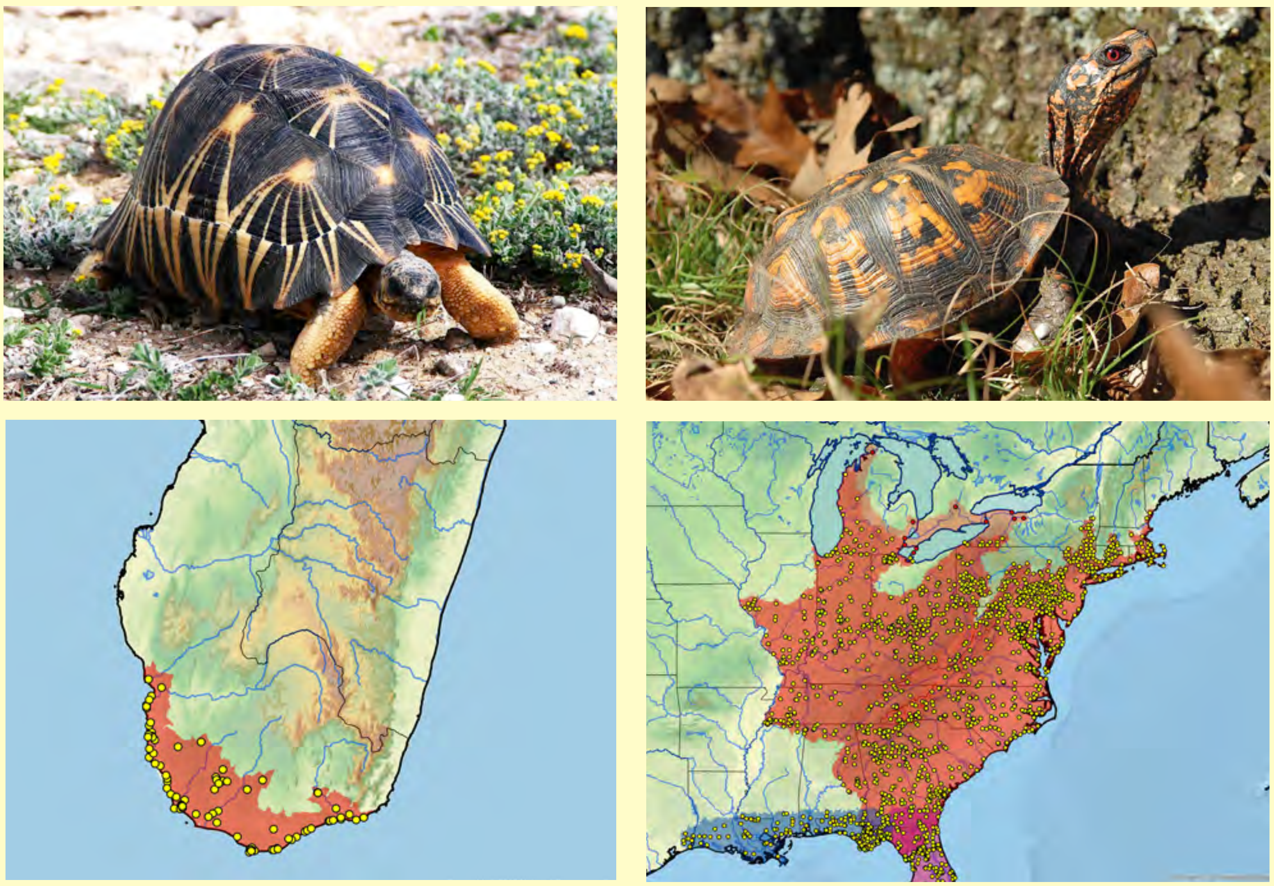
TURTLES OF THE WORLD

Annotated Checklist and Atlas of Taxonomy, Synonymy, Distribution, and Conservation Status (9th Ed.)

Turtle Taxonomy Working Group

Anders G.J. Rhodin, John B. Iverson, Roger Bour, Uwe Fritz, Arthur Georges, H. Bradley Shaffer, and Peter Paul van Dijk



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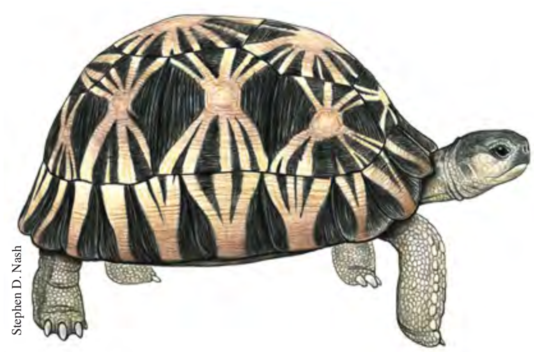

COVER AND TITLE PAGES ILLUSTRATIONS

***Front Cover*:** *Left*: Radiated Tortoise, *Astrochelys radiata* (Testudinidae), from Madagascar, photo by Anders G.J. Rhodin. *Right*: Eastern Box Turtle, *Terrapene carolina carolina* (Emydidae), from Maryland, USA, photo by Peter Paul van Dijk.

***Title Pages*:** p. i: Radiated Tortoise, *Astrochelys radiata* (Testudinidae), from Madagascar, drawing by Stephen D. Nash. p. iv: Ploughshare Tortoise, *Astrochelys yniphora* (Testudinidae), from Madagascar, drawing by Stephen D. Nash. p. vi, *left*: Six-tubercled Amazon River Turtle, *Podocnemis sextuberculata* (Podocnemididae), from Brazil, photo by Richard C. Vogt. p. vi, *right*: Pig-nosed Turtle, *Carettochelys insculpta* (Carettochelyidae), from Australia, photo by John Cann. p. x, *left*: Southwestern Snake-necked Turtle, *Chelodina (Macrochelodina) oblonga* (Chelidae), from Australia, photo by Gerald Kuchling. p. x, *right*: Cochin Forest Cane Turtle, *Vijayachelys silvatica* (Geoemydidae), from India, photo by Veerappan Deepak.

***Back Cover*:** *Top Left*: Nubian Flapshell Turtle, *Cyclanorbis elegans* (Trionychidae), from South Sudan, photo by Luca Luiselli. *Top Right*: Geometric Tortoise, *Psammobates geometrica* (Testudinidae), from South Africa, photo by Eric V. Goode. *Bottom Left*: Leatherback Sea Turtle, *Dermochelys coriacea* (Dermochelyidae), from Florida, USA, photo by Chris Johnson. *Bottom Right*: Narrow-bridged Musk Turtle, *Claudius angustatus* (Kinosternidae), from Belize, photo by John B. Iverson.

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DEDICATION

As we were revising and updating this
latest edition of our checklist and atlas, we tragically lost
two of our closest longterm friends and colleagues,
co-author ***Roger Bour*** and former co-editor ***Peter Pritchard***.

They were both giants in the fields of turtle taxonomy, biology,
and conservation, and we owe them both a huge debt of gratitude
for all they have done to help us understand and appreciate
the full spectrum of turtle diversity across the world,
and to help inspire all of us to work passionately
for turtle preservation and protection.

***We dedicate this book and our ongoing work to
Roger Bour and Peter Pritchard
and their memories.***

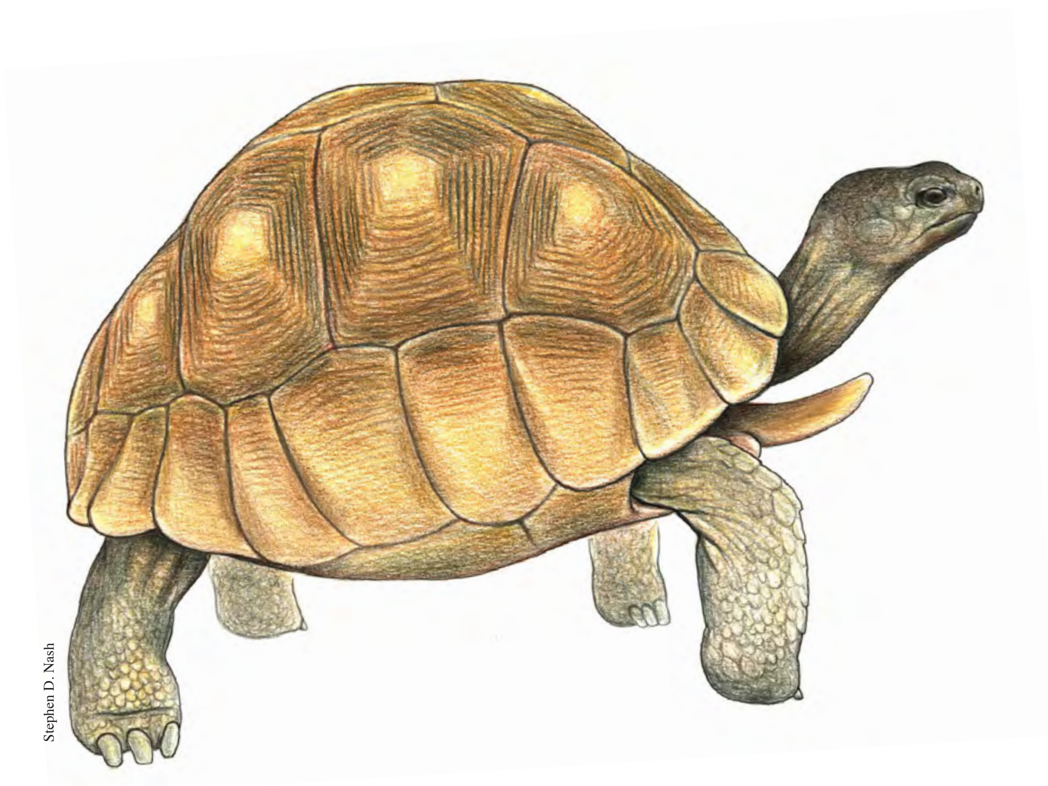
Their lasting legacies shall continue to inspire us.

Marie-Noëlle Bour

Roger Bour

Anders G.J. Rhodin

Peter C.H. Pritchard


Stephen D. Nash

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Turtle Taxonomy Working Group

Anders G.J. Rhodin, John B. Iverson, Roger Bour, Uwe Fritz, Arthur Georges, H. Bradley Shaffer, and Peter Paul van Dijk

Supplement No. 2 of Chelonian Research Monographs No. 5:

Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group

Edited by

Anders G.J. Rhodin[1,2], John B. Iverson[3], Peter Paul van Dijk[2,4], Craig B. Stanford[5], Eric V. Goode[2], Kurt A. Buhlmann[6], and Russell A. Mittermeier[4]

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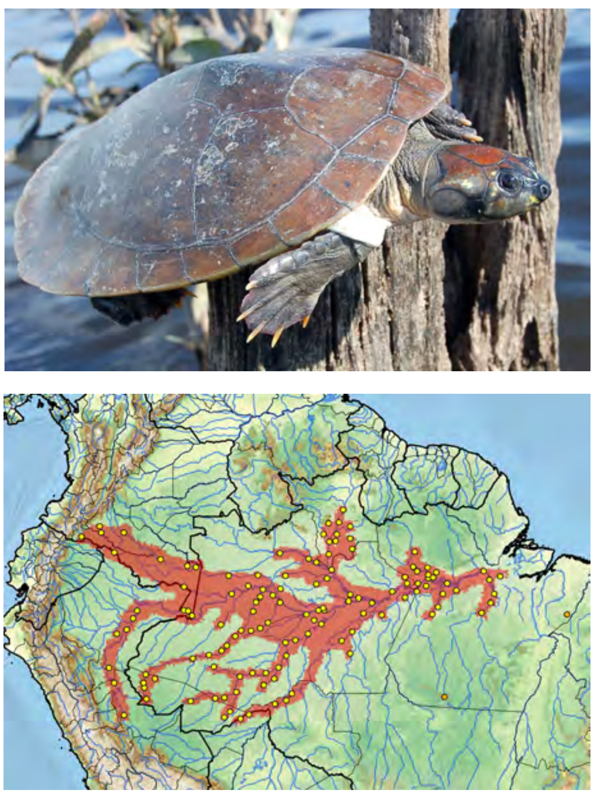

Six-tubercled Amazon River Turtle,
Podocnemis sextuberculata (Podocnemididae), from
Paraná Floresta, Roraima, Brazil;
photo by Richard C. Vogt.

Pig-nosed Turtle,
Carettochelys insculpta (Carettochelyidae), from
Daly River, Northern Territory, Australia;
photo by John Cann.

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Southwestern Snake-necked Turtle,
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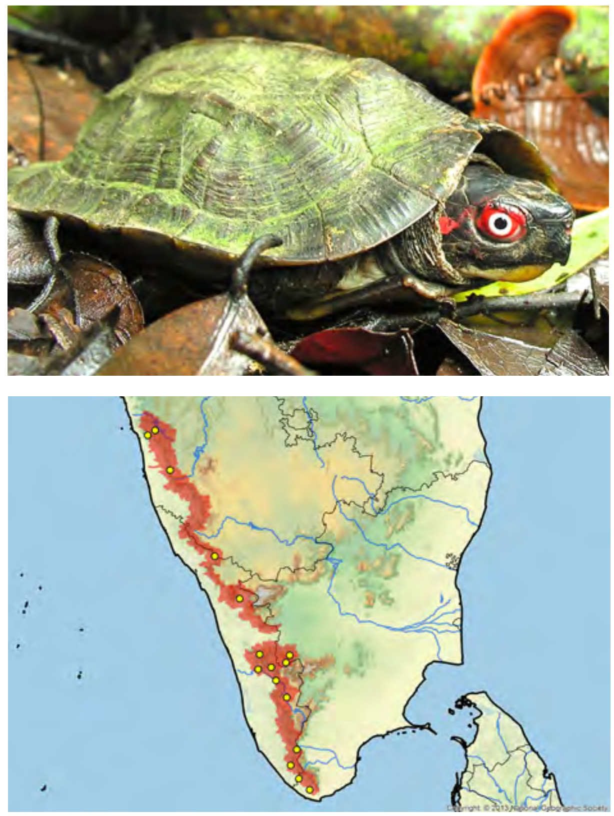
photo by Gerald Kuchling.



Cochin Forest Cane Turtle,
Vijayachelys silvatica (Geoemydidae), from
Anaimalai Hills, Western Ghats, Tamil Nadu, India;
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Turtle Taxonomy Working Group*

**Authorship of this article is by this working group of the IUCN SSC Tortoise and Freshwater Turtle Specialist Group, which for the purposes of this document consisted of the following contributors:*

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Abstract. – This is our 9th edition of an annotated checklist and atlas of all recognized taxa of the world's modern turtle and tortoise fauna, documenting recent changes and controversies through mid-2021, and including all primary synonyms, updated from eight previous checklists. We provide an updated comprehensive listing of taxonomy and nomenclature, including type localities, type specimens, detailed distribution maps, as well as calculated presumed historic indigenous ranges, conservation status, and maximum known sex-based carapace lengths for all taxa. We strive to record the most recent justified taxonomic assignment of taxa in a hierarchical framework, providing detailed annotations, including alternative arrangements for a few taxa. We include current published and provisional IUCN Red List status assessments for all species, as well as current listings on CITES appendices. The diversity of turtles and tortoises in the world that has existed in modern times (since 1500 CE) and currently generally recognized as distinct and included in this checklist, now consists of 357 species. Of these, 58 are polytypic, representing 129 additional recognized subspecies (one unnamed), or 486 total taxa of modern chelonians, increased from 478 taxa in our previous checklist. Of these, 5 species and 5 subspecies (one unnamed), or 10 taxa (2.1%), are extinct. We also include a supplementary checklist of 17 taxa of terrestrial chelonians that went extinct during the Holocene from ca. 10,000 BCE to 1500 CE. As of the current IUCN 2021 Red List, 171 turtle species (62.4% of the 274 species red-listed, 47.9% of all 357 recognized modern species) are officially regarded as globally Threatened (Critically Endangered [CR], Endangered [EN], or Vulnerable [VU]). We record additional provisional Red List assessments by the IUCN Tortoise and Freshwater Turtle Specialist Group, allowing us to evaluate the overall current threat levels for all 357 species of turtles and tortoises. Of these, 183 (51.3%) are Threatened (CR, EN, or VU); if we provisionally adjust for predicted threat rates of Data Deficient (DD) species, then ca. 55.9% of all extant turtles are Threatened. These numbers and percentages of Threatened species have increased since our last checklist, although our reclassification of 12 Threatened Galápagos tortoises as subspecies rather than species has moderated the results; the number and percentage of Threatened species increases to 193 (52.3% of 369) if they are considered full species. Turtles and tortoises are among the most threatened of the major groups of vertebrates.

Key Words. – Reptilia, Testudines, turtle, tortoise, chelonian, taxonomy, nomenclature, systematics, distribution, maximum size, sexual dimorphism, conservation status, IUCN Red List, CITES, extinction, Holocene

INTRODUCTION

The global diversity of turtles and tortoises (chelonians, order Testudines) that has existed in modern times (since 1500 CE), and currently generally recognized as described and distinct by specialists in turtle taxonomy and systematics, consists of approximately 357 species, of which 58 are polytypic, with 129 additional recognized subspecies, or 486 total taxa of modern (living and extinct) turtles and tortoises (including one unnamed subspecies). Of these, 5 species plus 5 subspecies (one unnamed), or 10 total taxa of tortoises and freshwater turtles (2.1% of all modern taxa) have become extinct since 1500 CE (see Table 1 and Fig. 1), leaving us currently with 352 species and 124 additional subspecies, or 476 total taxa of living turtles and tortoises, of which 345 species and 469 taxa are freshwater or terrestrial and 7 species (and taxa) are marine.

In this checklist we present a full taxonomic listing of all recognized modern turtle and tortoise taxa, including synonymized names and type localities, detailed distribution maps, and annotations concerning recently described new taxa, nomenclatural and taxonomic updates, and significant taxon-related controversies or developments. To make the checklist more useful to a broader audience of biologists and managers, we also include the current conservation status and maximum carapace lengths for all taxa.

The 486 modern turtle and tortoise taxa we recognize here are based on a synonymy of 1,488 separate named turtle and tortoise species and subspecies, including all primary description names, secondary *nomen novum* replacement names, undescribed *nomen nudum* names, and other nomenclaturally unavailable names. These names also include those fossil taxa that have been synonymized with modern taxa.

Within the monophyletic order Testudines (turtles and tortoises) we recognize 2 suborders, 2 infraorders, 6 superfamilies, 14 families, 22 subfamilies, 97 genera, and 9 subgenera of modern turtles, for a total of 153 supraspecific groupings. These groups are based on 510 valid and synonymized names, for a total listing here of 1,997 taxonomic names applied to all modern turtle taxa and groups.

As there is always some disagreement among experts as to which taxa are distinct and valid, and at what systematic level or rank (species or subspecies, genus or subgenus), these numbers are variable depending on the authorities presenting their data or interpretations. For prior discussions and listings of all recognized modern turtle taxa, with extensive annotations regarding areas of recent taxonomic change, instability, or controversy, see the previous publications by the Turtle Taxonomy Working Group (TTWG 2007a,b, 2009, 2010, 2011, 2012, 2014, 2017), Rhodin et al. (2008), and the turtle checklist produced for CITES by Fritz and Havaš (2007). For a listing of all extinct Pleistocene and Holocene turtle and tortoise taxa, see our companion checklist by the Turtle Extinctions Working Group (TEWG 2015).

Methodology

The Turtle Taxonomy Working Group (TTWG) functions under the auspices of the IUCN SSC Tortoise and Freshwater Turtle Specialist Group (TFTSG), which operates under the umbrella of the IUCN (International Union for Conservation of Nature) and its Species Survival Commission (SSC). We first compiled our checklist of modern turtle taxa in 2007 (TTWG 2007b), and have updated it frequently to reflect more recent changes, as required by subsequent publications with taxonomic novelties or proposed changes, as well as adding primary synonyms for all recognized taxa, type species and type locality designations, and distribution maps (Rhodin et al. 2008; TTWG 2009, 2010, 2011, 2012, 2014, 2017). The previous and current checklists took a longer time to update and produce because of extensive further expansion in content. This is now the 9th installment in this series. It is current through approximately October 2021.

We list all primary and synonymized description names, as well as all *nomen nudum, nomen dubium, nomen oblitum*, *nomen novum* names and various unavailable, suppressed, or rejected names of which we are aware. In general, we exclude obvious *ex errore* and typographical *lapsus* names, especially the profusion of inadvertent misspellings in modern literature (notably in the popular literature and other non-taxonomic biological sciences).

Our listing of alternative *nomina nova* takes a broadly encompassing approach and lists both justified and unjustified subsequent emendations and replacements, including substantial name changes caused by early authors' occasional tendencies to create new or "better" names that they felt were more appropriate or more correct. Occasionally, early authors appear not to have remembered what the previously used names were, or simply came up with new spelling variations, with these new names sometimes becoming temporarily established in the literature. This was especially true for the many names and unjustified spelling emendations created and recorded by Gray between 1825 and 1874. Some of the alternative names may have simply been misinterpretations of handwritten script that led to typesetting errors.

However, prior to the establishment of the International Commission on Zoological Nomenclature in 1895, and the publication of the first edition of the Code of Zoological Nomenclature in 1905, these kinds of new names and changes were fairly common and we do not generally consider them to be simple errors; therefore we have instead recorded many of them as *nomina nova*. Many early names were also unjustifiably emended in

Table 1. Modern freshwater turtles and tortoises that have gone extinct since 1500 CE (5 species and 5 subspecies = 10 taxa), with approximate or known extinction dates. We have removed *Pelusios castaneus seychellensis* from this list, as we no longer consider it a valid taxon (see Annotation 35), but have added an extinct unnamed subspecies from the Galápagos. For species that went extinct during the Holocene from ca. 10,000 BCE to 1500 CE, see the supplementary checklist at the end of this publication. For species that went extinct during the Pleistocene, see TEWG (2015).

Kinosternidae
- ***Kinosternon hirtipes megacephalum***
  - Viesca Mud Turtle
  - Mexico (Coahuila); ca. 1970

Testudinidae
- ***Aldabrachelys gigantea daudinii***
  - Daudin's Giant Tortoise
  - Seychelles (Mahé?); ca. 1850
- ***Chelonoidis niger abingdonii***
  - Pinta Giant Tortoise, Abingdon Island Giant Tortoise
  - Ecuador (Galápagos: Pinta [Abingdon]); 24 June 2012
- ***Chelonoidis niger niger***
  - Floreana Giant Tortoise, Charles Island Giant Tortoise
  - Ecuador (Galápagos: Floreana [Charles]); ca. 1850
- ***Chelonoidis niger* unnamed subsp.**
  - Santa Fé Giant Tortoise, Barrington Island Giant Tortoise
  - Ecuador (Galápagos: Santa Fé [Barrington]); ca. 1890 [?]
- ***Cylindraspis indica***
  - Reunion Giant Tortoise
  - Réunion; ca. 1840
- ***Cylindraspis inepta***
  - Mauritius Giant Domed Tortoise
  - Mauritius (Mauritius); ca. 1735
- ***Cylindraspis peltastes***
  - Rodrigues Domed Tortoise
  - Mauritius (Rodrigues); ca. 1800
- ***Cylindraspis triserrata***
  - Mauritius Giant Flat-shelled Tortoise
  - Mauritius (Mauritius); ca. 1735
- ***Cylindraspis vosmaeri***
  - Rodrigues Giant Saddleback Tortoise
  - Mauritius (Rodrigues); ca. 1800

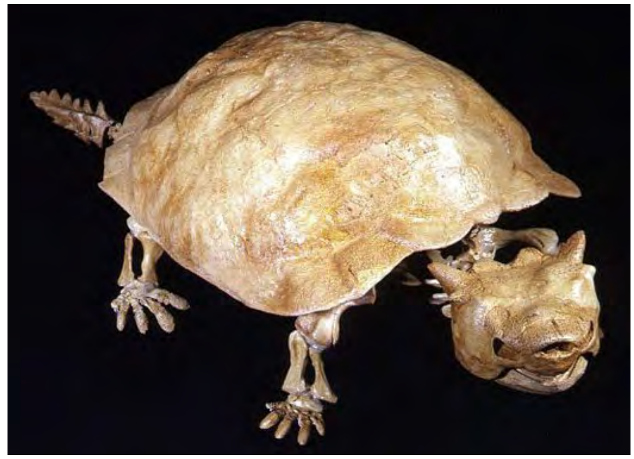


Figure 1. While beyond the time-frame of extinctions for modern turtles, it is worth noting the findings of White et al. (2010), who documented the continued existence into the late Holocene of a giant tortoise on Efate Island, Vanuatu, in the southern Pacific Ocean. The species persisted until as recently as 940–810 BCE (see TEWG 2015). They tentatively assigned it to the extinct terrestrial horned family Meiolaniidae, and named it ?*Meiolania damelipi*, providing clear evidence of human butchering and consumption of the species, further corroborated and expanded by Hawkins et al. (2016). This exploitation represented the final anthropogenic extinction event for these southern Pacific giant terrestrial chelonians. For a more complete analysis of turtle extinctions caused by humans and/or climate change during the Pleistocene and Holocene, see our companion publication by the TEWG (2015) and the Supplement on extinct Holocene turtles at the end of this book. Recent work by Rabi et al. (2019) has now re-assigned this species to the Testudinidae, but its presence on Vanuatu is still extraordinary. No complete skeletons of ?*M. damelipi* are known, but the ecologically similar *Meiolania platyceps* from Lord Howe Island, Australia, which went extinct in the Late Pleistocene, has been beautifully reconstructed (photo above) by the American Museum of Natural History (Burke et al. 1983).

an attempt to comply with perceived rules about word constructions and the use of non-Greek vs. Greek letters (e.g., *c* vs. *k*, as in *Cinosternon* vs. *Kinosternon*, *Cinixys* vs. *Kinixys*). In addition, we do not list variations in spelling of the two alternate patronymic endings (*-ii* vs. *-i*), always using the original valid orthography.

Furthermore, in accord with Article 13 of the ICZN Code regarding availability of new names proposed after 1930, unless they were expressly created as justified *nomina nova*, alternative names appearing post-1930 are regarded as invalid and unavailable. We list a few of these misspelled or unjustified new names that have appeared in the major turtle taxonomic literature and label them as *nomen invalidum* names.

We also include an **Appendix** (p. 354) of recent turtle and tortoise names proposed by Hoser (2013, 2014a,b, 2018a,b, 2021) that we consider to be unacceptable *nomina rejecta* for nomenclatural purposes, and provide additional details on our concerns about these names in a series of annotations.

We include listings of subsequent new combination names to reflect how taxa have been rearranged into new genera or different specific or subspecific levels. The new combination names are listed in *lighter gray text* following each associated primary name, arranged more or less chronologically from oldest to most recently created combinations, but without attributing authorship or date of first use of the new combination. We have attempted to list all known subsequent combination names, but these listings may be incomplete. A few older *ex errore* misspelled names are included in these listings.

Original and synonymized taxon names (including higher-category names) are listed using their original spelling and genus-species combination as used by the author at the time of first publication of the name. Our synonymies for genus- and species-level taxa follow, to our best efforts, the strict and established nomenclatural rules established by the fourth edition of the International Code of Zoological Nomenclature (ICZN 1999).

However, for the higher-level suprageneric categories used in this checklist, we have also provided some synonyms and previously-used names for the same or included groupings whose usage may not necessarily correspond to nomenclatural guidelines under the ICZN. Since the ICZN does not regulate names above the superfamily rank, our listings of these names are intended to document historical use to aid understanding and resolving the difficult questions of what names are most appropriately used for these suprageneric categories and to what author they should be attributed.

For example, the names we list under the Order-level name for turtles (Testudines) are not all strict synonyms, as some were proposed at different levels of groupings, from "Family" to Order to various supra-ordinal categories. Many were utilized primarily for including various fossil turtle-like ancestors in an expanded concept of turtles, including some rank-free PhyloCode names. The names we list in other infra-ordinal suprageneric categories are not always strict synonyms either, as based on nomenclatural acceptability or availability of the utilized group name, but instead provide a partial historical record for names previously used for the same or similar grouping.

Our main checklist includes all currently recognized named taxa (species and subspecies) of modern turtles (extant after 1500 CE). By "currently recognized" we mean those taxa that have not been demonstrably refuted or justifiably synonymized in published literature, or whose description or recommended resurrection has yet to receive wide community acceptance. We have attempted to describe all recent published taxonomic recommendations in our annotations, even though we have not included all proposed changes in the checklist.

Since there are sometimes also different interpretations for some genera and polytypic species as to which names are valid and whether to lump or split the contained taxa, we occasionally list alternative name usages. Our most important criterion for accepting proposed changes is that they be accompanied by adequate data and sound arguments justifying the taxonomic revision. Consequently, some proposed taxonomic changes from lists or publications with unsupported or untested revisions have not been incorporated. We also list and annotate recent systematic papers that do not necessarily commit nomenclatural or taxonomic acts, but that present data on phylogenetic or phylogeographic relationships that either serve to further support currently understood relationships, or are indicators of distinct lineages or potential taxonomic changes to come. Occasionally we also include annotations concerning dates of publication or other bibliographic considerations.

Currently recognized modern turtle and tortoise genera and terminal taxa (species and subspecies) are listed in bold italics. Original description names and synonymized names are in non-bold italicized text. Higher suprageneric group-level names are listed in bold non-italic text and are presented in an indented phylogenetic hierarchy. For competing alternative generic names, we list them in phylogenetic order from most to least inclusive. All original names include authorship, year, and page number.

As of this edition of the checklist, all described genera include type species designations (original and subsequent), and all described species include verbatim original and subsequently restricted type localities. This has been undertaken through a comprehensive reexamination of all original literature rather than relying on secondary sources. As a result, many of these type designations and localities are somewhat different from those previously cited in Fritz and Havaš (2007).

Comments on names that have undergone recent taxonomic change or phylogenetic analysis or are associated with instability or uncertainty or other changes are indicated by superscript numbers that refer to annotations at the end of this and earlier checklists. See the section on **Annotations** at the end of the checklist for all detailed explanations.

A summary of all major taxonomic changes in this checklist as compared to our previous one is provided in Table 2; all minor changes are only included in the annotations. Table 3 lists those recently described or resurrected taxa that we have not accepted as distinct, and the Appendix (p. 354) lists names proposed by Hoser that we consider unacceptable *nomina rejecta*.

Turtle taxa that were originally described based on Pleistocene or Holocene fossil, subfossil, or archeological material, but subsequently recognized as representing extant taxa or synonymized with modern turtle taxa, are included in the checklist and marked with a cross (†), and include stratigraphic horizon and location data. Fossil taxa synonymized with extant polytypic species are listed under the geographically most appropriate subspecies; however, such synonymizations may not be accurate for some Pleistocene or older fossils which could conceivably represent distinct chronospecies or extinct subspecies. For further details on extinct fossil turtle and tortoise taxa from the Pleistocene and Holocene, see TEWG (2015).

As of the current checklist, we now also include a **Supplement**, following the main checklist, where we list the species and taxa that went extinct during the Holocene from about 10,000 BCE to 1500 CE.

Those modern species and subspecies for which in-depth informational accounts have been published in this TFTSG monograph series on *Conservation Biology of Freshwater Turtles and Tortoises* (CBFTT), are indicated by a **CBFTT Account** heading, with interactive hyperlinks provided to the online published accounts in dark blue typeface. We will gradually publish CBFTT accounts for all non-marine turtle and tortoise species—accounts also include recognized subspecies within the account, but some subspecies have separate accounts and are so indicated. As of November 2021 we have published 114 CBFTT accounts covering 148 turtle and tortoise taxa; these are all available online as downloadable open-access doi-designated pdf's on the TFTSG website at **www.iucn-tftsg.org/cbftt/**.

This checklist includes English common names for all taxa. We have tried to provide the most widely used names, although occasionally we have provided two or more names. We do not support the practice of designating "official" or "standard" common names for species, as that is the domain for scientific names. Instead, common names tend to evolve and vary from area to area and over time, as well as with language and cultural context. However, in the field of conservation, the use of reasonably widely recognized and appropriately descriptive common names is critically important for communication purposes, and so we include English common names, as well as some of the more common native language names used in countries where the species occurs. Though also important for the global conservation community, and officially included in IUCN Red List and CITES documentation, we do not at this time include non-native Spanish or French common names in this checklist. Indigenous vernacular names for certain species are often extensive and imprecise, and in general we do not list such names here, although a few commonly-used ones are listed.

Body Size (Carapace Length) and Sexual Size Dimorphism

We introduce sex-based maximum body size (shell length) data for all turtle taxa in this edition of the checklist, with separate values for males and females for most taxa. We record primarily maximum straight-line carapace length (Max SCL; see Iverson and Lewis 2018), based on cited sources. Most authors who report SCL do not indicate whether the measurement is midline or maximum (which is greater in species with extended anterior marginals with an anterior midline notch or recess and/or serrated posterior marginals with a supracaudal notch), but when they do, we record the maximum value. Many undefined SCL measurements in the literature are probably midline and therefore likely a bit smaller than the maximum carapace length. We urge all authors to standardize and accurately describe their methods of measuring body size (Iverson and Lewis 2018).

We do not record adult size means or ranges, nor calculate single-taxon sexual size dimorphism (SSD) ratios or indices (see Lovich and Gibbons 1992), as all these values are typically population-dependent, usually vary geographically, latitudinally, and altitudinally, are affected by sample sizes and potentially biased collection methodology, and are adversely impacted by long-term exploitation levels and other environmental and anthropogenic pressures and threats. Additionally, SSD indices based on single maximum values do not reflect population-level dynamics as accurately as the evaluation of body size means determined via large unbiased sample sizes.

The various ecological, geographic, environmental, phylogenetic, evolutionary, behavioral, and theoretical aspects of body size and sexual size dimorphism in turtles and tortoises have been extensively analyzed and discussed by, among others, Berry and Shine (1980), Gibbons and Lovich (1990), Bonnet et al. (2001, 2010), Lindeman (2003), Ben Kaddour et al. (2008), Gosnell et al. (2009), Stephens and Wiens (2009), Lovich et al. (2010, 2014), Jaffe et al. (2011), Ceballos et al. (2013), Halámková et al. (2013), Ceballos and Iverson (2014), Itescu et al. (2014), Angielczyk et al. (2015), Tesche and Hodges (2015), Regis and Meik (2017), Agha et al. (2018), Rodrigues et al. (2018), and Santilli and Rollinson (2018). The nearly complete sex-based maximum size data recorded here for most turtles and tortoises should provide improved data for further analyses.

We note that one of the attributes of these data is that for exploited species, the historical maximum sizes, which we record here, may seldom be reached in affected populations, and that this is usually an indication of exploitation pressures on the largest specimens (e.g., Close and Seigel 1997; Boundy and Kennedy 2006; Wolak et al. 2010; Eisemberg et al. 2011; among others). We also note that there are occasional individuals that exceed typical maximal sizes in a usual distribution range; however, we choose to include data from such record-size individuals, as they are always of interest.

We provide sources for all our size data, with most values accessed from primary references cited either in our CBFTT review accounts or in compilations by others, including Pritchard (2001), Ernst and Lovich (2009), Hansen et al. (2010), Legler and Vogt (2013), Ceballos et al. (2013), Itescu et al. (2014), and Cann and Sadlier (2017). Many are from various other primary cited sources, including some from IUCN Red List assessments; and in general, we strive to provide primary sources for data as much as possible.

Many accounts in the literature provide only generalized or approximate maximum carapace lengths; we attempt to record only those that are based on actual measurements of documented specimens. Generalized records of large animals may also be suspect unless specific measurement methodology is noted, as they often represent rounded-off estimates of SCL, or measurements of curved carapace length (CCL), or even total body length. Many of the maximum sizes provided in Itescu et al. (2014) were from Ernst et al. (2006b) and Bonin et el. (2006), but many of those were generalized size approximations and were not specifically referenced, especially those in Bonin et al. (2006), many of which appear to be overestimated. They are therefore only included here if more precise size data are

Table 2. Summary of new or resurrected taxa (*) included in this checklist with major taxonomic changes from TTWG 2017. See the annotations for a full discussion of all these changes; minor changes associated only with overlooked or previously synonymized names or dates of authorship or other primarily nomenclatural changes are not listed here, but only in the annotations. This table does not include added synonymized fossil taxa, nomina nuda, or names not considered valid in the 2017 checklist (i.e., newly added synonyms).

TTWG 2017 (356 species, 478 taxa)	**TTWG 2021** (357 species, 486 taxa)	Change
Pleurodira	Cheloidea * + Pelomedusoidea *	2 superfamilies recognized
Chelodininae	Chelodininae + Emydurinae *	1 subfamily split into two
Chelus fimbriata	*Chelus fimbriata* + *Chelus orinocensis* *	taxon split, 1 new species described
Mesoclemmys heliostemma + *Mesoclemmys raniceps*	*Mesoclemmys raniceps* + *Mesoclemmys wermuthi* *	1 species synonymized, 1 species resurrected
Mesoclemmys hogei	*Ranacephala hogei*	species reallocated to different genus
Chelodina (Chelodina) mccordi roteensis	*Chelodina (Chelodina) mccordi mccordi*	1 subspecies synonymized
Chelodina (Macrochelodina)	*Chelodina (Chelydera)* *	subgenus redefined, new subgenus described
Chelodina (Macrochelodina) oblonga	*Chelodina (Chelydera) rugosa* * + *Chelodina (Chelydera) kurrichalpongo* *	subgenus redefined, taxon renamed and split, 1 new species described
Chelodina (Macrodiremys)	*Chelodina (Macrochelodina)*	subgenus redefined
Chelodina (Macrodiremys) colliei	*Chelodina (Macrochelodina) oblonga*	subgenus and species renamed
———	*Emydura gunaleni* *	1 new species described
Pelusios castaneus seychellensis	*Pelusios castaneus*	1 subspecies synonymized
Pelusios sinuatus	*Pelusios sinuatus sinuatus* + *Pelusios sinuatus bottegi* *	taxon split, 1 subspecies resurrected
Podocnemididae	Erymnochelyinae * + Peltocephalinae * + Podocnemidinae *	3 subfamilies recognized
Cryptodira	Durocryptodira * + Trionychia *	2 infraorders recognized
Chelydridae + Kinosternoidea	Chelydroidea	1 family and 1 superfamily merged into 1 combined superfamily
———	*Kinosternon cora* *	1 new species described
———	*Kinosternon vogti* *	1 new species described
Sternotherus minor minor + *Sternotherus minor peltifer*	*Sternotherus minor* + *Sternotherus peltifer* + *Sternotherus intermedius* *	taxon split, 1 new species described, 1 subspecies elevated to species
Terrapene carolina (*T. c. carolina* + *bauri* + *major* + *mexicana* + *triunguis* + *yucatana*)	*Terrapene carolina* (*T. c. carolina* + *bauri* + *major*) + *Terrapene mexicana* + *Terrapene triunguis* + *Terrapene yucatana*	1 species with 6 subspecies split into 3 monotypic + 1 polytypic species
Terrapene ornata (*T. o. ornata* + *luteola*)	*Terrapene ornata*	1 subspecies synonymized
Trachemys gaigeae hartwegi	*Trachemys hartwegi*	1 subspecies elevated to species
Trachemys venusta uhrigi	*Trachemys venusta uhrigi* + *Trachemys medemi* *	taxon split, 1 new species described
Geoemydinae	Geoemydinae + Batagurinae *	1 subfamily split into two
Testudinidae	Testudininae * + Xerobatinae * + Manouriinae *	3 subfamilies recognized
Chelonoidis niger species complex	*Chelonoidis niger* subspecies	14 Galápagos tortoise species reclassified instead as subspecies, 1 unnamed subspecies added
Testudo graeca graeca	*Testudo graeca whitei* *	subspecies redefined and renamed
Testudo graeca soussensis	*Testudo graeca graeca*	subspecies synonymized
Pelodiscus axenaria	*Pelodiscus axenaria* + *Pelodiscus huangshanensis* *	taxon split, 1 new species described
Pelodiscus parviformis	*Pelodiscus parviformis* + *Pelodiscus variegatus* *	taxon split, 1 new species described

not readily available. Many of the sizes we record do not agree with numbers previously cited in the various reviews noted above, but we have verified ours by checking primary sources. Some sizes provided in some reviews appear to be rounded up or erroneously interpreted or inaccurately copied from the primary sources.

For some species, notably giant tortoises, large sea turtles, large softshells, and a few others, we also provide maximum CCL measurements. For large species such as these, SCL is difficult to measure in the field, so CCL measurements are often recommended and reported (see Bolten 1999 for sea turtles). For species with only CCL measurements available, we provide a few estimated SCL values. For some polytypic species, we only have data available for the whole species, not for the included subspecies. Whenever possible, we have incorporated previously unpublished data on maximum sizes from our own measurements of museum and live specimens, as well as unpublished measurements received from colleagues, all of which are recorded and cited where appropriate.

We provide maximum shell size for all 357 recognized species and 480 (98.8%) of the 486 recognized taxa of the world's modern turtles. The average turtle species has a maximum SCL of 35.8 cm and the average turtle taxon has a maximum SCL of 35.4 cm (slightly smaller since many polytypic species are relatively smaller than monotypic species, with the giant tortoises of the Galápagos and Indian Ocean being notable exceptions).

Table 3. Summary of new (*) or resurrected taxa proposed since TTWG 2017 that have **not** been recognized as distinct in this checklist, but instead synonymized with currently accepted taxa. See Annotations for discussions of these decisions, and the Appendix (p. 354) for multiple rejected names proposed by Hoser.

Proposed Taxon	Synonymized Under
Chelodina canni rankini	*Chelodina canni*
Chelodina siebenrocki	*Chelodina rugosa*
Elseya caelata caelata *	*Elseya novaeguineae*
Elseya caelata ayamaru *	*Elseya novaeguineae*
Elseya jukesi	*Elseya flaviventralis*
Elseya oneiros *	*Elseya lavarackorum*
Elseya orestiad *	*Elseya schultzei*
Elseya stirlingi	*Elseya irwini*
Emydura australis	*Emydura macquarii macquarii* as *nomen dubium*
Emydura macquarii binjing	*Emydura macquarii macquarii*
Emydura macquarii dharra	*Emydura macquarii macquarii*
Emydura macquarii dharuk	*Emydura macquarii macquarii*
Emydura macquarii gunabarra	*Emydura macquarii macquarii*
Emydura macquarii signata	*Emydura macquarii macquarii*
Emydura subglobosa angkibaanya *	*Emydura subglobosa subglobosa*

We rank the 25 largest modern turtle and tortoise taxa by straight carapace length (SCL) in Table 4. The Leatherback, *Dermochelys coriacea*, is the world's largest turtle and largest marine species at ca. 226.0 cm SCL (256.5 cm CCL). The Siamese Narrow-headed Softshell Turtle, *Chitra chitra chitra*, is the largest freshwater species at 140.0 cm, and the Seychelles Giant Tortoise, *Aldabrachelys gigantea hololissa,* the largest terrestrial species at 138.0 cm. Several of the largest taxa have gone extinct, a typical pattern for reptiles and vertebrates in general (see Ripple et al. 2017).

We note, interestingly, that other than the three marine turtles (Dermochelyidae and Cheloniidae) among these 25 largest chelonians, 21 of the remaining 22 taxa are either tortoises (Testudinidae) or softshell turtles (Trionychidae), with only a single Podocnemididae. Among the other chelonian families, the largest Chelydridae is *Macrochelys suwanniensis* at an SCL of 80.0 cm, the largest Geoemydidae is *Orlitia borneensis*, also at 80.0 cm, the largest (and only) Dermatemydidae is *Dermatemys mawii* at 60.0 cm, the largest Pelomedusidae is *Pelusios sinuatus bottegi* at 55.0 cm, the largest Emydidae is *Trachemys grayi emolli* at 54.8 cm, the largest Chelidae is *Chelus orinocensis* at 52.6 cm, the largest (and only) Carettochelyidae is *Carettochelys insculpta* at 52.5 cm, the largest Kinosternidae is *Staurotypus triporcatus* at 40.2 cm, and the largest Platysternidae is *Platysternon megacephalum peguense* at 25.5 cm SCL.

The largest known turtle that ever lived was *Stupendemys geographicus* Wood 1976 (Podocnemididae), a freshwater or estuarine turtle from the Miocene of northern South America closely related to extant *Peltocephalus dumerilianus*. It has been recorded as reaching an impressive SCL of 240 cm (Cadena et al. 2020), but not much larger than the largest Leatherback.

We rank the 25 smallest modern taxa by SCL in Table 5. The recently described Vallarta Mud Turtle, *Kinosternon vogti*, appears to be the world's smallest turtle and smallest freshwater species at 10.2 cm, but the known sample size is still very small, and the other recently described species, *Kinosternon cora*, is just about as small at 10.8 cm. The South African tortoises, *Chersobius signatus* and *C. boulengeri*, are the smallest terrestrial species at 11.0 cm, and the Kemp's Ridley, *Lepidochelys kempii*, is the smallest marine species at 76.0 cm. Only one of the smallest taxa has gone extinct.

We also note that among the 25 (26 with ties) smallest chelonians, 20 of the taxa are either tortoises (Testudinidae) or mud turtles (Kinosternidae), with only one Pelomedusidae, one Geoemydidae, one Trionychidae, and three Emydidae. Among the other polytypic chelonian families, the smallest Platysternidae is *Platysternon megacephalum shiui* at an SCL of 15.1 cm, the smallest Chelidae is *Pseudemydura umbrina* at 15.5 cm, the smallest Podocnemididae is *Podocnemis erythrocephala* at 32.2 cm, the smallest Chelydridae is *Chelydra acutirostris* at 41.0 cm, and the smallest Cheloniidae is *Lepidochelys kempii* at 76.0 cm SCL.

Although we do not record sexual size dimorphism (SSD) index values for individual species in the checklist, for the reasons provided above, we calculated them for the 320 species (89.6% of 357) and 426 taxa (87.7% of 486) for which we have sex-apportioned data, using the method recommended by Lovich and Gibbons (1992). We found that, overall, based on maximum recorded carapace length values, turtle species have an average female-biased SSD index of 0.180, and turtle taxa have a slightly lower average female-biased SSD index of 0.175.

Based on the limited maximum size data we provide, the Suwannee Alligator Snapping Turtle, *Macrochelys suwanniensis*, is apparently the most male-biased species at an SSD of -0.626, with the Angulate Tortoise, *Chersina angulata*, the second-most at -0.625, and the African Spurred Tortoise, *Centrochelys sulcata*, the third-most at -0.488. However, incomplete data suggest that the extinct Reunion Giant Tortoise, *Cylindraspis indica*, may have been the most male-biased species at -1.340. The Crowned River Turtle, *Hardella thurjii*, is apparently the most female-biased species at 2.185, with the Pink-ringed Tent Turtle, *Pangshura tentoria circumdata,* the second-most at 2.080, and Barbour's Map Turtle, *Graptemys barbouri*, the third-most at 1.515.

As size data for many taxa are generalized or missing or only maximum values without sexual differentiation, we invite and encourage our readers to submit documented corrections, updates, and missing values and reference sources as necessary. Any input will be gratefully accepted and appropriately acknowledged.

Type Specimens

We introduce information on type specimens in this checklist, recording the types of all currently recognized species, subspecies, and synonymized taxa. We list the primary name-bearing holotype, lectotype, neotype, or syntype specimen(s) as designated, with notes as warranted, but not secondary allotype, paratype, or paralectotype specimens, except as occasionally necessary. We document the status, designation, and museum location (if known) of name-bearing type specimens for all turtle and tortoise taxa with type localities (whether designated or not). Of these, many have no known or located type specimens, or the types are apparently lost, or there are only illustrated iconotypes (figured type specimens). Where possible, we document figured type specimens for taxa with no located type specimens. The acronyms we use for the museum collections holding turtle type specimens are defined at the end of the checklist, and are also documented in Sabaj (2019) and Uetz et al. (2019). We note that several type specimens listed by Uetz et al. (2019) unfortunately are not accurate or lack up-to-date lectotype or neotype designations.

Since DNA-based character identification of historical and ancient name-bearing type specimens is emerging as an increasingly important component of current taxonomic differential diagnoses and for resolution of nomenclatural issues and controversies (Renner 2016; Kehlmaier et al. 2019a), those historical turtle type specimens that have been genetically sampled and analyzed to date are indicated and referenced in the checklist.

Several older turtle type specimens, collected and described in the 18th through the 20th centuries, have already been genetically analyzed (e.g., Austin and Arnold 2001; Austin et al. 2002, 2003; Blanck et al. 2006a; Praschag et al. 2008; Stuart and Fritz 2008; Murphy et al. 2011; Stuckas and Fritz 2011; Parham et al. 2012; Poulakakis et al. 2012, 2015; Stuckas et al. 2013; Fritz et al. 2014; Petzold et al. 2014; Tiedemann et al. 2014; Kindler et al. 2016; Kehlmaier et al. 2019a, 2019b). We urge that many more ancient and historical turtle type specimens undergo genotyping with DNA-based sampling and characterization.

A few holotype specimens of recently described taxa have also been genotyped at the time of their description (e.g., Blanck et al. 2006a; Petzold et al. 2014; Poulakakis et al. 2015; Ihlow et al. 2016). However, this is still uncommon and even though most recent descriptions of new taxa are at least partly based on DNA characterization, holotype specimens are not yet being routinely genetically analyzed. We recommend that authors that describe new taxa that are based at least partly on either mitochondrial or nuclear DNA characterization, should also consider genetically analyzing the selected holotype specimen. All genetically analyzed type specimens, whether ancient and historical or newly described,

Table 4. Top 25 largest modern turtle taxa by maximum straight-line carapace length (SCL, cm) of the larger sex; † = extinct.

Taxon	Family	SCL
Dermochelys coriacea	Dermochelyidae	226.0
Chelonia mydas	Cheloniidae	141.0
Chitra chitra chitra	Trionychidae	140.0
Aldabrachelys gigantea hololissa	Testudinidae	138.0
Chelonoidis niger porteri	Testudinidae	135.8
Chelonoidis niger vandenburghi	Testudinidae	129.5
Chitra chitra javanensis	Trionychidae	129.0
Caretta caretta	Cheloniidae	125.0
Aldabrachelys gigantea gigantea	Testudinidae	123.0
Trionyx triunguis	Trionychidae	120.0
Cylindraspis indica †	Testudinidae	117.0
Chelonoidis niger donfaustoi	Testudinidae	112.0
Rafetus swinhoei	Trionychidae	109.5
Cylindraspis vosmaeri †	Testudinidae	109.0
Podocnemis expansa	Podocnemididae	109.0
Chelonoidis niger darwini	Testudinidae	107.0
Chelonoidis niger becki	Testudinidae	105.0
Cylindraspis inepta †	Testudinidae	104.0
Pelochelys bibroni	Trionychidae	102.0
Aldabrachelys gigantea daudinii †	Testudinidae	101.0
Chitra vandijki	Trionychidae	100.0
Pelochelys cantorii	Trionychidae	100.0
Pelochelys signifera	Trionychidae	100.0
Chelonoidis niger abingdonii †	Testudinidae	99.1
Chitra indica	Trionychidae	99.0

Table 5. Top 25 smallest modern turtle taxa by maximum straight-line carapace length (SCL, cm) of the larger sex; † = extinct.

Taxon	Family	SCL
Kinosternon vogti	Kinosternidae	10.2
Kinosternon cora	Kinosternidae	10.8
Chersobius signatus	Testudinidae	11.0
Chersobius boulengeri	Testudinidae	11.0
Kinosternon subrubrum hippocrepis	Kinosternidae	11.1
Kinosternon steindachneri	Kinosternidae	11.4
Chersobius solus	Testudinidae	11.4
Glyptemys muhlenbergii	Emydidae	11.5
Sternotherus intermedius	Kinosternidae	11.6
Pelodiscus huangshanensis	Trionychidae	11.6
Kinosternon hirtipes megacephalum †	Kinosternidae	11.7
Kinosternon acutum	Kinosternidae	12.0
Kinosternon angustipons	Kinosternidae	12.0
Homopus areolatus	Testudinidae	12.0
Pelusios nanus	Pelomedusidae	12.2
Kinosternon creaseri	Kinosternidae	12.5
Kinosternon subrubrum subrubrum	Kinosternidae	12.5
Sternotherus depressus	Kinosternidae	12.5
Sternotherus peltifer	Kinosternidae	12.6
Kinosternon baurii	Kinosternidae	12.7
Geoemyda spengleri	Geoemydidae	12.8
Pyxis arachnoides brygooi	Testudinidae	12.8
Emys orbicularis eiselti	Emydidae	13.1
Psammobates tentorius tentorius	Testudinidae	13.1
Kinosternon alamosae	Kinosternidae	13.5
Kinosternon hirtipes magdalense	Kinosternidae	13.6
Kinosternon hirtipes tarascense	Kinosternidae	13.6
Clemmys guttata	Emydidae	13.6

should have their genetic samples accessioned into GenBank (https://www.ncbi.nlm.nih.gov/genbank/) or the European Nucleotide Archive (ENA; https://www.ebi.ac.uk/ena), or other similar public repository, and their accession numbers published. We solicit input from our readers to update and correct any errors of omission or commission.

Taxonomic Changes

A primary purpose of this checklist is to record taxonomic changes published in the literature, to evaluate the strength of the data supporting those proposed changes, and to recommend whether the community should adopt or reject the proposed changes. It is important to note that the recommendations we make here as the TTWG regarding the validity or non-validity of any included or excluded taxonomic names or systematic relationships are not prescriptive, nor are they official recommendations by the TFTSG or the IUCN, as such matters are generally best left to specialists working in these areas. However, we have tried to be consistent in our listing of what appear to be valid taxa and relationships, based on criteria of published scientific descriptions and proposed taxonomic changes accompanied by data and sound argumentation (TTWG 2007a) (see also inset on p. 15).

Our hope is that through this process, the TTWG and the TFTSG may help stabilize and guide the fluid state of chelonian systematics and nomenclature, and provide a standard reference source for updated taxonomy, systematic relationships, distributions, and conservation status of all turtles and tortoises. The list should also provide an impetus for ongoing and future work aimed at clarifying and resolving areas of taxonomic disagreement and/or uncertainty, as well as documented distribution patterns.

The very first checklist (TTWG 2007b) was compiled on the 'last published revision' principle, though reflecting some alternative arrangements through our use of the '*Xxxx* **or** *Yyyy*' arrangement. As the checklist has developed over the years and is increasingly adopted as the taxonomic standard by other groups and entities (IUCN Red List, Reptile Database, and others), and informs nomenclatural deliberations in CITES, ITIS, and other institutions, the TTWG author team has increasingly felt a need to evaluate both the scientific merit and the wider implications of adopting proposed taxonomic novelties. Evaluations have always been on a case-by-case basis, bringing the diverse perspectives of the authorship team to bear on the merits of each proposed change. We have considered drafting criteria for adoption or rejection, but concluded that every case is unique, making it unrealistic and undesirable to rely on a single set of "rules". Instead, we have formulated guidelines and considerations of what increases (or decreases) the scientific credibility of a proposed taxonomic novelty, and therefore the likelihood of its adoption into (or rejection from) the TTWG turtle checklist (see inset on p. 10).

We have previously (TTWG 2007a) presented proactive guidelines for researchers proposing taxonomic novelties; these remain valuable guidance also when we evaluate new published names or arrangements. But updating the checklist has required additional considerations, which we describe here. None of these are all-or-nothing decisions; instead, almost every proposed taxonomic novelty, and the underlying supporting data as presented in the publication, falls somewhere on a continuum between 'adopt unreservedly' and 'reject outright'.

The collective weight of evidence supporting any proposed change (availability of the name; strength and nature of the supporting evidence; phylogenetic context; agreement with other studies; effect on taxonomic stability) is deliberated by the TTWG team (often very extensively and often with different philosophical views of the value of the underlying evidence). In order to provide a more comprehensive and international approach to TTWG deliberations and decisions, especially as regards issues of phylogenetic analysis, in 2017 we expanded our previous authorship team (Rhodin, Iverson, van Dijk, Shaffer, and Bour) to also include Georges and Fritz. We have also frequently sought the advice of experts outside the TTWG. Our deliberations lead to conclusions on whether to:

1) adopt fully, reject, or recommend modification of a proposed taxonomic change,

2) include it as an '*Xxxx* (or *Yyyy*)' arrangement, or

3) suspend adoption until additional, independent supporting or alternative data are published.

It is important to note that decisions and recommendations within the TTWG are not always unanimous, and our checklist is not necessarily reflective of the individual taxonomic views or conclusions of all team members. In the accompanying text box (see inset on p. 10), we summarize our guidelines and recommendations for making taxonomic changes.

Nomenclatural and taxonomic changes often have disruptive effects for legislation and other 'users' of checklists. A degree of disruption is inevitable as phylogenetic knowledge accumulates; but we are more likely to adopt proposed changes that have significant 'disruptive' effects on widely-used names if such changes are strongly supported by robust data. In contrast, we are inclined to suspend adoption of novel names and arrangements if they are based on weaker data sets or do not greatly improve our overall phylogenetic understanding. As an example, we would be reluctant to adopt a proposal to transfer a single species out of an established genus to form a new, monotypic genus, a move that would involve new names and combinations without significant improvement of our understanding of the overall relationships of the group of species. We repeat our recommendation (TTWG 2007a) that taxonomy should not be driven by politics or opportunism, but that

TTWG Guidelines for Taxonomic Changes

Taxonomy is both a summary of scientific knowledge and a language for biological communication. As such, it is critical that taxonomic changes be carefully considered and based on strong, comprehensive underlying data to ensure that changes are stable and long-lasting. We fully recognize that taxonomy and the systematics research on which it is based, is a dynamic field and that change is a sign of healthy science. However, we also recognize that taxonomic and nomenclatural stability are of immense value to the wider community of biologists, conservationists, legislative authorities, and the public at large. Pauly et al. (2009) argued that taxonomy should aim for stability and monophyly; in cases where these two objectives are in conflict, well-supported monophyly usually prevails over stability. Given the dynamic nature of turtle taxonomy, we believe that a series of best practices can and should be followed that should lead to changes that are stable, informative, and long-lasting. We summarize these best practices both to identify many of the key points in our group discussions on newly-proposed name changes, and as a set of considerations for authors who are considering new name changes. We hope the community finds them useful. For additional related discussions, see TTWG (2007a), Pauly et al. (2009), Kaiser et al. (2013), Rhodin et al. (2015), and Thomson et al. (2018).

1. A proposed taxonomic change must meet the ICZN criteria for nomenclatural validity. Published names gain much greater credibility by being published in a peer-reviewed scientific journal or equivalent publication standard. These standards include the 2012 emendations of the Code (ICZN 2012) regarding accepted methods of electronic publication of new names.

2. Taxonomic changes above the species level should preferably be suggested and adopted only when a currently recognized higher taxon is demonstrably non-monophyletic. We share the view of the global systematics community that phylogeny should be reflected in higher taxonomic categories, and that changes should be proposed to "fix" a non-monophyletic grouping. As discussed in no. 5 below, non-monophyly should be based on multiple lines of statistically well-supported evidence. As pointed out by Pauly et al. (2009), the use of novel levels within a taxonomic hierarchy (subgenera, supergenera, etc.) allows for the recognition of new and/or previously known clades while still maintaining taxonomic stability within a group.

3. Taxonomic changes should incur the fewest possible name changes while resulting in a final set of monophyletic taxa. We share the view that taxonomic stability, and therefore the fewest possible nomenclatural changes, is always a desirable outcome.

4. Avoid naming monotypic higher groups when possible. As has been repeatedly stated in the literature, monotypic genera, families, etc. provide only very limited information on group membership, and therefore are less informative than alternative schemes where higher groups have multiple species within them. This may imply merging or lumping, rather than splitting, to resolve issues of non-monophyly. On the other hand, monotypic higher taxa emphasize the unique position of its contained (surviving) taxon. Monotypic higher taxa have been recognized among turtles for over two centuries, and many (though not all) contain additional extinct taxa as well as a single surviving species. We do not advocate eliminating traditionally recognized monotypic, and usually reciprocally monophyletic, higher taxa (since that would lead to taxonomic destabilization), but caution against proliferation of monotypic higher taxa.

5. Taxonomic arrangements that are supported by several independent character sets, provide strong support for each, and report reasonable concordance between different datasets are more compelling than results from a single character set. Independence in evolutionary studies is a complex concept. In systematics, independence means that characters are not constrained to covary. For example, when multiple genetically independent nuclear genes, or nuclear genes and morphological characters, imply the same phylogenetic relationships or species boundaries, they presumably do so because both reflect the evolutionary history of the contained lineages. However, two mitochondrial genes are far less independent, since they are physically linked in the same non-recombining piece of mtDNA, and natural selection, drift, introgression, or any other process act simultaneously on that linked set of nucleotides. Single characters (e.g., only mitochondrial or nuclear DNA, or only geographic distribution patterns) may reflect the history of the species, or they may reflect the history of that one character. We strongly recommend that individual characters (each nuclear gene, composite set of mtDNA data, morphological, behavioral, and other characters) be analyzed separately to test for concordance among multiple independent data sets.

6. Independent datasets may or may not provide convincing evidence for monophyly and taxonomic changes. When one dataset conflicts strongly with several other independent ones, there may still be strong support for the hypothesis supported by multiple independent data sets. However, character conflict may often suggest that additional analyses or data are needed before taxonomic changes should be endorsed and accepted.

7. Sampling should be comprehensive at the appropriate level. Broad taxon sampling for species trees, with multiple specimens from across the geographic range of each taxon, can help avoid spuriously high statistical support values for apparent clades (see Spinks et al. 2013 for a recent chelonian example).

8. Species delimitation studies should include broad geographic sampling of all relevant taxa. Comprehensive geographic sampling for each character from individuals across the ranges of all species being considered is often critically important to correctly diagnose new species. We recognize that comprehensive geographic sampling may be difficult for rare species, but every effort should be made to be as comprehensive as possible.

9. Studies that only evaluate a taxonomic or geographic subset of the relevant group, or only make changes to some taxa without evaluating the relevance of these changes to related taxa, are less likely to be convincing and stand the test of time, and therefore are less likely to be widely adopted. For example, a study that elevates a particular subspecies to species rank, without examining variation among the remainder of the species is unlikely to be adopted until further supporting and clarifying information is published.

10. The TTWG primarily reacts to taxonomic changes proposed in the published literature, although we also will take under consideration publications that are under review but not yet published if they add additional information to a proposed change. Any information that the TTWG members have access to can be used to argue for or against adoption of a new taxonomic arrangement proposed in a validly published publication, although in almost all cases we rely on information that is either published or under review in a peer-reviewed journal. The TTWG will not use information from an as-yet unpublished study or manuscript to initiate a taxonomic change. In very rare cases, the TTWG may decide to make a new nomenclatural act, such as creating new nomenclatural combinations.

the wider implications of taxonomic and nomenclatural decisions be understood and carefully considered.

We have noted for many years that the ICZN (2012) has emended its Code regarding accepted methods of electronic publication of new names. The revision permits electronic publication after 2011 only after the work (not the new name) is first registered in ZooBank (http://zoobank.org/; The Official Registry of Zoological Nomenclature). ZooBank must register the precise electronic archive where the work is to be published, as well as the ISSN or ISBN of the work. In addition, amendments to the Code also clarify that preliminary electronic versions of works due for publication on paper are unavailable, and that abstracts of meetings, presentation texts and posters are unavailable for nomenclatural purposes, and preliminary electronic versions do not bring forward the date of publication, unless the electronic version meets the requirements for availability. Authors intending to publish taxonomic novelties in electronic archives are cautioned to read the text of International Commission on Zoological Nomenclature (2012) carefully, and to follow the guidelines precisely, or be at risk of having their work judged as inadmissible.

Distributions

We summarize distributions for all taxa in the checklist, listing all nations and territories in which they occur as native populations (see Tables 6–8 for the top turtle-rich nations). For several larger nations we also list political or geographic subunits (e.g., states, provinces, regions, or larger islands). We attempt to also indicate nations or territories where species have been extirpated or where they occur as non-native introduced or invasive species, or where there are uncertainties as to occurrence.

For introductions, we attempt to distinguish between two forms: (1) modern introductions (since ca. 1500 CE) for those species that appear to have relatively well-established or potentially reproducing populations in extra-limital areas primarily as a result of relatively recent trade for food or pets or planned conservation introductions (labeled “introduced” or “modern”), and (2) earlier historic or prehistoric introductions for those species that appear to have native populations, but where population genetics studies find evidence of founder effects suggestive of possible introduction by humans, or other dispersal events, during the last ca. 2000–3000 years (labeled “prehistoric introduction?”).

For freshwater and terrestrial turtles and tortoises, we compiled native and introduced distributions and locality records from a combination of multiple published and database sources. For native distributions we used Iverson (1992) and Fritz and Havaš (2007) as starting points, and then added data from other recent literature by numerous authors, data from our extensive database compiled from Iverson’s work by Buhlmann et al. (2009), further data from our published CBFTT species accounts, our TFTSG-organized IUCN Red Listing workshops, and data from Iverson’s continuing intensive compilation of distribution records from the literature.

For introduced species, we used Kraus (2009) as a starting point and have added data from other publications and online sources and databases. We have attempted to list introductions that are based on recorded populations rather than just single animals (but not necessarily with evidence of reproduction), but have not been rigorous in this, as it can be difficult to determine what the actual situation may be in each recorded case.

Finally, we also solicited and received input from many members of the TFTSG for corrections and additions to all the native distributions and introductions data. Despite this effort, it is likely that we have committed errors of omission or commission, and we request that any corrections or updates be brought to our attention so that they can be included in future editions of this checklist.

For sea turtles, we compiled distributions from a combination of IUCN Red List data, CMS (Convention on Migratory Species) listings, and the extensive listings of nesting sites and foraging ranges that the IUCN/SSC Marine Turtle Specialist Group (MTSG) includes in its SWOT mapping application (The State of the World’s Sea Turtles) (http://seaturtlestatus.org/learn/maps/all), generously supplied to us by the MTSG. Based on these data, we list sea turtle distributions in three distributional categories: 1) nesting: native regularly nesting populations, 2) foraging: native permanently foraging or regularly migrating populations (but no evidence yet of regular nesting), and 3) vagrant: temporarily foraging or migrating animals not necessarily considered native.

GIS Maps and Historic Ranges

This edition of the checklist now includes 603 separate distribution maps for species, subspecies, families, suborders, and species richness. We provide enhanced and updated maps that include specific locality points upon which species and subspecies ranges are based, as well as detailed topographic features. Nearly all distributional ranges have been revised based on new data and improved geographic analysis, in general restricting most ranges somewhat more tightly around recorded localities, and depicting what we consider to be the **presumed historic indigenous range**.

We have followed the definition of the historic indigenous range of a species as established by the IUCN (2013) as “the known or inferred distribution generated from historical (written or verbal) records, or physical evidence of the species’ occurrence. Where direct evidence is inadequate to confirm previous occupancy, the existence of suitable habitat within ecologically appropriate proximity to proven range may be taken as adequate evidence of previous occupation.” Following

Table 6. Top turtle-rich countries for all extant **Species** of terrestrial tortoises, freshwater turtles, and nesting sea turtles.

Tortoises & Freshwater Turtle Species	Tortoises & Freshwater Turtles & Nesting Sea Turtles
1. USA, 59	1. USA, 64
2. Mexico, 48	2. Mexico, 54
3. Brazil, 32	3. Brazil, 37
4. Indonesia, 31	4. Indonesia, 35
5. China, 29	5. Australia, 33
India, 29	Colombia, 33
7. Colombia, 28	India, 33
8. Australia, 27	8. China, 32
Vietnam, 27	9. Vietnam, 31
10. Myanmar, 26	10. Bangladesh, 30
11. Bangladesh, 25	11. Myanmar, 29
Thailand, 25	Thailand, 29
13. Laos, 19	13. Malaysia, 23
Malaysia, 19	14. Venezuela, 22
15. South Africa, 18	15. Ecuador, 20
Venezuela, 18	South Africa, 20
17. Congo (DRC), 17	17. Laos, 19
18. Ecuador, 16	18. Congo (DRC), 17
Nepal, 16	Panama, 17
20. Bolivia, 15	20. Cameroon, 16
21. Cambodia, 14	Guatemala, 16
22. Cameroon, 13	Nepal, 16
Guatemala, 13	Papua New Guinea, 16
24. Angola, 12	24. Mozambique, 15
Central African Republic, 12	
Kenya, 12	
Nigeria, 12	
Papua New Guinea, 12	
Peru, 12	
Tanzania, 12	

the recommendations of Akçakaya et al. (2018) and Stephenson et al. (2019), we have selected a benchmark cutoff date of approximately 1500 CE for the determination of the presumed historic indigenous range of all turtle species, that being the year from which the IUCN Red List considers modern extinctions and the approximate start of European expansion and global development patterns beginning to impact native turtle ranges.

Edited or new maps in the current checklist with new locality points and/or significantly revised historic ranges differing from the previous checklist are indicated by an asterisk (*); those with new locality dots with only a minimal or no range change are indicated by a bullet (•).

Map production began with point locality datasets from Iverson (1992), based on the many museum-held voucher specimens and published records amassed by John Iverson over the years and updated on the EmySystem website. These datasets were then supplemented by newer data and converted into shapefiles and edited and corrected and updated for content by Iverson, Ross Kiester, Tom Akre, Kurt Buhlmann, Peter Paul van Dijk, Arthur Georges, Anders

Table 7. Top turtle-rich countries for all extant **Taxa** (species and subspecies) of terrestrial tortoises, freshwater turtles, and nesting sea turtles.

Tortoises & Freshwater Turtles Taxa	Tortoises & Freshwater Turtles & Nesting Sea Turtles
1. USA, 83	1. USA, 88
2. Mexico, 59	2. Mexico, 65
3. India, 36	3. India, 40
4. Indonesia, 35	4. Indonesia, 39
5. China, 33	5. Australia, 37
6. Brazil, 32	Brazil, 37
Vietnam, 32	7. China, 36
8. Australia, 31	Vietnam, 36
9. Colombia, 30	9. Colombia, 35
10. Myanmar, 28	10. Ecuador, 31
11. Ecuador, 27	Myanmar, 31
12. Thailand, 26	12. Thailand, 30
13. Bangladesh, 24	13. Bangladesh, 29
14. Malaysia, 22	14. Malaysia, 26
15. Laos, 20	15. Venezuela, 24
South Africa, 20	16. South Africa, 22
Venezuela, 20	17. Laos, 20
18. Congo (DRC), 17	18. Guatemala, 18
Nepal, 17	19. Congo (DRC), 17
20. Bolivia, 15	Nepal, 17
Guatemala, 15	21. Cameroon, 16
22. Cambodia, 14	Mozambique, 16
23. Cameroon, 13	Panama, 16
Peru, 13	Papua New Guinea, 16
Tanzania, 13	

Table 8. Top turtle-rich countries for extant **Endemic Taxa** (species and subspecies) of terrestrial tortoises and freshwater turtles.

1. USA, 59	6. India, 8
2. Mexico, 30	Madagascar, 8
3. Australia, 28	8. Indonesia, 7
4. China, 12	Myanmar, 7
Ecuador, 12	10. Brazil, 6

Rhodin, Russ Mittermeier, and Whit Gibbons, and analyzed by Buhlmann et al. (2009).

The original maps created this way were based on constructing projected historical ranges. This was done by selecting GIS-defined hydrologic unit compartments (HUCs; www.hydrosheds.org), originally at coarse level 6 hydroshed basins with verified locality points, and then adding HUCs that connected known point localities in the same watershed or physiographic region and that had similar habitats and elevations as the verified HUCs. As such, these first maps represented predicted ranges that were generally larger than reality, and required further verification and adjustment.

These distribution shapefiles were then further revised and formatted by Rhodin using ArcGIS Desktop 10.1 (www.esri.com) as part of the IUCN-associated BioFresh initiative (http://atlas.freshwaterbiodiversity.eu/), using finer geographic scales (IUCN hydroshed basins at HUC levels 10 and 12) using the WGS 1984

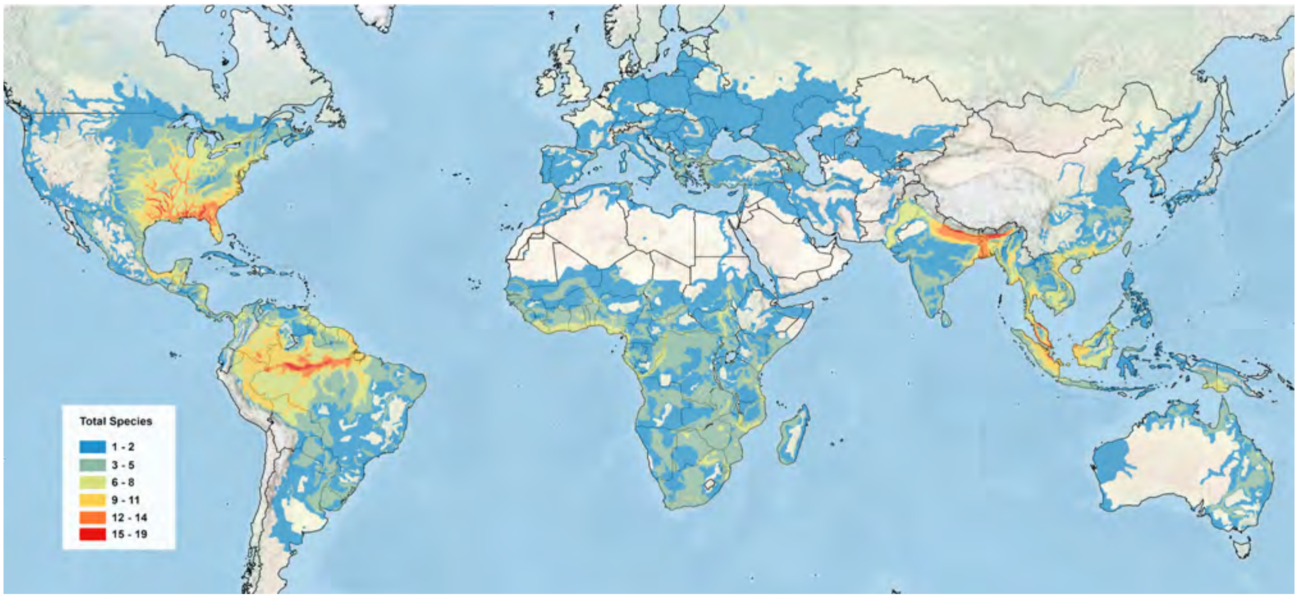


Figure 2. Global Species Richness Map for all 345 extant freshwater and terrestrial turtle and tortoise species (not including extinct species) as presented in this checklist and atlas using fine-scaled HUC level 12 hydrobasin polygons. See comparative map by Buhlmann et al. (2009) that used broad-scaled HUC level 06 hydrobasin polygons. For enlarged and more detailed regional and focused species richness maps, see Figs. 3–8.

coordinate system (available at https://www.iucnredlist.org/resources/spatialtoolsanddata). This allowed elimination of many higher-altitude regions from the projected ranges (notably in areas such as the Himalayan and Andean foothills and other mountainous regions), while keeping lower altitude HUC distributions in the same overall drainage basins, and in general significantly tightening up and reducing many of the projected ranges around known locality points. Similarly, many primarily riverine species had their ranges limited to tighter distributions around the rivers from which they had been recorded. As a result, for those species that have not been taxonomically split or synonymized, the average difference in presumed ranges of the species recorded in Buhlmann et al. (2009) to their corresponding ranges recorded in this checklist is a 19.9% reduction, with many species having much greater decreases. The maps have also been further revised through input of data provided by authors of published CBFTT accounts and participants in TFTSG-organized IUCN Red Listing workshops, but still represent projected and assumed historical ranges. For some taxa with extremely limited distributions (e.g., *Chelonoidis niger* subspecies in the Galápagos and a few other small-island taxa), custom-drawn polygons smaller than HUC level 12 were used as appropriate.

Sea turtle maps were generated from GIS data generously supplied to us by the IUCN/SSC Marine Turtle Specialist Group (MTSG) and SWOT, and show documented nesting sites as yellow dots and generalized foraging distributions for each species as shaded oceanic distributional ranges delimited as either Regional Management Units (RMUs) or Distinctive Population Segments (DPSs) (see Seminoff et al. 2015).

For some relatively cryptic, poorly known, or possibly questionable species, the ranges depicted in this checklist are at best general approximations of their potential distributions. Species that fall into this category include *Pelodiscus axenaria*, *P. huangshanensis*, *Cuora mccordi*, *C. zhoui*, *Cyclemys enigmatica*, *Rafetus swinhoei*, *Chelodina gunaleni*, and *Emydura tanybaraga*.

Widespread species with significant documented phylogeographic differentiation in the form of recognized subspecies or genetically-defined lineages and Evolutionarily Significant Units (ESUs) or Management Units (MUs) may eventually warrant recognition as multiple taxa at the species level. Some species that fall into this category include *Kinosternon hirtipes*, *K. integrum*, *K. scorpioides*, *Terrapene carolina*, *Cuora amboinensis*, *Melanochelys trijuga*, *Chelonoidis carbonarius*, *Testudo graeca*, and *Phrynops geoffroanus*.

Native populations and recorded specimens are marked with yellow locality spots set in partially transparent distribution range polygons (using HUCs), using red polygons at 50% transparency for species and nominate subspecies, and other colors at 50% transparency for other subspecies. Populations that represent possible prehistoric introductions (whether genetically verified or hypothesized as such) or possible prehistoric or more recent natural range extensions are also indicated with yellow spots.

A composite species richness map for all extant tortoise and freshwater turtle species is depicted in Fig. 2, with enlarged regional detailed maps in Figs. 3–5. We also provide focused continental richness maps for Europe, Africa, and Australia in Figs. 6–8, as each of those continents has less species richness than North and South America and Asia. We note that the three most prominent global areas of high species richness are the southeastern USA in

Figure 3. Species Richness Map for North and South America as presented in this checklist and atlas using fine-scaled HUC level 12 hydrobasin polygons. For composite global species richness map, see Fig. 2.

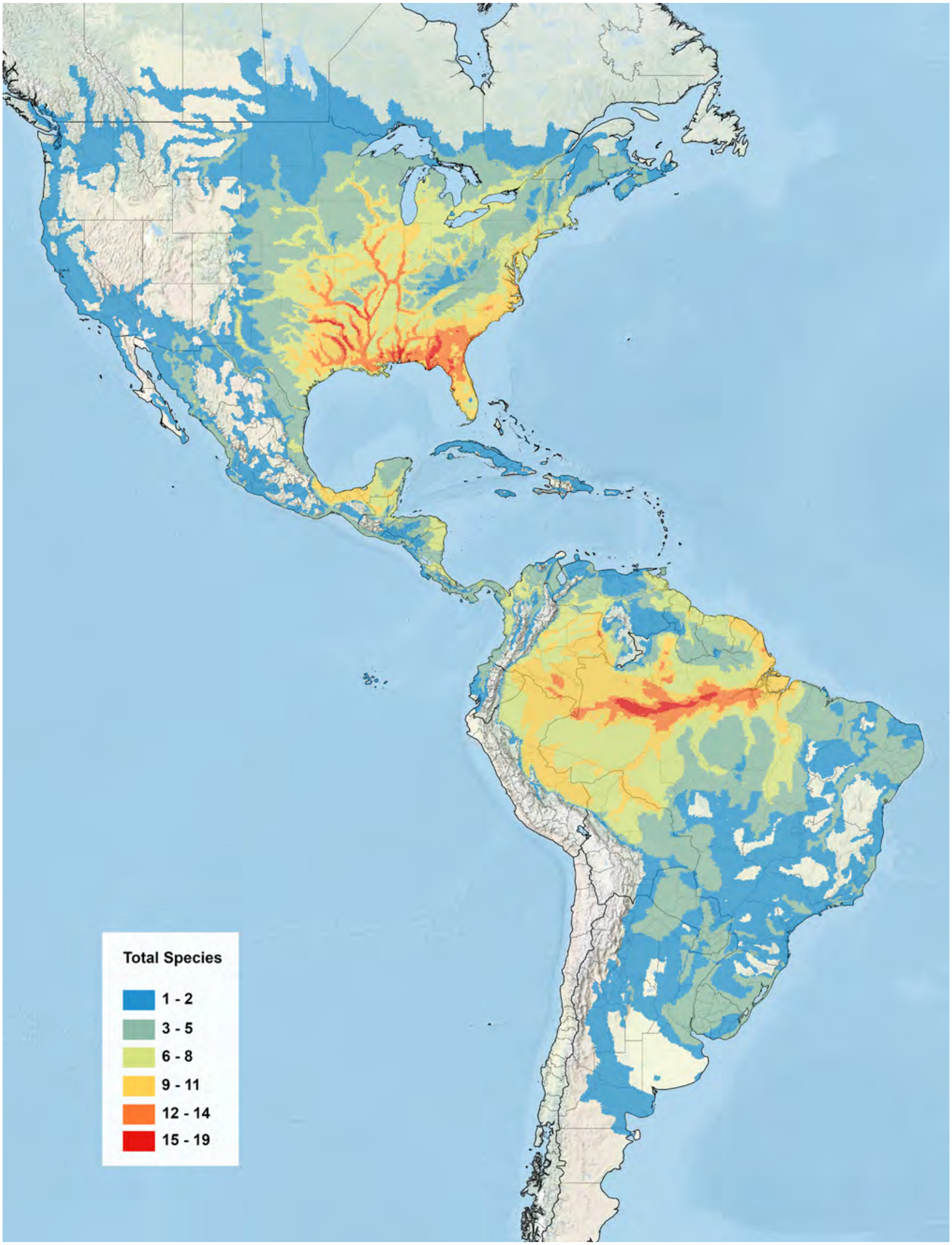


Figure 4. Species Richness Map for Europe and Africa as presented in this checklist and atlas using fine-scaled HUC level 12 hydrobasin polygons. For composite global species richness map, see Fig. 2.

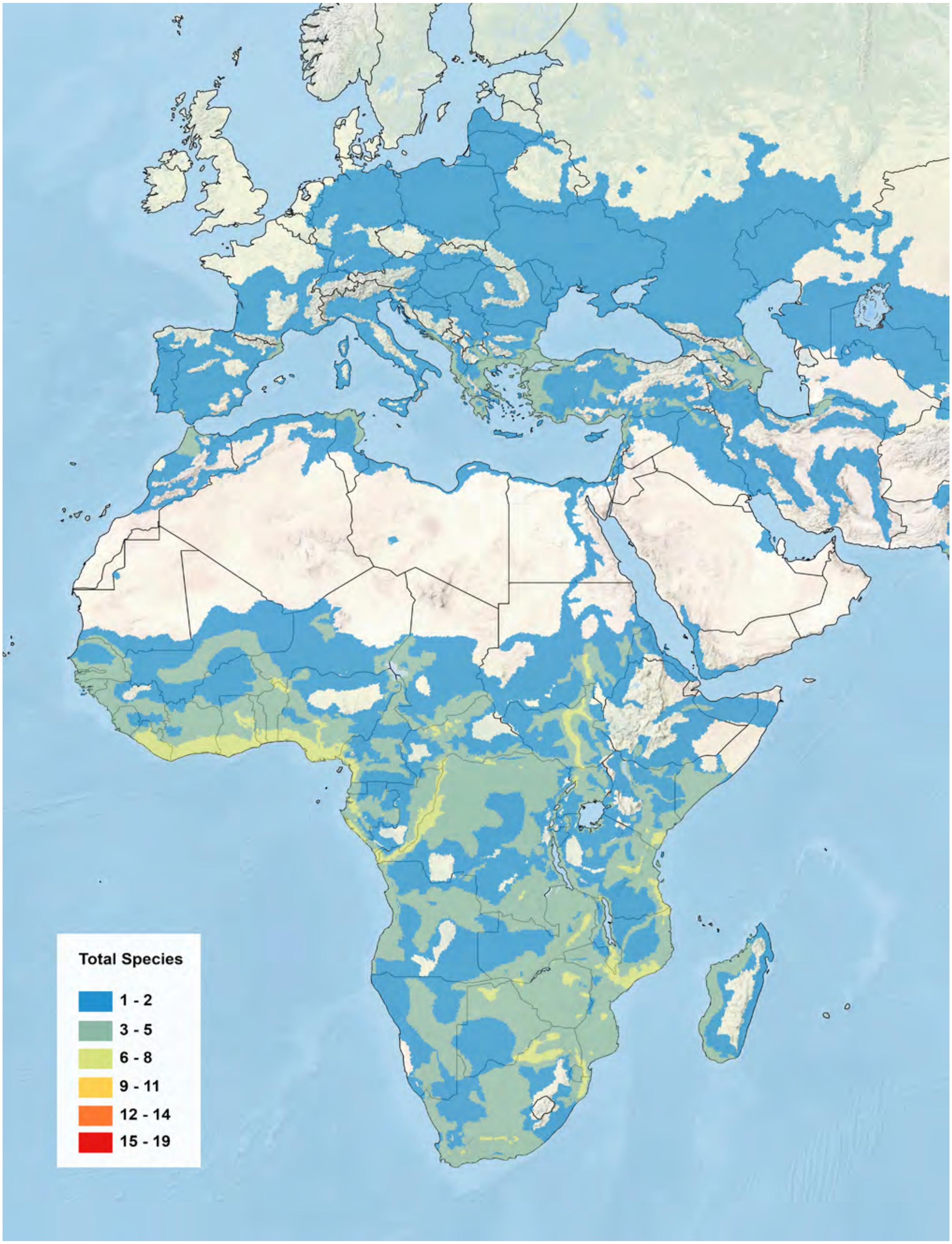


Figure 5. Species Richness Map for Asia and Australia as presented in this checklist and atlas using fine-scaled HUC level 12 hydrobasin polygons. For composite global species richness map, see Fig. 2.

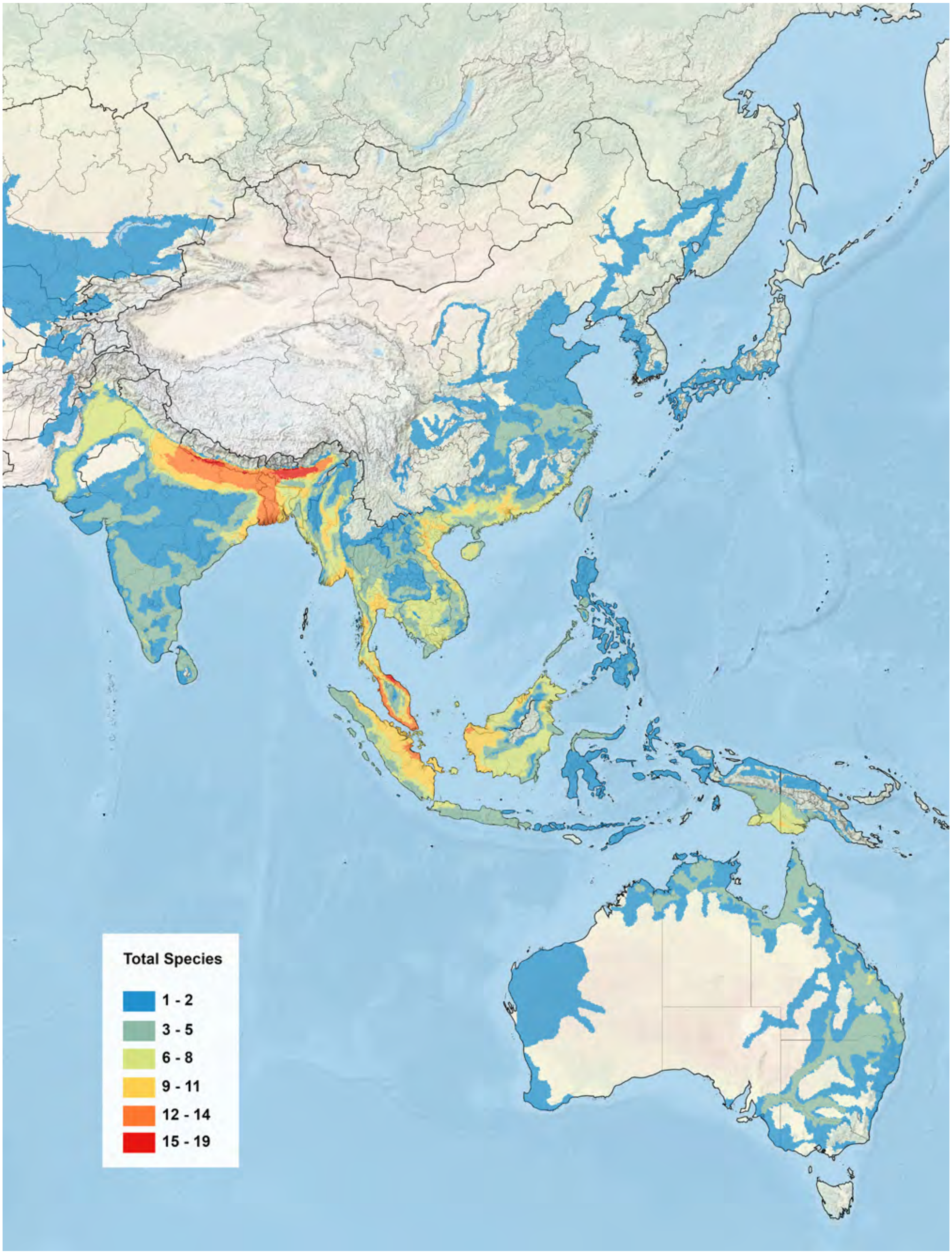
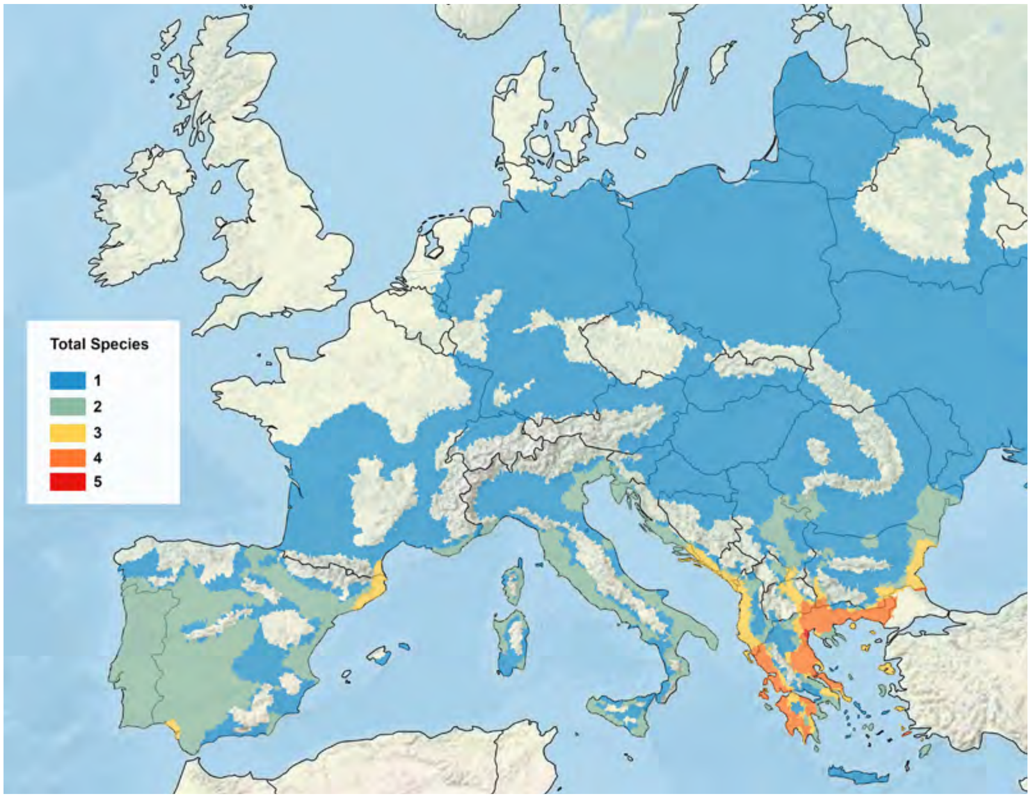


Figure 6. Focused Species Richness Map for only Europe as presented in this checklist and atlas using fine-scaled HUC level 12 hydrobasin polygons.



North America, the Amazon basin in South America, and the Brahmaputra-Ganges basins in Asia, as previously noted by Buhlmann et al. (2009) and Mittermeier et al. (2015). See Ennen et al. (2020, 2021) for further in-depth analysis of global biogeographic distribution and conservation patterns.

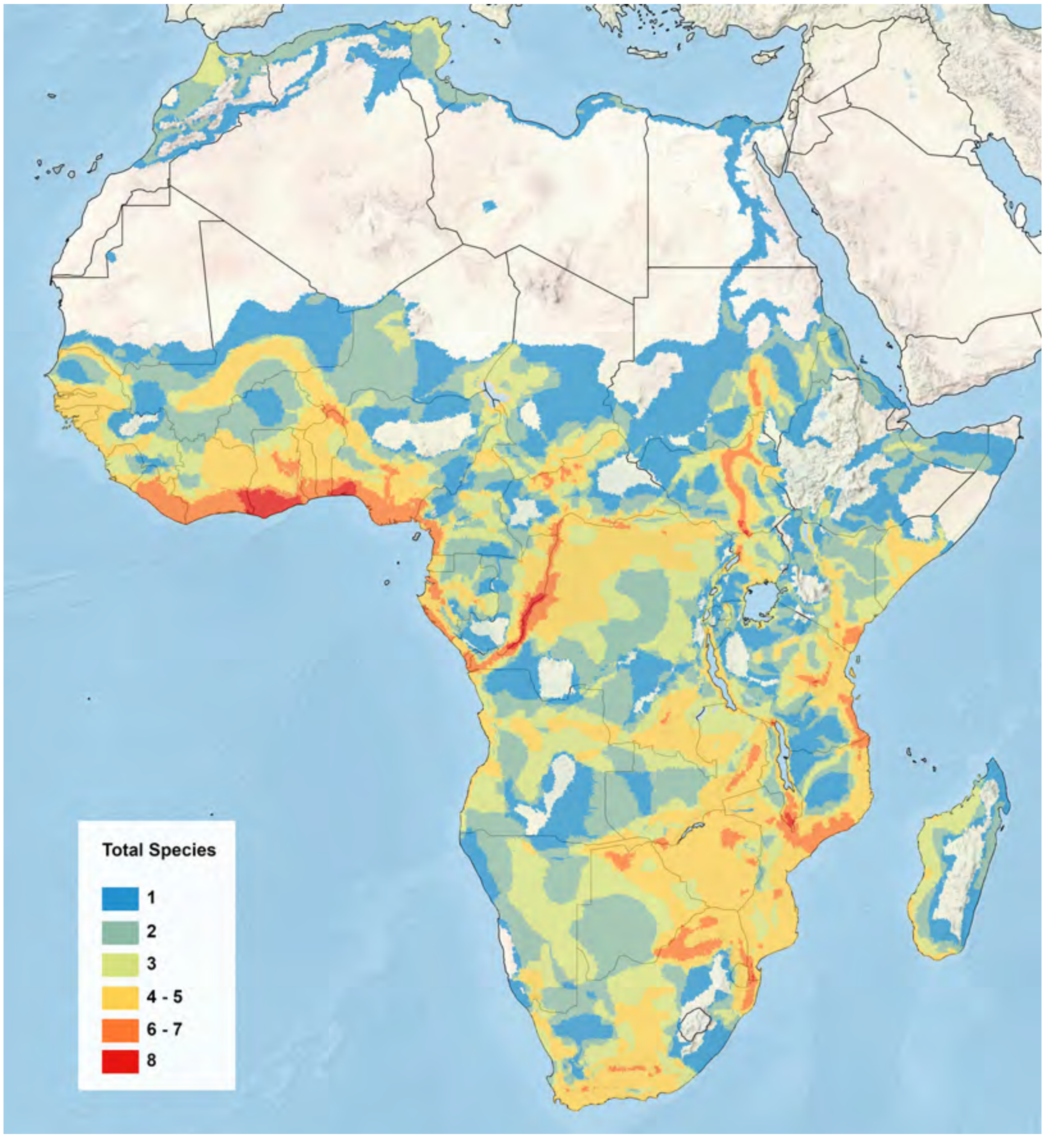
Apparently introduced populations near the native range that are most likely of modern and recent historic origin are generally included, and are indicated by orange spots. Remote introduced populations are not included. Questionable locality records near the native range (possibly misidentified and/or regional trade specimens) are also indicated by orange spots. Extinct taxa (species or subspecies) are designated by red spots.

It is critically important to note that the maps published here depict projected and **presumed historic indigenous ranges**, defined as historic area of occupancy, or AOO, as per IUCN (2013) guidelines, as they are based on a combination of older historical museum and literature data and more recent locality data, and **do not** indicate actual **current** areas of occupancy of these species. Most turtle and tortoise species have had their historical ranges decrease considerably as a result of extensive habitat loss and degradation and/or overexploitation. For example, the ranges depicted here for *Batagur trivittata* and *Geochelone platynota* from Myanmar, and *Psammobates geometricus* from South Africa, show their **historic indigenous** ranges, rather than their **current** ranges, which have all been reduced by >90%. In general, all species assessed as Critically Endangered or Endangered on the IUCN Red List or the TFTSG Provisional Red List have had their current AOO ranges greatly decreased from historical extents.

In this edition of the checklist, we have calculated these historic range sizes (in sq. km) for all tortoises and freshwater turtles—but not marine turtles—and include that value under each taxon. We calculated presumed historic ranges precisely in ArcGIS using Goode Homolosine (Land) equal area projections of our GIS range polygons generated using fine-scaled HUC levels 10 or 12. As such, these distribution ranges reflect apparently precise and reasonably accurate **potential or presumed historic indigenous** range sizes, but **not** the IUCN-defined extent of occurrence (EOO) or actual area of occupancy (AOO), either historic or current. Furthermore, each individual HUC polygon, especially along the edges of the depicted range, may be larger than the actual distribution of the species within that polygon, thereby somewhat overestimating the total presumed indigenous range.

Importantly, the precision and accuracy of these calculated presumed historic indigenous ranges are also clearly affected by our choice of how tightly or broadly to limit the selected range around our point localities, and how best to reflect apparent discontinuities in the range, and should not be interpreted as realistically indicative of the apparent precision. We can clearly expect significant

Figure 7. Focused Species Richness Map for only Africa as presented in this checklist and atlas using fine-scaled HUC level 12 hydrobasin polygons.



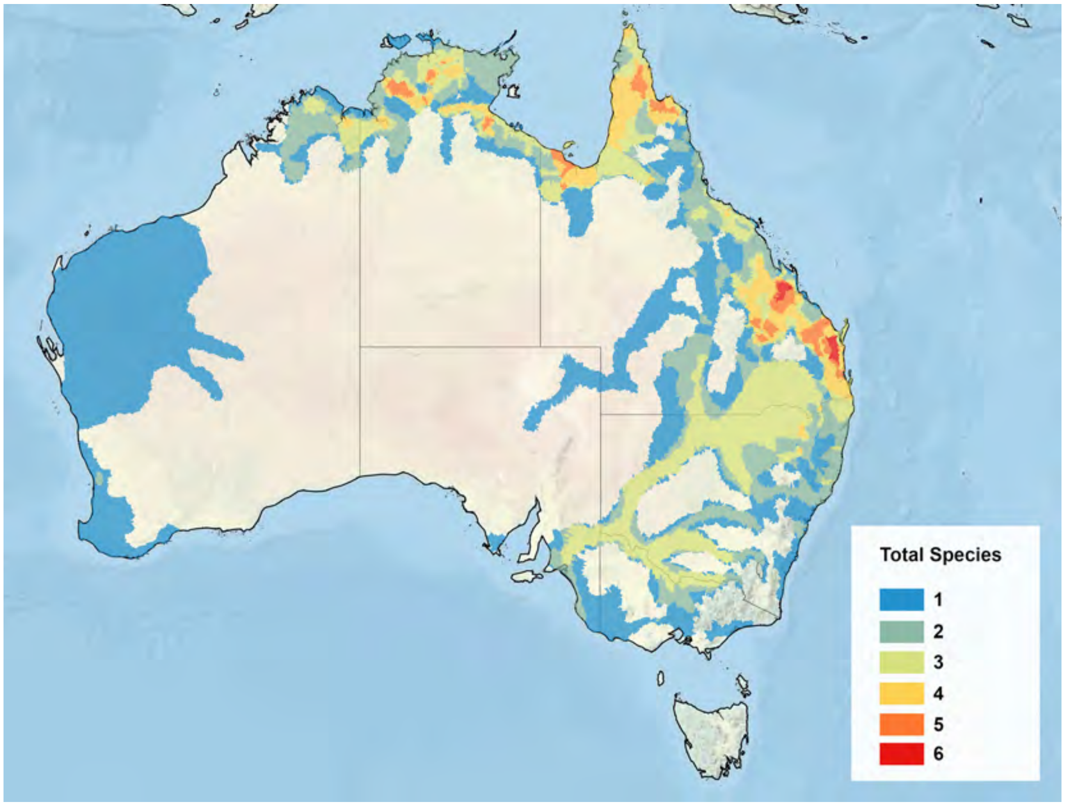
potential variance in the numbers provided, but have chosen not to round them off.

As an example of some of these potential discrepancies and caveats, the presumed historic indigenous range for the Coahuilan Box Turtle, *Terrapene coahuila*, based on our map using HUC level 12 polygons, is 1,170 sq. km, whereas the potential turtle habitat of the closed Cuatro Ciénegas Basin, where the species exists, is only about 840 sq. km (Howeth and Brown 2011 CBFTT), and the species' apparent area of occupancy (AOO) has been estimated to have shrunk from about 600 sq. km in the 1960s to only about 360 sq. km in the early 2000s (van Dijk et al. 2007 IUCN), and now considered to be less than 6 sq. km (Castañeda Gaytán 2020).

The average historic indigenous range size for all 479 tortoise and freshwater turtle taxa (species plus subspecies) was 451,744 sq. km, ranging from the smallest range of 9 sq. km for the Pinzón Giant Tortoise, *Chelonoidis niger duncanensis*, to the largest range of 7,136,270 sq. km for the Scorpion Mud Turtle subspecies, *Kinosternon scorpioides scorpioides*. Tables 9–10 list the top 50 ranked taxa with the, respectively, smallest and largest presumed historic indigenous ranges.

The taxa with the smallest indigenous ranges are the most likely to be endangered and threatened, with many already extinct (see Ripple et al. 2017; Newsome et al. 2020). Widespread species appear to be under less threat, but are more difficult to assess in terms of the degree to which they may be undergoing similar relative percentages of population reductions as the restricted-range species. Additionally, widespread species likely harbor potentially unrecognized regional or cryptic diversity that should be investigated for included evolutionarily significant lineages that might warrant taxonomic recognition and increased conservation concern,

Figure 8. Focused Species Richness Map for only Australia as presented in this checklist and atlas using fine-scaled HUC level 12 hydrobasin polygons.



as was recently demonstrated for the previously considered widespread species, *Pelomedusa subrufa* sensu lato, now a constellation of several recognized separate species (Petzold et al. 2014).

The average historic indigenous range size for all 350 tortoise and freshwater turtle species (combining subspecies distributions and eliminating areas of subspecific intergradation) was 621,463 sq. km. Based on current taxonomy, the species with the largest distribution is the polytypic Scorpion Mud Turtle species, *Kinosternon scorpioides,* from South and Central America, at 7,810,894 sq. km for its three included subspecies (*scorpioides, albogulare*, and *cruentatum*).

Conservation Status

We include current IUCN Red List conservation status for all species. The status categorizations listed here are current as of the IUCN Red List of Threatened Species™, version 2021.2 (www.iucnredlist.org). The TFTSG is the official global IUCN Red List Authority responsible for continuously updating IUCN Red List assessments of all tortoises and freshwater turtles, and this process is handled through multiple consensus-building workshops and consultations.

As many species on the Red List need updating, either because their previous evaluations are more than ten years old, or because of recent conservation status or taxonomic changes, we have also included the results of TFTSG Provisional Red List assessments (through May 2021) to indicate their current provisional status, which should be released on the official IUCN Red List site in the near future. In addition, many species that were determined by the TFTSG to be Least Concern in 1996 were never formally listed (as per IUCN Red List protocol at the time), but the original determinations as prepared at that time are still available and are indicated here.

Finally, we include regulatory status listings on CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) Appendices I, II, or III, current as of the 22 June 2021 listing (http://cites.org/eng/app/appendices.php). As such, this document brings together most important aspects of taxonomy, names, distribution, and conservation status of all turtles and tortoises of the world.

STATUS UPDATES AND DISCUSSION

Conservation Status

To assess and summarize the current conservation status of turtles and tortoises in the broadest strokes, we first provide an update and analysis of the most current IUCN Red List (www.iucnredlist.org). Additionally, since some species have not yet been assessed by

Table 9. Top 50 turtle taxa with the smallest presumed historic indigenous range sizes (sq. km); † = extinct.

Taxon	Family	Size
Chelonoidis niger duncanensis	Testudinidae	9
Chelonoidis niger subsp. Santa Fé [?] †	Testudinidae	13
Chelonoidis niger hoodensis	Testudinidae	31
Chelonoidis niger abingdonii †	Testudinidae	39
Chelonoidis niger donfaustoi	Testudinidae	53
Chelonoidis niger niger †	Testudinidae	81
Cylindraspis peltastes †	Testudinidae	113
Cylindraspis vosmaeri †	Testudinidae	113
Chelonoidis niger phantasticus	Testudinidae	137
Chelonoidis niger microphyes	Testudinidae	145
Aldabrachelys gigantea daudinii †	Testudinidae	159
Aldabrachelys gigantea arnoldi	Testudinidae	162
Aldabrachelys gigantea gigantea	Testudinidae	190
Chelodina mccordi timorensis	Chelidae	224
Aldabrachelys gigantea hololissa	Testudinidae	229
Chelonoidis niger darwini	Testudinidae	240
Pelusios castanoides intergularis	Pelomedusidae	240
Pelusios subniger parietalis	Pelomedusidae	240
Chelodina mccordi mccordi	Chelidae	242
Chelonoidis niger chathamensis	Testudinidae	250
Chelonoidis niger becki	Testudinidae	263
Chelonoidis niger porteri	Testudinidae	306
Chelonoidis niger vicina	Testudinidae	357
Chelonoidis niger vandenburghi	Testudinidae	380
Apalone spinifera atra	Trionychidae	535
Pelusios williamsi laurenti	Pelomedusidae	551
Cuora flavomarginata evelynae	Geoemydidae	668
Kinosternon hirtipes magdalense	Kinosternidae	694
Kinosternon vogti	Kinosternidae	700
Mauremys mutica kami	Geoemydidae	705
Chelonoidis niger guntheri	Testudinidae	707
Kinosternon hirtipes tarascense	Kinosternidae	709
Trachemys stejnegeri malonei	Emydidae	726
Kinixys zombensis domerguei	Testudinidae	835
Terrapene coahuila	Emydidae	840
Astrochelys yniphora	Testudinidae	884
Trachemys taylori	Emydidae	887
Myuchelys georgesi	Chelidae	987
Geoemyda japonica	Geoemydidae	1,613
Kinosternon hirtipes megacephalum †	Kinosternidae	1,659
Emys orbicularis ingauna	Emydidae	1,701
Kinosternon sonoriense longifemorale	Kinosternidae	1,704
Cylindraspis inepta †	Testudinidae	1,882
Cylindraspis triserrata †	Testudinidae	1,882
Pseudemydura umbrina	Chelidae	1,884
Emydura macquarii nigra	Chelidae	2,150
Cylindraspis indica †	Testudinidae	2,536
Chelodina kuchlingi	Chelidae	2,778
Myuchelys purvisi	Chelidae	3,142
Cuora picturata	Geoemydidae	3,541

Table 10. Top 50 turtle taxa with the largest presumed historic indigenous range sizes (sq. km).

Taxon	Family	Size
Kinosternon scorpioides scorpioides	Kinosternidae	7,136,270
Chelonoidis denticulatus	Testudinidae	6,016,719
Platemys platycephala platycephala	Chelidae	5,385,455
Chelydra serpentina	Chelydridae	5,355,623
Chelonoidis carbonarius	Testudinidae	5,099,045
Podocnemis unifilis	Podocnemididae	5,094,278
Stigmochelys pardalis	Testudinidae	4,560,754
Phrynops geoffroanus	Chelidae	4,156,787
Mesoclemmys gibba	Chelidae	3,993,262
Emys orbicularis orbicularis	Emydidae	3,929,538
Mesoclemmys raniceps	Chelidae	3,547,705
Centrochelys sulcata	Testudinidae	3,384,127
Chelus fimbriata	Chelidae	3,167,026
Podocnemis expansa	Podocnemididae	2,962,702
Pelomedusa subrufa	Pelomedusidae	2,913,756
Kinixys erosa	Testudinidae	2,810,555
Chrysemys picta bellii	Emydidae	2,579,476
Kinixys spekii	Testudinidae	2,498,158
Kinixys nogueyi	Testudinidae	2,445,542
Pelusios sinuatus bottegi	Pelomedusidae	2,288,663
Kinixys belliana	Testudinidae	2,268,595
Pelusios rhodesianus	Pelomedusidae	2,250,980
Mesoclemmys wermuthi	Chelidae	2,220,936
Pelusios gabonensis	Pelomedusidae	2,167,086
Rhinoclemmys punctularia punctularia	Geoemydidae	2,163,814
Sternotherus odoratus	Kinosternidae	2,104,014
Peltocephalus dumerilianus	Podocnemididiae	2,058,635
Trionyx triunguis	Trionychidae	2,050,595
Pelomedusa olivacea	Pelomedusidae	2,009,750
Cyclanorbis senegalensis	Trionychidae	1,998,159
Trachemys scripta elegans	Emydidae	1,991,029
Pelusios castaneus	Pelomedusidae	1,966,366
Lissemys punctata vittata	Trionychidae	1,903,820
Terrapene ornata	Emydidae	1,899,334
Apalone spinifera spinifera	Trionychidae	1,706,333
Pelusios subniger subniger	Pelomedusidae	1,664,250
Pelochelys cantorii	Trionychidae	1,514,742
Pelusios adansonii	Pelomedusidae	1,475,150
Cuora amboinensis kamaroma	Geoemydidae	1,391,572
Nilssonia gangetica	Trionychidae	1,371,884
Terrapene carolina carolina	Emydidae	1,359,554
Chrysemys picta marginata	Emydidae	1,353,033
Kinosternon flavescens	Kinosternidae	1,349,735
Cyclemys dentata	Geoemydidae	1,345,504
Lissemys punctata andersoni	Trionychidae	1,311,991
Indotestudo elongata	Testudinidae	1,308,716
Podocnemis sextuberculata	Podocnemididiae	1,210,901
Mesoclemmys vanderhaegei	Chelidae	1,208,086
Chelus orinocensis	Chelidae	1,142,174
Testudo horsfieldii kazachstanica	Testudinidae	1,126,892

the IUCN, for these taxa we provide additional analyses based on their provisional conservation status as determined by the TFTSG. The official determinations of conservation status of turtles are provided to the IUCN Red List by the TFTSG, which is continuously producing provisional assessments for unevaluated taxa as well as previously evaluated taxa needing updates (necessary every 10 years). Quantifying the overall conservation status and percentage of threatened species of turtles is important in understanding how seriously they are endangered, and how they compare with other imperiled clades. Mittermeier et al. (2015) provided an analysis of global Turtle Hotspots as part of such an evaluation, and Rhodin et al. (2018) provided a global overview of the conservation status of all turtles and tortoises as assessed at that time on both the IUCN Red List and the TFTSG Provisional

Red List. Subsequent work by Ennen et al. (2020, 2021) has analyzed the conservation status of turtles based on hydrobasin distributions.

The current IUCN Red List (version 2021.2) formally lists 274 turtle species (a 9.2% increase in number of species listed from 251 in 2017), in addition to 9 separate subspecies and 21 regional subpopulations, using a slightly different taxonomy from the one presented in this checklist. Of the 274 species listed, 8 are listed as Extinct (EX) [including *Pelusios seychellensis*, no longer considered valid in our current checklist, now synonymized under *Pelusios castaneus*] (unchanged since 2017), 67 Critically Endangered (CR), (a 67.5% increase from 40 in 2017), 46 Endangered (EN), (a 4.5% increase from 44 in 2017), 58 Vulnerable (VU) (a 10.8% decrease from 65 in 2017), 36 Near Threatened (NT) (a 5.9% increase from 34 in 2017), 1 Lower Risk/conservation dependent (LR/cd; an old category being phased out), 48 Least Concern (LC) (a 6.7% increase from 45 in 2017), and 10 Data Deficient (DD) (a 9.1% decrease from 11 in 2017).

According to IUCN Red List protocol, Threatened species are defined as those in the three categories of Critically Endangered, Endangered, and Vulnerable, meaning that 171 species are officially regarded as Threatened (62.4% of the 274 species listed, a 5.1% increase from the 59.4% of the 251 species listed in 2017), with 113 species (41.2% of all those listed) considered Critically Endangered or Endangered. This represents a 23.0% increase in the species that are currently considered Critically Endangered or Endangered as compared to the 84 species (33.5% of all those listed) assessed as such in 2017.

Of the 357 species recognized as distinct in our checklist, 84 are not yet officially listed on the IUCN Red List (although some are listed as subspecies). Most of these apparently “unassessed” species have in fact already been evaluated by the TFTSG, first in 1996, when Least Concern (LC) species were not formally listed (as some are now), and then more recently through a series of draft assessments. Of these species, the TFTSG evaluated 53 as Least Concern in 1996 (J.L. Behler and C. Hilton-Taylor, in litt.), and these are marked as such in this checklist, with 42 of them still needing updating with new Red List assessments.

Further status assessments have been accomplished through an ongoing series of regional IUCN Red Listing workshops held by the TFTSG. These workshops have assessed both previously unevaluated species and updated older previously evaluated species. Since 1999 the TFTSG has held Red Listing workshops in or for Asia, Mexico, the Mediterranean, India, Madagascar, Australia, New Guinea, USA, northern South America, southern South America, the Galápagos Islands, Asia a second time, Sub-Saharan Africa, and India a second time. Although not yet official IUCN Red List evaluations, we can use all of these provisional evaluations to determine overall threat rates to all turtles and tortoises. The current assessments that are based on the findings and results of these workshops as well as more recently published literature, but have not yet been finalized and published on the IUCN Red List, are included in this checklist as TFTSG Provisional Red List status assessments.

Combining the formal IUCN Red List assessments with draft TFTSG status evaluations for previously unlisted species and draft updated assessments for currently listed but outdated assessments, yields the following total current status numbers for all 357 species of turtles and tortoises (not counting subspecies): 5 Extinct (EX), a 28.6% decrease from 7 in 2017 (due to reclassification of two extinct Galápagos tortoises as subspecies instead of species), 73 Critically Endangered (CR), a 15.9% increase from 63 in 2017, 47 Endangered (EN), a 6.0% decrease from 50 in 2017, 59 Vulnerable (VU), a 9.2% decrease from 65 in 2017, 42 Near Threatened (NT), a 10.5% increase from 38 in 2017, 97 Least Concern (LC), a 19.8% increase since 81 in 2017, and 31 Data Deficient (DD), an 11.4% decrease from 35 in 2017. This yields 123 species (34.7%) that are Critically Endangered or Endangered, an 8.4% increase from 114 (32.0%) in 2017, and 183 (51.3%) that are Threatened (Critically Endangered, Endangered, or Vulnerable), only a 2.2% increase from 179 (50.3%) in 2017.

However, this apparently slight increase in Threatened species would have been much greater if we still considered all the Galápagos tortoises as separate species instead of subspecies. If they were still counted as species, as they were in our previous global assessments (TTWG 2017; Rhodin et al. 2018), then the number of Threatened species would now have been 195 (52.8% of 369 total species), a 6.6% increase from 2017.

We can provisionally adjust these numbers to account for Data Deficient species which may also be Threatened. We follow the calculation method of determining percentage of Threatened species utilized by Hoffmann et al. (2010): the number of Threatened species (181) is divided by the number of data-sufficient species (324), i.e., the total number of species minus those that are Data Deficient (DD). This assumes that DD species will have the same percentage of Threatened species as data-sufficient species. Using this calculation methodology, 55.9% of all assessed data-sufficient turtles and tortoises are Threatened. For comparison, using the same methods, Hoffmann et al. (2010) determined that 41% of amphibians, 33% of cartilaginous fishes, 25% of mammals, and 13% of birds were Threatened. An updated analysis of all red-listed species in these vertebrate groups by Rhodin et al. (2018) demonstrated that turtles were more Threatened than birds, lizards, mammals, crocodiles, or amphibians, but less than primates. A current review by Cox et al. (2021) continues to demonstrate that turtles are more Threatened than birds, mammals, or amphibians, as well as more than lizards, crocodiles, or snakes.

No matter how we analyze these various percentages of Threatened species, turtles and tortoises, with anywhere from ca. 51–56% of all their modern species Threatened, are among the most endangered of any of the major groups of vertebrate species, and surpassed among the larger vertebrate groups only by the primates, currently with 65.8% of their 515 red-listed species assessed as Threatened (www.iucnredlist.org, as of August 2021).

Using the method developed by Stuart and Thorbjarnarson (2003), Rhodin (2006), and Rhodin et al. (2018), we calculated the Average Threat Level (ATL) for various groupings of turtles and tortoises with IUCN or TFTSG Red List assessments (including all species and several subspecies). We assigned a numerical threat level per taxon based on current assessments, with LC = 1, NT = 2, VU = 3, EN = 4, CR = 5, EW = 6, CR(PE) = 7, and EX = 8. Taxa assessed as DD were assigned a value of 2.5 based on the potential predicted average threat level after evaluation (see Hoffmann et al. 2010). We then summed all values and calculated the ATL for each grouping (where ATL equals the total summed threat value per grouping divided by the total number of assessed taxa in that grouping).

The ATL for all Testudines at this time is 2.982, a 0.74% increase since the ATL of 2.960 in 2018 (Rhodin et al. 2018). For the most endangered turtle family, the Testudinidae, the ATL at this time is 4.197, a 3.37% increase since the ATL of 4.060 in 2018. For the second most threatened grouping, the two Asian subfamilies Geoemydinae and Batagurinae (treated as one subfamily in 2018), their combined ATL at this time is 3.903, a 0.33% increase since the ATL of 3.890 in 2018. For the other two most threatened families in 2018, the Podocnemididae and Cheloniidae, each remains unchanged with ATLs of 3.875 and 3.750, respectively. The next most endangered family at this time is the Trionychidae, which increased 2.18% from an ATL of 3.440 in 2018 to 3.515. The least endangered family in 2018, the Kinosternidae, increased 3.64% from an ATL of 1.650 in 2018 to 1.710, but is still the least threatened; Emydidae currently have an ATL of 2.410, Chelydridae have an ATL of 2.30, Chelidae have an ATL of 2.145, Rhinoclemmydinae have an ATL of 1.833, and Pelomedusidae have an ATL of 1.815.

As part of the process of determining the relative threatened status of the world's tortoises and freshwater turtles, the Turtle Conservation Coalition (2011, 2018) has published two consensus listings of "*Turtles in Trouble: The World's 25+ Most Endangered Tortoises and Freshwater Turtles*", which listed the top ca. 50–65 most endangered species in each of those years. These documents have become widely cited, especially as a basis for justifying and supporting conservation grant proposals and action plans.

Continuing to evaluate further changes to these Top 25+ compilations, both in terms of improved status for those species benefitting from conservation efforts, and documenting potentially deteriorating survival prospects for other species, will be critically important for future conservation efforts for these highly threatened species. This continuing process is undertaken by the TFTSG in collaboration with other turtle conservation organizations, notably Chelonian Research Foundation, Global Wildlife Conservation (now Re:wild), Turtle Conservancy, Turtle Survival Alliance, and Wildlife Conservation Society.

Increasing support for conservation efforts targeting endangered freshwater turtles and tortoises has been generated over the years through separate and joint efforts of all of the above organizations and others. A welcome groundswell of turtle conservation work has risen to meet the challenge of increasing threat levels to native populations of freshwater turtles and tortoises. Helping to provide leadership in these efforts has been: 1) the Turtle Conservation Fund (TCF 2002, 2019) that from 2002 to date has provided over US$ 1.3 million in grants to 313 deserving projects focused on urgently needed conservation efforts for endangered tortoises and freshwater turtles, and 2) the Mohamed bin Zayed Species Conservation Fund (Rhodin et al. 2018) that from 2009 to date has provided over US$ 1.4 million to about 140 deserving projects.

In addition, there has been fairly robust support for conservation work focused on marine turtles over the years, especially from the Marine Turtle Conservation Fund administered by the U.S. Fish and Wildlife Service (USFWS). As we were going to press, the USFWS announced a major expansion of its program to also include support for conservation work on freshwater turtles and tortoises—a most welcome and critically needed expansion of support.

Genetic Pollution

Aside from overt and highly impactful conservation threats such as overexploitation and habitat destruction, the global turtle fauna is also increasingly facing another insidious threat: genetic pollution caused by human-facilitated hybridization and introgression from introduced and invasive species (Rhymer and Simberloff 1996; Simison et al. 2013; Spencer et al. 2014; García-Díaz et al. 2015; Nori et al. 2017; Georges et al. 2018b). This is not entirely new, but the current extent is unprecedented. Some taxa have historically already been affected. This is most probably true for Asian softshell turtles of the genus *Pelodiscus*. These turtles have been farmed and traded for centuries, with the corollary of translocating different species and local genetic lineages, leading to the admixture of different taxa and lineages in farms and in the wild (Fritz et al. 2010b; Suzuki and Hikida 2014; Gong et al. 2018). Similarly, the historical introduction of *Mauremys reevesii* to Japan resulted in massive hybridization with the native *M.*

japonica (Suzuki et al. 2014). Another historical case of human-mediated admixture of genetic lineages is known from European pond turtles (*Emys orbicularis*). Here, the non-native populations on the Balearic Islands, most probably introduced in Roman times (Valenzuela et al. 2016), are of admixed origin (Lenk et al. 1999). Another population with genetic signatures of an old or ancient introduction of *E. o. hellenica* was discovered near Rome (Lenk et al. 1999; Vamberger et al. 2015) within the range of another subspecies (*E. o. galloitalica*).

However, unlike in historical times, when only a few turtle species were affected, genetic pollution has become a major issue for nature conservation in recent years, facilitated by the massive pet and food trade and increased human mobility. Today, genetic pollution is also caused by well-meaning augmentation of endangered local turtle populations with genetically mismatched individuals (typically, but not exclusively, from non-coordinated actions by turtle enthusiasts), the release of surplus or abandoned genetically divergent pet turtles, and also by large-scale releases of confiscated turtle shipments, especially in Southeast Asia.

Examples of restocking with mismatched genetic individuals include endangered populations of *E. orbicularis* at the northern edge of its range (Fritz et al. 2004; Velo-Antón et al. 2011: genetic evidence for restocking with several different subspecies), and in southern France (Vamberger et al. 2015; Raemy et al. 2017: restocking with non-native *E. o. hellenica* instead of native *E. o. galloitalica*), also northern edge populations of *Mauremys leprosa* in southern France (Palacios et al. 2015: restocking with *M. l. saharica* and northern African *M. l. leprosa* instead of European *M. l. leprosa*), of *M. rivulata* in Croatia (Vamberger et al. 2014: restocking with Cretan individuals), and of *Testudo graeca* in Doñana National Park in Spain (Graciá et al. 2017b: restocking with non-native *T. g. marokkensis* from Morocco instead of native *T. g. whitei* from Spain).

Examples of genetic pollution caused by abandoned pet turtles include *Chrysemys picta bellii* from British Columbia introgressed by non-native subspecies (Jensen et al. 2014b) and Antillean *Trachemys* introgressed by red-eared sliders (*Trachemys scripta elegans*; Parham et al. 2013). Also some of the above-mentioned cases for European pond turtles refer at least partially to genetic pollution by abandoned pet turtles. Hybridization in the wild from released trade animals has been recorded in Taiwan for *Mauremys reevesii* and *M. sinensis* (Fong and Chen 2010).

This issue of potentially increasing genetic pollution needs to be kept in mind as conservationists devise management plans designed to reinforce or restore dwindling or extirpated populations of turtles impacted by overexploitation and habitat loss. The need to maintain well-defined and relatively pure non-hybrid genetic lineages, subspecies, and species is important and needs to be kept in focus. However, also maintaining increased heterozygosity of non-hybrid transplanted populations is also important for improved survival (Scott et al. 2020).

Request for Updates

Please help the TTWG and the TFTSG keep this Turtles of the World Checklist and Atlas up-to-date by e-mailing us (addresses noted above) and including pdf's of any relevant articles about new taxonomic or distributional information and/or revisions that should be included and annotated here in upcoming checklists, whether you are an author on a paper providing updated information, or have become aware of data that you believe should be included. Also please inform us of any errors or discrepancies in any of our data, especially for geographic distributions in countries or states, and for cited references and names, so that we may update or correct them as necessary. For sea turtle distribution data, please submit additions and corrections via the SWOT website. We want this checklist and atlas to be as accurate, up-to-date, and comprehensive as possible, and ask for your assistance to help us accomplish this goal.

The maps published here all represent work in progress, and will continue to be updated and revised in future checklists as we acquire new and improved locality data. We strongly encourage and welcome our readers and professional colleagues, especially field-based turtle specialists and other enthusiasts, to inform us about proposed corrections and changes to these maps, and to submit specific locality data on the presence or absence of species in various locations for consideration of incorporation into the next checklist.

We are especially interested in receiving new point locality data from presumed range areas not well represented by locality points on our maps, especially from gap areas in the presumed range, as well as verified range extensions. Please help us improve and update these maps by submitting any new locality information along with geographic coordinates and the associated citations to Rhodin at rhodincrf@aol.com.

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We also most gratefully acknowledge and very much appreciate the use of 1404 turtle and tortoise photos by the following 333 photographers that enhance this checklist. We include both previously unpublished and republished photos from previous CRF publications, with each acknowledged and (if republished) identified as to its original source: *Conservation Biology of Freshwater Turtles and Tortoises* species accounts (CBFTT), *Chelonian Conservation and Biology* journal articles (CCB), *Chelonian Research Monographs* books (CRM 1–6), *Turtle and Tortoise Newsletter* (TTN), *TurtleLog* (TL), *Turtle Conservation Fund* 2002 prospectus (TCF), and the *Turtle Conservation Coalition* 2011 and 2018 Top 25+ documents (TCC). We strive to use primarily photos from natural native settings and to include locality data when available, although some photos are from captivity or the trade.

We include photos of 478 (98.4%) of all 486 recognized modern taxa. We lack photos of only the following 8 modern taxa: Pelomedusidae: *Pelomedusa kobe, Pelomedusa schweinfurthi, Pelusios williamsi laurenti, Pelusios williamsi lutescens*; Emydidae: *Trachemys stejnegeri malonei*; Testudinidae: *Testudo horsfieldii horsfieldii, Testudo horsfieldii bogdanovi, Testudo horsfieldii kuznetzovi*.

We urge those of you who may have photos of any of these missing taxa to submit them for consideration of inclusion in the next checklist. We are also always looking for better quality photos with locality data for those taxa we have already illustrated; if you have photos that may offer such improvement, please submit them for consideration.

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Hierarchical Linnaean Classification of Suprageneric Categories used in this Checklist
(Order, Suborder, Infraorder, Superfamily, Family, Subfamily)

Testudines .... 357 spp., 486 taxa
••Pleurodira .... 96 spp., 107 taxa
_Cheloidea .... 61 spp., 67 taxa
__Chelidae .... 61 spp., 67 taxa
___Chelinae .... 22 spp., 23 taxa
___Hydromedusinae .... 2 spp., 2 taxa
___Chelodininae .... 16 spp., 17 taxa
___Emydurinae .... 20 spp., 24 taxa
___Pseudemydurinae .... 1 sp., 1 taxon
_Pelomedusoidea .... 35 spp., 40 taxa
__Pelomedusidae .... 27 spp., 32 taxa
__Podocnemididae .... 8 spp., 8 taxa
___Erymnochelyinae .... 1 sp., 1 taxon
___Peltocephalinae .... 1 sp., 1 taxon
___Podocnemidinae .... 6 spp., 6 taxa
••Cryptodira .... 261 spp., 379 taxa
•Durocryptodira .... 226 spp., 333 taxa
_Chelonioidea .... 7 spp., 7 taxa
__Cheloniidae .... 6 spp., 6 taxa
___Carettinae .... 4 spp., 4 taxa
___Cheloniinae .... 2 spp., 2 taxa
__Dermochelyidae .... 1 sp., 1 taxon
_Chelydroidea .... 37 spp., 47 taxa
__Chelydridae .... 5 spp., 5 taxa
__Dermatemydidae .... 1 sp., 1 taxon
__Kinosternidae .... 31 spp., 41 taxa
___Kinosterninae .... 28 spp., 38 taxa
___Staurotypinae .... 3 spp., 3 taxa
_Testudinoidea .... 182 spp., 279 taxa
__Emydidae .... 57 spp., 91 taxa
___Deirochelyinae .... 42 spp., 67 taxa
___Emydinae .... 15 spp., 24 taxa
__Platysternidae .... 1 sp., 3 taxa
__Geoemydidae .... 71 spp., 96 taxa
___Batagurinae .... 20 spp., 24 taxa
___Geoemydinae .... 42 spp., 58 taxa
___Rhinoclemmydinae ..... 9 spp., 14 taxa
__Testudinidae .... 53 spp., 89 taxa
___Manouriinae .... 2 spp., 3 taxa
___Xerobatinae .... 6 spp., 6 taxa
___Testudininae .... 45 spp., 80 taxa
•Trionychia .... 35 spp., 46 taxa
_Trionychoidea .... 35 spp., 46 taxa
__Carettochelyidae .... 1 sp., 1 taxon
__Trionychidae .... 34 spp., 45 taxa
___Cyclanorbinae .... 7 spp., 9 taxa
___Trionychinae .... 27 spp., 36 taxa

Alternative Phylogenetic Hierarchical PhyloCode Classification (17:1) (**2**)

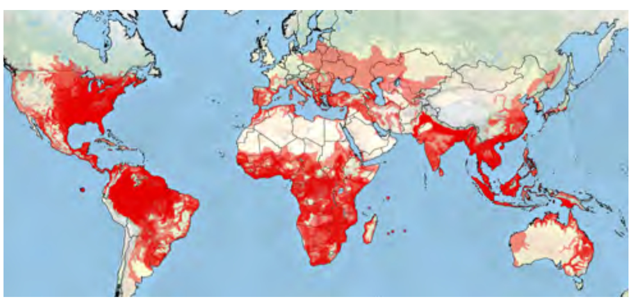
Testudines
••Pleurodira
_Chelidae
__Hesperochelida
___Chelinae
___Hydromedusinae
__Australochelida
___Chelodininae
___Emydurinae
___Pseudemydurinae
_Pelomedusoides
__Pelomedusidae
__Podocnemididae
___Erymnochelyinae
___Peltocephalinae
___Podocnemidinae
••Cryptodira
•Durocryptodira
_Americhelydia
__Chelonioidea
__Cheloniidae
___Carettini
___*Chelonia* + *Natator* + *Eretmochelys*
__Dermochelyidae
__Chelydroidea
__Chelydridae
__Kinosternoidea
__Dermatemydidae
__Kinosternidae
___Kinosterninae
___Staurotypinae
_Testudinoidea
__Emysternia
__Emydidae
___Deirochelyinae
___Emydinae
__Platysternidae
__Testuguria
__Geoemydidae
__Testudinidae
___Testudininae
___*Manouria* + *Gopherus*
•Trionychia
__Carettochelyidae
__Trionychidae
___Cyclanorbinae
___Trionychinae

While the TTWG continues to adhere to the Linnaean classification presented here to the left (a system fundamental to, and compliant with, the International Code of Zoological Nomenclature), we also include the PhyloCode classification ranking here to the right, as based on Joyce et al. (2021).

CHECKLIST
Modern Turtle and Tortoise Taxa
Extant Since 1500 CE

Testudines Batsch 1788 (07:1, 10:4, 12:6, 17:1) **(3, 4)**

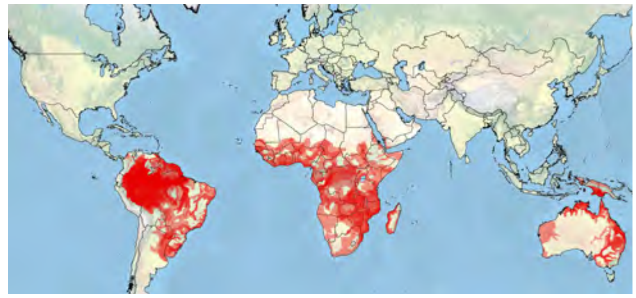
Testudinata Klein 1751:96 (invalid pre-1758 name)
Testudines Linnaeus 1758:194 (vernacular name)
Testudinata Klein *in* Behn 1760:tab.gen.
Testudines Batsch 1788:437
Testudinea Batsch 1796:179
Cheloniens Brongniart 1800a:196 (vernacular)
Chelonii Latreille 1800:xi
Chelonia Ross and Macartney 1802:tab.iii
Cataphractae Link 1807:51
Testudinata Oppel 1811:3
Perostia Rafinesque 1814:66
Cataphracta Hemprich 1820:101
Chelonea Fleming 1822:268
Fornicata Haworth 1825:373
Chelynae Wagler 1828:861
Sterrichrotes Ritgen 1828:269
Chelonites Burmeister 1837:730
Chelonides Swainson 1839:112
Tylopoda Mayer 1849:197
Testudina Fry 1850:21
Chersemydes Strauch 1862:16
Rhynchochelones Dollo 1886:79
Cheloniae Hoffmann 1890:372
Testudoformes Chang 1957:50
Chelonomorpha Kuhn 1960:30
Casichelydia Gaffney 1975:4
Testudinomorpha Laurin and Reisz 1995:197
Pantestudines Joyce, Parham, and Gauthier 2004:996



Testudines Species Richness

Pleurodira Cope 1864 (08:20) **(8, 9)**

Pleurodères Duméril and Bibron 1834:354
Pleurodera Lichtenstein and von Martens 1856:2 (08:20) **(8)**
Pleurodera Cope 1864:181
Pleurodira Cope 1865:186



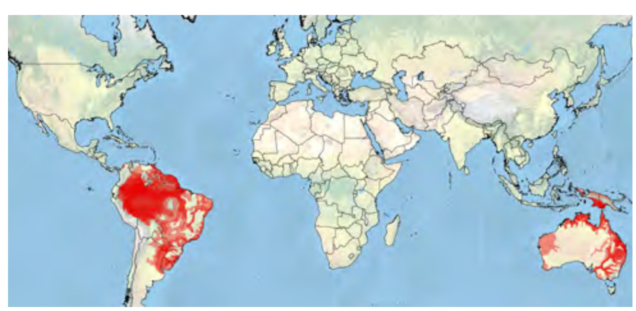
Pleurodira Species Richness

Cheloidea Gray 1825 **(3)**

Chelidina Gray 1825:211
Chelydoidea Fitzinger 1826:7
Chelyoidea Baur 1893a:212
Cheloides Gaffney, Tong, and Meylan 2006:33
Cheloidea Turtle Taxonomy Working Group 2021:*hoc loco*
(includes 1 family)
Chelidae

Chelidae Gray 1825 (12:39, 17:86) **(3, 9)**

Chelides Cuvier 1816:14
Chelydes Schmid 1819:17
Chelidina Gray 1825:211
Chelydoidea Fitzinger 1826:7
Chelydae Gray 1831d:7
Chelydidae Gray 1831d:37
Chelina Bonaparte 1831:63
Hydraspidina Bonaparte 1836:3 (*partim*)
Hydraspididae Agassiz 1857a:249
Chelydidi Portis 1890:17
Chelyidae Baur 1893a:211
Chelodinidae Baur 1893a:211
Hydromedusidae Baur 1893a:211
Rhinemydidae Baur 1893a:212
Chelidae Lindholm 1929:289
Cheluidae Storr 1978:303 (17:86)
(includes 5 subfamilies)
Chelinae
Hydromedusinae
Chelodininae
Emydurinae
Pseudemydurinae



Chelidae Species Richness

CHELINAE Gray 1825 (12:39)

Chelides Cuvier 1816:14
Chelydes Schmid 1819:17
Chelidina Gray 1825:211
Chelina Bonaparte 1831:63
Chelidinae Georges, Birrell, Saint, McCord, and Donnellan 1998:235
Chelinae Turtle Taxonomy Working Group 2012:289

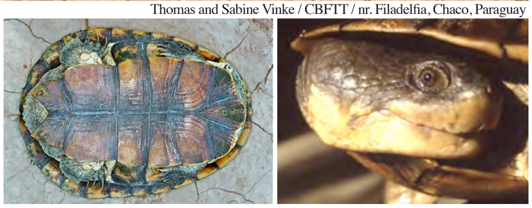
Acanthochelys Gray 1873c (14:39)

Acanthochelys Gray 1873c:305
Type species: *Acanthochelys spixii* [= *Platemys spixii* Duméril and Bibron 1835], by original monotypy.

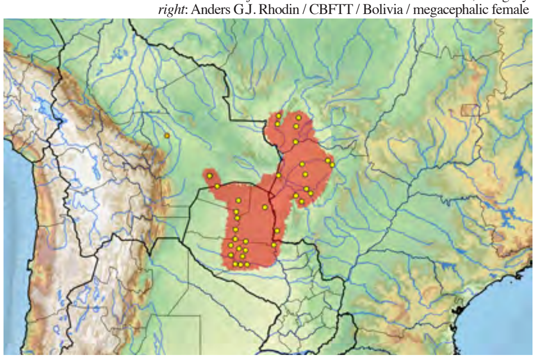
Acanthochelys macrocephala (Rhodin, Mittermeier, and McMorris 1984) (07:84)

Pantanal Swamp Turtle, Big-headed Pantanal Swamp Turtle

Thomas and Sabine Vinke / CBFTT / nr. Filadelfia, Chaco, Paraguay



left: Sébastien Métrailler / CBFTT / Chaco, Paraguay
right: Anders G.J. Rhodin / CBFTT / Bolivia / megacephalic female



*

(orange dot = probable trade)

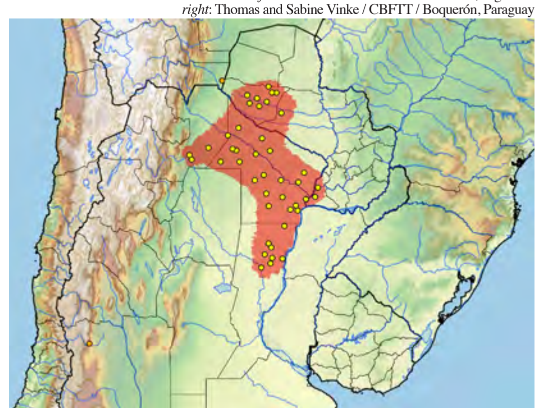
Distribution: Bolivia (Santa Cruz), Brazil (Mato Grosso, Mato Grosso do Sul), Paraguay
Presumed Historic Indigenous Range: 283,284 sq. km
Size (Max SCL): male 23.5 cm, female 29.5 cm (Rhodin et al. 2009 CBFTT)
CBFTT Account: Rhodin, Métrailler, Vinke, Vinke, Artner, and Mittermeier (2009)
IUCN Red List: Near Threatened (NT) (Rhodin et al. 2018); Previously: Near Threatened (NT) (TFTSG 1996)
Synonymy:
Phrynops schoepffii Fitzinger *in* Siebenrock 1904b:27 (*partim, nomen novum et nudum*)
Platemys macrocephala Rhodin, Mittermeier, and McMorris 1984a:38
Acanthochelys macrocephala
Type locality: "Caiçara, Rio Paraguai, Mato Grosso, Brazil (16°03' S 57°43' W)."
Type specimen: NMW 1293, holotype, see Tiedemann et al. (1994), Fritz and Pauler (1999), and Gemel et al. (2019).
Phrynops chacoensis Fritz and Pauler 1992:299 (07:84)
Acanthochelys chacoensis, Mesoclemmys chacoensis
Type locality: "Paraguayanischer Chaco, 22°30'3" S, 59°44'30" W" [Paraguay].
Type specimen: SMNS 3984–85 (shell and soft parts of one specimen), holotype, see Schlüter and Hallermann (1997).

Acanthochelys pallidipectoris (Freiberg 1945)

Chaco Side-necked Turtle

Thomas and Sabine Vinke / CBFTT / Boquerón, Paraguay

left: Sébastien Métrailler / CBFTT / Salta, Argentina
right: Thomas and Sabine Vinke / CBFTT / Boquerón, Paraguay



*

(orange dots = probable trade)

Distribution: Argentina (Chaco, Formosa, Salta, Santa Fe), Paraguay
Introduced: Argentina (Mendoza), Bolivia (Tarija)
Presumed Historic Indigenous Range: 289,717 sq. km
Size (Max SCL): male 18.0 cm, female 17.5 cm (Vinke et al. 2011 CBFTT)
CBFTT Account: Vinke, Vinke, Richard, Cabrera, Paszko, Marano, and Métrailler (2011)
IUCN Red List: Endangered (EN A2cde+3cde+4cde; C1+2a(i)) (Vinke and Vinke 2016); Previously: Vulnerable (VU) (TFTSG 1996)
Synonymy:
Platemys pallidipectoris Freiberg 1945:19
Acanthochelys pallidipectoris
Type locality: "Pcia. [Presidencia] Roque Sáenz Peña, Chaco" [Argentina].
Type specimen: MACN 1731, holotype, see also Freiberg (1947).

Acanthochelys radiolata (Mikan 1820) (14:39, 17:87)
Brazilian Radiolated Swamp Turtle

Russell A. Mittermeier / Alagoas, Brazil

Russell A. Mittermeier / San Miguel dos Campos, Alagoas, Brazil

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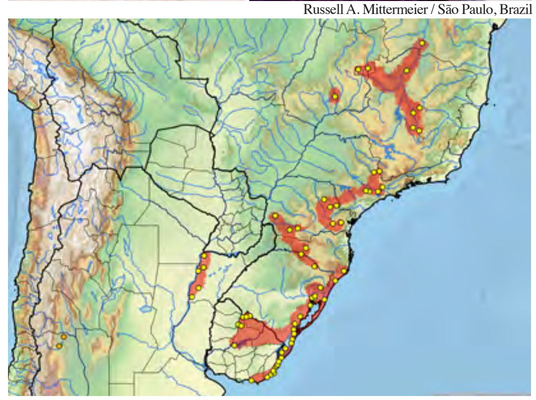
(orange dots = misidentified or uncertain)

Distribution: Brazil (Alagoas, Bahia, Espírito Santo, Minas Gerais, Rio de Janeiro, Sergipe)
Presumed Historic Indigenous Range: 200,690 sq. km
Size (Max SCL): male 18.4 cm, female 19.6 cm (Garbin et al. 2016; Rhodin and Mittermeier, unpubl. data)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)
Synonymy:
Emys radiolata Mikan 1820:[unpaginated]
Chelodina radiolata, Rhinemys radiolata, Chelys (Hydraspis) radiolata, Chelys radiolata, Hydraspis radiolata, Platemys radiolata, Platemys radiolata radiolata, Acanthochelys radiolata
Type locality: "Sebastianopoli...Brasilia" [Rio de Janeiro, Brazil]. Erroneously emended to "São Paulo: Sebastianópolis (= São Sebastião) (23°45'S, 45°25'W)" by Rhodin et al. (1984:784), corrected to "Sebastianopolis...used to be the name...of São Sebastião do Rio de Janeiro" [= Rio de Janeiro] by Vanzolini (1994:8).
Type specimens: NMW 184, 1295, 23390, syntypes (3), see Gemel et al. (2019); 23390 erroneously listed as holotype by Tiedemann and Häupl (1980) and Tiedemann et al. (1994).
Platemys gaudichaudii Duméril and Bibron 1835:427
Hydraspis gaudichaudii
Type locality: "Brésil" [Brazil].
Type specimens: MNHN 1946, 2101, syntypes (2).
Hydraspis affinis Gray 1844:41 (*nomen dubium et oblitum*)
Type locality: "Brazils" [Brazil].
Type specimen: ZMB s/n (possibly ZMB 165), holotype, not located (G. Peters, in litt.); see also Fritz et al. (1994:161).
Comment: Description based on a lost manuscript ("Gray, D. C. 22, n. 10" = Gray, J.E. No date. Descriptive Catalogue of Reptiles), but later annotated in pencil by Gray himself as being *H. radiolata* (= *Acanthochelys radiolata*) (A.F. Stimson, in litt.).
Platemys werneri Schnee 1900:463
Type locality: "Umgebung von São Paulo" [Brazil].
Type specimens: NMW 23389, one of two syntypes, see Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Gemel et al. (2019); other syntype apparently lost.
Platemys radiolata quadrisquamosa Luederwaldt 1926:437,
Platemys quadrisquamosa
Type locality: "Rio Doce (Est. do Espirito Santo)...[&]...Belmonte (Bahia)" [Brazil].
Type specimens: MZUSP 62, 64, and 337, syntypes (3).

Acanthochelys spixii (Duméril and Bibron 1835)
Black Spiny-necked Turtle, Spix's Sideneck Turtle

Russell A. Mittermeier / São Paulo, Brazil

Russell A. Mittermeier / São Paulo, Brazil



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(orange dots = introduced)

Distribution: Argentina (Corrientes), Brazil (Bahia, Goiás, Minas Gerais, Paraná, Rio Grande do Sul, Santa Catarina, São Paulo), Uruguay
Introduced: Argentina (Mendoza)
Presumed Historic Indigenous Range: 364,234 sq. km
Size (Max SCL): male 17.8 cm, female 18.0 cm (Bager et al. 2016)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2011)
Synonymy:
Emys depressa Spix 1824:4 (junior homonym, not = *Emys depressa* Wied-Neuwied *in* Merrem 1820 [= *Phrynops geoffroanus*])

Type locality: "provinciarum Rio de Janeiro et fluminis Sti Francisci" [Brazil]. Restricted to "Rio São Francisco, near Rio dos Pandeiros, Minas Gerais, Brazil" by Rhodin et al. (1984b:783) by restriction of *nomen novum* replacement name *Platemys spixii* Duméril and Bibron 1835.

Type specimen: ZSM 3003/0, lectotype, designated by Hoogmoed and Gruber (1983:345), see Franzen and Glaw (2007).

Emys aspera Cuvier *in* Gray 1830e:16 (10:7) (*nomen oblitum*)

Type locality: "America." Restricted to "Brésil" [Brazil] by Bour and Pauler (1987:14).

Type specimen: MNHN 8751, holotype, see Bour and Pauler (1987).

Platemys spixii Duméril and Bibron 1835:409 (*nomen novum*)

Hydraspis spixii, Acanthochelys spixii, Platemys radiolata spixii

Type locality: "Brésil" [Brazil]. Restricted to "Rio São Francisco, near Rio dos Pandeiros, Minas Gerais, Brazil" by Rhodin et al. (1984b:783).

Type specimen: ZSM 3003/0, lectotype by default, designated by Hoogmoed and Gruber (1983:345); MNHN 8751, recorded as "holotype" by Ernst (1983), is not a type, since *spixii* is a *nomen novum* for *depressa*, discussed by Rhodin et al. (1984b) and Iverson (1992).

Chelus Duméril 1805 (10:11)

Chelus Duméril 1805:76 (10:11)

Type species: *Chelus fimbriata* [= *Testudo fimbriata* Schneider 1783], by original monotypy.

Chelys Oppel 1811:6 (*nomen novum*)

Chelyda Rafinesque 1815:75 (*nomen novum*)

Matamata Merrem 1820:21 (*nomen novum*)

Chelus fimbriata (Schneider 1783) (17:88) **(10, 11)**

Amazon Matamata, *Mata-Matá Amazonica*

Rafael Bernhard / Cachoeira do Caldeirão, Rio Madeira, Amazonas, Brazil

left: Peter C.H. Pritchard / CBFTT / Leticia, Amazonas, Colombia
right: Anders G.J. Rhodin / CBFTT / Leticia, Amazonas, Colombia

*

(orange dot = possible introduced or trade)

Distribution: Bolivia (Beni, Pando, Santa Cruz), Brazil (Amapá, Amazonas, Goiás, Maranhão, Mato Grosso, Pará, Rondônia, Tocantins), Colombia (Amazonas, Caquetá, Putumayo, Vaupés), Ecuador, French Guiana, Peru (Amazonas, Cuzco (?), Huanuco, Junin, Loreto, Madre de Dios, Pasco (?), Puno (?), San Martin, Ucayali), Suriname

Presumed Historic Indigenous Range: 3,167,026 sq. km

Size (Max SCL): male 42.8 cm, female 43.7 cm (Dixon and Soini 1977; Rhodin, unpubl. data)

CBFTT Account: Pritchard (2008)

IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

TFTSG Provisional Red List: Least Concern (LC) (2011)

Synonymy:

Testudo terrestris Fermin 1765:51 (*nomen suppressum* and junior homonym, not = *Testudo terrestris* Garsault 1764 (*nomen oblitum*) [= *Emys orbicularis orbicularis*], not = *Testudo terrestris* Forskål 1775 (*nomen conservandum*) [= *Testudo (Testudo) graeca terrestris*])

Type locality: "Surinam."

Type specimen: Not located or figured.

Comment: Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Testudo fimbriata Schneider 1783:349 (*nomen conservandum*)

Chelus fimbriata, Chelys fimbriata, Matamata fimbriata, Chelus fimbriatus

Type locality: "Surinam...von Aprouague..[&]...Remire."

Type specimen: Not known or located.

Comment: Name conserved by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Testudo fimbria Gmelin 1789:1043 (*nomen novum*)

Chelys fimbria

Comment: Unjustified replacement name for *fimbriata*.

Testudo matamata Bruguière 1792:257

Emydes matamata, Chelus matamata, Chelys matamata

Type locality: "Cayenne" [French Guiana].

Type specimen: Not located, holotype, type specimen figured (pl.13).

Testudo bispinosa Ruiz de Xelva *in* Daudin 1801:94

Testudo bi-spinosa, Chelys bispinosa, Matamata bispinosa

Type locality: "Brésil" [Brazil].

Type specimen: Possibly MNHN, not located.

Testudo rapara Gray 1831d:44 (*nomen nudum*)

Testudo raparara Gray 1844:44 (*nomen nudum*)

Chelys boulengerii Baur 1890b:968

Type locality: Not known; recorded as "South America" in NHMUK catalogue.

Type specimen: NHMUK 1881.9.27.3, shell and skull, figured by Boulenger (1889:f.52-53), lectotype, designated by Vargas-Ramírez et al. (2020:13).

Testudo corticolis Ferreira *in* Carvalho 1972:210 **(10)** (*nomen nudum*)

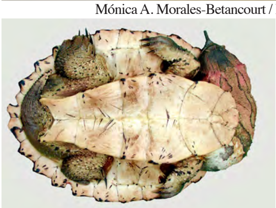
Testudo corticollis

Testudo torticollis Ferreira *in* Ceríaco and Bauer 2017:42 **(10)** (*nomen novum et nudum*)

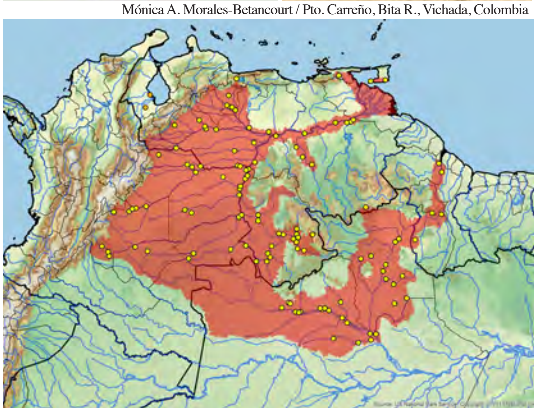
Chelus orinocensis Vargas-Ramírez, Caballero, Morales-Betancourt, Lasso, Amaya, Martínez, Viana, Vogt, Farias, Hrbek, Campbell, and Fritz 2020 **(11)**

Orinoco Matamata, *Matamata del Orinoco*

Mónica A. Morales-Betancourt / La Macarena, Guayabero R., Meta, Colombia



Mónica A. Morales-Betancourt / Pto. Carreño, Bita R., Vichada, Colombia



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Distribution: Brazil (Amazonas, Roraima), Colombia (Arauca, Casanare, Guainía, Meta, Vaupés, Vichada), Guyana, Trinidad, Venezuela (Amazonas, Anzoátegui, Apure, Barinas, Bolívar, Cojedes, Delta Amacuro, Guárico, Monagas, Sucre, Zulia)

Presumed Historic Indigenous Range: 1,172,008 sq. km

Size (Max SCL): male 48.5 cm, female 52.6 cm (Kabisch 1997; Meier and Schaefer 2003; Barrio-Amorós and Manrique 2006; Pritchard 2008 CBFTT; Vargas-Ramírez et al. 2020)

CBFTT Account: Pritchard (2008) [as part of *Chelus fimbriata* sensu lato]

IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

TFTSG Provisional Red List: Least Concern (LC) (2011), as part of *Chelus fimbriata*

Synonymy:

Chelus orinocensis Vargas-Ramírez, Caballero, Morales-Betancourt, Lasso, Amaya, Martínez, Viana, Vogt, Farias, Hrbek, Campbell, and Fritz 2020:13

Type locality: "Colombia, Vichada, Pto. Carreño, Bita River (5.7610 N / 68.5858 W)."

Type specimen: IAVH R-8755, holotype.

Mesoclemmys Gray 1873c (07:100) **(12)**

Mesoclemmys Gray 1873c:305

Type species: *Mesoclemmys gibba* [= *Emys gibba* Schweigger 1812], by original monotypy.

Batrachemys Stejneger 1909:126

Type species: *Batrachemys nasuta* [= *Emys nasuta* Schweigger 1812], by original monotypy.

Bufocephala McCord, Joseph-Ouni, and Lamar 2001:732

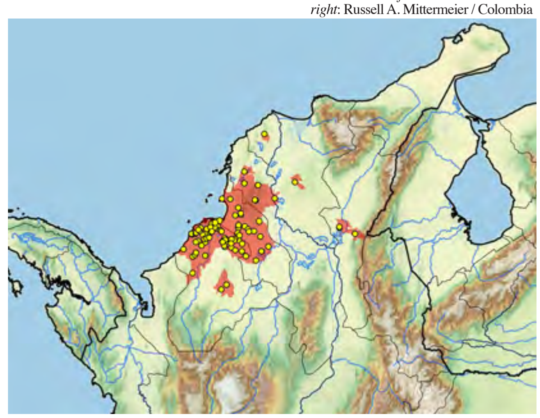
Type species: *Bufocephala vanderhaegei* [= *Phrynops tuberculatus vanderhaegei* Bour 1973], by original designation.

Mesoclemmys dahli (Zangerl and Medem 1958) (12:40) **(13)**

Dahl's Toad-headed Turtle, *Carranchina*

German Forero-Medina / CBFTT / Colombia

left: Uwe Fritz / Colombia
right: Russell A. Mittermeier / Colombia



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Distribution: Colombia (Atlántico, Bolívar, Cesar, Córdoba, Magdalena, Sucre)

Presumed Historic Indigenous Range: 17,776 sq. km

Size (Max SCL): male 22.9 cm, female 29.7 cm (Forero-Medina et al. 2013 CBFTT)

CBFTT Account: Forero-Medina, Castaño-Mora, Cárdenas-Arevalo, and Medina-Rangel (2013)

IUCN Red List: Critically Endangered (CR B1+2c) (TFTSG 1996)

TFTSG Provisional Red List: Critically Endangered (CR) (2017)

Synonymy:

Phrynops (Batrachemys) dahli Zangerl and Medem 1958:376

Phrynops dahli, Batrachemys dahli, Phrynops nasutus dahli, Mesoclemmys dahli

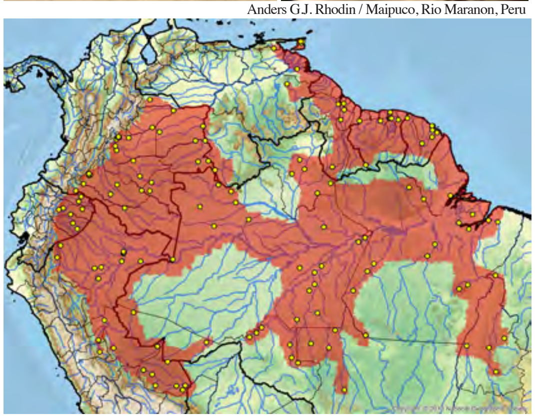
Type locality: "Vicinity of Sincelejo, Bolivar, Colombia."

Type specimen: FMNH 75980, holotype, see Marx (1976).

Mesoclemmys gibba (Schweigger 1812) [14]
Gibba Turtle

Frank Deschandol / French Guiana

Anders G.J. Rhodin / Maipuco, Rio Maranon, Peru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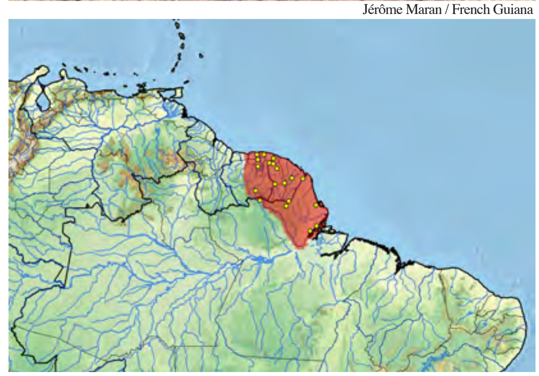
Distribution: Bolivia, Brazil (Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, Rondônia, Roraima, Tocantins), Colombia (Amazonas, Arauca, Caquetá, Casanare, Guainía, Guaviare, Meta, Putumayo, Vaupés, Vichada), Ecuador, French Guiana, Guyana, Peru (Amazonas, Loreto, Madre de Dios, Puno, Ucayali), Suriname, Trinidad, Venezuela (Amazonas, Bolívar, Delta Amacuro, Monagas)
Presumed Historic Indigenous Range: 3,993,262 sq. km
Size (Max SCL): male 20.0 cm, female 23.3 cm (Pritchard and Trebbau 1984; Ernst et al. 2006b; Itescu et al. 2014)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Emys gibba Schweigger 1812:299
Rhinemys gibba, Hydraspis cayennensis gibba, Platemys gibba, Hydraspis (Podocnemis) gibba, Hydraspis gibba, Phrynops gibbus, Mesoclemmys gibba, Phrynops (Mesoclemmys) gibba, Mesoclemmys gibbus
Type locality: Not known. Restricted to "Amérique méridional" by Duméril and Duméril (1851:20); and to "environs de Cayenne, Guyane française" [French Guiana] by Bour and Pauler (1987:7).
Type specimen: MNHN 8756, holotype, see Ernst (1981b), Iverson (1992), Bour (2005d), and Ettmar (2019); MNHN 8356 (a typo) erroneously listed as holotype by Bour (2005d) and Ceríaco and Bour (2012).
Emys stenops Spix 1824:12 [14]
Hydraspis stenops
Type locality: "fluminis Solimoëns" [Rio Solimões, Amazonas, Brazil]. Restricted to "l'Amazone entre Tefé et Tabatinga au Brésil (Amazonas)" [Brazil] by Bour and Pauler (1987:7).
Type specimen: ZSM 2454/0, holotype, see Hoogmoed and Gruber (1983), Bour (2005d), and Franzen and Glaw (2007).
Platemys miliusii Duméril and Bibron 1835:431
Phrynops miliusii, Hydraspis miliusii
Type locality: "Cayenne" [French Guiana].
Type specimen: MNHN 8755, holotype, see Bour (2005d), who recorded it erroneously as MNHN 8355.
Hydraspis gordoni Gray 1868:563
Type locality: "Trinidad, near the mountain of Tamana."
Type specimen: NHMUK 1947.3.4.18 (formerly 1881.69.2.1), holotype, see Bour (2005d).
Hydraspis bicolor Gray 1873c:304
Type locality: "Demerara Falls" [Guyana].
Type specimen: NHMUK 1946.1.22.86 (formerly 1872.10.16.80), holotype, see Bour (2005d), who recorded it erroneously as NHMUK 1946.2.22.86.

Mesoclemmys nasuta (Schweigger 1812)
Guyanan Toad-headed Turtle

Jérôme Maran / French Guiana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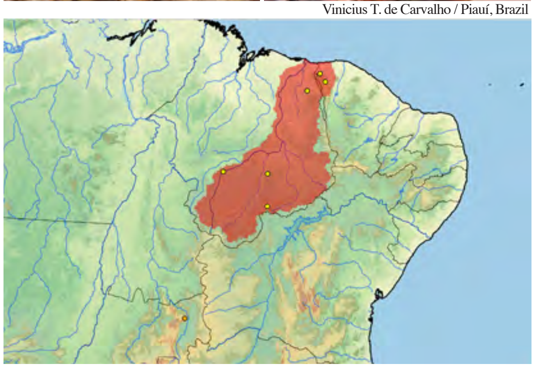
Distribution: Brazil (Amapá, Pará), French Guiana, Suriname
Presumed Historic Indigenous Range: 333,651 sq. km
Size (Max SCL): male 31.7 cm, female 25.6 cm (Pritchard and Trebbau 1984; Métrailler and Le Gratiet 1996)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)
Synonymy:
Emys nasuta Schweigger 1812:298
Rhinemys nasuta, Hydraspis (Rhinemys) nasuta, Hydraspis nasuta, Platemys nasuta, Batrachemys nasuta, Phrynops (Batrachemys) nasuta, Phrynops nasuta, Phrynops nasutus, Phrynops nasutus nasutus, Phrynops nasuta nasuta, Batrachemys nasutus, Mesoclemmys nasuta
Type locality: Not known. Restricted to "Amérique méridionale" by Duméril and Bibron (1835:437); to "Guyanes et au nord-est de l'Amazonie" by Lescure and Fretey (1976:1318); and to "rivières Ouaqui et Inini, bassin du Maroni en amont de Maripasoula, Guyane française" [French Guiana] by Bour and Pauler (1987:6).
Type specimen: MNHN 4140, holotype, see Bour (2007d) and Ceríaco and Bour (2012).

Emys barbatula Gravenhorst 1829:15
Hydraspis barbatula
Type locality: Not known.
Type specimen: MNHW, holotype, specimen figured (pl.5,f.3-4), apparently destroyed during World War II, see Ettmar (2019).
Platemys schweiggerii Duméril and Bibron 1835:435 (*nomen novum*)
Type specimen: MNHN 4140, holotype by default, see Bour (2007d) and Ceríaco and Bour (2012).
Phrynops walbaumi Fitzinger *in* Siebenrock 1904b:20 (*nomen nudum*)

Mesoclemmys perplexa Bour and Zaher 2005
Cerrado Side-necked Turtle

Vinicius T. de Carvalho / Piauí, Brazil

Vinicius T. de Carvalho / Piauí, Brazil



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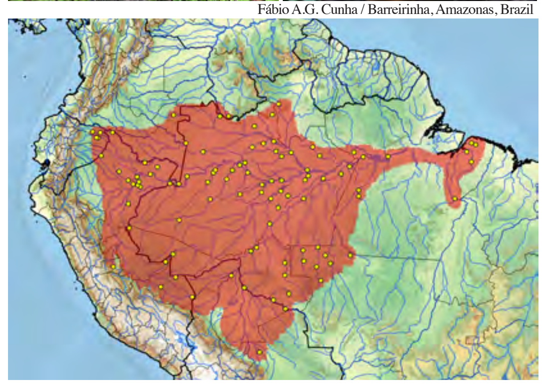
(orange dot = possible misidentified or uncertain)

Distribution: Brazil (Ceará, Goiás [?], Maranhão, Piauí, Tocantins [?])
Presumed Historic Indigenous Range: 275,287 sq. km
Size (Max SCL): male 16.9 cm, female 21.4 cm (Maran 2006b)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)
Synonymy:
Mesoclemmys perplexa Bour and Zaher 2005:298
Type locality: "the regions called "Olho d'Água da Santa" and "Baixão do Fausto", southern part of the Parque Nacional da Serra das Confusões, State of Piauí, Brasil" [Brazil].
Type specimen: MZUSP 4111, holotype, see Ettmar (2019).

Mesoclemmys raniceps (Gray 1856b) (12:41, 17:89) (**15**)
Amazon Toad-headed Turtle

Jiří Moravec / nr. Anguilla, Rio Nanay, Loreto, Peru

Fábio A.G. Cunha / Barreirinha, Amazonas, Brazil



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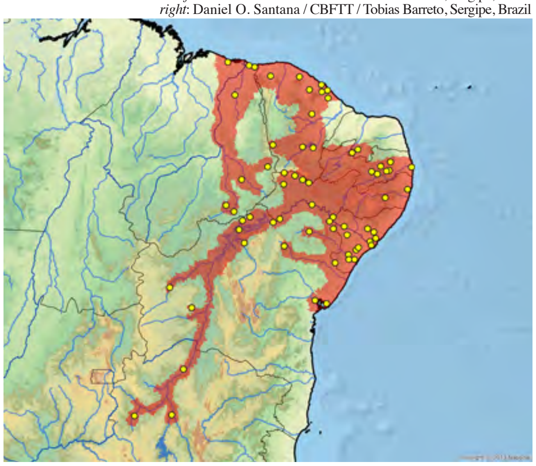
Distribution: Bolivia, Brazil (Acre, Amazonas, Mato Grosso, Pará, Rondônia, Roraima), Colombia (Amazonas, Caquetá, Guainía, Putumayo, Vaupés), Ecuador, Peru (Loreto, Madre de Dios, Pasco, Ucayali), Venezuela (Amazonas)
Presumed Historic Indigenous Range: 3,547,705 sq. km
Size (Max SCL): male 33.4 cm, female 33.5 cm (Brito et al. 2019)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)
Synonymy:
Hydraspis raniceps Gray 1856b:55
Platemys raniceps, Phrynops raniceps, Batrachemys raniceps, Batrachemys raniceps raniceps, Mesoclemmys raniceps
Type locality: "Brazils; Para" [Pará, Brazil].
Type specimen: NHMUK 1947.3.5.92 (formerly 1851.8.12.1), lectotype, designated by Bour and Pauler (1987:8).
Batrachemys heliostemma McCord, Joseph-Ouni, and Lamar 2001:734 (**15**)
Mesoclemmys heliostemma
Type locality: "base of Pico da Neblina (situated on the Venezuela/Brazil border) on the left bank of Río Baria (= Río Mawarinuma) [4º95'N, 66º10'W], a tributary of the Rio Negro, Amazonas, Venezuela." Original GPS coordinates incorrect, emended to 0º50'N, 66º10'W by TTWG (2017:181).
Type specimen: USNM 541895, holotype, see Reynolds et al. (2007).

Mesoclemmys tuberculata (Luederwaldt 1926)
Tuberculate Toad-headed Turtle


Daniel O. Santana / CBFTT / Areia Branca, Sergipe, Brazil



left: Daniel O. Santana / CBFTT / Areia Branca, Sergipe, Brazil
right: Daniel O. Santana / CBFTT / Tobias Barreto, Sergipe, Brazil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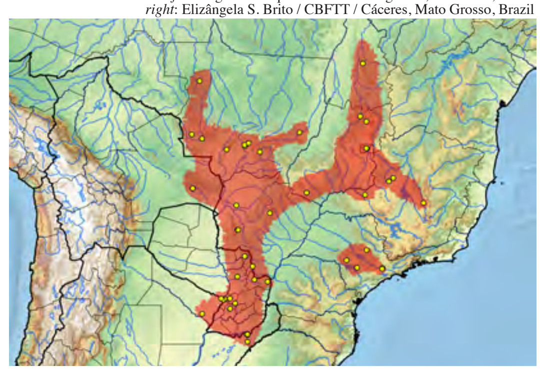
Distribution: Brazil (Alagoas, Bahia, Ceará, Maranhão, Minas Gerais, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe)
Presumed Historic Indigenous Range: 552,518 sq. km
Size (Max SCL): male 19.6 cm, female 25.0 cm (Santana et al. 2016 CBFTT; Rhodin, unpubl. data)
CBFTT Account: Santana, Marques, Vieira, Moura, Faria, and Mesquita (2016)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)
Synonymy:
Rhinemys tuberculata Luederwaldt 1926:428
Batrachemys tuberculata, Phrynops (Batrachemys) tuberculata, Phrynops tuberculata, Phrynops (Batrachemys) tuberculatus, Phrynops tuberculatus, Phrynops tuberculatus tuberculatus, Mesoclemmys tuberculata
Type locality: "Brasil: Estado da Bahia e Pará" [Brazil]. Restricted to "Villa Nova, Bahia" by Mertens and Wermuth (1955:400); and to "Fortaleza, Ceará" [Brazil] by Bour and Pauler (1987:9).
Type specimen: MZUSP 43, lectotype, designated by Bour and Pauler (1987:9).

Mesoclemmys vanderhaegei (Bour 1973)
Vanderhaege's Toad-headed Turtle


Elizângela S. Brito / CBFTT / Cáceres, Mato Grosso, Brazil



left: Thiago S. Marques / CBFTT / Angatuba, São Paulo, Brazil
right: Elizângela S. Brito / CBFTT / Cáceres, Mato Grosso, Brazil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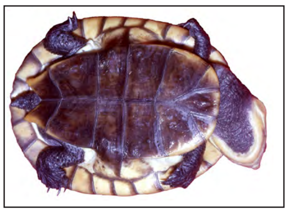
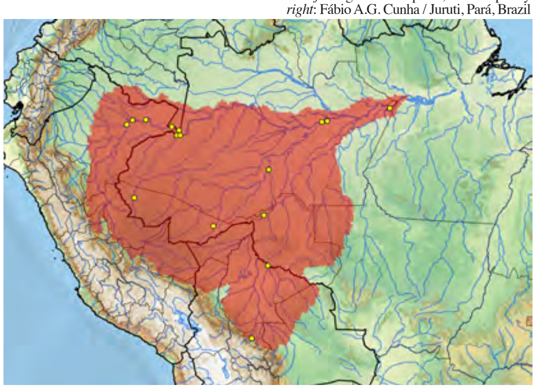
Distribution: Argentina (Corrientes, Formosa, Misiones), Bolivia, Brazil (Goiás, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Paraná, São Paulo, Tocantins), Paraguay
Presumed Historic Indigenous Range: 1,208.086 sq. km
Size (Max SCL): male 28.5 cm, female 28.0 cm (Marques et al. 2014 CBFTT)
CBFTT Account: Marques, Böhm, Brito, Cabrera, and Verdade (2014)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2018)
Synonymy:
Phrynops schöpfii Fitzinger *in* Diesing 1839:237 (*nomen nudum*)
Type locality: "Cuiabá, Mato Grosso, Brésil" [Brazil].
Type specimen: NMW 15762, see Bour and Pauler (1987).
Phrynops schoepffii Fitzinger *in* Siebenrock 1904b:22 (*partim, nomen novum et nudum*)
Phrynops paraguayensis Vanzolini *in* Donoso-Barros 1965:13 (*nomen nudum*)
Type locality: "rio Paraguay," see Bour and Pauler (1987).
Type specimen: Possibly MZUSP, not located.
Phrynops tuberculatus vanderhaegei Bour 1973:175
Phrynops (Batrachemys) vanderhaegei, Phrynops vanderhaegei, Batrachemys vanderhaegei, Bufocephala vanderhaegei, Mesoclemmys vanderhaegei
Type locality: "environs d'Asunción au Paraguay." Restricted to "Tobati (25º15' S, 57º04' W), La Cordillera, Paraguay" by Bour and Pauler (1987:10).
Type specimen: MNHN 1977.50, holotype, see Bour and Pauler (1987).

Mesoclemmys wermuthi (Mertens 1969) [15]
Wermuth's Toad-headed Turtle

Richard C. Vogt / Iquitos, Peru / captivity



left: Roger Bour / Iquitos, Peru / captivity
right: Fábio A.G. Cunha / Juruti, Pará, Brazil



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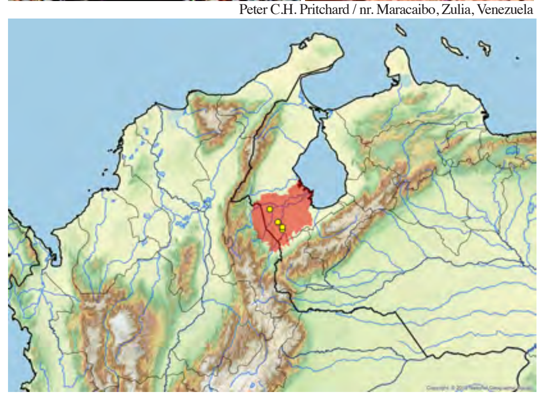
Distribution: Bolivia, Brazil (Acre, Amazonas, Mato Grosso, Pará, Rondônia), Colombia (Amazonas), Peru (Loreto, Madre de Dios, Pasco, Ucayali)
Presumed Historic Indigenous Range: 2,282,521 sq. km
Size (Max SCL): male 23.2 cm, female 33.8 cm (Molina et al. 2012; Rhodin and Mittermeier, unpubl. data)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2020)
Synonymy:
Hydraspis maculata Gray 1873c:305 [17:89] [15] (*nomen oblitum*)
Mesoclemmys maculata
Type locality: "Tropical America." Restricted to "S. America" by Gray (1873j:65); and to "Venezuela" by Boulenger (1889:219) and Pritchard and Trebbau (1984:127), in error, see Rivas et al. (2015).
Type specimen: NHMUK 1946.1.22.14 (formerly 1866.8.14.233), holotype, see Bour and Pauler (1987), Rivas et al. (2015), Ettmar (2019), and Cunha et al. (2019).
Phrynops wermuthi Mertens 1969b:132 [15]
Phrynops tuberculatus wermuthi, *Phrynops (Batrachemys) nasutus wermuthi*, *Phrynops nasutus wermuthi*, *Phrynops nasuta wermuthi*, *Batrachemys raniceps wermuthi*, *Mesoclemmys wermuthi*
Type locality: "Peru...zweifellos der amazonische Teil des Landes." Restricted to "Iquitos (3°50' S 73°15' W), Loreto, Peru" by Bour and Pauler (1987:8).
Type specimen: SMF 66246, holotype, see Mertens (1970) and Bour and Pauler (1987).

Mesoclemmys zuliae (Pritchard and Trebbau 1984) [12:40]
Zulia Toad-headed Turtle

Peter C.H. Pritchard / nr. Maracaibo, Zulia, Venezuela

Peter C.H. Pritchard / nr. Maracaibo, Zulia, Venezuela



•

Distribution: Colombia (?) (Norte de Santander), Venezuela (Zulia)
Presumed Historic Indigenous Range: 13,179 sq. km
Size (Max SCL): male 20.8 cm, female 27.9 cm (Pritchard and Trebbau 1984; Ceballos et al. 2013)
IUCN Red List: Vulnerable (VU B1+2c) (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
Synonymy:
Phrynops (Batrachemys) zuliae Pritchard and Trebbau 1984:135
Phrynops zuliae, *Batrachemys zuliae*, *Mesoclemmys zuliae*
Type locality: "Caño Madre Vieja near El Guayabo, Distrito Colón, Edo. Zulia, Venezuela (8°53' N, 72°30' W)."
Type specimen: UF 53439, holotype.

Phrynops Wagler 1830b [07:100]

Phrynops Wagler 1830b:135

Type species: *Phrynops geoffroanus* [= *Emys geoffroana* Schweigger 1812], by original monotypy.

Spatulemys Gray 1872b:463

Type species: *Spatulemys lasalae* [= subjective synonym of *Platemys hilarii* Duméril and Bibron 1835], by original monotypy.

Parahydraspis Wieland 1923:2

Type species: *Parahydraspis paranaensis* † Wieland 1923, by original monotypy.

Phrynops geoffroanus (Schweigger 1812) [10:44, 14:40, 17:90] **[16]**

Geoffroy's Side-necked Turtle

Vinícius T. de Carvalho / Piracicaba, São Paulo, Brazil

Russell A. Mittermeier / São Paulo, Brazil / captivity

*

Distribution: Argentina (Corrientes, Misiones), Bolivia (Beni), Brazil (Acre, Alagoas, Amapá, Amazonas, Bahia, Ceará, Espírito Santo, Goiás, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Paraíba, Paraná, Pernambuco, Piauí, Rio de Janeiro, Rio Grande do Norte, Rio Grande do Sul, Rondônia, Santa Catarina, São Paulo, Sergipe, Tocantins), Colombia (Amazonas, Caquetá, Casanare, Guainía, Meta, Putumayo, Vaupés, Vichada), Ecuador, Paraguay, Peru (Cusco, Huanuco, Junin, Loreto, Madre de Dios, Pasco), Venezuela (Amazonas)

Presumed Historic Indigenous Range: 4,156,787 sq. km

Size (Max SCL): male 39.5 cm, female 46.3 cm (Souza and Abe 2001; Rhodin and Mittermeier, unpubl. data)

IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

TFTSG Provisional Red List: Least Concern (LC) (2011)

Synonymy:

Emys geoffroana Schweigger 1812:302,350

Chelodina geoffroana, Phrynops geoffroanus, Platemys geoffroana, Hydraspis (Phrynops) geoffroana, Hydraspis geoffroana, Phrynops geoffroana, Rhinemys geoffroana, Phrynops geoffroana geoffroana, Phrynops geoffroanus geoffroanus, Phrynops (Phrynops) geoffroanus

Type locality: "Brasilia" [Brazil].

Type specimen: MNHN 9417, holotype, see Bour (2008c) and Ceríaco and Bour (2012).

Emys depressa Wied-Neuwied *in* Merrem 1820:22 **[16]** (senior homonym, not = *Emys depressa* Spix 1824 [= *Acanthochelys spixii*])

Testudo depressa, Chelys (Hydraspis) depressa, Chelys depressa, Hydraspis depressa, Platemys depressa

Type locality: "Brasilia" [Brazil].

Type specimen: Not located, specimen figured by Wied-Neuwied (1825:pl.4-5), lectotype, designated by Bour (2008c:39).

Emys viridis Spix 1824:3

Chelys (Hydraspis) viridis, Chelys viridis, Hydraspis viridis

Type locality: "fluminis Carinhanhae, confluentis Sti Francisci" [Rio Carinhanha, at junction with Rio São Francisco, Bahia, Brazil]. Emended to "Brazil, back-swamp lakes of Rio Carinhanha at confluent with São Francisco, probably at or near 14°18'S, 43°47'W" by Vanzolini (1981:xxiv).

Type specimen: ZSM 3008/0, holotype, see Hoogmoed and Gruber (1983) and Franzen and Glaw (2007).

Emys tritentaculata Saint-Hilaire *in* Cuvier 1829:11 [14:40] (*nomen nudum et dubium*)

Emys geoffroyana Gray 1830e:16 (*nomen novum*)

Phrynops geoffroyana, Hydraspis geoffroyana, Platemys geoffroyana

Platemys geoffreana Duméril and Bibron 1835:418 (*nomen novum*)

Platemys waglerii Duméril and Bibron 1835:422

Hydraspis waglerii, Phrynops waglerii

Type locality: "Brésil" [Brazil].

Type specimen: MNHN 8758, holotype, see Mertens (1967b) and Bour (2008c).

Platemys neuwiedii Duméril and Bibron 1835:425 (*nomen novum*)

Type locality: "Brésil" [Brazil].

Type specimen: Not located, specimen figured by Wied-Neuwied (1825:pl.4-5), lectotype, by default, designated by Bour (2008c:39).

Emys lyrae Reuss *in* Gray 1844:39 (*nomen nudum et dubium*)

Hydraspis boulengeri Bohls 1895:53

Type locality: "nördlichen Theile Paraguays...im Aquidaban, Tagatiya und anderen linken Nebenflüssen des Paraguaystromes" [Paraguay]. Restricted to "Departmento Concepción: Río Saladillo, 23ºS" [Paraguay] by Cacciali et al. (2016:45).

Type specimen: NHMUK 1947.3.5.94 (formerly 1896.5.11.1), holotype.

Hydraspis lutzi Ihering *in* Luederwaldt 1926:441

Phrynops lutzi

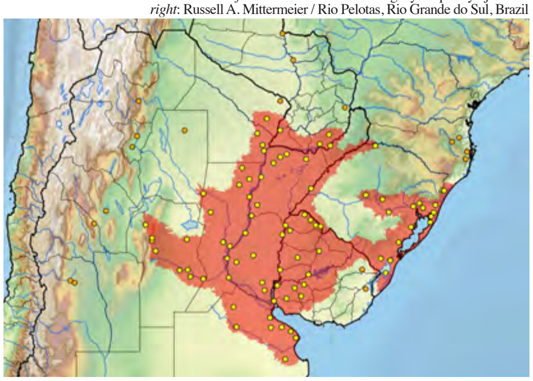
Type locality: "Mogy-guassù (Est. de S. Paulo)" [Brazil].

Type specimen: MZUSP 31, holotype.

Phrynops hilarii (Duméril and Bibron 1835)
Saint-Hilaire's Side-necked Turtle


Russell A. Mittermeier / Rio Pelotas, Rio Grande do Sul, Brazil


left: Anders G.J. Rhodin / Uruguay / captivity / juvenile
right: Russell A. Mittermeier / Rio Pelotas, Rio Grande do Sul, Brazil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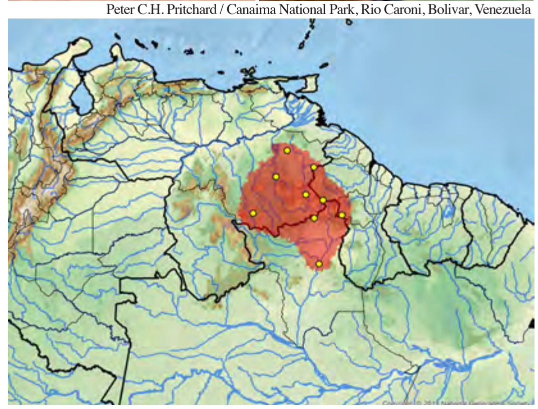
(orange dots = possible introduced)

Distribution: Argentina (Buenos Aires, Chaco, Córdoba, Corrientes, Entre Rios, Formosa, Misiones, Santa Fe, Santiago del Estero), Brazil (Rio Grande do Sul, Santa Catarina), Paraguay, Uruguay
Introduced: Argentina (Formosa, La Rioja, Mendoza, Salta, San Juan, Santiago del Estero, Tucumán), Brazil (Santa Catarina), Paraguay, Uruguay
Presumed Historic Indigenous Range: 689,235 sq. km
Size (Max SCL): male 35.6 cm, female 40.8 cm (Ernst et al. 2006b; Rhodin and Mittermeier, unpubl. data; Bager, unpubl. data)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Platemys hilarii Duméril and Bibron 1835:428
Hydraspis hilarii, Hydraspis geoffroyana hilarii, Phrynops hilarii, Phrynops (Phrynops) hilarii, Phrynops geoffroana hilarii, Phrynops geoffroanus hilarii
Type locality: "Brésil" [Brazil].
Type specimen: MNHN 8757, holotype, see Bour (2008c).
Hydraspis hilairii Gray 1844:40 (*nomen novum*)
Platemys hilairii, Phrynops (Phrynops) geoffroanus hilairii, Phrynops geoffroanus hilairii
Spatulemys lasalae Gray 1872b:463
Spatulemys lasala
Type locality: "Rio Parana, Corrientes" [Argentina].
Type specimen: NHMUK 1947.3.5.93 (formerly 1872.11.6.1), holotype.

Phrynops tuberosus (Peters 1870) (10:44, 17:90)
Guianan Shield Side-necked Turtle


Peter C.H. Pritchard / Canaima National Park, Rio Caroni, Bolivar, Venezuela


Peter C.H. Pritchard / Canaima National Park, Rio Caroni, Bolivar, Venezuela



Distribution: Brazil (Roraima), Guyana, Venezuela (Bolívar)
Presumed Historic Indigenous Range: 222,280 sq. km
Size (Max SCL): male 28.6 cm, female 32.6 cm (Pritchard and Trebbau 1984; Ceballos et al. 2013)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Platemys tuberosa Peters 1870:311
Hydraspis tuberosa, Phrynops tuberosa, Phrynops geoffroana tuberosa, Phrynops geoffroanus tuberosus, Phrynops (Phrynops) tuberosus, Phrynops tuberosus
Type locality: "Cotingaflusse am Roraimagebirge in British-Guyana" [Guyana]. Emended to "Amazon drainage, the Río Cotingo... Brazil...state of Roraima" by Bour (2008a:38).
Type specimen: ZMB 166, holotype, see Fritz et al. (1994) and Bour (2008c).

Phrynops williamsi Rhodin and Mittermeier 1983
Williams' Side-necked Turtle


Vinícius T. de Carvalho / Picada Café, rio Cadeia, Rio Grande do Sul, Brazil



Vinícius T. de Carvalho / Picada Café, rio Cadeia, Rio Grande do Sul, Brazil


*

Distribution: Argentina (Corrientes, Entre Rios [?], Misiones), Brazil (Paraná, Rio Grande do Sul, Santa Catarina), Paraguay, Uruguay
Presumed Historic Indigenous Range: 135,093 sq. km
Size (Max SCL): male 27.8 cm, female 35.4 cm (Rhodin et al. 1988; Ceballos et al. 2013; Bressan and Verrastro 2020)
IUCN Red List: Vulnerable (VU A4cd) (Rhodin et al. 2018);
Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Phrynops williamsi Rhodin and Mittermeier 1983:58
Phrynops (Phrynops) williamsi
Type locality: "Rio Cadea, Rio Grande do Sul, Brazil."
Type specimen: MCZ 64135, holotype.

Platemys Wagler 1830b (14:39)

Platemys Wagler 1830b:135
Type species: *Platemys planiceps* [= *Testudo planiceps* Schneider 1792] [= objective synonym of *Testudo platycephala* Schneider 1792], by original monotypy.

Platemys platycephala (Schneider 1792) (14:41, 17:91)
Twist-necked Turtle
(includes 2 subspecies)


*

(subspecies: *platycephala* = red, *melanonota* = purple)
Distribution: Bolivia (Beni, La Paz, Pando, Santa Cruz), Brazil (Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, Rondônia, Roraima), Colombia (Amazonas, Caquetá, Guainía, Guaviare, Meta, Putumayo, Vaupés, Vichada), Ecuador, French Guiana, Guyana, Peru (Amazonas, Huánuco, Loreto, Madre de Dios, Puno, Ucayali), Suriname, Venezuela (Amazonas, Bolívar, Delta Amacuro, Monagas)
Presumed Historic Indigenous Range: 5,568,323 sq. km
Size (Max SCL): male 18.0 cm, female 16.7 cm (see subspp.)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)

Platemys platycephala platycephala (Schneider 1792)
Eastern Twist-necked Turtle, Common Twist-necked Turtle


Russell A. Mittermeier / nr. Leticia, Colombia



Anders G.J. Rhodin / Suriname


*

(subspecies: *platycephala* = red, *melanonota* = purple)

Distribution: Bolivia (Beni, La Paz, Pando, Santa Cruz), Brazil (Acre, Amapá, Amazonas, Mato Grosso, Pará, Roraima), Colombia (Amazonas, Caquetá, Putumayo, Vaupés), French Guiana, Guyana, Peru (Huánuco, Loreto, Madre de Dios, Puno, Ucayali), Suriname, Venezuela (Amazonas, Bolívar, Delta Amacuro, Monagas)

Presumed Historic Indigenous Range: 5,385,455 sq. km

Size (Max SCL): male 18.0 cm, female 16.5 cm (Ceballos et al. 2013)

Synonymy:

Testudo platycephala Schneider 1792:261

Platemys platycephala, Platemys platycephala platycephala

Type locality: "Ost-indien." Restricted to "Cayenne, French Guiana" by Ernst (1984:350).

Type specimen: Not located, type specimen figured (pl.7).

Testudo planiceps Schneider 1792:pl.7 (*nomen novum* and senior homonym, not = *Testudo planiceps* Gray 1854b [= *Chelonoidis porteri*])

Emys planiceps, Hydraspis planiceps, Clemmys planiceps, Platemys planiceps, Chelys (Hydraspis) planiceps, Chelys planiceps

Type locality: "Ost-indien." Restricted to "Cayenne, French Guiana" by Ernst (1984:350).

Type specimen: Not located, type specimen figured (pl.7).

Comment: Erroneous alternate name for *Testudo platycephala*.

Testudo martinella Daudin 1802:377

Platemys martinella

Type locality: "Cayenne et dans l'intérieur de la Guiane" [French Guiana].

Type specimen: MNHN 8760, holotype, see Ernst (1987).

Emys discolor Thunberg *in* Schweigger 1812:302,348

Hydraspis (Phrynops) discolor, Hydraspis discolor

Type locality: Not known. Restricted to "Cayenne, French Guiana" by Ernst (1984:350).

Type specimen: UPSZTY 723 (formerly UUZM 723), holotype, listed by Thunberg (1828), but not listed by Lönnberg (1896), Andersson (1900), Holm (1957), or Wallin (2001); discovered and identified by Rhodin (unpubl. data).

Emys canaliculata Spix 1824:10

Hydraspis canaliculata, Platemys canaliculata

Type locality: "fluminis Solimoens" [Rio Solimões, Amazonas, Brazil].

Type specimen: ZSM 3007/0, lectotype, designated by Hoogmoed and Gruber (1983:349), see also Franzen and Glaw (2007).

Emys carunculata Saint-Hilaire *in* Cuvier 1829:11 (14:41) (*nomen nudum et dubium*)

Emys constricta Cuvier *in* Gray 1830e:17 (*nomen nudum*)

Hydraspis pachyura Boie *in* Gray 1830e:17 (*nomen nudum*)

Emys pachyura

Hydraspis constricta Gray 1831d:43

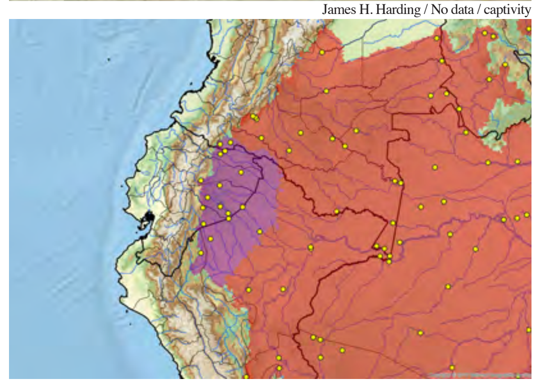
Type locality: Not known. Restricted to "Belem, Brazil" by Ernst (1984:350).

Type specimens: MNHN, holotype or syntypes, apparently lost.

Platemys platycephala melanonota Ernst 1984 (17:91)

Black-backed Twist-necked Turtle

James H. Harding / No data / captivity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(subspecies: *platycephala* = red, *melanonota* = purple)

Distribution: Colombia (Putumayo), Ecuador, Peru (Amazonas, Loreto)

Presumed Historic Indigenous Range: 182,932 sq. km

Size (Max SCL): male 16.8 cm, female 16.7 cm (Ernst 1984)

Synonymy:

Platemys platycephala melanonota Ernst 1984:352

Type locality: "vicinity of Galilea, on the Río Santiago, Amazonas, Perú (4°1' S, 77°47' W)."

Type specimen: USNM 224136, holotype, see Reynolds et al. (2007).

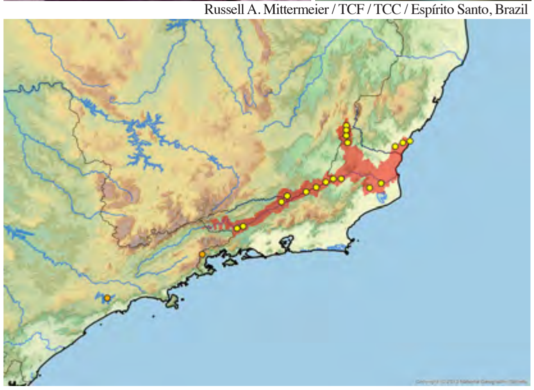
Ranacephala McCord, Joseph-Ouni, and Lamar 2001 (07:100) (3)

Ranacephala McCord, Joseph-Ouni, and Lamar 2001:732
Type species: *Ranacephala hogei* [= *Phrynops hogei* Mertens 1967a], by original monotypy and designation.

Ranacephala hogei (Mertens 1967a)
Hoge's Side-necked Turtle

Russell A. Mittermeier / TCF / TCC / Espírito Santo, Brazil

Russell A. Mittermeier / TCF / TCC / Espírito Santo, Brazil



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(orange dots = uncertain or in error)

Distribution: Brazil (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo [?])
Presumed Historic Indigenous Range: 15,155 sq. km
Size (Max SCL): male 38.0 cm, female 34.0 cm (Moreira 2002; Rhodin and Mittermeier, unpubl. data)
IUCN Red List: Critically Endangered (CR A2bcd+4bcd) (Drummond et al. 2016); Previously: Endangered (EN) (TFTSG 1996)
Synonymy:
Phrynops hogei Mertens 1967a:73
Ranacephala hogei, *Mesoclemmys hogei*
Type locality: "Rio Pequena, südwestlich von São Paulo, Brasilien" [Brazil] [locality in error]. Emended to "Rio Pequeno, southeast of São Paulo" [Brazil] [locality probably in error] by Rhodin et al. (1982:179).
Type specimen: SMF 62530, holotype, see Mertens (1967b).

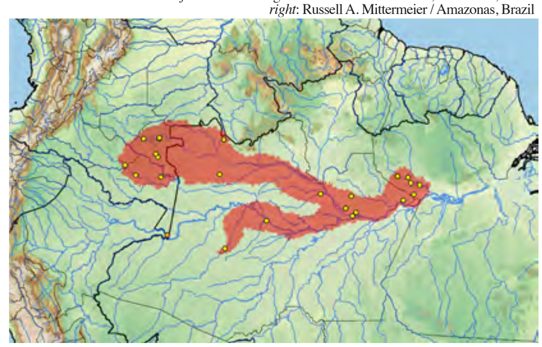
Rhinemys Wagler 1830b (07:100)

Rhinemys Wagler 1830b:134
Type species: *Rhinemys rufipes* [= *Emys rufipes* Spix 1824], by subsequent designation by Fitzinger (1843:29).

Rhinemys rufipes (Spix 1824)
Red Side-necked Turtle, Red-footed Sideneck Turtle

William E. Magnusson / CBFTT / Presidente Figuero, Amazonas, Brazil

left: Richard C. Vogt / CBFTT / Reserva Ducke, Amazonas, Brazil
right: Russell A. Mittermeier / Amazonas, Brazil



*

(orange dot = probable trade)

Distribution: Brazil (Amazonas, Pará), Colombia (Amazonas, Guainía, Vaupés)
Presumed Historic Indigenous Range: 534,190 sq. km
Size (Max SCL): male 23.0 cm, female 25.6 cm (Magnusson and Vogt 2014 CBFTT)
CBFTT Account: Magnusson and Vogt (2014)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Emys rufipes Spix 1824:7
Hydraspis rufipes, *Rhinemys rufipes*, *Chelys (Hydraspis) rufipes*, *Chelys rufipes*, *Platemys rufipes*, *Phrynops rufipes*
Type locality: "fluminis Solimoëns" [Rio Solimões, Amazonas, Brazil].
Type specimen: ZSM 3006/0, holotype, see Hoogmoed and Gruber (1983), Franzen and Glaw (2007), and Ettmar (2019).

Hydromedusinae Baur 1893a (12:39)

Hydromedusidae Baur 1893a:211

Hydromedusinae Georges, Birrell, Saint, McCord, and Donnellan 1998:235

Hydromedusa Wagler 1830b

Hydromedusa Wagler 1830b:135

Type species: *Hydromedusa maximiliani* [= *Emys maximiliani* Mikan 1825], by original monotypy.

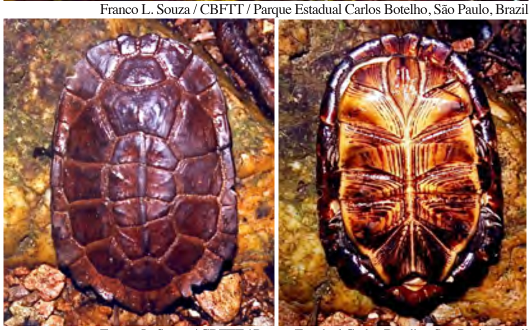
Chelomedusa Gray 1873c:303

Type species: *Hydromedusa (Chelomedusa) depressa* [= *Hydromedusa depressa* Gray 1856b] [= subjective synonym of *Emys maximiliani* Mikan 1825], by subsequent designation by Lindholm (1929:289). Genus established as *Hydromedusa (Chelomedusa)* without a type species.

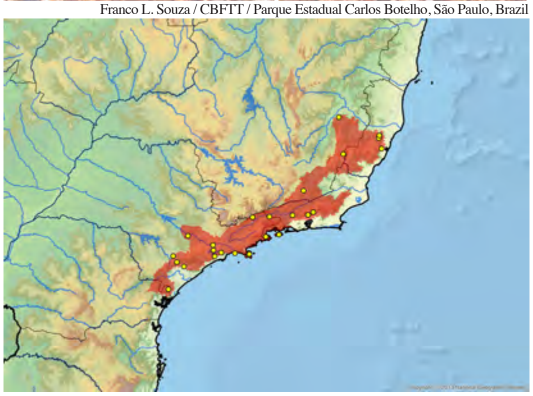
Hydromedusa maximiliani (Mikan 1825)

Brazilian Snake-necked Turtle, Maximilian's Snake-necked Turtle

Franco L. Souza / CBFTT / Parque Estadual Carlos Botelho, São Paulo, Brazil



Franco L. Souza / CBFTT / Parque Estadual Carlos Botelho, São Paulo, Brazil



Distribution: Brazil (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

Presumed Historic Indigenous Range: 109,625 sq. km

Size (Max SCL): male 17.0 cm, female 20.0 cm (Souza and Abe 1997; Souza and Martins 2009 CBFTT)

CBFTT Account: Souza and Martins (2009)

IUCN Red List: Vulnerable (VU B1+2cd) (TFTSG 1996)

TFTSG Provisional Red List: Near Threatened (NT) (2011)

Synonymy:

Emys maximiliani Mikan 1825:[unpaginated]

Chelodina maximiliani, Hydromedusa maximiliani, Hydraspis maximiliani

Type locality: "Brasiliam...Capitania St. Paulo" [São Paulo, Brazil]. Restricted to "auf dem Weg nach Portofeliz" [nr. Pôrto Feliz, São Paulo, Brazil] by J. Natterer (1820, unpubl. data) in Gemel et al. (2019:80).

Type specimen: NMW 23391, holotype, see Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Gemel et al. (2019).

Emys maximiliana Gray 1830e:17 (*nomen novum*)

Hydromedusa maximiliana

Comment: Unjustified emendation or error for *maximiliani*.

Chelodina flavilabris Duméril and Bibron 1835:446

Hydromedusa flavilabris, Chelomedusa flavilabris

Type locality: "Brésil" [Brazil].

Type specimen: MNHN 9411, holotype.

Hydromedusa subdepressa Gray 1854a:134

Type locality: "Brazils" [Brazil].

Type specimen: NHMUK 1946.1.22.57 (formerly 1849.11.7.29), holotype.

Hydromedusa depressa Gray 1856b:60 (*nomen novum*)

Chelomedusa depressa

Type locality: "Brazils" [Brazil].

Type specimen: NHMUK 1946.1.22.57 (formerly 1849.11.7.29), holotype, by default.

Comment: Unjustified emendation or error for *subdepressa*.

Hydromedusa bankae Giebel 1866b:19

Type locality: "Insel Banka" [Bangka Island, Sumatra, Indonesia] [in error].

Type specimen: Possibly MLUH, holotype, not located, type specimen figured (pl.4).

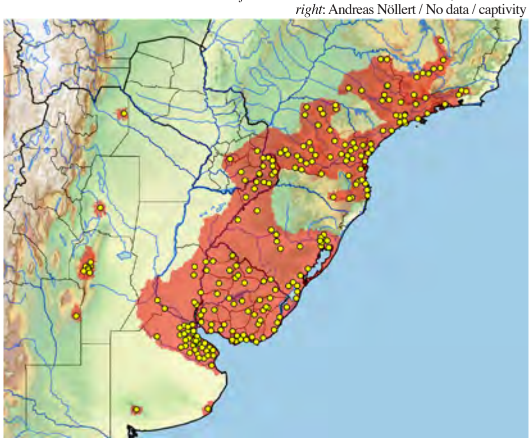
Hydromedusa tectifera Cope 1870a

South American Snake-necked Turtle, Argentine Snake-necked Turtle, *Tortuga Cuello de Vibora*


Peter C.H. Pritchard / captivity / Brazil



left: Raissa Bressan / Rio Grande do Sul, Brazil / male
right: Andreas Nöllert / No data / captivity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Distribution: Argentina (Buenos Aires, Corrientes, Entre Rios, Misiones, Salta, San Luis, Santa Fe, Santiago del Estero), Brazil (Minas Gerais, Paraná, Rio de Janeiro, Rio Grande do Sul, Santa Catarina, São Paulo), Paraguay, Uruguay
Presumed Historic Indigenous Range: 1,047,260 sq. km
Size (Max SCL): male 28.4 cm, female 30.6 cm (Bager et al. 2003; Chinen et al. 2004; Regis and Meik 2017; Alcalde et al. 2021 CBFTT)
CBFTT Account: Alcalde, Sánchez, and Pritchard (2021)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:

Hydromedusa tectifera Cope 1870a:147
Type locality: "tributaries of the Parana or Uraguay rivers, either in the Argentine Confederation or the Banda Oriental" [Argentina or Uruguay].
Type specimen: Not located, holotype in either USNM or ANSP, apparently lost, not recorded by Cochran (1961), Malnate (1971), or Reynolds et al. (2007). NHMUK 1947.3.5.85, erroneously listed as "type" by Uetz et al. (2019), is the holotype of *Hydromedusa platanensis* Gray 1873c.

Hydromedusa platanensis Gray 1873c:302
Hydromedusa platensis
Type locality: "Rio de la Plata" [Argentina or Uruguay].
Type specimen: NHMUK 1947.3.5.85 (formerly 1854.8.16.11), holotype.

Platemys antiqua † Ameghino 1882:41 (*nomen nudum*)
Type locality: "Provincia Buenos Aires" [Argentina].
Type specimen: Not designated, fossil.
Geologic age: Pleistocene or Holocene.

Platemys fossilis † Ameghino 1882:41 (*nomen nudum*)
Type locality: "Provincia Buenos Aires" [Argentina].
Type specimen: Not designated, fossil.
Geologic age: Pleistocene or Holocene.

Platemys laevis † Ameghino 1882:41 (*nomen nudum*)
Type locality: "Provincia Buenos Aires" [Argentina].
Type specimen: Not designated, fossil.
Geologic age: Pleistocene or Holocene.

Platemys robusta † Ameghino 1882:41 (*nomen nudum*)
Type locality: "Provincia Buenos Aires" [Argentina].
Type specimen: Not designated, fossil.
Geologic age: Pleistocene or Holocene.

Hydromedusa wagleri Günther 1884:423
Type locality: "Buenos Ayres" [Buenos Aires, Argentina].
Type specimen: NHMUK 1947.3.5.84 (formerly 1848.2.3.3), holotype.

Chelodininae Baur 1893a (12:39) (**17**)

Chelodinidae Baur 1893a:211

Chelodininae Georges, Birrell, Saint, McCord, and Donnellan 1998:235

Chelodina Fitzinger 1826 (07:85, 08:2, 10:34) (**5, 17**)

Chelodina Fitzinger 1826:6

Type species: *Chelodina longicollis* [= *Testudo longicollis* Shaw 1794], by original designation.

Hydraspis Bell 1828b:512

Type species: *Hydraspis longicollis* [= *Testudo longicollis* Shaw 1794], by original designation.

Chelyodina Agassiz 1846:79 (*nomen novum*)

Hesperochelodina Wells and Wellington 1985:9 (*nomen nudum*)

Macrochelodina Wells and Wellington 1985:9

Type species: *Macrochelodina oblonga* [= *Chelodina oblonga* Gray 1841], by original designation.

Macrodiremys McCord and Joseph-Ouni 2007b:57

Type species: *Macrodiremys oblonga* [= *Chelodina oblonga* Gray 1841], by original designation.

Chelydera Thomson and Georges *in* Shea, Thomson, and Georges 2020:430

Type species: *Chelodina (Chelydera) parkeri* [= *Chelodina parkeri* Rhodin and Mittermeier 1976], by original designation.

Comment: Valid replacement name (aspidonym) for *Supremechelys* Hoser 2014b, as per Wüster et al. (2021).

Chelodina (Chelodina) Fitzinger 1826 (10:34) (**17**)

Chelodina Fitzinger 1826:6

Type species: *Chelodina longicollis* [= *Testudo longicollis* Shaw 1794], by original designation.

Hydraspis Bell 1828b:512

Type species: *Hydraspis longicollis* [= *Testudo longicollis* Shaw 1794], by original designation.

Chelyodina Agassiz 1846:79 (*nomen novum*)

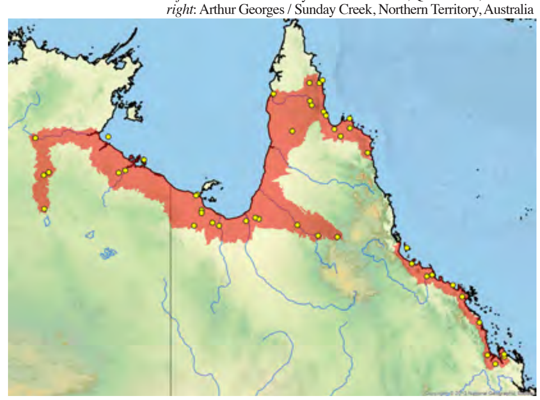
Hesperochelodina Wells and Wellington 1985:9 (*nomen nudum*)

Chelodina (Chelodina) canni McCord and Thomson 2002 (07:86) (**17**)

Cann's Snake-necked Turtle

John Cann / Kalala Station, Roper R. drainage, Northern Territory, Australia

left: Jason Schaffer / Rinyirru National Park, Queensland, Australia
right: Arthur Georges / Sunday Creek, Northern Territory, Australia



*

Distribution: Australia (Northern Territory, Queensland)

Presumed Historic Indigenous Range: 241,340 sq. km

Size (Max SCL): male 16.9 cm, female 27.9 cm (Ceballos et al. 2013; Cann and Sadlier 2017; Rhodin, unpubl. data)

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Near Threatened (NT) (2009)

Synonymy:

Chelodina rankini Wells and Wellington 1985:8 (*nomen nudum*)

Chelodina canni McCord and Thomson 2002:256

Chelodina (Chelodina) canni, *Chelodina novaeguineae canni*, *Chelodina (Chelodina) canni canni*

Type locality: "Malogie Waterhole, near Scarlet Hill on Kalala Station (16°08' S, 133°36' E), Northern Territory, Australia."

Type specimen: NTM 24515, holotype; see Cann and Sadlier (2017).

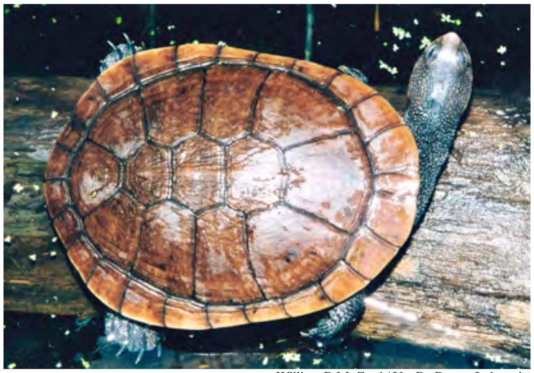
Chelodina rankini Wells 2007a:2 (07:86, 10:43) (unavailable name)

Chelodina canni rankini, *Chelodina (Chelodina) canni rankini*

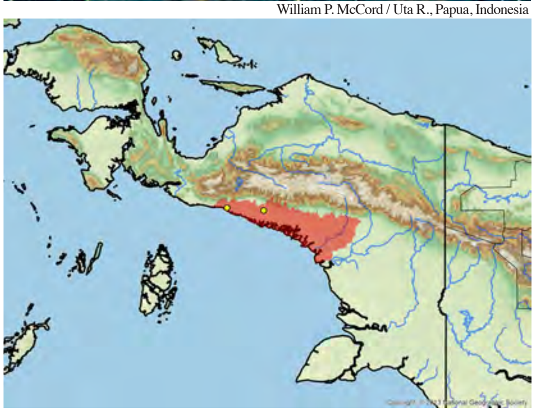
Type locality: "north-eastern Australia...Burdekin River, Queensland."

Type specimen: NHMUK 1908.2.25.1, holotype.

Chelodina (Chelodina) gunaleni McCord and Joseph-Ouni 2007a (10:35) **(18)**
Gunalen's Snake-necked Turtle



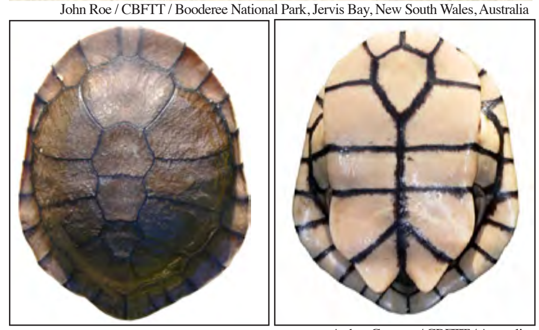
William P. McCord / Uta R., Papua, Indonesia



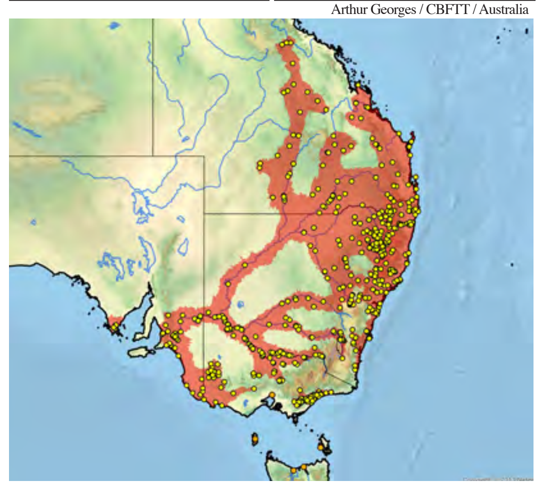
Distribution: Indonesia (Papua)
Presumed Historic Indigenous Range: 23,956 sq. km
Size (Max SCL): male 16.7 cm, female 23.9 cm (McCord and Joseph-Ouni 2007a)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2009)
Synonymy:
Chelodina gunaleni McCord and Joseph-Ouni 2007a:48
Chelodina (Chelodina) gunaleni
Type locality: "Uta River basin, Mimika District, Central Papua Province (Irian Jaya), Indonesia."
Type specimen: AMNH 160133, holotype; genotyped by Kehlmaier et al. (2019a).

Chelodina (Chelodina) longicollis (Shaw 1794) (17:92)
Eastern Snake-necked Turtle, Common Snake-necked Turtle

John Roe / CBFTT / Booderee National Park, Jervis Bay, New South Wales, Australia



Arthur Georges / CBFTT / Australia



*

(orange dots = probable introduced)

Distribution: Australia (New South Wales, Queensland, South Australia, Victoria)
Introduced: Australia (Tasmania)
Presumed Historic Indigenous Range: 979,916 sq. km
Size (Max SCL): male 24.9 cm, female 28.2 cm (Kennett et al. 2009 CBFTT)
CBFTT Account: Kennett, Roe, Hodges, and Georges (2009)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2009)
Synonymy:
Testudo longicollis Shaw 1794:19
Emys longicollis, Chelodina longicollis, Hydraspis longicollis, Chelys (Chelodina) longicollis, Chelys longicollis, Chelodina longicollis longicollis, Chelodina (Chelodina) longicollis
Type locality: "The vast island or rather continent of Australia, Australasia, or New Holland." Type locality presumed to be near Botany Bay or Sydney, New South Wales (Cann and Sadlier 2017:17), but not formally restricted.
Type specimen: NHMUK 1947.3.5.86, holotype, designated by Cogger et al. (1983:61), see Cann and Sadlier (2017); genotyped by Kehlmaier et al. (2019a).
Chelodina novaehollandiae Duméril and Bibron 1835:443 (*nomen novum*)
Chelodina novae-hollandiae

Type locality: "Nouvelle-Hollande" [Australia].
Type specimen: NHMUK 1947.3.5.86, holotype by default; MNHN 6969, recorded as "type" by Roux-Esteve (1979), and "holotype" by Cogger et al. (1983), Georges and Thomson (2010), and Cann and Sadlier (2017), is not a type, since *C. novaehollandiae* is a *nomen novum* replacement name for *C. longicollis*.

Chelodina sulcata Gray 1856a:201
Chelodina longicollis sulcata
Type locality: "Australia."
Type specimen: NHMUK 1947.3.5.87 (formerly 1851.4.24.27), holotype.

Chelodina sulcifera Gray 1856b:59 (*nomen novum*)
Chelodina longicollis sulcifera
Type locality: "Australia."
Type specimen: NHMUK 1947.3.5.87 (formerly 1851.4.24.27), holotype by default, see Goode (1967), Cogger et al. (1983), and Cann and Sadlier (2017).

Chelodina (Chelodina) mccordi Rhodin 1994b [(10:36) (19)]
Roti Island Snake-necked Turtle; Rote Snake-necked Turtle (includes 2 subspecies)

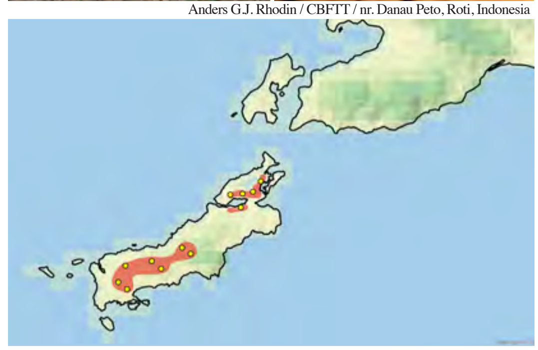
*
(subspecies: *mccordi* = red; *timorensis* = purple)

Distribution: Indonesia (Lesser Sundas [Roti = Rote]), Timor-Leste
Presumed Historic Indigenous Range: 466 sq. km
Size (Max SCL): male 20.2 cm, female 24.1 cm (see subspp.)
CBFTT Account: Rhodin, Ibarrondo, and Kuchling (2008)
IUCN Red List: Critically Endangered (CR A2acde) (As-singkily et al. 2019); Previously: Critically Endangered (CR) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II (2005); Zero export quota for specimens from the wild (2013)

Chelodina (Chelodina) mccordi mccordi Rhodin 1994b [(10:36) (19)]
Roti Island Snake-necked Turtle, Rote Snake-necked Turtle

Anders G.J. Rhodin / TCF / CBFTT / nr. Busalangga, Roti, Indonesia

Anders G.J. Rhodin / CBFTT / nr. Danau Peto, Roti, Indonesia



*

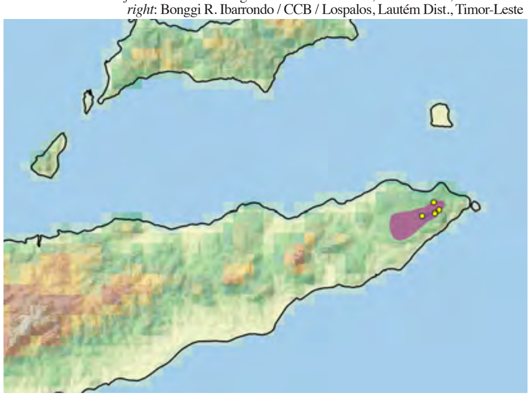
Distribution: Indonesia (Lesser Sundas [Roti = Rote])
Presumed Historic Indigenous Range: 242 sq. km
Size (Max SCL): male 20.2 cm, female 24.1 cm (Rhodin et al. 2008 CBFTT)
IUCN Red List: Critically Endangered (Possibly Extinct in the Wild) (CR(PEW) A2acde+B2ab(ii,iv)) (As-singkily et al. 2019)
Synonymy:
Chelodina rottiensis Brongersma *in* Rhodin 1994b:3 (*nomen nudum*)
Chelodina mccordi Rhodin 1994b:4
Chelodina mccordi mccordi, *Chelodina (Chelodina) mccordi*, *Chelodina (Chelodina) mccordi mccordi*
Type locality: "Danau Naloek, near Busalangga, ca. 11 km northeast of Tudameda and ca. 8 km southwest of Ba'a, elevation ca. 115 m, southwestern Roti Island (10°48' S, 123°00' E), East Nusa Tenggara Province, Indonesia."
Type specimen: MCZ 176730, holotype; MCZ 176731, paratype, genotyped by Kehlmaier et al. (2019a).

Chelodina mccordi roteensis McCord, Joseph-Ouni, and Hagen 2007b:59 [(07:87, 10:36) (19)]
Chelodina (Chelodina) mccordi roteensis, *Chelodina (Chelodina) mccordi rotiensis*
Type locality: "Lake Enduy, eastern Rote Island, East Nusa Tenggara Province, Indonesia."
Type specimen: AMNH R160132, holotype; genotyped by Kehlmaier et al. (2019a).

Chelodina (Chelodina) mccordi timorensis McCord, Joseph-Ouni, and Hagen 2007a [07:89, 10:36] [19]
Timor Snake-necked Turtle, Timor-Leste Snake-necked Turtle

Bonggi R. Ibarrondo / CCB / Lospalos, Lautém Dist., Timor-Leste

left: Carla C. Eisemberg / CCB / Lake Iralalaro, Lautém Dist., Timor-Leste
right: Bonggi R. Ibarrondo / CCB / Lospalos, Lautém Dist., Timor-Leste



*

Distribution: Timor-Leste
Presumed Historic Indigenous Range: 224 sq. km
Size (Max SCL): male 20.0 cm, female 23.3 cm (Kuchling et al. 2007)
IUCN Red List: Critically Endangered (CR B1ab(ii,iv)) (Assingkily et al. 2019)
Synonymy:
Chelodina timorensis McCord, Joseph-Ouni, and Hagen 2007a:54
Chelodina mccordi timorensis, Chelodina (Chelodina) mccordi timorensis, Chelodina (Chelodina) timorensis
Type locality: "Lake Ira Lalaro, Lautem District (regency), Tutuala Subdistrict, eastern East Timor (= Timor-Leste; = Timor Lorosa'E)."
Type specimen: AMNH 160135, holotype; genotyped by Kehlmaier et al. (2019a).
Chelodina mccordi timorlestensis Kuchling, Rhodin, Ibarrondo, and Trainor 2007:213
Type locality: "plain of Lake Iralalaro (= Lagoa Ira Lalaro) (ca. 08°28' S; 127°07' E, elev. ca. 334 m), east of Lospalos, Lautém District, Timor-Leste."
Type specimen: WAM 165888, holotype, see Ellis and Georges (2015); genotyped by Kehlmaier et al. (2019a).

Chelodina (Chelodina) novaeguineae Boulenger 1888b [20]
New Guinea Snake-necked Turtle

Fred Parker / Abam, Western Prov., Papua New Guinea

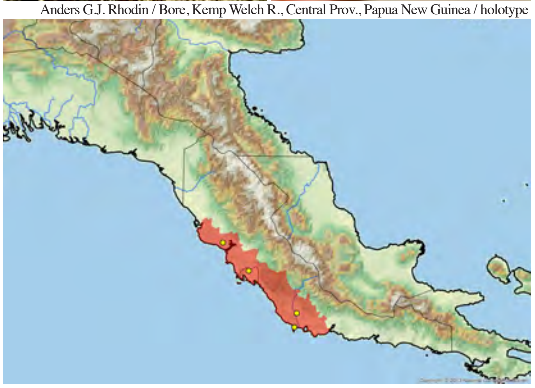
Anders G.J. Rhodin / Binaturi R., Western Prov., Papua New Guinea

Distribution: Indonesia (Papua), Papua New Guinea (Southern)
Presumed Historic Indigenous Range: 83,858 sq. km
Size (Max SCL): male 15.1 cm, female 21.8 cm (Rhodin and Hall, unpubl. data)
IUCN Red List: Least Concern (LC) (ATTWG 2000); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2009)
Synonymy:
Chelodina novaeguineae Boulenger 1888b:450
Chelodina novaeguineae novaeguineae, Chelodina (Chelodina) novaeguineae
Type locality: "Katow, S. E. New Guinea" [Papua New Guinea]. Emended to "Mawatta, Binaturi River (as Katow), Papua New Guinea" by Wells and Wellington (1985:8), and "Mawatta, Binaturi River, Western Province, Papua New Guinea" by Rhodin (1994a:9).
Type specimen: NHMUK 1946.1.22.36, lectotype, designated by Wells and Wellington (1985:8), see also Rhodin (1994a); genotyped by Kehlmaier et al. (2019a).

Chelodina (Chelodina) pritchardi Rhodin 1994a
Pritchard's Snake-necked Turtle

Anders G.J. Rhodin / Bore, Kemp Welch R., Central Prov., Papua New Guinea / holotype

Anders G.J. Rhodin / Bore, Kemp Welch R., Central Prov., Papua New Guinea / holotype



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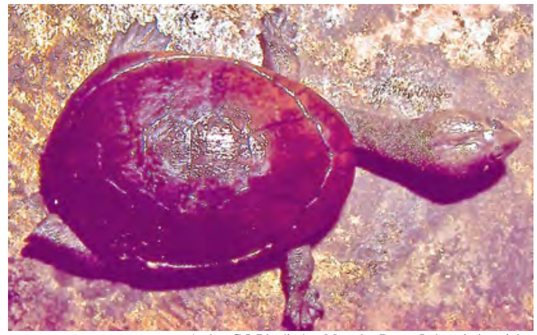
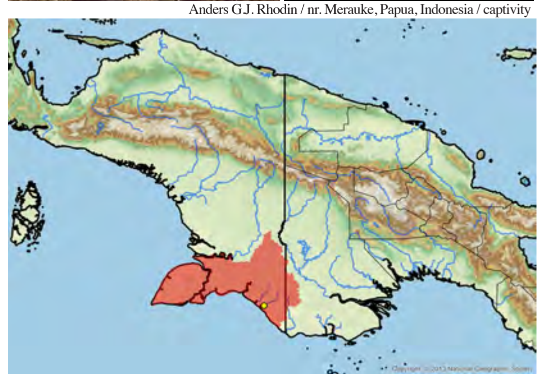
Distribution: Papua New Guinea (Southern)
Presumed Historic Indigenous Range: 6,947 sq. km
Size (Max SCL): male 18.6 cm, female 22.8 cm (Rhodin 1994a)
IUCN Red List: Vulnerable (VU B1ab(ii,iii,v)+2ab(ii,iii,v)) (Rhodin and Georges 2020); Previously: Endangered (EN B1+2e) (ATTWG 2000), Vulnerable (VU) (TFTSG 1996)
Synonymy:
Chelodina pritchardi Rhodin 1994a:4
Chelodina (Chelodina) pritchardi
Type locality: "Bore, Kemp Welch River, 13 km southeast of Kwikila, Central Province, Papua New Guinea (9°53' S, 147°46' E)."
Type specimen: MCZ 173543, holotype, specimen figured (f.1) and in Rhodin and Genorupa (2000:f.7) and here (TTWG:above), subsequently badly damaged in fire (Rhodin, pers. comm.); MCZ 175813 and AMNH 139735, paratypes.

Chelodina (Chelodina) reimanni Philippen and Grossmann 1990 [(20)]
Reimann's Snake-necked Turtle



Anders G.J. Rhodin / nr. Merauke, Papua, Indonesia / captivity

Anders G.J. Rhodin / nr. Merauke, Papua, Indonesia / captivity

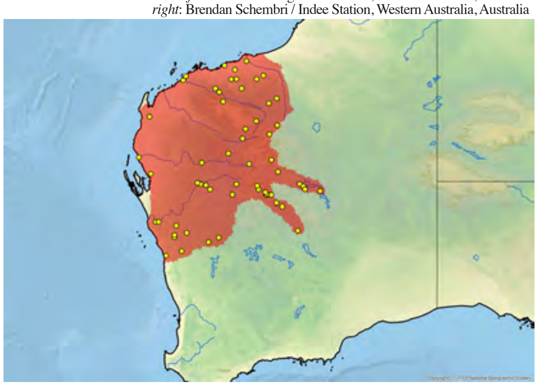


Distribution: Indonesia (Papua), Papua New Guinea (Southern)
Presumed Historic Indigenous Range: 49,192 sq. km
Size (Max SCL): male 20.9 cm, female 22.0 cm (Lyons et al. 2013)
IUCN Red List: Near Threatened (NT) (ATTWG 2000); Previously: Vulnerable (VU) (TFTSG 1996)
TFTSG Provisional Red List: Data Deficient (DD) (2009)
Synonymy:
Chelodina reimanni Philippen and Grossman 1990:95
Chelodina novaeguineae reimanni, Chelodina (Chelodina) reimanni
Type locality: "Merauke-River, West-Irian, Neuguinea" [Papua, Indonesia].
Type specimen: MTD 29178, holotype; genotyped by Kehlmaier et al. (2019a); MTD 29241, listed as "holotype" by Uetz et al. (2019), is a paratype.

Chelodina (Chelodina) steindachneri Siebenrock 1914 (07:85)
Steindachner's Snake-necked Turtle

Stephen M. Zozaya / nr. Wodgina, Western Australia, Australia

left: Gerald Kuchling / Borodale R., Western Australia, Australia
right: Brendan Schembri / Indee Station, Western Australia, Australia



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Distribution: Australia (Western Australia)
Presumed Historic Indigenous Range: 626,147 sq. km
Size (Max SCL): male 17.8 cm, female 21.2 cm (Glauert 1923; Cann and Sadlier 2017)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2009, 2018)
Synonymy:
Chelodina steindachneri Siebenrock 1914:386
Hesperochelodina steindachneri, *Chelodina (Chelodina) steindachneri*
Type locality: "Marloo Station am Grey River in Westaustralien" [Western Australia, Australia]. Types possibly from "Marloo Station (28°19'S, 116°10'E) in the Murchison District ca. 50 km west of...Yagloo", but locality not formally restricted (Cann and Sadlier 2017:42).
Type specimens: NMW 1818, 19796–98, syntypes (4), see Gemel et al. (2019), only three of these (19796–98) listed by Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Cann and Sadlier (2017); 19798 listed as "holotype" by Cogger et al. (1983) and Uetz et al. (2019), but has no status as holotype (Gemel et al. 2019).
Chelodina millymillyensis Glauert 1923:54
Chelodina milly-millyensis
Type locality: "Milly Milly, Murchison River, W.A." [Australia]. Emended to "Milly Milly Creek, Milly Milly Station, Murchison River, W.A." [Australia] by Cogger et al. (1983:62).
Type specimen: WAM R1000, lectotype, designated by Cogger et al. (1983:62), see Ellis and Georges (2015).

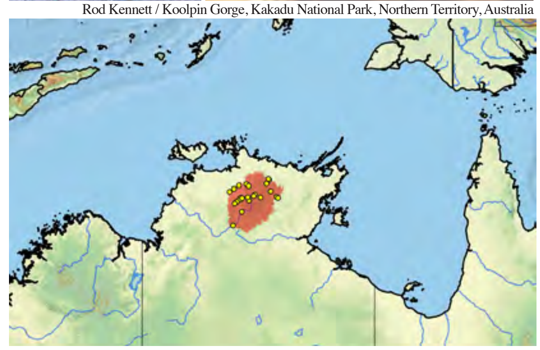
Chelodina (Chelydera) Thomson and Georges *in* Shea, Thomson, and Georges 2020 (5,17,21)

Chelydera Thomson and Georges *in* Shea, Thomson, and Georges 2020:430
Type species: *Chelodina (Chelydera) parkeri* [= *Chelodina parkeri* Rhodin and Mittermeier 1976], by original designation.
Comment: Valid replacement name (aspidonym) for *Supremechelys* Hoser 2014b, as per Wüster et al. (2021).

Chelodina (Chelydera) burrungandjii Thomson, Kennett, and Georges 2000
Arnhem Snake-necked Turtle, Sandstone Snake-necked Turtle

Rod Kennett / Koolpin Gorge, Kakadu National Park, Northern Territory, Australia

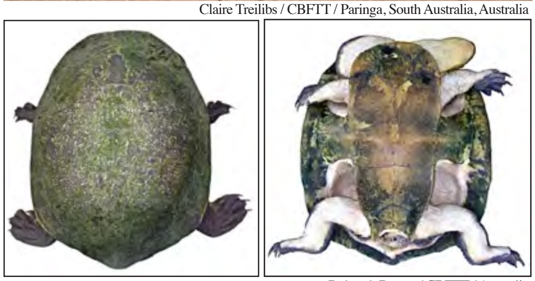
Rod Kennett / Koolpin Gorge, Kakadu National Park, Northern Territory, Australia



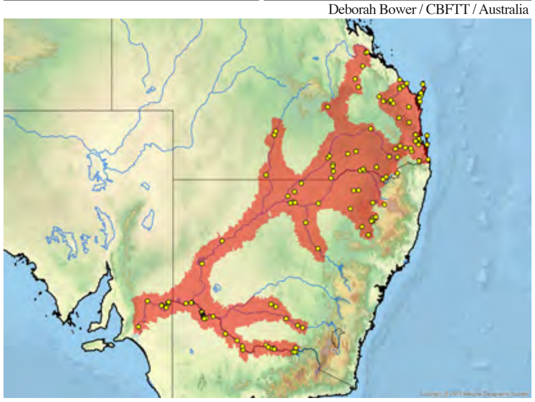
Distribution: Australia (Northern Territory)
Presumed Historic Indigenous Range: 37,944 sq. km
Size (Max SCL): male 22.0 cm, female 27.1 cm (Thomson et al. 2011 CBFTT)
CBFTT Account: Thomson, Kennett, Tucker, FitzSimmons, Featherston, Alacs, and Georges (2011) [includes *Chelodina (Macrochelodina) walloyarrina*]
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Least Concern (LC) (2009)
Synonymy:
Chelodina burrungandjii Thomson, Kennett, and Georges 2000:676
Macrochelodina burrungandjii, *Chelodina (Macrochelodina) burrungandjii*, *Chelodina (Macrochelodina) oblonga burrungandjii*, *Chelodina (Chelydera) burrungandjii*, *Chelydera burrungandjii*
Type locality: "Koolpin Gorge, South Alligator River (13°28' S, 132°38' E)... Arnhem Land Plateau, Northern Territory, Australia."
Type specimen: NTM 16010, holotype, see Cann and Sadlier (2017).

Chelodina (Chelydera) expansa Gray 1857 (17:4, 17:93) **(5)**
Broad-shelled Snake-necked Turtle

Claire Treilibs / CBFTT / Paringa, South Australia, Australia



Deborah Bower / CBFTT / Australia



*

Distribution: Australia (New South Wales, Queensland, South Australia, Victoria)

Presumed Historic Indigenous Range: 502,348 sq. km

Size (Max SCL): male 33.7 cm, female 50.0 cm (Cann and Legler 1994; Bower and Hodges 2014 CBFTT; Rhodin, unpubl. data)

CBFTT Account: Bower and Hodges (2014)

IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)]

TFTSG Provisional Red List: Near Threatened (NT) (2009)

Synonymy:

Chelodina expansa Gray 1857:370

Chelodina oblonga expansa, Macrochelodina expansa, Chelodina (Macrochelodina) expansa, Chelodina (Supremechelys) expansa, Chelodina (Chelydera) expansa, Chelydera expansa

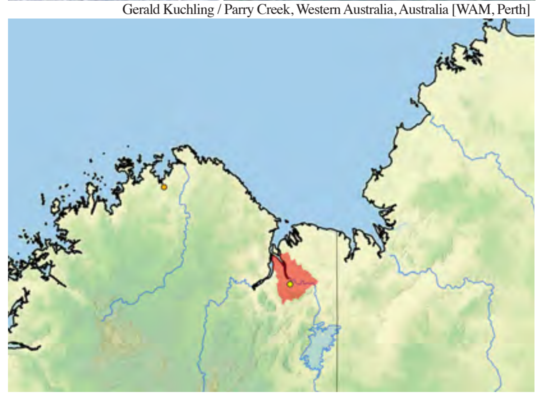
Type locality: "Australia." Restricted to "N. Australia" by Gray (1873j:63). Types possibly from the Condamine River in southeastern Queensland, west of the Great Dividing Range, but locality not formally restricted (Cann and Sadlier 2017:98).

Type specimen: NHMUK 1947.3.4.21, lectotype, designated by Iverson et al. (2001:366); Uetz et al. (2019) erroneously listed NHMUK 1947.3.4.21 and 1947.3.5.88 as syntypes.

Chelodina (Chelydera) kuchlingi Cann 1997d (07:90, 10:37, 14:42, 17:94) **(23)**
Kuchling's Snake-necked Turtle

Gerald Kuchling / Parry Creek, Western Australia, Australia [WAM, Perth]

Gerald Kuchling / Parry Creek, Western Australia, Australia [WAM, Perth]



*

(orange dot = erroneous type locality)

Distribution: Australia (Western Australia)

Presumed Historic Indigenous Range: 2,778 sq. km

Size (Max SCL): female 23.5 cm (Kuchling 2020)

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Critically Endangered (2020)

Synonymy:

Chelodina kuchlingi Cann 1997d:41 (07:90, 10:37, 14:42)

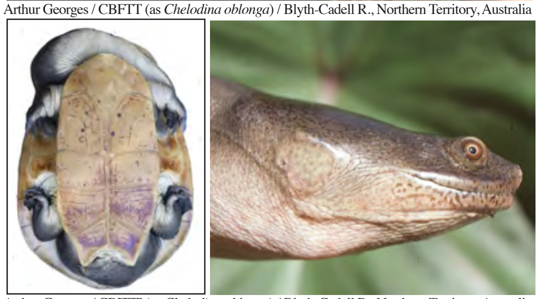
Macrochelodina kuchlingi, Chelodina (Macrochelodina) kuchlingi, Chelodina (Chelydera) kuchlingi, Chelydera kuchlingi

Type locality: "Kalumburu, N.W. Australia, (14°18' S x 126°28' E)"; locality in error, restricted to "Parry Creek, lower Ord River floodplain, Kimberley, Western Australia" [Australia] by Kuchling (2020:53).

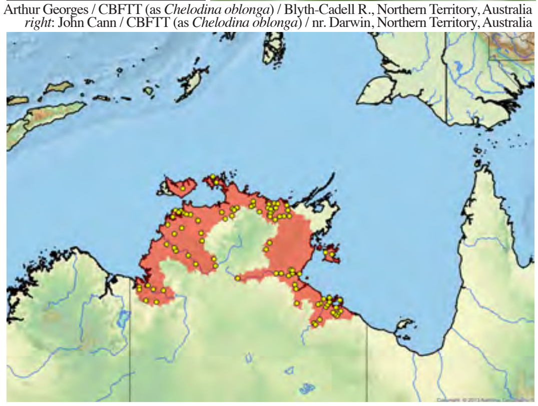
Type specimen: WAM R29411, holotype; genotyped by Kehlmaier et al. (2019a).

Chelodina (Chelydera) kurrichalpongo (Joseph-Ouni, McCord, Cann, and Smales 2019) [24]
(or *Chelodina (Chelydera) rugosa*)
Darwin Snake-necked Turtle

Arthur Georges / CBFTT (as *Chelodina oblonga*) / Blyth-Cadell R., Northern Territory, Australia



left: Arthur Georges / CBFTT (as *Chelodina oblonga*) / Blyth-Cadell R., Northern Territory, Australia
right: John Cann / CBFTT (as *Chelodina oblonga*) / nr. Darwin, Northern Territory, Australia

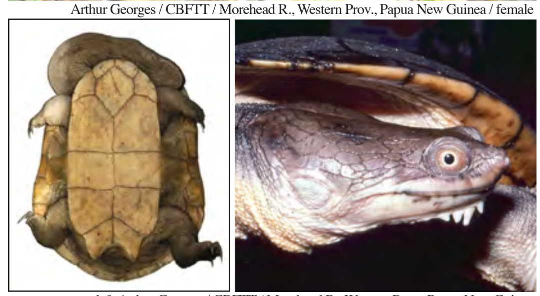


*

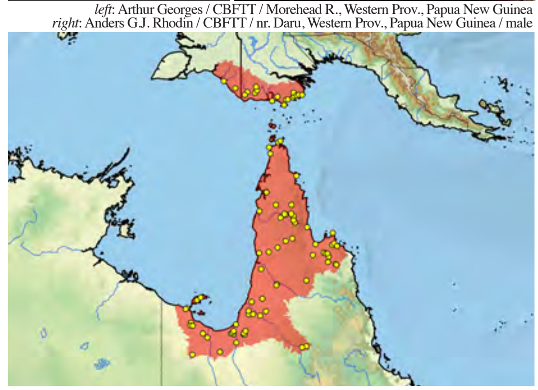
Distribution: Australia (Northern Territory)
Presumed Historic Indigenous Range: 177,191 sq. km
Size (Max SCL): 31.5 cm (Joseph-Ouni et al. 2019a)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Least Concern (LC) (2020)
Synonymy:
Macrochelodina kurrichalpongo Joseph-Ouni, McCord, Cann, and Smales 2019:9
Chelodina (Macrochelodina) kurrichalpongo, Chelodina (Chelydera) kurrichalpongo, Chelydera kurrichalpongo
Type locality: "McMinns Lagoon, Outer Darwin, Litchfield, Northern Territory, Australia ... latitude -12.517, longitude 131.083)."
Type specimen: NTM R17209, holotype.

Chelodina (Chelydera) rugosa Ogilby 1890 [14:43, 17:94] [22, 25]
[previously *Chelodina (Macrochelodina) oblonga* Gray 1841] [07:91, 10:37]
Northern Snake-necked Turtle

Arthur Georges / CBFTT / Morehead R., Western Prov., Papua New Guinea / female



left: Arthur Georges / CBFTT / Morehead R., Western Prov., Papua New Guinea
right: Anders G.J. Rhodin / CBFTT / nr. Daru, Western Prov., Papua New Guinea / male



*

Distribution: Australia (Queensland), Indonesia (Papua), Papua New Guinea (Southern)
Presumed Historic Indigenous Range: 243,961 sq. km
Size (Max SCL): male 26.8 cm, female 36.0 cm (Georges et al. 2006; Lyons et al. 2013; Kennett et al. 2014 CBFTT)
CBFTT Account: Kennett, Fordham, Alacs, Corey, and Georges (2014)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996); the currently synonymized taxon *Chelodina siebenrocki* listed by IUCN as Near Threatened (NT) (ATTWG 2000), as *Chelodina rugosa siebenrocki*
TFTSG Provisional Red List: Least Concern (LC) (2018)
Synonymy:
Chelodina rugosa Ogilby 1890:56 [14:43] [25]
Chelodina oblonga rugosa, Macrochelodina rugosa, Macrochelodina rugosa rugosa, Chelodina (Macrochelodina) rugosa, Chelodina (Macrochelodina) oblonga rugosa, Chelodina (Chelydera) rugosa, Chelydera rugosa
Type locality: "Cape York, Q." [Queensland, Australia]. Restricted to "Cape York Peninsula north of the Jardine River" by Cann and Sadlier (2017:79).
Type specimen: AMS 6256, holotype, see Goode (1967), Cogger et al. (1983), and Cann and Sadlier (2017); NHMUK 1947.3.5.89, listed as "holotype" of *Chelodina rugosa* by Uetz et al. (2019), is the holotype of *Chelodina oblonga*.

Comment: A proposal to the ICZN by Thomson (2006, 2007) to give *Chelodina rugosa* Ogilby 1890 precedence over *Chelodina oblonga* Gray 1841 whenever the two are considered synonyms, was not approved by ICZN (2013a).

Chelodina siebenrocki Werner 1901a:602 (07:91) **(24, 25)**

Chelodina oblonga siebenrocki, Macrochelodina siebenrocki, Macrochelodina rugosa siebenrocki

Type locality: "Deutsch Neu-Guinea" [northern Papua New Guinea] [in error]. Emended to "New Guinea's south coast" [southern Papua New Guinea] by Rhodin and Mittermeier (1976:474).

Type specimen: ZMB 36221 (formerly 16491), holotype, previously recorded as lost (Peters, pers. comm. *in* Rhodin and Mittermeier 1976), rediscovered by Fritz et al. (1994); genotyped by Kehlmaier et al. (2019a).

Chelodina intergularis Fry 1915:88

Type locality: "Australia."

Type specimen: AMS 6255, holotype, see Goode (1967) and Cogger et al. (1983).

Macrochelodina billabong Wells and Wellington 1985:9 (*nomen nudum*)

Chelodina billabong

Type locality: "Bullo River Crossing, along the Katherine to Kununurra Rd., Northern Territory" [Australia].

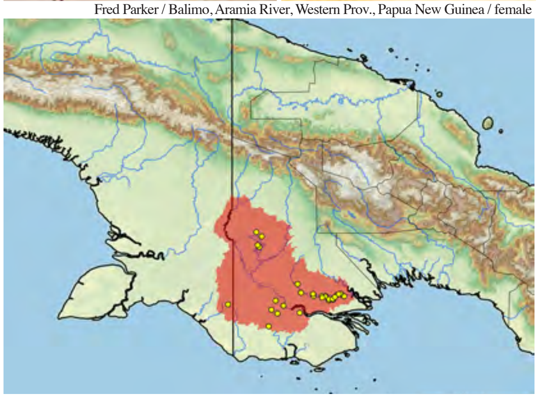
Type specimen: AMS R72933, holotype, see Cann and Sadlier (2017).

Chelodina (Chelydera) parkeri Rhodin and Mittermeier 1976 **(21)**

Parker's Snake-necked Turtle

Fred Parker / Balimo, Aramia River, Western Prov., Papua New Guinea / female

Fred Parker / Balimo, Aramia River, Western Prov., Papua New Guinea / female



*

Distribution: Indonesia (Papua), Papua New Guinea (Southern)
Presumed Historic Indigenous Range: 50,521 sq. km
Size (Max SCL): male 27.4 cm, female 35.3 cm (Georges et al. 2006; Ceballos et al. 2013)

IUCN Red List: Near Threatened (NT A4d) (Rhodin and Georges 2020); Previously: Vulnerable (VU D2) (ATTWG 2000), Vulnerable (VU) (TFTSG 1996)

Synonymy:

Chelodina parkeri Rhodin and Mittermeier 1976:465

Macrochelodina parkeri, Chelodina (Macrochelodina) parkeri, Chelodina (Chelydera) parkeri, Chelydera parkeri

Type locality: "Mawa, Lake Murray, Western District, Papua New Guinea."

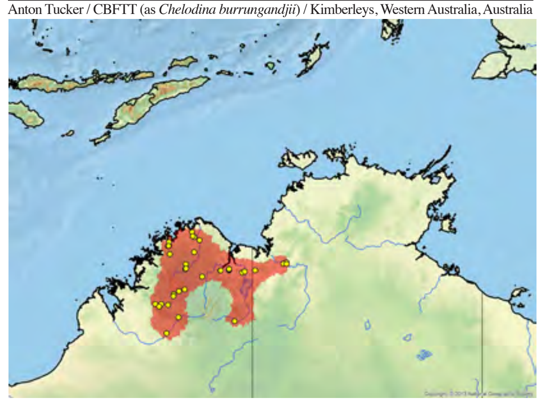
Type specimen: AMS 21425, holotype, see Cogger (1979) and Shea and Sadlier (1999).

Chelodina (Chelydera) walloyarrina McCord and Joseph-Ouni 2007b (08:4, 10:38, 17:94) **(17)**

Kimberley Snake-necked Turtle

John Cann / TCF / Kimberleys, Western Australia, Australia

Anton Tucker / CBFTT (as *Chelodina burrungandjii*) / Kimberleys, Western Australia, Australia



*

Distribution: Australia (Northern Territory, Western Australia)
Presumed Historic Indigenous Range: 128,406 sq. km
Size (Max SCL): male 26.3 cm, female 31.6 cm (Thomson et al. 2011 CBFTT)

CBFTT Account: Thomson, Kennett, Tucker, FitzSimmons, Featherston, Alacs, and Georges (2011) [as part of *Chelodina (Macrochelodina) burrungandjii* account]

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Least Concern (2018)

Synonymy:
Macrochelodina walloyarrina McCord and Joseph-Ouni 2007b:59
Chelodina (Macrochelodina) walloyarrina, *Chelodina (Macrochelodina) oblonga walloyarrina*, *Chelodina burrungandjii walloyarrina*, *Chelodina (Chelydera) walloyarrina*, *Chelydera walloyarrina*
Type locality: “The Fitzroy River at Fitzroy River Crossing, Western Australia, Australia, 18°10.834' S and 125°35.849' E.”
Type specimen: WAM R164345, holotype, see Ellis and Georges (2015) and Cann and Sadlier (2017).

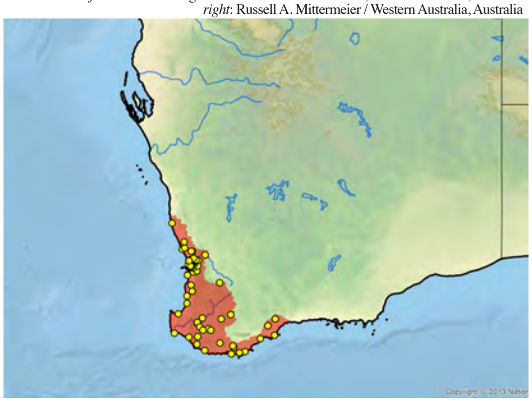
Chelodina (Macrochelodina) Wells and Wellington 1985 (07:85, 08:2, 10:34) (**21**)

Macrochelodina Wells and Wellington 1985:9
Type species: *Macrochelodina oblonga* [= *Chelodina oblonga* Gray 1841], by original designation.
Macrodiremys McCord and Joseph-Ouni 2007b:57 (08:3, 10:39)
Type species: *Macrodiremys oblonga* sensu Burbidge et al. 1974 [= *Chelodina oblonga* Gray 1841 sensu Burbidge et al. 1974 = subjective synonym of *Chelodina colliei* Gray 1856a], by original designation.

Chelodina (Macrochelodina) oblonga Gray 1841 (07:88, 08:3, 10:39, 14:44) (**22**)
[previously *Chelodina (Macrodiremys) colliei* Gray 1856a] (14:43)
Southwestern Snake-necked Turtle

Gerald Kuchling / Moore River Nature Reserve, Western Australia, Australia

left: Gerald Kuchling / Moore River Nature Reserve, Western Australia, Australia
right: Russell A. Mittermeier / Western Australia, Australia



Distribution: Australia (Western Australia)
Presumed Historic Indigenous Range: 79,162 sq. km
Size (Max SCL): male 23.3 cm, female 31.0 cm (Bonnet et al. 2010; Cann and Sadlier 2017; Rhodin, unpubl. data)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2009)
Synonymy:
Chelodina oblonga Gray 1841:446 (14:43)
Chelodina (Macrochelodina) oblonga, *Chelodina (Macrochelodina) oblonga oblonga*, *Macrochelodina oblonga*, *Macrodiremys oblonga*, *Chelodina (Macrodiremys) oblonga*
Type locality: “Western Australia.” Emended to “Northern Territory... possibly...Port Essington” [Australia] by Thomson (2000:747); further emended to “southwestern Australia” by Shea et al. (2020:427).
Type specimen: NHMUK 1947.3.5.89 (formerly 1840.12.9.81), lectotype, originally considered the holotype as discussed by Thomson (2000, 2006, 2007), see also Goode (1967) and Cann and Sadlier (2017); genotyped by Kehlmaier et al. (2019a); further discussed and designated lectotype by Shea et al. (2020:427).
Chelodina colliei Gray 1856a:200
Macrodiremys colliei, *Chelodina (Macrodiremys) colliei*
Type locality: “Swan River” [Western Australia, Australia].
Type specimen: NHMUK 1947.3.5.91 (formerly 1852.11.12.2), lectotype, designated by Thomson (2000:747), see Cann and Sadlier (2017); NHMUK 1947.3.5.91 also designated as neotype of *Chelodina oblonga* Gray 1841 by McCord and Joseph-Ouni (2007:56), but that designation was invalid (Kuchling 2010; Shea et al. 2020).

Emydurinae Gaffney 1977 (26)

Emydurodd Gaffney 1977:24
Emydurinei Bour and Dubois 1984b:80
Emydurinae Joyce, Anquetin, Cadena, Claude, Danilov, Evers, Ferreira, Gentry, Georgalis, Lyson, Pérez-García, Rabi, Sterli, Vitek, and Parham 2021:18

Elseya Gray 1867 (07:92, 14:45, 17:95)

Elseya Gray 1867:44
Type species: *Elseya dentata* [= *Chelymys dentata* Gray 1863a], by subsequent designation by Lindholm (1929:291).
Pelocomastes De Vis 1897:6
Type species: *Pelocomastes ampla* † De Vis 1897 [= subjective synonym of *Chelymys uberrima* † De Vis 1897], by original monotypy.
Hanwarachelys Thomson, Amepou, Anamiato, and Georges 2015:65
Type species: *Elseya (Hanwarachelys) novaeguineae* [= *Platemys novaeguineae* Meyer 1874], by original designation.

Elseya (Elseya) Gray 1867 (17:95)

Elseya Gray 1867:44
Type species: *Elseya dentata* [= *Chelymys dentata* Gray 1863a], by subsequent designation by Lindholm (1929:291).

Elseya (Elseya) branderhorsti (Ouwens 1914) (07:93)

White-bellied Snapping Turtle, Branderhorst's Snapping Turtle

Arthur Georges / Bensbach R., Western Prov., Papua New Guinea

Anders G.J. Rhodin / nr. Merauke, Papua, Indonesia / captivity

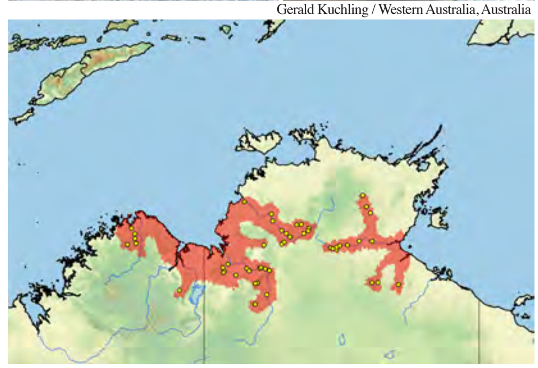
Distribution: Indonesia (Papua), Papua New Guinea (Southern)
Presumed Historic Indigenous Range: 158,109 sq. km
Size (Max SCL): male 40.2 cm, female 48.1 cm (Georges et al. 2006; Ceballos et al. 2013)
IUCN Red List: Vulnerable (VU B1+2e) (ATTWG 2000)
TFTSG Provisional Red List: Vulnerable (VU) (2019)
Synonymy:
Emydura branderhorsti Ouwens 1914:31
Elseya branderhorsti, Elseya (Elseya) branderhorsti
Type locality: "Sth. Nw. Guinea" [Southern New Guinea = Papua, Indonesia]. Restricted to "southeastern Papua, Indonesia, between the Lorentz River and Merauke" by Thomson et al. (2015:65); and to "Bensbach River of the Trans-Fly region of Papua New Guinea (8°50'58.6896" S., 141°14'52.944" E.) by Thomson et al. (2015:63).
Type specimen: MZB, holotype, originally live, now lost (Thomson et al. 2015); PNGM 25201, neotype, designated by Thomson et al. (2015:63).

Elseya (Elseya) dentata (Gray 1863a)

Northern Snapping Turtle; North Australian Snapping Turtle

Gerald Kuchling / Carson R., Western Australia, Australia

Gerald Kuchling / Western Australia, Australia



*

Distribution: Australia (Northern Territory, Western Australia)
Presumed Historic Indigenous Range: 133,631 sq. km
Size (Max SCL): male 28.0 cm, female 33.0 cm (Cann and Sadlier 2017)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Chelymys dentata Gray 1863a:98
Podocnemis dentata, Elseya dentata, Emydura dentata, Elseya dentata dentata, Elseya (Elseya) dentata
Type locality: "N. Australia; Upper Victoria, in Beagle's Valley." [Northern Territory, Australia]. Emended to "Beagles Valley, Victoria River, Northern Territory...(15°34' S, 130°54' E)" by Thomson et al. (2015:62).

Type specimen: NHMUK 1947.3.6.3 (formerly 1857.10.24.73), lectotype, designated by Wells and Wellington (1985:8), see Goode (1967) and Cann and Sadlier (2017); NHMUK 1947.3.6.2 erroneously designated lectotype by Thomson et al. (2015:62).

Chelymys elseyi Gray 1864d:132 (*nomen nudum*)

Chelymys elseya Gray 1870c:76 (*nomen nudum*)

Elseya intermedia Gray 1872c:23

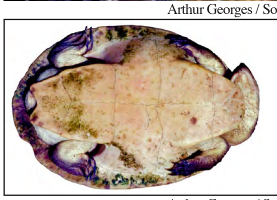
Type locality: "North Australia, upper part of Victoria" [Victoria River, Northern Territory, Australia].

Type specimen: NHMUK 1947.3.4.14, holotype, see Cogger et al. (1983) and Cann and Sadlier (2017; genotyped by Kehlmaier et al. (2019a).

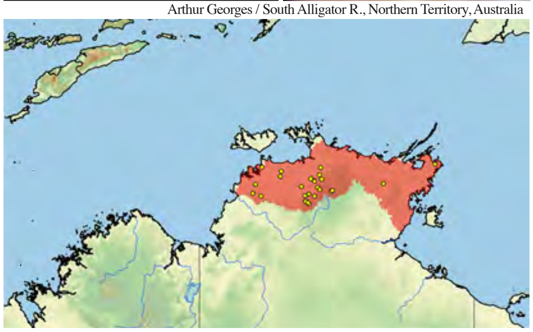
Elseya (Elseya) flaviventralis Thomson and Georges 2016 [17:96]

Yellow-bellied Snapping Turtle

Arthur Georges / South Alligator R., Northern Territory, Australia



Arthur Georges / South Alligator R., Northern Territory, Australia



*

Distribution: Australia (Northern Territory)

Presumed Historic Indigenous Range: 107,600 sq. km

Size (Max SCL): male 26.5 cm, female 34.0 cm (Thomson and Georges 2016; Joseph-Ouni et al. 2020)

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Least Concern (LC) (2018)

Synonymy:

Elseya flaviventralis Georges, Doody, Young, and Cann 2000:7 (*nomen nudum*)

Elseya jukesi Wells 2002b:7 (*nomen nudum*)

Elseya jukesi Wells 2007b:5 [07:94, 10:43] (unavailable name)

Type locality: "Pul Pul Billabong, South Alligator River (13 34'S, 132 35'E)" [Northern Territory, Australia].

Type specimen: NTM 13985, holotype.

Elseya (Elseya) flaviventralis Thomson and Georges 2016:20

Type locality: "Pine Creek Crossing, South Alligator River Drainage, Kakadu National Park, Northern Territory, Australia, 13°30' S 132°28' E."

Type specimen: NTM 13512, holotype.

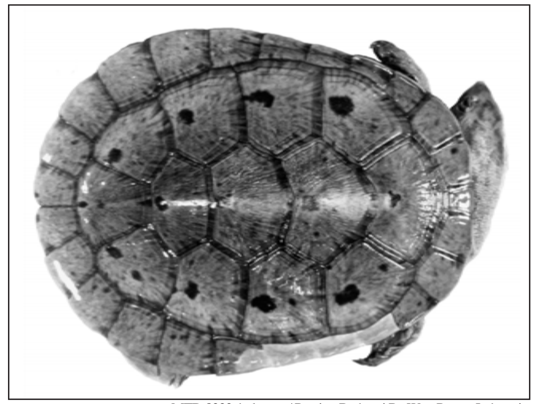
Elseya (Hanwarachelys) Thomson, Amepou, Anamiato, and Georges 2015 [17:95]

Hanwarachelys Thomson, Amepou, Anamiato, and Georges 2015:65

Type species: *Elseya (Hanwarachelys) novaeguineae* [= *Platemys novaeguineae* Meyer 1874], by original designation.

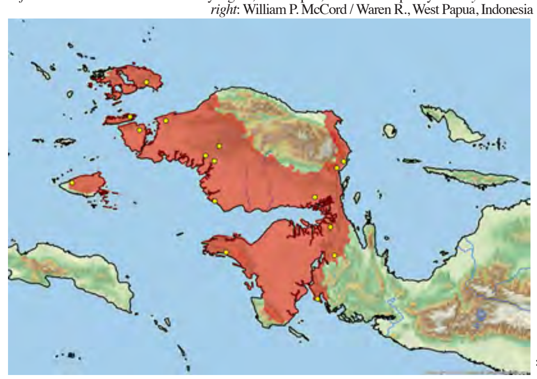
Elseya (Hanwarachelys) novaeguineae (Meyer 1874) [10:40, 14:45, 17:97] **(27)**

Western New Guinea Stream Turtle, New Guinea Snapping Turtle



MTD 8222, holotype / Passim, Barbussi R., West Papua, Indonesia

left: Anders G.J. Rhodin / Bintuni Bay region, West Papua, Indonesia / captivity / "*Elseya caelata*"
right: William P. McCord / Waren R., West Papua, Indonesia



*

Distribution: Indonesia (West Papua)

Introduced: Palau (Babeldaob), see Aoki (1977)

Presumed Historic Indigenous Range: 66,950 sq. km

Size (Max SCL): male 19.1 cm, female 22.9 cm (Rhodin, unpubl. data)

IUCN Red List: Least Concern (LC) (ATTWG 2000); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)

TFTSG Provisional Red List: Least Concern (LC) (2015)

Synonymy:

Platemys novaeguineae Meyer 1874:128

Platemys novae guineae, Emydura novaeguineae, Elseya novaeguineae, Elseya latisternum novaeguineae, Elseya dentata novaeguineae, Elseya novaeguineae novaeguineae, Myuchelys novaeguineae, Elseya (Hanwarachelys) novaeguineae, Hanwarachelys novaeguineae

Type locality: "Neu-Guinea" [West Papua, Indonesia]. Restricted to "Passim (Nordwest Neu Guinea)" [West Papua, Indonesia] by Meyer (1887:4); to "southwestern shore of Cenderawasih Bay on the southeastern Vogelkop" [West Papua, Indonesia] by Rhodin and Genorupa (2000:132); and to "Passim, Barbussi River, ca. 3 km N.

Sieb, 1 km S. Tandjung Sjeri (= Syeri), west shore Geelvink Bay (= Cenderawasih Bay), Papua, Indonesia (1°41' S, 134°05' E)" by Thomson et al. (2015:67).

Type specimen: MTD 8222, holotype, see Obst (1976) and Thomson et al. (2015); MSNG CE8605, erroneously listed as a syntype by Goode (1967) is not a type; MTD 8222 genotyped by Kehlmaier et al. (2019a).

Elseya caelatus Joseph-Ouni and McCord 2019a:25 [27]

Elseya caelatus caelatus, Elseya caelata, Elseya caelata caelata, Elseya (Hanwarachelys) caelata, Elseya (Hanwarachelys) caelata caelata

Type locality: "Salawati Island, West Papua Province, (New Guinean) Indonesia."

Type specimen: AMNH R178715, holotype.

Elseya caelatus ayamaru Joseph-Ouni and McCord 2019a:28 [27]

Elseya caelata ayamaru, Elseya (Hanwarachelys) caelata ayamaru

Type locality: "Ayamaru lakes, West Papua Province, (New Guinean) Indonesia."

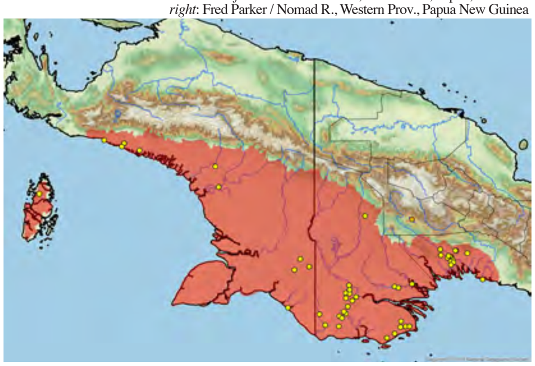
Type specimen: AMNH R178717, holotype.

Elseya (Hanwarachelys) rhodini Thomson, Amepou, Anamiato, and Georges 2015 [17:97]

Southern New Guinea Stream Turtle; Rhodin's Stream Turtle

John Cann / Kapara R., nr. Uta, Mimika Regency, Papua, Indonesia

left: John Cann / Josaker, Eilanden R., Papua, Indonesia
right: Fred Parker / Nomad R., Western Prov., Papua New Guinea



*

(orange dot = probable introduced)

Distribution: Indonesia (Aru Islands, Papua); Papua New Guinea (Southern)

Presumed Historic Indigenous Range: 250,991 sq. km

Size (Max SCL): male 20.5 cm, female 27.6 cm (Thomson et al. 2015)

IUCN Red List: Least Concern (LC) (Amepou et al. 2020)

Synonymy:

Elseya (Hanwarachelys) rhodini Thomson, Amepou, Anamiato, and Georges 2015:69

Elseya rhodini, Hanwarachelys rhodini

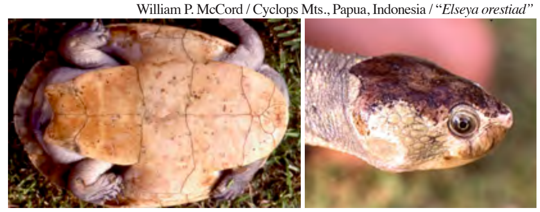
Type locality: "Rue Creek (tributary of Wau Creek), Gulf Province, Papua New Guinea (07°11'67.3" S, 144°37'13.8" E)"; GPS coordinates emended to (07°11.673' S, 144°37.138' E) by TTWG (2017:195).

Type specimen: PNGM 25204, holotype.

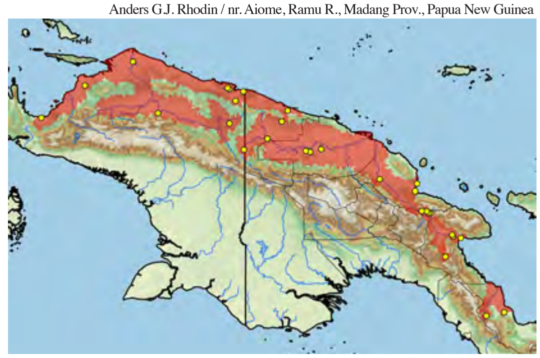
Elseya (Hanwarachelys) schultzei (Vogt 1911) [07:95, 10:40, 14:45] [28]

Northern New Guinea Stream Turtle, Schultze's Snapping Turtle

William P. McCord / Cyclops Mts., Papua, Indonesia / "*Elseya orestiad*"



Anders G.J. Rhodin / nr. Aiome, Ramu R., Madang Prov., Papua New Guinea



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Distribution: Indonesia (Papua); Papua New Guinea (Northern)

Introduced: Solomon Islands (?) (Malaita)

Presumed Historic Indigenous Range: 154,896 sq. km

Size (Max SCL): female 22.5 cm (Rhodin, unpubl. data)

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Least Concern (LC) (2015)

Synonymy:

Emydura schultzei Vogt 1911:410

Elseya schultzei, Elseya novaeguineae schultzei, Elseya (Hanwarachelys) schultzei, Hanwarachelys schultzei

Type locality: "Fluss westlich der Tamimündung...Holländisch-Neu-Guinea" [Papua, Indonesia]. Restricted to "near Sae village, Seko coast, near Skosai, ca 5 km W. mouth of Tami River, Papua, Indonesia (2°37' S, 140°54' E)" by Thomson et al. (2015:68).

Type specimen: ZMB 22182, holotype, see Goode (1967), Fritz et al. (1994), and Thomson et al. (2015).

Elseya orestiad Joseph-Ouni and McCord 2019b:45 [28]

Type locality: "Cyclops Mountains, Papua Province, (New Guinean) Indonesia."

Type specimen: AMNH R178719, holotype.

Elseya (Pelocomastes) De Vis 1897 (17:95)

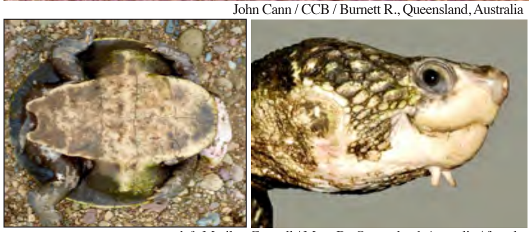
Pelocomastes De Vis 1897:6

Type species: *Pelocomastes ampla* † De Vis 1897 [= subjective synonym of *Chelymys uberrima* † De Vis 1897], by original monotypy.

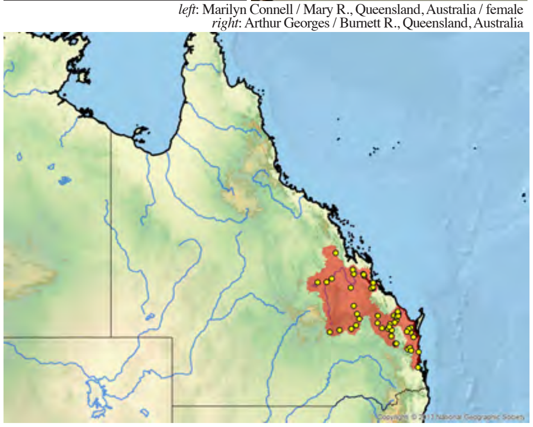
Elseya (Pelocomastes) albagula Thomson, Georges, and Limpus 2006 (29)

White-throated Snapping Turtle, Southern Snapping Turtle

John Cann / CCB / Burnett R., Queensland, Australia



left: Marilyn Connell / Mary R., Queensland, Australia / female
right: Arthur Georges / Burnett R., Queensland, Australia



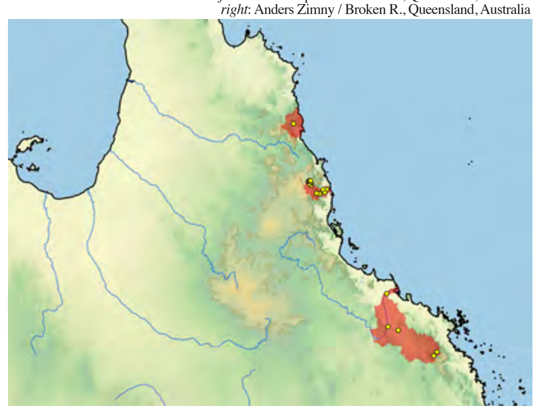
Distribution: Australia (Queensland)
Presumed Historic Indigenous Range: 126,224 sq. km
Size (Max SCL): male 28.3 cm, female 41.8 cm (Thomson et al. 2006; Hamann et al. 2008)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Endangered (EN) (2018)
Synonymy:
Elseya albagula Thomson, Georges, and Limpus 2006:75
Elseya dentata albagula, Elseya (Pelocomastes) albagula, Pelocomastes albagula, Elseya albagula albagula, Elseya (Fitzroychelys) albagula, Elseya (Fitzroychelys) albagula albagula
Type locality: "Ned Churchwood Weir, Burnett River, Queensland, Australia (25º03' S, 152º05' E)."
Type specimen: QM J81785, holotype.

Elseya (Pelocomastes) irwini Cann 1997c (29)

Irwin's Snapping Turtle, Johnstone River Snapping Turtle

Anders Zimny / Broken R., Queensland, Australia

left: Duncan Limpus / Burdekin R., Queensland, Australia
right: Anders Zimny / Broken R., Queensland, Australia



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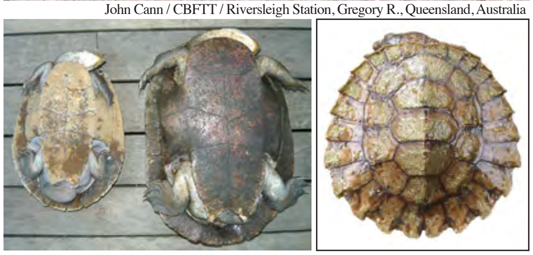
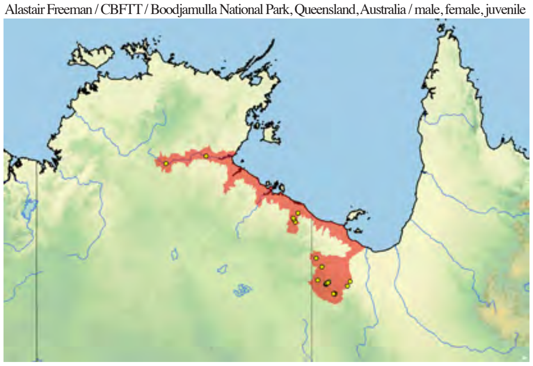
Distribution: Australia (Queensland)
Presumed Historic Indigenous Range: 15,915 sq. km
Size (Max SCL): male 23.9 cm, female 35.7 cm (Itescu et al. 2014; Cann and Sadlier 2017; Freeman et al. 2018)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Near Threatened (NT) (2018)
Synonymy:
Elseya stirlingi Wells and Wellington 1985:9 (*nomen nudum*)
Type locality: "Cairns district, Queensland" [Australia].
Type specimen: AMS R93048 (formerly R68848), discussed by Iverson et al. (2001b), see Shea and Sadlier (1999) and Cann and Sadlier (2017).
Elseya irwini Cann 1997c:36
Elseya dentata irwini, Elseya (Pelocomastes) irwini, Pelocomastes irwini
Type locality: "Burdekin River, Queensland, 19°42' S, 147°18' E, approximately 18 km upstream from Ayr" [Australia].
Type specimen: QM J59431, holotype, see Cann and Sadlier (2017).
Elseya sterlingi Iverson, Thomson, and Georges 2001b:363 (*nomen invalidum*)
Comment: Unjustified emendation or error for *stirlingi*.
Elseya stirlingi Wells 2007b:4 (07:96, 10:43) (unavailable name)
Type locality: "South Johnstone River, Qld (17 38'S, 145 05'E)" [Queensland, Australia].
Type specimen: QM J48059, holotype.

Elseya (Pelocomastes) lavarackorum (White and Archer 1994) [30]
Riversleigh Snapping Turtle, Gulf Snapping Turtle


John Cann / CBFTT / Riversleigh Station, Gregory R., Queensland, Australia


Alastair Freeman / CBFTT / Boodjamulla National Park, Queensland, Australia / male, female, juvenile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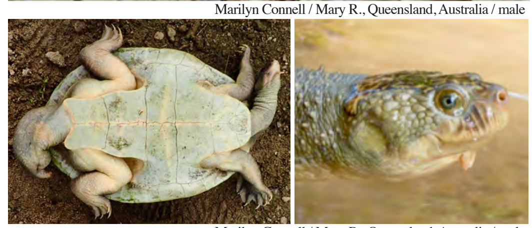
Distribution: Australia (Northern Territory, Queensland)
Presumed Historic Indigenous Range: 55,650 sq. km
Size (Max SCL): male 24.2 cm, female 35.2 cm (Freeman et al. 2014 CBFTT; Joseph-Ouni et al. 2020)
CBFTT Account: Freeman, Thomson, and Cann (2014)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2018)
Synonymy:
Emydura lavarackorum † White and Archer 1994:159
Elseya lavarackorum, Elseya dentata lavarackorum, Elseya (Pelocomastes) lavarackorum, Pelocomastes lavarackorum, Elseya (Elseya) lavarackorum
Type locality: "Gregory River, Riversleigh Station, northwestern Queensland, approximately 200 km northwest of Mount Isa" [Australia].
Type specimen: QM F24121, holotype, fossil, almost complete plastron, partial carapace and pelvic fragments, figured (f.1-4), see Thomson et al. (1997) and Cann and Sadlier (2017).
Geologic age: Late Pleistocene, Terrace Site, gravel sediments, ^{14}C age ca. 28,000–21,200 ybp, see Davis and Archer (1997).
Comment: Although originally described from a fossil specimen, the extant taxon was subsequently recognized by Thomson et al. (1997).
Elseya (Pelocomastes) oneiros Joseph-Ouni, McCord, Cann, Smales, Freeman, Sadlier, Couper, White, and Amey 2020:32 [30]
Elseya oneiros
Type locality: "Elizabeth Gorge, Bowthorn Station, Queensland, Australia [...] latitude -18.2167, longitude 138.3333."
Type specimen: QM J47908.

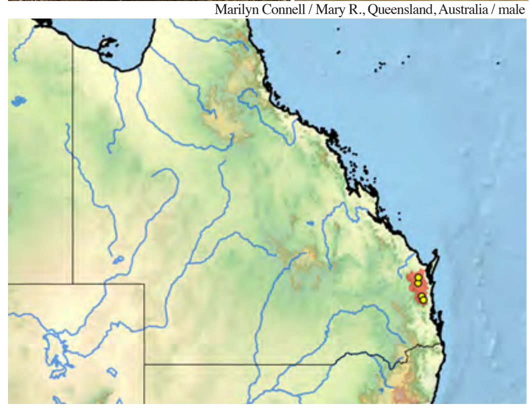
Elusor Cann and Legler 1994

Elusor Cann and Legler 1994:83
Type species: *Elusor macrurus* Cann and Legler 1994, by original monotypy.

Elusor macrurus Cann and Legler 1994
Mary River Turtle


Marilyn Connell / Mary R., Queensland, Australia / male


Marilyn Connell / Mary R., Queensland, Australia / male



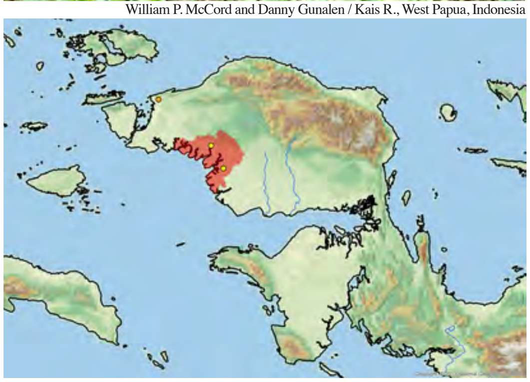
Distribution: Australia (Queensland)
Presumed Historic Indigenous Range: 8,977 sq. km
Size (Max SCL): male 43.6 cm, female 34.8 cm (Cann and Legler 1994; Limpus 2008; Cann and Sadlier 2017)
IUCN Red List: Endangered (EN B1+2c) (TFTSG 1996)
TFTSG Provisional Red List: Critically Endangered (CR) (2018)
Synonymy:
Elusor macrurus Cann and Legler 1994:83
Type locality: "Mary River. 45.5 km S and 21.0 km W Maryborough, Queensland, Australia, elevation approximately 30 m (25°58' S, 152°30' E)."
Type specimen: QM J51275, holotype, see Shea and Sadlier (1999) and Cann and Sadlier (2017).

Emydura Bonaparte 1836

Emydura Bonaparte 1836:7
Type species: *Emydura macquaria* [= *Emys macquaria* Cuvier 1829] [= *Chelys (Hydraspis) macquarii* Gray 1830e], by original monotypy.
Chelymys Gray 1844:42
Type species: *Chelymys macquaria* [= *Emys macquaria* Cuvier 1829] [= *Chelys (Hydraspis) macquarii* Gray 1830e], by original monotypy.
Euchelymys Gray 1871a:118
Type species: *Euchelymys sulcifera* [= subjective synonym of *Chelys (Hydraspis) macquarii* Gray 1830e], by subsequent designation by Lindholm (1929:290).
Tropicochelymys Wells and Wellington 1985:9
Type species: *Tropicochelymys victoriae* [= *Hydraspis victoriae* Gray 1842], by original designation.

Emydura gunaleni Smales, McCord, Cann, and Joseph-Ouni 2019a [31]
Gunalen's Short-necked Turtle


William P. McCord and Danny Gunalen / Kais R., West Papua, Indonesia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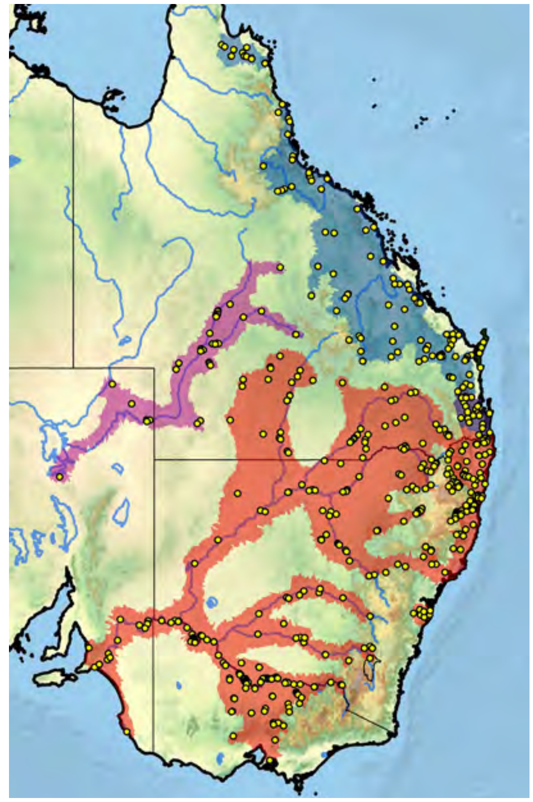
Distribution: Indonesia (West Papua)
Presumed Historic Indigenous Range: 3,789 sq. km
Size (Max SCL): male 14.7 cm, female 18.5 cm (Smales et al. 2019a)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Not Evaluated (NE) (2021)
Synonymy:
Emydura gunaleni Smales, McCord, Cann, and Joseph-Ouni 2019a:24
Type locality: "Kais River (Sungai Kais) at approximately 1°43.808'S 132°7.826'E, in Kais District of Sarong Selatan Regency, West Papua Province (Papua Barat Province), Indonesia."
Type specimen: AMNH R178722, holotype.

Emydura macquarii (Gray 1830e) [10:7, 17:98]
Eastern Short-necked Turtle, Southern River Turtle (includes 4 subspecies)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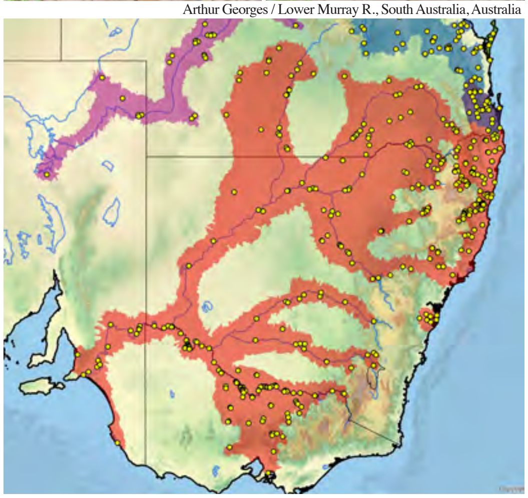
(subspecies: *macquarii* = red, *emmotti* = purple, *krefftii* = blue, *nigra* = green; overlap = intergrades)

Distribution: Australia (New South Wales, Queensland, South Australia, Victoria)
Presumed Historic Indigenous Range: 1,069,689 sq. km
Size (Max SCL): male 30.0 cm, female 36.8 cm (see subspp.)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)

Emydura macquarii macquarii (Gray 1830e) [07:98, 10:7, 10:41, 10:42]
Macquarie River Turtle


Arthur Georges / Brisbane R., Queensland, Australia


Arthur Georges / Lower Murray R., South Australia, Australia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(subspecies: *macquarii* = red, *emmotti* = purple, *krefftii* = blue, *nigra* = green; overlap = intergrades)

Distribution: Australia (New South Wales, Queensland, South Australia, Victoria)

Presumed Historic Indigenous Range: 680,073 sq. km

Size (Max SCL): male 30.0 cm, female 34.0 cm (McCord et al. 2003; Cann and Sadlier 2017)

IUCN Red List: The currently synonymized taxon *Emydura signata* is listed by IUCN as Least Concern (LC) (TFTSG 1996), as *Emydura macquarii signata*

Synonymy:

Emys macquaria Cuvier 1829:11 (*nomen nudum*)

Chelys (Hydraspis) macquarii Gray 1830e:15 [10:7]
Chelys macquarii, Emys macquarii, Emydura macquarii, Chelymys macquarii, Emydura macquarii macquarii
Type locality: "New Holland" [Australia]. Restricted to "Novâ Hollandiâ, Macquarrie River" [New South Wales, Australia] by Gray (1831d:40), and to "Upper Macquarie River, in the vicinity of Bathurst [NSW]" [Australia] by Cann (1998:101).
Type specimen: MNHN 9409, holotype, see Cogger et al. (1983) and Cann and Sadlier (2017).

Hydraspis macquarrii Gray 1831d:40 (*nomen novum*)
Emydura macquarrii, Emydura macquarrii macquarrii

Platemys macquaria Duméril and Bibron 1835:438 (*nomen novum*)
Hydraspis macquaria, Chelymys macquaria

Hydraspis australis Gray 1841:445 [10:41] [17] (*nomen dubium*)
Hydraspis australia, Chelymys australis, Emydura australis, Emydura australis australis
Type locality: "Western Australia?" Restricted to "Australia, Macquarie River" by Gray (1872d:506).
Type specimen: NHMUK 1947.3.4.36 (formerly 1840.12.9.52), holotype, see Goode (1967), Cogger et al. (1983), and Cann and Sadlier (2017); genotyped by Kehlmaier et al. (2019a).

Euchelymys sulcifera Gray 1871a:118
Type locality: "North Australia."
Type specimen: NHMUK 1947.3.5.97 (formerly 1858.12.8.6), lectotype, designated by Cogger et al. (1983:63).

Emydura macquariae Boulenger 1889:ix (*nomen novum*)

Emydura signata Ahl 1932:127 [10:42]
Emydura macquarrii signata, Chelymys signata, Emydura macquarii signata
Type locality: "Umgebung von Brisbane, Australien" [Queensland, Australia].
Type specimen: ZMB 34102, holotype, see Goode (1967), Cogger et al. (1983), Fritz et al. (1994), and Cann and Sadlier (2017).

Emydura canni Worrell 1970:pl.6 (*nomen nudum*)

Chelymys cooki Wells and Wellington 1985:8 (*nomen nudum*)
Emydura cooki
Type locality: "Macleay River, New South Wales (30 46'S x 152 18'E)" [Australia].
Type specimen: AMS R44816, holotype, see Cann and Sadlier (2017).

Chelymys johncanni Wells and Wellington 1985:8 (*nomen nudum*)
Type locality: "Rouchel Brook, New South Wales" [Australia].
Type specimen: AZM R101, holotype

Emydura macquarii binjing Cann 1998:116 [10:42]
Type locality: "Clarence River and its tributaries in eastern New South Wales...29°45'S, 152°15'E" [Australia].
Type specimen: AMS R59558, holotype, see Shea and Sadlier (1999) and Cann and Sadlier (2017).

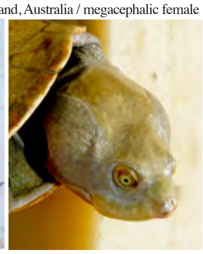
Emydura macquarii dharra Cann 1998:120 [10:42]
Type locality: "Macleay River and its tributaries in eastern New South Wales...30°54'S, 152°10'E" [Australia].
Type specimen: AMS R59553, holotype, see Shea and Sadlier (1999) and Cann and Sadlier (2017).

Emydura macquarii gunabarra Cann 1998:123 [10:42]
Type locality: "Hunter River and its tributaries in eastern New South Wales...32°09'S, 150°58'E" [Australia].
Type specimen: AMS 143596, holotype, see Shea and Sadlier (1999) and Cann and Sadlier (2017).

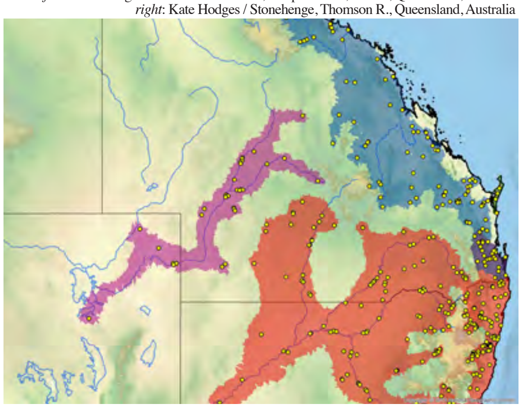
Emydura macquarii dharuk Cann 1998:126 [10:42]
Type locality: "Norton's Basin, Nepean River, 0.5 km upstream from the junction of the Warragamba and Nepean Rivers at 33°52'S, 150°37'E...Sydney Basin in eastern New South Wales" [Australia].
Type specimen: AMS 143598, holotype, see Shea and Sadlier (1999) and Cann and Sadlier (2017).

Emydura macquarii emmotti Cann, McCord, and Joseph-Ouni *in* McCord, Cann, and Joseph-Ouni 2003 [(17:98)]
Cooper Creek Turtle

Kate Hodges / Stonehenge, Thomson R., Queensland, Australia / megacephalic female



left: Arthur Georges / Eulbertie Waterhole, Cooper Creek, Tanbar, Queensland, Australia
right: Kate Hodges / Stonehenge, Thomson R., Queensland, Australia



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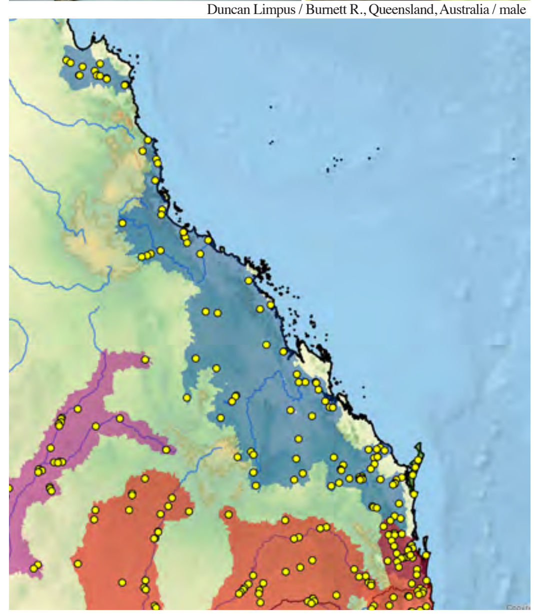
(subspecies: *macquarii* = red, *emmotti* = purple, *krefftii* = blue, *nigra* = green; overlap = intergrades)

Distribution: Australia (Queensland, South Australia)
Presumed Historic Indigenous Range: 127,297 sq. km
Size (Max SCL): female 36.8 cm (McCord et al. 2003; Cann and Sadlier 2017)
Synonymy:
Chelymys windorah Wells and Wellington 1985:8 (*nomen nudum*)
Emydura windorah
Type locality: "Windorah district of south-west Queensland" [Australia].
Type specimen: AZM R104, holotype.
Emydura macquarii emmotti Cann, McCord, and Joseph-Ouni *in* McCord, Cann, and Joseph-Ouni 2003:60
Emydura emmotti
Type locality: "Waterloo Station, shearing-shed waterhole, southwestern Queensland, Australia (24°13' S, 143°17' E)."
Type specimen: QM J51255, holotype, see Cann and Sadlier (2017).

Emydura macquarii krefftii (Gray 1871b) [(17:98)]
Krefft's River Turtle

Arthur Georges / Grays Waterhole, Burnett R., Queensland, Australia

Duncan Limpus / Burnett R., Queensland, Australia / male



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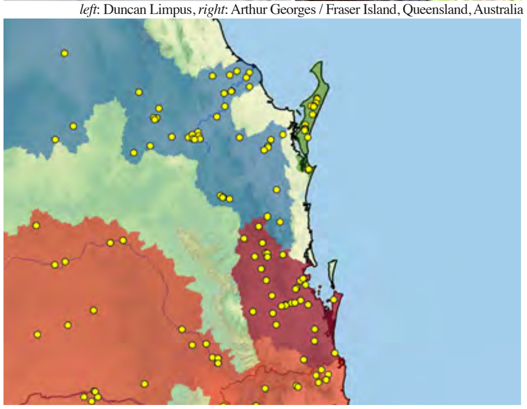
(subspecies: *macquarii* = red, *emmotti* = purple, *krefftii* = blue, *nigra* = green; overlap = intergrades)

Distribution: Australia (Queensland)
Presumed Historic Indigenous Range: 275,563 sq. km
Size (Max SCL): male 27.7 cm, female 34.2 cm (Georges 1985; Cann and Sadlier 2017)
Synonymy:
Chelymys krefftii Gray 1871b:366
Emydura krefftii, Emydura australis krefftii, Emydura macquarrii krefftii, Tropicochelymys krefftii, Emydura macquarii krefftii
Type locality: "Burnett's River" [Queensland, Australia].
Type specimen: NHMUK 1947.3.6.1 (formerly 1871.9.25.1), holotype, see Goode (1967), Cogger et al. (1983), and Cann and Sadlier (2017).
Chelymys victoriae marmorata Gray 1872d:506
Type locality: "east coast of Queensland, Burnett River" [Australia].
Type specimen: NHMUK 1871.9.25.5, holotype, see Cogger et al. (1983).
Chelymys victoriae sulcata Gray 1872d:506
Type locality: "east coast of Queensland, Burnett River" [Australia].
Type specimens: NHMUK 1871.9.25.3–4, syntypes (2), see Cogger et al. (1983) and Georges and Thomson (2010).

Emydura macquarii nigra McCord, Cann, and Joseph-Ouni 2003 (17:98)
Fraser Island Short-necked Turtle


Arthur Georges / Fraser Island, Queensland, Australia


left: Duncan Limpus, *right*: Arthur Georges / Fraser Island, Queensland, Australia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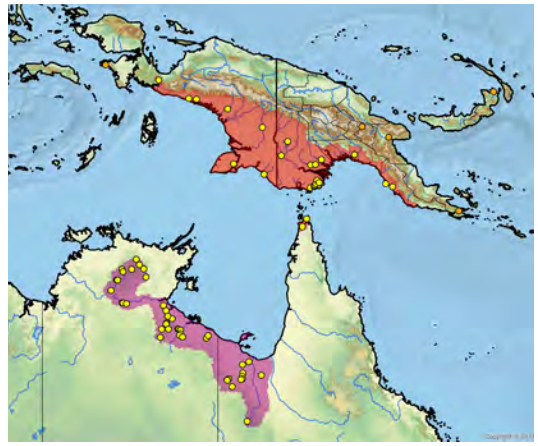
(subspecies: *macquarii* = red, *krefftii* = blue, *nigra* = green; overlap = intergrades)

Distribution: Australia (Queensland)
Presumed Historic Indigenous Range: 2,150 sq. km
Size (Max SCL): male 19.7 cm, female 24.6 cm (Georges 1985; Itescu et al. 2014)
Synonymy:
Tropicochelymys insularis Wells and Wellington 1985:9 (*nomen nudum*)
Emydura insularis
Type locality: "Fraser Island, Queensland" [Australia].
Type specimen: AZM R102, holotype.
Emydura macquarii nigra McCord, Cann, and Joseph-Ouni 2003:59
Emydura nigra
Type locality: "Lake McKenzie, Fraser Island, Queensland, Australia (25°27' S, 153°04' E)."
Type specimen: QM J48008, holotype, see Cann and Sadlier (2017).

Emydura subglobosa (Krefft 1876) (32)
Red-bellied Short-necked Turtle
(includes 2 subspecies)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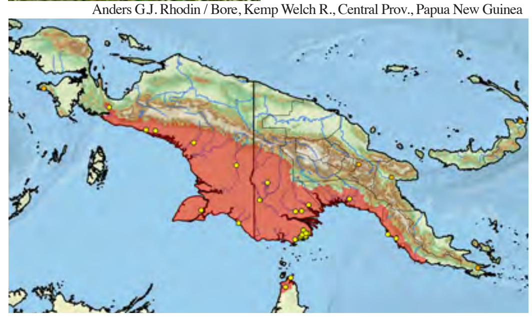
(subspecies: *subglobosa* = red, *worrelli* = purple; orange dots = trade or introduced or uncertain)

Distribution: Australia (Northern Territory, Queensland), Indonesia (Papua, West Papua), Papua New Guinea (Southern)
Introduced: Papua New Guinea (New Britain, Northern)
Presumed Historic Indigenous Range: 481,442 sq. km
Size (Max SCL): male 20.0 cm, female 26.1 cm (see subspp.)
IUCN Red List: Least Concern (LC) (ATTWG 2000); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2009, 2018)

Emydura subglobosa subglobosa (Krefft 1876) (32)
New Guinea Red-bellied Short-necked Turtle


Arthur Georges / Suki-Aramba Swamps, Fly R., Western Prov., Papua New Guinea


Anders G.J. Rhodin / Bore, Kemp Welch R., Central Prov., Papua New Guinea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(subspecies: *subglobosa* = red; orange dots = trade or introduced or uncertain)

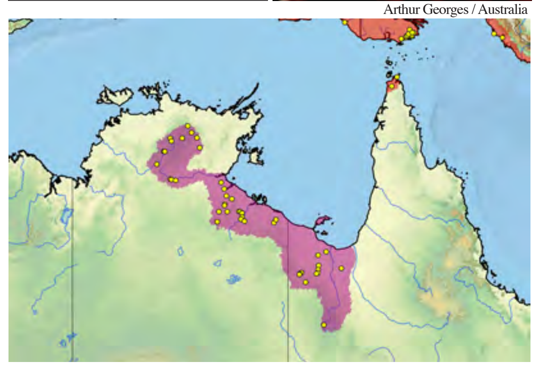
Distribution: Australia (Queensland), Indonesia (Papua, West Papua), Papua New Guinea (Southern)
Introduced: Papua New Guinea (New Britain, Northern)
Presumed Historic Indigenous Range: 277,368 sq. km
Size (Max SCL): male 20.0 cm, female 25.5 cm (Georges et al. 2006; Ceballos et al. 2013; Lyons et al. 2013)
Synonymy:
Euchelymys subglobosa Krefft 1876:390
Emydura subglobosa, Emydura australis subglobosa, Emydura macquarrii subglobosa, Chelymys subglobosa, Tropicochelymys subglobosa, Emydura subglobosa subglobosa
Type locality: "Amama River S. E. New Guinea" [Papua New Guinea]. Restricted to "Naiabui S. E. New Guinea" [Papua New Guinea] by Boulenger (1888b:450).
Type specimen: MSNG CE2320, holotype, see Ogilby (1905), Capocaccia (1961), Goode (1967), Cogger et al. (1983), Cann and Sadlier (2017), and Smales et al. (2019a); genotyped by Kehlmaier et al. (2019a).
Emydura albertisii Boulenger 1888b:449
Emydura australis albertisii
Type locality: "Katow, S. E. New Guinea". Emended to "Mawatta, Binaturi River (9°08' S, 142°55' E), Papua New Guinea" by Cogger et al. (1983) and TTWG (2017:199).
Type specimens: MSNG CE8430–31, syntypes (2), see Ogilby (1905), Capocaccia (1961), Goode (1967), Cogger et al. (1983), and Smales et al. (2019a); apparently lost.
Comment: Capocaccia (1961) listed CE8430 as being two specimens, Goode (1967) listed CE8430 and 8431 as syntypes (p.74) and photographed CE8430 (p.77), Smales et al. (2019a:pl.2) erroneously labeled their reproduction of Goode's photo as showing CE8431, they also reported that both specimens had apparently been lost in flooding of the museum in 1970.
Tropicochelymys goodei Wells and Wellington 1985:9 (*nomen nudum*)
Emydura goodei
Type locality: "Jardine River, Cape York Peninsula, Queensland" [Australia].
Type specimen: AMS s/n, holotype.
Emydura subglobosa angkibaanya Joseph-Ouni, McCord, Cann, Smales, and Freeman 2019b:55 [32]
Type locality: "Old River Crossing, Jardine River, Cape York Peninsula, Queensland, Australia ... 11°08'S, 142°21'E."
Type specimen: AMS R37669, holotype.

Emydura subglobosa worrelli (Wells and Wellington 1985) [07:99]
Worrell's Short-necked Turtle, Diamond-head Turtle


Jason Schaffer / Dugald R., Flinders basin, Queensland, Australia



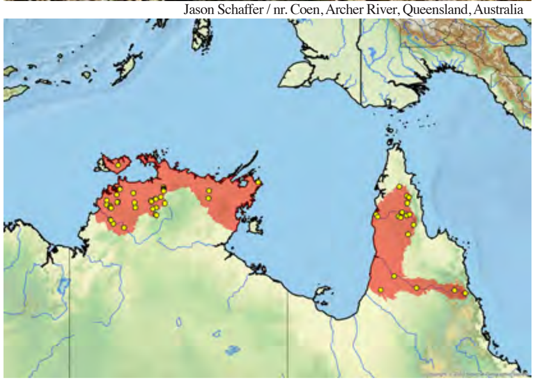
Arthur Georges / Australia


*
(subspecies: *subglobosa* = red; *worrelli* = purple)

Distribution: Australia (Northern Territory, Queensland)
Presumed Historic Indigenous Range: 204,074 sq. km
Size (Max SCL): male 20.0 cm, female 26.1 cm (Cann and Sadlier 2017)
Synonymy:
Tropicochelymys leichhardti Wells and Wellington 1985:9 (*nomen nudum*)
Type locality: "Leichhardt River, Queensland" [Australia].
Type specimen: AZM 103, holotype.
Tropicochelymys worrelli Wells and Wellington 1985:9
Emydura worrelli, Emydura subglobosa worrelli
Type locality: "Caranbirini Waterhole, ca. 21 km north of MacArthur River, Northern Territory (16°16' S x 136°05' E)" [Australia].
Type specimen: AMS 53689, holotype, see Cann and Sadlier (2017).

Emydura tanybaraga Cann 1997b
Northern Yellow-faced Turtle

Jason Schaffer / nr. Coen, Archer River, Queensland, Australia



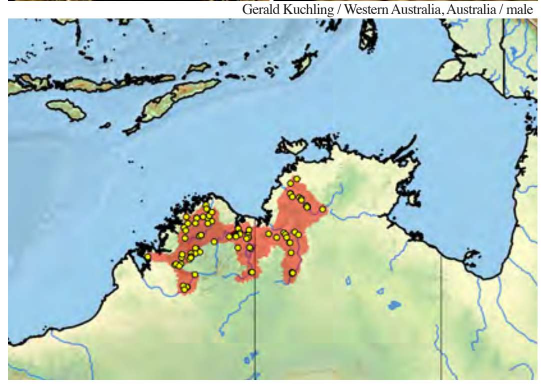
*

Distribution: Australia (Northern Territory, Queensland)
Presumed Historic Indigenous Range: 202,630 sq. km
Size (Max SCL): female 28.5 cm (Cann and Sadlier 2017)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Least Concern (LC) (2009, 2018)
Synonymy:
Emydura tanybaraga Cann 1997b:24
Emydura subglobosa tanybaraga
Type locality: "near Policeman Crossing, Daly River, Northern Territory (13°46' S x 130°43' E)" [Australia].
Type specimen: AMS R125498, holotype, see Shea and Sadlier (1999) and Cann and Sadlier (2017).

Emydura victoriae (Gray 1842) (17)
Northern Red-faced Turtle

Gerald Kuchling / Barnett R., Western Australia, Australia / male

Gerald Kuchling / Western Australia, Australia / male



Distribution: Australia (Northern Territory, Western Australia)
Presumed Historic Indigenous Range: 197,953 sq. km
Size (Max SCL): 30.0 cm (Ernst et al. 2006b; Itescu et al. 2014)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2009)
Synonymy:
Hydraspis victoriae Gray 1842:55
Chelymys victoriae, Emydura victoriae, Tropicochelymys victoriae
Type locality: "Victoria River, North-west coast of New Holland" [Northern Territory, Australia].
Type specimen: NHMUK 1947.3.5.96 (formerly 1841.10.12.2), holotype, see Cann and Sadlier (2017) and Kehlmaier et al. (2019a); NHMUK 1947.3.5.95 (formerly 1846.5.23.3), erroneously designated "lectotype" by Wells and Wellington (1985:9), but this specimen was received after the description of the species (Uetz et al. 2019), and has been identified as an *Emydura macquarii* (Iverson et al. 2001; Kehlmaier et al. 2019a); both specimens genotyped by Kehlmaier et al. (2019a).

Myuchelys Thomson and Georges 2009 (09:45, 10:43, 17:99)

Wollumbinia Wells 2007c:1 (07:97, 10:43) (unavailable name)

Type species: *Wollumbinia latisternum* [= *Elseya latisternum* Gray 1867], by original designation.

Myuchelys Thomson and Georges 2009:33 (09:45)

Type species: *Myuchelys latisternum* [= *Elseya latisternum* Gray 1867], by original designation.

Flaviemys Le, Reid, McCord, Naro-Maciel, Raxworthy, Amato, and Georges 2013:257 (17:99)

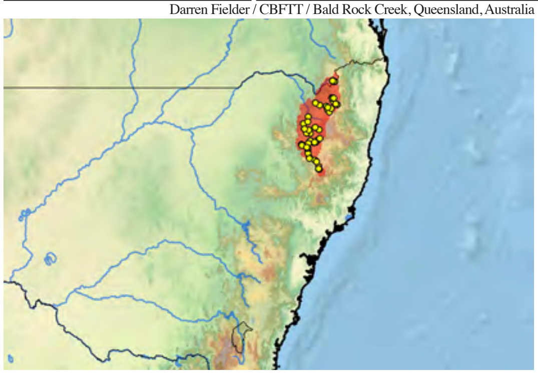
Type species: *Flaviemys purvisi* [= *Elseya purvisi* Wells and Wellington 1985], by original designation.

Myuchelys bellii (Gray 1844) (07:97)

Bell's Sawshelled Turtle, Western Sawshelled Turtle

Darren Fielder / CBFTT / Bald Rock Creek, Queensland, Australia

Darren Fielder / CBFTT / Bald Rock Creek, Queensland, Australia



Distribution: Australia (New South Wales, Queensland)

Presumed Historic Indigenous Range: 19,936 sq. km

Size (Max SCL): male 22.7 cm, female 30.0 cm (Fielder et al. 2015 CBFTT)

CBFTT Account: Fielder, Chessman, and Georges (2015)

IUCN Red List: Endangered (EN B1+2c) (TFTSG 1996), as *Elseya* sp. nov. Namoi River

TFTSG Provisional Red List: Vulnerable (VU) (2018)

Synonymy:

Phrynops bellii Gray 1844:41

Hydraspis bellii, *Elseya bellii*, *Wollumbinia bellii*, *Wollumbinia bellii bellii*, *Elseya latisternum bellii*, *Myuchelys bellii*

Type locality: Not known. Restricted to "the upper reaches of both the Namoi-MacDonald and Gwydir Rivers, above the New England escarpment, in New South Wales" [Australia] by Cann (1998:211).

Type specimen: OUM 8460, holotype, discussed by Cann (1998), Nowak-Kemp and Fritz (2010), Fielder (2013), and Cann and Sadlier (2017); genotyped by Kehlmaier et al. (2019a).

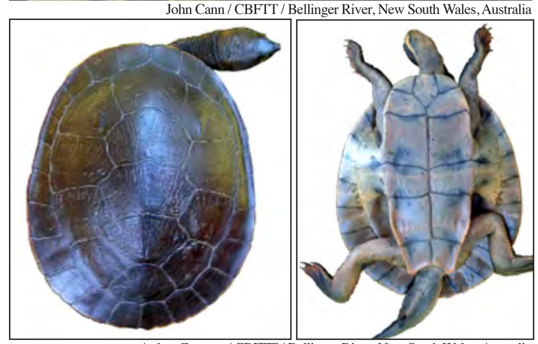
Elseya dorriani Wells 2002b:16 (07:97) (*nomen nudum*)

Wollumbinia bellii dorriani

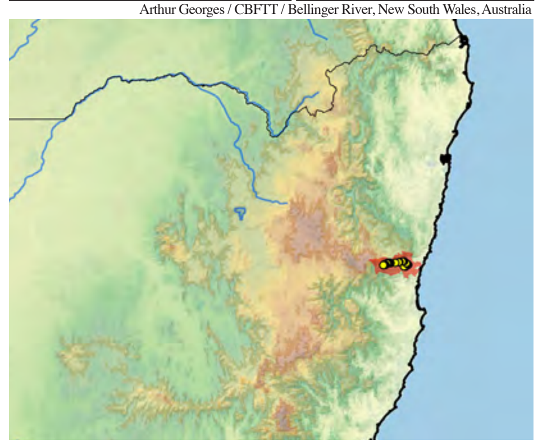
Myuchelys georgesi (Cann 1997a)

Bellinger River Sawshelled Turtle

John Cann / CBFTT / Bellinger River, New South Wales, Australia



Arthur Georges / CBFTT / Bellinger River, New South Wales, Australia



Distribution: Australia (New South Wales)

Presumed Historic Indigenous Range: 987 sq. km

Size (Max SCL): male 21.2 cm, female 24.0 cm (Blamires et al. 2005; Cann et al. 2015 CBFTT)

CBFTT Account: Cann, Spencer, Welsh, and Georges (2015)

IUCN Red List: Data Deficient (DD) (TFTSG 1996), as *Elseya* sp. nov. Bellinger River

TFTSG Provisional Red List: Critically Endangered (CR) (2018)

Synonymy:

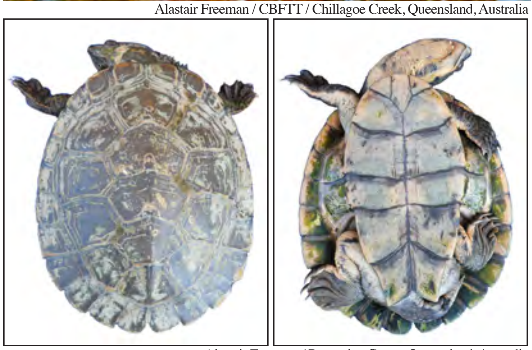
Elseya georgesi Cann 1997a:18

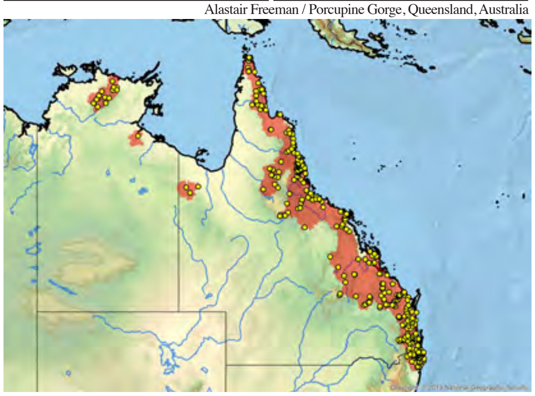
Wollumbinia georgesi, *Elseya latisternum georgesi*, *Myuchelys georgesi*

Type locality: "Bellinger River 30°25' S, 152°46' E" [New South Wales, Australia].
Type specimen: AMS R31721, holotype, see Shea and Sadlier (1999) and Cann and Sadlier (2017).

Myuchelys latisternum (Gray 1867) (09:47)
Sawshelled Turtle, Common Sawshelled Turtle


Alastair Freeman / CBFTT / Chillagoe Creek, Queensland, Australia


Alastair Freeman / Porcupine Gorge, Queensland, Australia



Distribution: Australia (New South Wales, Northern Territory, Queensland)
Presumed Historic Indigenous Range: 432,668 sq. km
Size (Max SCL): male 22.4 cm, female 28.8 cm (Freeman and Cann 2014 CBFTT)
CBFTT Account: Freeman and Cann (2014)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Elseya latisternum Gray 1867:44
Emydura latisternum, Elseya latisternum latisternum, Wollumbinia latisternum, Myuchelys latisternum
Type locality: "North Australia." Restricted to "Cape York" [Queensland, Australia] by Cann and Sadlier (2017:193), and to "Cape York Peninsula north of latitude 11°40'S" [Queensland, Australia] by Smales et al. (2019b:705).
Type specimens: NHMUK 1867.5.13.19, lectotype, designated by Smales et al. (2019b:705); NHMUK 1867.5.13.19–20, syntypes (2), previously discovered and designated by Cann and Sadlier (2017:193); NHMUK 1947.3.4.13, previously recorded as "holotype" by Goode (1967), Cogger et al. (1983), and Cann (1998), is not a type, see Cann and Sadlier (2017) and Smales et al. (2019b).
Euchelymys spinosa Gray 1871a:118 (09:47)
Type locality: "North Australia."
Type specimen: NHMUK 1946.1.22.77 (formerly 1866.6.19.1), referred to as holotype by Cann (1998) and Cann and Sadlier (2017); designated lectotype by Smales et al. (2019b:705).
Elseya latisternon Gray 1871b:292 (*nomen novum*)
Wollumbinia dorsii Wells 2009:2 (09:46, 10:43) (unavailable name)
Type locality: "Richmond River, near Wiangaree, New South Wales" [Australia].
Type specimen: AMS R172224, holotype, see Cann and Sadlier (2017).

Myuchelys purvisi (Wells and Wellington 1985) (14:46, 17:99) **(33)**
Manning River Sawshelled Turtle


Phil Spark / Barrington R., New South Wales, Australia


left: Phil Spark / Barrington R., New South Wales, Australia
right: Arthur Georges / Barnard R., New South Wales, Australia

Distribution: Australia (New South Wales)
Presumed Historic Indigenous Range: 3,142 sq. km
Size (Max SCL): male 17.5 cm, female 22.9 cm (Cann and Sadlier 2017)
IUCN Red List: Data Deficient (DD) (TFTSG 1996), as *Elseya* sp. nov. Manning River
TFTSG Provisional Red List: Near Threatened (NT) (2011)
Synonymy:
Elseya purvisi Wells and Wellington 1985:8
Wollumbinia purvisi, Elseya latisternum purvisi, Myuchelys purvisi, Flaviemys purvisi
Type locality: "a river 15 km S., 32.3 km E. of Nowendoc, New South Wales (31°39' S x 152°04' E. elevation 183 m)" [Australia].
Type specimen: AMS 44654, holotype; on loan to UU since 1976, see Cann and Sadlier (2017:208), now presumably there.

Rheodytes Legler and Cann 1980

Rheodytes Legler and Cann 1980:2

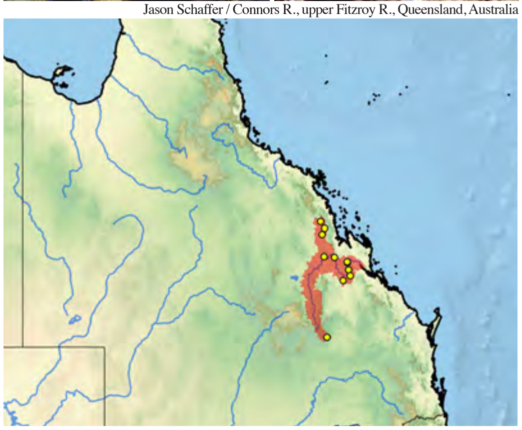
Type species: *Rheodytes leukops* Legler and Cann 1980, by original designation.

Rheodytes leukops Legler and Cann 1980

Fitzroy River Turtle

Stephen M. Zozaya / Connors R., upper Fitzroy R., Queensland, Australia

Jason Schaffer / Connors R., upper Fitzroy R., Queensland, Australia



Distribution: Australia (Queensland)

Presumed Historic Indigenous Range: 35,107 sq. km

Size (Max SCL): male 26.2 cm, female 26.2 cm (Cann and Legler 1994)

IUCN Red List: Vulnerable (VU A1c+2c, D2) (ARASG 1996)

TFTSG Provisional Red List: Endangered (EN) (2018)

Synonymy:

Rheodytes leukops Legler and Cann 1980:2, *Elseya leukops*

Type locality: "Fitzroy River, 63 km N and 25 km E of Duaringa, Queensland, Australia, elevation 40 m (23°09' S 149°55' E)."

Type specimen: QM J31701, holotype, see Cogger et al. (1983) and Cann and Sadlier (2017).

PSEUDEMYDURINAE Gaffney 1977 (17:100)

Pseudemydurinae Gaffney 1977:24

Pseudemydura Siebenrock 1901 (17:100)

Pseudemydura Siebenrock 1901:248

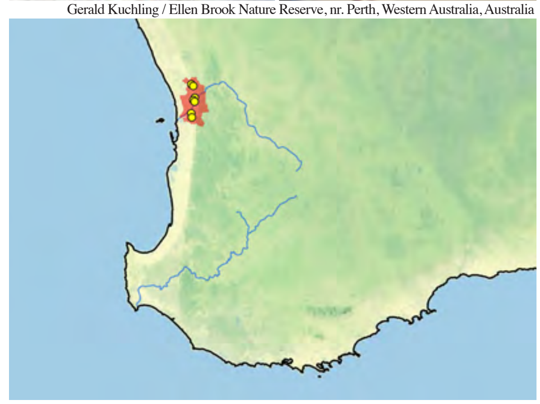
Type species: *Pseudemydura umbrina* Siebenrock 1901, by original monotypy.

Pseudemydura umbrina Siebenrock 1901 (17:100)

Western Swamp Turtle

Gerald Kuchling / TCC / Ellen Brook Nature Reserve, nr. Perth, Western Australia, Australia

Gerald Kuchling / Ellen Brook Nature Reserve, nr. Perth, Western Australia, Australia



Distribution: Australia (Western Australia)

Presumed Historic Indigenous Range: 1,884 sq. km

Size (Max SCL): male 15.5 cm, female 14.2 cm (Burbidge 1967; Cann and Legler 1994; Durrell and Keeley 2019)

IUCN Red List: Critically Endangered (CR A1c, B1+2c, C1+2b, D) (TFTSG 1996)

TFTSG Provisional Red List: Critically Endangered (CR) (2011)

CITES: Appendix I (1975)

Synonymy:

Pseudemydura umbrina Siebenrock 1901:249

Type locality: "Australien" [Australia].

Type specimen: NMW 1296 (formerly 1839 89(8450)), holotype, see Goode (1967), Tiedemann and Häupl (1980), Cogger et al. (1983); Tiedemann et al. (1994), Cann and Sadlier (2017), and Gemel et al. (2019).

Emydura inspectata Glauert 1954:125

Type locality: "Warbrook, about 24 miles north of Perth...Swan River District" [Western Australia, Australia].

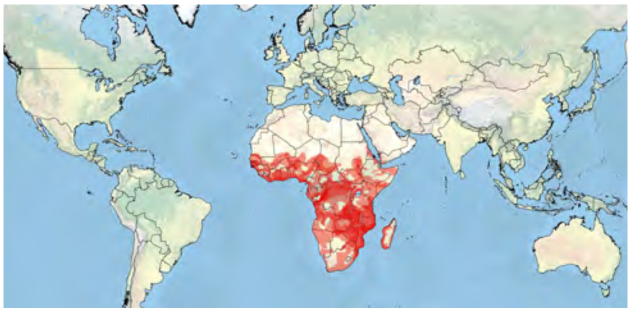
Type specimen: WAM R11092, holotype, see Cogger et al. (1983) and Ellis and Georges (2015).

Pelomedusoidea Baur 1893 (3)

Pelomedusoidea Baur 1893a:212
Pelomedusoides Broin 1988:105,130
(includes 2 families)
Pelomedusidae
Podocnemididae

Pelomedusidae Cope 1868 (11:19)

Hydraspidina Bonaparte 1836:3 (*partim*)
Pelomedusidae Cope 1868:119
Pelomedusinae Zangerl 1948:48



Pelomedusidae Species Richness

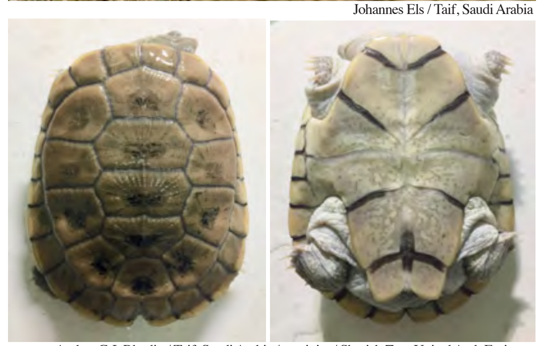
Pelomedusa Wagler 1830b (11:19, 17:101)

Pelomedusa Wagler 1830b:136 (*nomen conservandum*)
Type species: *Pelomedusa galeata* [= *Testudo galeata* Schoepff 1792], by original monotypy.
Comment: Name conserved by ICZN (1989), see Smith et al. (1980b).
Pentonyx Duméril and Bibron 1835:389
Type species: *Pentonyx galeata* [= *Testudo galeata* Schoepff 1792], by original designation.

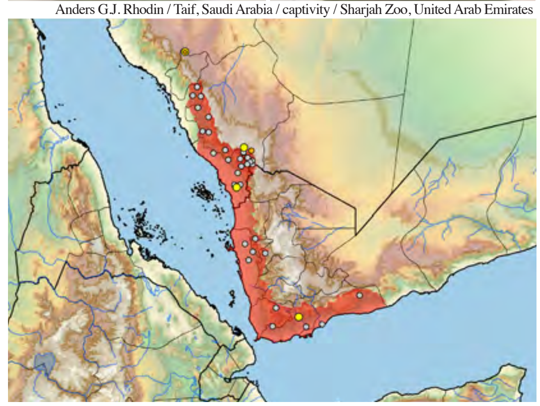
Pelomedusa barbata Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014 (17:101)

Arabian Helmeted Turtle

Johannes Els / Taif, Saudi Arabia



Anders G.J. Rhodin / Taif, Saudi Arabia / captivity / Sharjah Zoo, United Arab Emirates



*

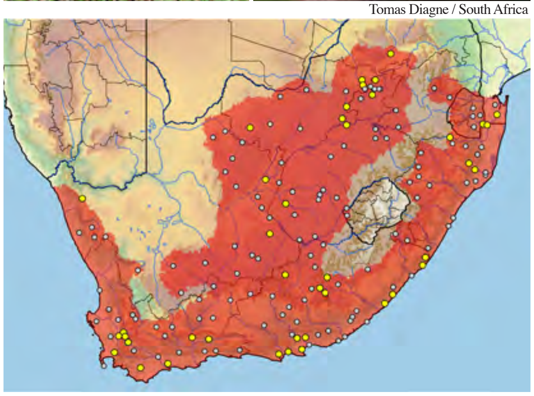
(yellow dots = genotyped *P. barbata* specimens, gray dots = presumed *P. barbata* specimens, orange/yellow dot = genotyped *P. barbata* specimen from questionable trade locality, orange dot = probable trade)

Distribution: Saudi Arabia (Asir, Jizan), Yemen
Presumed Historic Indigenous Range: 88,671 sq. km
Size (Max SCL): male 21.6 cm, female 20.1 cm (Gasperetti et al. 1993; Petzold et al. 2014)
CBFTT Account: Boycott and Bourquin (2008) [as part of *Pelomedusa subrufa* sensu lato]
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Endangered (EN) (2016)
Synonymy:
Pelomedusa barbata Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014:530
Type locality: "Zinjibar, Abyan, Yemen, N13°7.75 E45°22.81."
Type specimen: MTD 24637, holotype; ZFMK 87122, paratype, genotyped by Petzold et al. (2014).

Pelomedusa galeata (Schoepff 1792) (17:101) **(34)**
South African Helmeted Turtle, Cape Terrapin

William R. Branch / Port Elizabeth, South Africa


Tomas Diagne / South Africa



*

(yellow dots = genotyped *P. galeata* specimens, gray dots = presumed *P. galeata* specimens)

Distribution: Botswana (?), Eswatini (Swaziland), Lesotho, Mozambique, South Africa

Presumed Historic Indigenous Range: 812,031 sq. km

Size (Max SCL): male 32.5 cm, female 29.0 cm (Boycott and Bourquin 2008 CBFTT; Petzold et al. 2014)

CBFTT Account: Boycott and Bourquin (2008) [as part of *Pelomedusa subrufa* sensu lato]

IUCN Red List: Least Concern (LC) (Hofmeyr and Fritz 2018)

Synonymy:

Testudo scabra Retzius *in* Schoepff 1792:12 (*nomen nudum* and junior homonym, not = *Testudo scabra* Linnaeus 1758 [= *Rhinoclemmys punctularia punctularia*])

Testudo galeata Schoepff 1792:12 (*nomen conservandum*)

Emys galeata, Pelomedusa galeata, Pentonyx galeata, Hydraspis (Pelomedusa) galeata, Hydraspis galeata, Pelomedusa galeata galeata

Type locality: "India orientali." Restricted to "near Cape Town" [South Africa] by Hewitt (1935:326).

Type specimen: LUZM Lxxx/6481 (formerly ZMUL 6481), lectotype, designated by Fritz et al. (2014b:508); NRM 7043, paralectotype, specimen figured in Schoepff (1792:pl.3,f.1), designated "holotype" by Rhodin and Carr (2009:4).

Comment: Name conserved by ICZN (1989), see Smith et al. (1980b).

Pentonyx capensis Duméril and Bibron 1835:390

Type locality: "au cap de Bonne-Espérance, dans l'Ile de Madagascar." Restricted to "Kap der Guten Hoffnung" [Cape of Good Hope, South Africa] by Mertens (1937:139), but invalid designation; and to "Cape of Good Hope" [South Africa] by Fritz et al. (2014b:510).

Type specimen: MNHN 9506, lectotype, designated by Fritz et al. (2014b:510), see also Bour (2009a) who labeled this name a *nomen novum*; genotyped by Fritz et al. (2014b) and Petzold et al. (2014).

Pelomedusa nigra Gray 1863b:99

Pelomedusa galeata nigra, Pelomedusa subrufa nigra

Type locality: "Natal" [South Africa].

Type specimen: NHMUK 1849.1.30.27, lectotype, designated by Fritz et al. (2014b:514); genotyped by Fritz et al. (2014b) and Petzold et al. (2014).

Pelomedusa galeata orangensis Hewitt 1935:332

Pelomedusa subrufa orangensis

Type locality: "presumably from the Kimberley neighbourhood" [South Africa].

Type specimen: KM s/n, holotype, specimen figured (pl.32), apparently lost; PEM 9404, 9408, paratypes, genotyped by Fritz et al. (2014b).

Pelomedusa galeata devilliersi Hewitt 1935:337

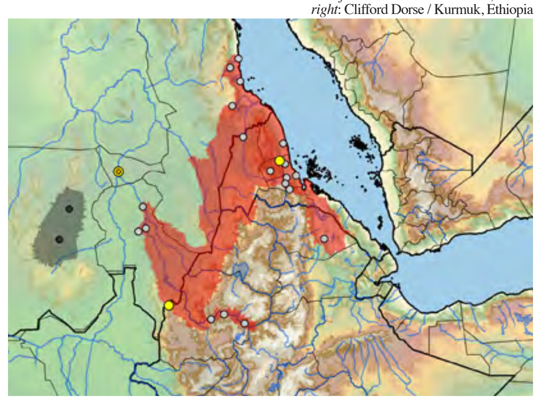
Type locality: "Besondermeid, Steinkopf, Namaqualand, C.P." [South Africa].

Type specimen: PEM 14962, holotype; genotyped by Fritz et al. (2014b) and Petzold et al. (2014).

Pelomedusa gehafie (Rüppell 1835) (17:101)
Eritrean Helmeted Turtle

Tomáš Mazuch / Ghinda, Eritrea


left: Tomáš Mazuch / Ghinda, Eritrea
right: Clifford Dorse / Kurmuk, Ethiopia



*

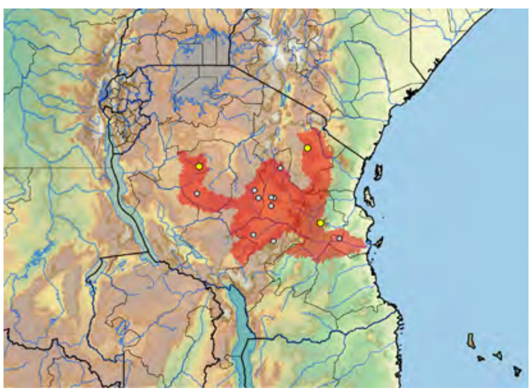
(yellow dots = genotyped *P. gehafie* specimens, gray dots = presumed *P. gehafie* specimens, black dots and gray shading = taxonomically unspecified populations of *P. subrufa* sensu lato, orange/yellow dot = genotyped *P. gehafie* specimen from questionable trade locality)

Distribution: Eritrea, Ethiopia, Sudan

Presumed Historic Indigenous Range: 317,115 sq. km

Size (Max SCL): 17.8 cm (Petzold et al. 2014)
CBFTT Account: Boycott and Bourquin (2008) [as part of *Pelomedusa subrufa* sensu lato]
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2018)
Synonymy:
Pentonyx gehafie Rüppell 1835:2
Pelomedusa galeata gehafie, *Pelomedusa subrufa gehafie*, *Pelomedusa gehafie*
Type locality: "östlichen Abhange der abyssinischen Küstengebirge" [eastern slope of Abyssinian coastal mountains] [Eritrea]. Restricted to "Massaua" [Masawa, Eritrea] by Mertens (1937:140), but invalid designation (Fritz et al. 2014b:511).
Type specimen: SMF 7947, lectotype, designated by Mertens (1937:140); genotyped by Fritz et al. (2014b) and Petzold et al. (2014).
Pelomedusa gehafiae Gray 1844:38 (*nomen novum*)
Comment: Unjustified emendation.
Pelomedusa galeata disjuncta Vaillant and Grandidier 1910:56
Type locality: Not designated. Restricted to "shore of Lake Abaya, Sidamo, Ethiopia" by Loveridge (1941:480), invalid designation; and to "Abyssinia...the eastern slope of the coastal mountains in present-day Eritrea," by Fritz et al. (2014b:515).
Type specimen: MNHN 7870, lectotype, designated by Fritz et al. (2014b:515).

Pelomedusa kobe Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014 (17:101)
Tanzanian Helmeted Turtle

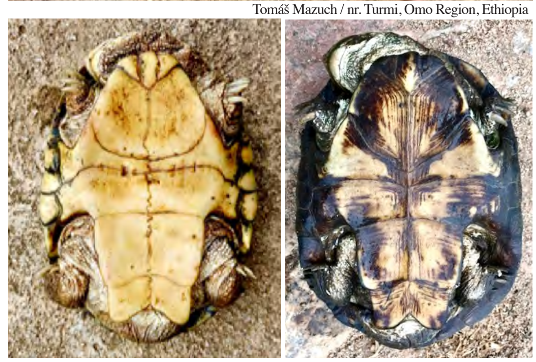

*

(yellow dots = genotyped *P. kobe* specimens, gray dots = presumed *P. kobe* specimens)

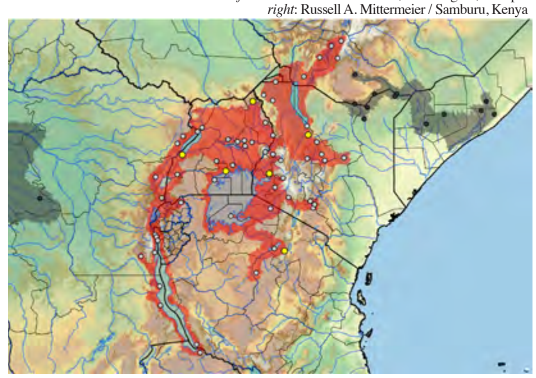
Distribution: Tanzania
Presumed Historic Indigenous Range: 199,877 sq. km
Size (Max SCL): 15.9 cm (Petzold et al. 2014)
CBFTT Account: Boycott and Bourquin (2008) [as part of *Pelomedusa subrufa* sensu lato]
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2018)
Synonymy:
Pelomedusa kobe Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014:535
Type locality: "Naberera, Manyara, Tanzania, S4°11.66 E36°55.74."
Type specimen: ZSM 334/1978, holotype; genotyped by Petzold et al. (2014).

Pelomedusa neumanni Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014 (17:101)
East African Helmeted Turtle, Neumann's Helmeted Turtle

Tomáš Mazuch / nr. Turmi, Omo Region, Ethiopia



left: Tomáš Mazuch / nr. Turmi, Omo Region, Ethiopia
right: Russell A. Mittermeier / Samburu, Kenya


*

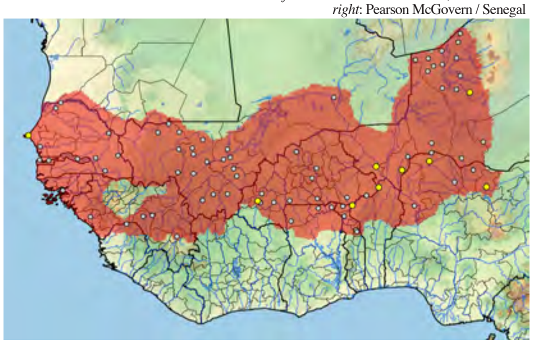
(yellow dots = genotyped *P. neumanni* specimens, gray dots = presumed *P. neumanni* specimens, black dots and gray shading = taxonomically unspecified populations of *P. subrufa* sensu lato)

Distribution: Burundi, Congo (DRC), Ethiopia, Kenya, Rwanda, Tanzania, Uganda, Zambia
Presumed Historic Indigenous Range: 488,313 sq. km
Size (Max SCL): 19.4 cm (Petzold et al. 2014)
CBFTT Account: Boycott and Bourquin (2008) [as part of *Pelomedusa subrufa* sensu lato]
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2018)
Synonymy:
Pelomedusa neumanni Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014:537
Type locality: "Kakamega, Kenya, N0°17.04 E34°44.52."
Type specimen: NMP6V 74974, holotype.

Pelomedusa olivacea (Schweigger 1812) (17:101)
Sahelian Helmeted Turtle

Laurent Chirio / Maradi, Niger

left: Luca Luiselli / Pama North, Burkina Faso
right: Pearson McGovern / Senegal

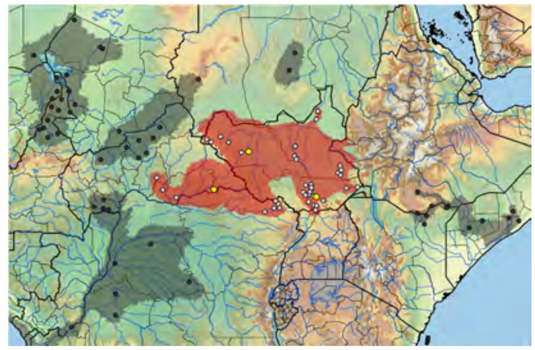


*

(yellow dots = genotyped *P. olivacea* specimens, gray dots = presumed *P. olivacea* specimens)

Distribution: Benin, Burkina Faso, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast (Côte d'Ivoire), Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo
Presumed Historic Indigenous Range: 2,009,750 sq. km
Size (Max SCL): 16.8 cm (Petzold et al. 2014)
CBFTT Account: Boycott and Bourquin (2008) [as part of *Pelomedusa subrufa* sensu lato]
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Least Concern (LC) (2018)
Synonymy:
Emys olivacea Schweigger 1812:307 (senior homonym, not = *Emys olivacea* Gray 1856b [= *Trachemys stejnegeri stejnegeri*])
Hydraspis (Pelomedusa) olivacea, *Hydraspis olivacea*, *Pelomedusa subrufa olivacea*, *Pelomedusa olivacea*
Type locality: "sabulosis Nigritiae" [Senegal].
Type specimen: MNHN 7971, holotype, see Bour (2009a), Ceríaco and Bour (2012), and Fritz et al. (2014); Uetz et al. (2019) erroneously listed ZFMK 17076 as neotype, but that specimen is the neotype of *Pelomedusa gasconi*.
Pelomedusa gasconi Rochebrune 1884:25
Type locality: "Dagana, Saidé, lac de N'Guer, marigot des Maringouins" [Senegal]. Restricted to "Dagana, Senegal" by Loveridge (1941:480), invalid designation; and to "Dakar" [Senegal] by Fritz et al. (2014b:514).
Type specimen: ZFMK 17076, neotype, designated and genotyped by Fritz et al. (2014b:514).

Pelomedusa schweinfurthi Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014 (17:101)
Central African Helmeted Turtle, Schweinfurth's Helmeted Turtle



*

(yellow dots = genotyped *P. schweinfurthi* specimens, gray dots = presumed *P. schweinfurthi* specimens, black dots and gray shading = taxonomically unspecified populations of *P. subrufa* sensu lato)

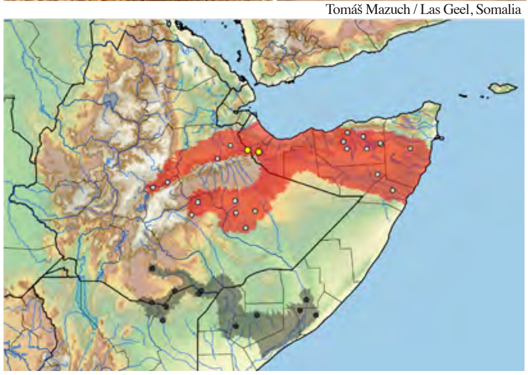
Distribution: Central African Republic, Congo (DRC), Ethiopia (?), South Sudan, Sudan, Uganda
Presumed Historic Indigenous Range: 759,884 sq. km
Size (Max SCL): 15.7 cm (Petzold et al. 2014)
CBFTT Account: Boycott and Bourquin (2008) [as part of *Pelomedusa subrufa* sensu lato]
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Least Concern (LC) (2018)
Synonymy:
Pelomedusa schweinfurthi Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014:539
Type locality: "Liria, Central Equatoria, South Sudan, N4°38.66 E32°4.83."
Type specimen: SMF 56161, holotype; genotyped by Petzold et al. (2014).

Pelomedusa somalica Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014 (17:101)

Somalian Helmeted Turtle

Tomáš Mazuch / Daarbuduq, Somalia

Tomáš Mazuch / Las Geel, Somalia



*

(yellow dots = genotyped *P. somalica* specimens, gray dots = presumed *P. somalica* specimens, black dots and gray shading = taxonomically unspecified populations of *P. subrufa* sensu lato)

Distribution: Djibouti (?) (extirpated?), Ethiopia, Somalia

Presumed Historic Indigenous Range: 320,499 sq. km

Size (Max SCL): 15.7 cm (Petzold et al. 2014)

CBFTT Account: Boycott and Bourquin (2008) [as part of *Pelomedusa subrufa* sensu lato]

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Data Deficient (DD) (2018)

Synonymy:

Pelomedusa somalica Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014:540

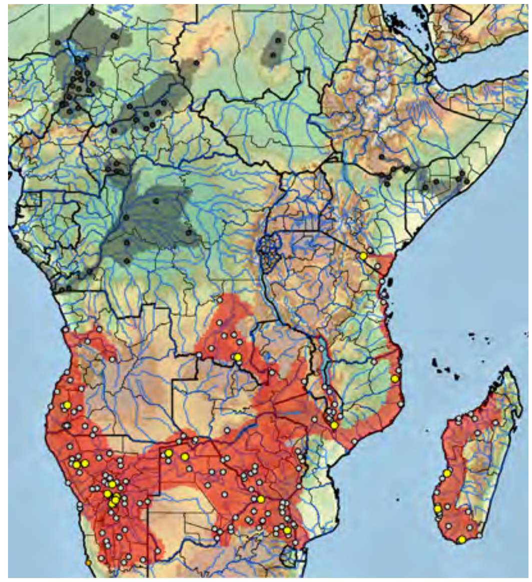
Type locality: “Borama district, Awdal, Somaliland/Somalia, N9°55 E43°10, 4500 ft.”

Type locality: NHMUK 1970.1481, holotype; NMW 24449, paratype, genotyped by Petzold et al. (2014).

Pelomedusa subrufa (Bonnaterre 1789) (10:45, 11:19, 17:101)

Helmeted Turtle, African Helmeted Terrapin

(includes *P. subrufa* sensu stricto and several taxonomically unspecified populations of *P. subrufa* sensu lato)



*

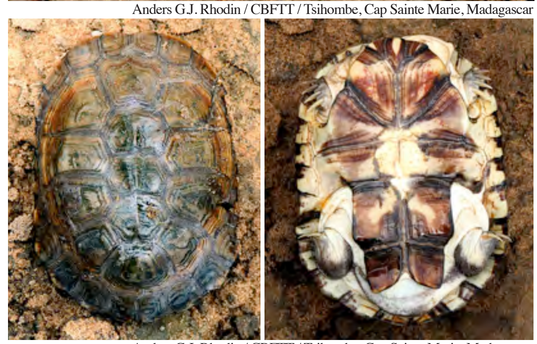
(yellow dots = genotyped *P. subrufa* sensu stricto specimens, gray dots = presumed *P. subrufa* sensu stricto specimens, black dots and gray shading = taxonomically unspecified populations of *P. subrufa* sensu lato, orange dot = probable trade)

Distribution: Angola, Botswana, Cameroon, Central African Republic, Chad, Congo (DRC), Congo (ROC), Gabon, Kenya, Madagascar (prehistoric introduction?), Malawi, Mozambique, Namibia, Niger, Nigeria, Somalia, South Africa, Sudan, Tanzania, Zambia, Zimbabwe

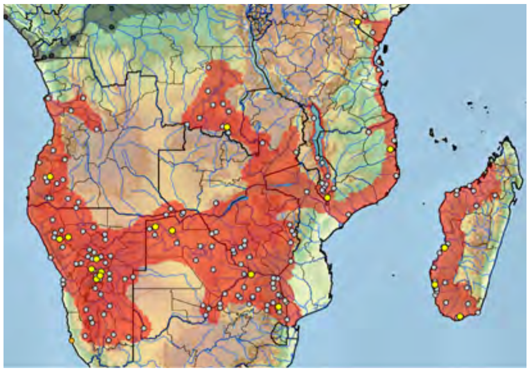
Pelomedusa subrufa (Bonnaterre 1789) (**sensu stricto**) (10:45, 11:19, 17:101)

Helmeted Turtle, African Helmeted Terrapin

Anders G.J. Rhodin / CBFTT / Tsihombe, Cap Sainte Marie, Madagascar



Anders G.J. Rhodin / CBFTT / Tsihombe, Cap Sainte Marie, Madagascar



*

(yellow dots = genotyped *P. subrufa* sensu stricto specimens, gray dots = presumed *P. subrufa* sensu stricto specimens, black dots and gray shading = taxonomically unspecified populations of *P. subrufa* sensu lato, orange dot = probable trade)

Distribution: Angola, Botswana, Congo (DRC), Kenya, Madagascar (prehistoric introduction?), Malawi, Mozambique, Namibia, South Africa, Tanzania, Zambia, Zimbabwe

Presumed Historic Indigenous Range: 2,913,756 sq. km

Size (Max SCL): 19.7 cm (Petzold et al. 2014)

CBFTT Account: Boycott and Bourquin (2008) [*Pelomedusa subrufa* sensu lato]

IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

TFTSG Provisional Red List: Data Deficient (DD) (2018)

Synonymy:

Testudo planitia Meuschen 1778:11 (*nomen dubium* and senior homonym, not = *Testudo planitia* Gmelin 1789 [= *Macrochelys temminckii*])
Hydraspis (Pelomedusa) planitia, Hydraspis planitia
Type locality: Not designated.
Type specimen: Not known or located.

Testudo subrufa Lacepède 1788:173, synopsis[table] [07:102, 09:6] (*nomen suppressum*)
Type locality: "l'Inde" [India] [in error]. Restricted to "Kap der Guten Hoffnung" [Cape of Good Hope, South Africa] by Mertens (1937:139); and to "Taolañaro (Fort-Dauphin), République Malagasy (Madagascar)" by Bour (1982c:535).
Type specimen: MNHN 7970, holotype, type specimen figured (pl. opp.173), see Bour (2009a); genotyped by Fritz et al. (2014b).
Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo subrufa Bonnaterre 1789:28
Emys subrufa, Pelomedusa subrufa, Chelys (Hydraspis) subrufa, Chelys subrufa, Hydraspis subrufa, Pelomedusa galeata subrufa, Pelomedusa subrufa subrufa
Type locality: "l'Inde" [India] [in error]. Restricted to "Taolañaro, Madagascar" by Fritz et al. (2014b:507), following Bour (1982c:535).
Type specimen: MNHN 7970, holotype, type specimen figured in Lacepède (1788:pl.opp.137), see Bour (2009a); genotyped by Fritz et al. (2014b).

Testudo rubra Meyer 1790:83 [09:8] (*nomen novum, dubium et oblitum*)
Comment: Unjustified replacement name for *subrufa*.

Testudo badia Donndorff 1798:34 (*nomen novum*)

Testudo rubicunda Suckow 1798:49 (*nomen novum*)

Pentonix americana Cornalia 1849:13 [17:105] (*nomen dubium*)
Pentonyx americana
Type locality: "Flum. prope Novaeboracum" [= Novum Eboracum = New York, USA] [in error].
Type specimen: MSNM s/n, holotype, destroyed during World War II, discussed by Fritz et al. (2014).

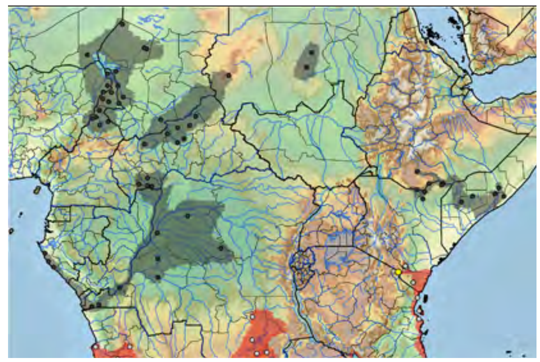
Pelomedusa mossambicensis Peters *in* Lichtenstein and von Martens 1856:2 (*nomen nudum*)

Pelomedusa mozambica Peters *in* Gray 1856b:53 (*nomen nudum*)

Pelomedusa galeata damarensis Hewitt 1935:338
Pelomedusa subrufa damarensis
Type locality: "Quickborn, near Okahandja, South West Africa" [Namibia].
Type specimen: PEM 14953, lectotype, designated by Fritz et al. (2014b:515); genotyped by Fritz et al. (2014b) and Petzold et al. (2014).

Pelomedusa subrufa wettsteini Mertens 1937:141
Type locality: "Majunga, West-Madagaskar" [Mahajanga, Madagascar].
Type specimen: SMF 7958, holotype, see Mertens (1967b).

Pelomedusa subrufa (Bonnaterre 1789) **(sensu lato)** [17:101]
African Helmeted Turtles, African Helmeted Terrapins
(includes several taxonomically unspecified populations)



*

(yellow dots = genotyped *P. subrufa* sensu stricto specimens, gray dots = presumed *P. subrufa* sensu stricto specimens, black dots and gray shading = taxonomically unspecified populations of *P. subrufa* sensu lato)

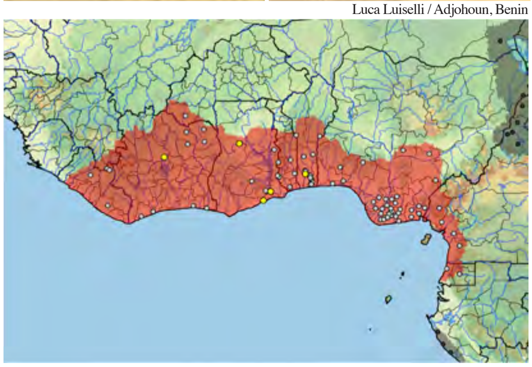
Distribution: Angola, Cameroon, Central African Republic, Chad, Congo (DRC), Congo (ROC), Ethiopia, Gabon, Kenya, Niger, Nigeria, Somalia, Sudan

Presumed Combined Historic Indigenous Ranges: 1,336,755 sq. km

Pelomedusa variabilis Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014 (17:101)
West African Helmeted Turtle


Tomas Diagne / Afram Arm, Ghana


Luca Luiselli / Adjohoun, Benin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(yellow dots = genotyped *P. variabilis* specimens, gray dots = presumed *P. variabilis* specimens, black dots and gray shading = taxonomically unspecified populations of *P. subrufa* sensu lato)

Distribution: Benin, Burkina Faso, Cameroon, Equatorial Guinea, Ghana, Guinea, Ivory Coast (Côte d'Ivoire), Liberia, Nigeria, Togo

Presumed Historic Indigenous Range: 996,640 sq. km

Size (Max SCL): male 24.8 cm (Petzold et al. 2014)

CBFTT Account: Boycott and Bourquin (2008) [as part of *Pelomedusa subrufa* sensu lato]

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Data Deficient (DD) (2018)

Synonymy:

Pelomedusa variabilis Petzold, Vargas-Ramírez, Kehlmaier, Vamberger, Branch, Du Preez, Hofmeyr, Meyer, Schleicher, Široký, and Fritz 2014:543
Type locality: "Gold Coast, Ghana."
Type specimen: SMF 58075, holotype.

Pelusios Wagler 1830b (11:19) (17:102)

Sternothaerus Bell 1825a:305 (*partim, nomen suppressum*)
Type species: *Sternothaerus leachianus* Bell 1825a [= subjective synonym of *Emys castanea* Schweigger 1812 = *Pelusios castaneus*], by subsequent designation by Bell (1828c:515); not *Sternothaerus odoratus* Bell [= *Testudo odorata* Latreille *in* Sonnini and Latreille 1801], by incorrect designation by Fitzinger (1843:290).
Comment: Name suppressed by ICZN (1989), see Smith et al. (1980b).

Pelusios Wagler 1830b:137 (*nomen conservandum*)
Type species: *Pelusios subniger* Wagler [= *Testudo subnigra* Lacepède 1788 (*nomen suppressum*) = *Testudo subnigra* Bonnaterre 1789], by subsequent designation by Fitzinger (1843:29).
Comment: Name conserved by ICZN (1989), see Smith et al. (1980b).

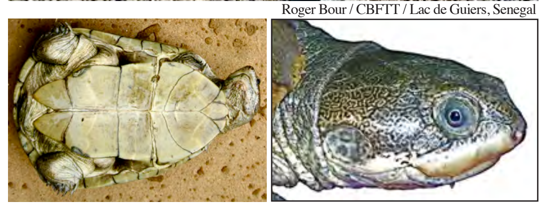
Tanoa Gray 1863f:193
Type species: *Sternothaerus (Tanoa) sinuatus* (Smith 1838), by subsequent designation by Lindholm (1929:288). Genus established as *Sternothaerus (Tanoa)* without a type species.

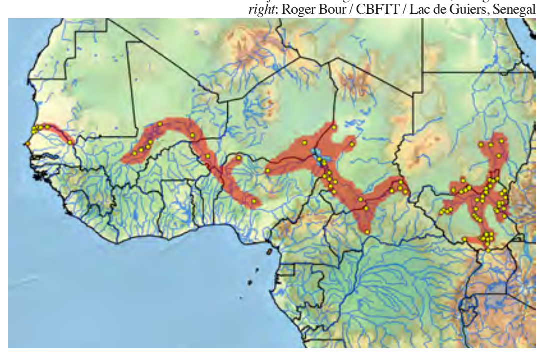
Notoa Gray 1863f:195
Type species: *Sternothaerus (Notoa) subniger* (Lacepède 1788) (*nomen suppressum*) = *Sternothaerus (Notoa) subniger* (Bonnaterre 1789)], by original monotypy.

Anota Gray 1863f:196 (junior homonym, not = *Anota* Hallowell 1852 [= Sauria])
Type species: *Sternothaerus (Anota) niger* (Duméril and Bibron 1835), by original monotypy.

Pelusios adansonii (Schweigger 1812)
Adanson's Mud Turtle


Roger Bour / CBFTT / Lac de Guiers, Senegal


left: Tomas Diagne / Lac de Guiers, Senegal / male
right: Roger Bour / CBFTT / Lac de Guiers, Senegal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(orange dot = probable trade)

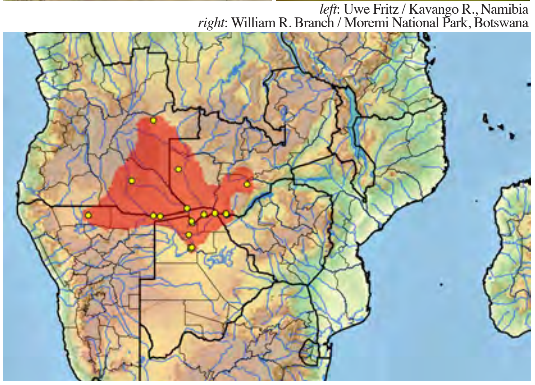
Distribution: Benin (?), Cameroon, Central African Republic, Chad, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, South Sudan, Sudan, Uganda (?)

Presumed Historic Indigenous Range: 1,475,150 sq. km
Size (Max SCL): male 20.0 cm, female 23.8 cm (Bour 2008 CBFTT)
CBFTT Account: Bour (2008)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2013)
Synonymy:
Emys adansonii Schweigger 1812:308
Hydraspis adansonii, Pelomedusa adansonii, Sternotherus adansonii, Sternothaerus adansonii, Pentonyx andansonii, Pentonyx adansonii, Pelusios adansonii, Pelusios adansonii adansonii
Type locality: "Nigritia" [Senegal]. Restricted to "cap Vert" [Senegal] by Duméril and Bibron (1835:395).
Type specimen: MNHN 7972, holotype, see Bour (1986) and Ceríaco and Bour (2012).
Chelys (Hydraspis) adamsonii Gray 1830e:15 (*nomen novum*)
Comment: Unjustified emendation or error for *adansonii*.

Pelusios bechuanicus FitzSimons 1932
Okavango Mud Turtle


Marius Burger / Liuwa Plain National Park, Zambia

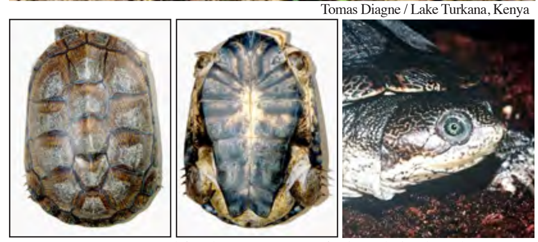

left: Uwe Fritz / Kavango R., Namibia
right: William R. Branch / Moremi National Park, Botswana

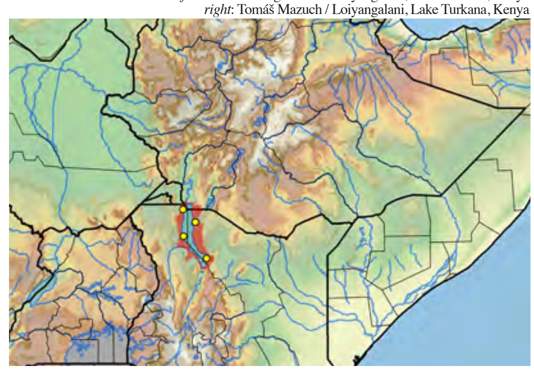


Distribution: Angola, Botswana, Namibia, Zambia, Zimbabwe
Presumed Historic Indigenous Range: 574,391 sq. km
Size (Max SCL): male 30.0 cm, female 33.0 cm (Broadley 1981a; Ceballos et al. 2013)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2013)
Synonymy:
Pelusios bechuanicus FitzSimons 1932:37
Pelusios castaneus bechuanicus, Pelusios bechuanicus bechuanicus
Type locality: "Thamalakane River at Maun, Ngamiland" [Botswana].
Type specimen: TMP 14688, holotype.

Pelusios broadleyi Bour 1986
Turkana Mud Turtle


Tomas Diagne / Lake Turkana, Kenya


left and center: Roger Bour / Loiyangalani, Lake Turkana, Kenya
right: Tomáš Mazuch / Loiyangalani, Lake Turkana, Kenya



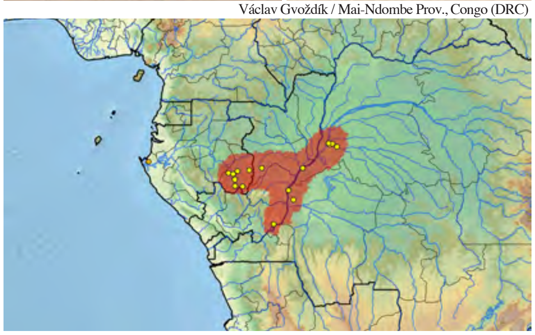
Distribution: Ethiopia, Kenya
Presumed Historic Indigenous Range: 14,366 sq. km
Size (Max SCL): male 17.9 cm, female 14.9 cm (Prokop 2010)
IUCN Red List: Vulnerable (VU D2) (TFTSG 1996)
TFTSG Provisional Red List: Endangered (EN) (2013)
Synonymy:
Pelusios broadleyi Bour 1986:31
Type locality: "Loiengalani [= Loyengalanij] (2°43' N, 36°43' E), Marsabit district, Kenya."
Type specimen: CAS 123062, holotype.

Pelusios carinatus Laurent 1956 (17:102)
African Keeled Mud Turtle


Tomas Diagne / Congo (DRC) / captivity



Václav Gvoždík / Mai-Ndombe Prov., Congo (DRC)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(orange dot = uncertain identification)

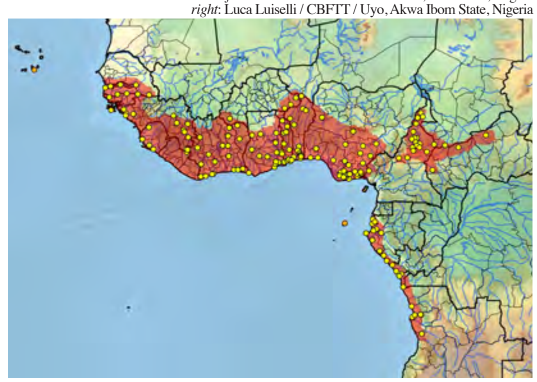
Distribution: Congo (DRC), Congo (ROC), Gabon
Presumed Historic Indigenous Range: 191,523 sq. km
Size (Max SCL): 30.0 cm (Branch 2008; Itescu et al. 2014)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2013)
Synonymy:
Pelusios carinatus Laurent 1956:39
Type locality: "Eala, Equateur" [Democratic Republic of Congo (DRC)].
Type specimen: MRAC 2821, holotype.

Pelusios castaneus (Schweigger 1812) (14:47, 17:102) (**35**)
West African Mud Turtle


Gabriel H. Segniagbeto / CBFTT / Togoville, Togo



left: Luis Ceriaco / CBFTT / Cacuaco, nr. Luanda, Angola
right: Luca Luiselli / CBFTT / Uyo, Akwa Ibom State, Nigeria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(orange dots = introduced or trade)

Distribution: Angola, Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo (DRC), Congo (ROC), Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast (Côte d'Ivoire), Liberia, Niger, Nigeria, Senegal, Sierra Leone, Togo
Introduced: Guadeloupe, São Tomé and Príncipe (probable historic introduction), Seychelles (?)
Presumed Historic Indigenous Range: 1,966,366 sq. km
Size (Max SCL): male 22.2 cm, female 28.5 cm (Segniagbeto et al. 2015; Bour et al. 2016 CBFTT)
CBFTT Accounts: Bour, Luiselli, Petrozzi, Segniagbeto, and Chirio (2016) on *Pelusios castaneus*; Bour and Gerlach (2008) on *Pelusios seychellensis*
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996); the currently synonymized taxon *P. seychellensis* assessed as Extinct on the IUCN Red List (Gerlach 2003).
TFTSG Provisional Red List: Least Concern (LC) (2013)
Synonymy:
Emys castanea Schweigger 1812:314
Pelusios castaneus, Chelys (Sternotherus) castaneus, Chelys castaneus, Sternotherus castaneus, Clemmys (Pelusios) castanea, Clemmys castanea, Sternothaerus castaneus, Sternothaerus nigricans castaneus, Sternothaerus nigricans castanea, Pelusios nigricans castaneus, Pelusios subniger castaneus, Pelusios castaneus, Pelusios castaneus castaneus
Type locality: Not known. Restricted to "Afrique occidentale" by Bour (1979:148), and to "vicinity of Koutchatcha (7°20'

N, 1°18' E)...close to the Amou River (ca. 30 km East of Gléï), Ogou Prefecture, Plateaux Region, Togo" by Bour (2008e:37).

Type specimen: MNHN 8366, holotype, lost, see Bour (2008e); MNHN 2008.0303, neotype, designated by Bour (2008e:37).

Sternothaerus leachianus Bell 1825a:306

Sternotherus leachianus

Type locality: Not known.

Type specimen: OUM 8618, holotype, see Bour (2008e) and Nowak-Kemp and Fritz (2010).

Sternotherus derbianus Gray 1844:37

Sternothaerus derbianus, Sternothaerus (Tanoa) derbianus, Pelusios derbianus, Pelusios castaneus derbianus

Type locality: "W. Africa, Sierra Leone ? Gambia." Restricted to "Gambia" by Loveridge (1941:491).

Type specimen: NHMUK 1947.3.5.77 (formerly 1841.12.25.1), holotype, see Bour (2008e).

Sternothaerus nigricans seychellensis Siebenrock 1906c:38 (07:103, 14:47, 17:103) (**35**)

Pelusios subniger seychellensis, Sternothaerus castaneus seychellensis, Pelusios castaneus seychellensis, Pelusios seychellensis

IUCN Red List: Extinct (EX) (Gerlach 2003), as *Pelusios seychellensis*

Type locality: "Seychellen" [Seychelles]. Restricted to "Seychellen, Insel Gloriosa?" [Seychelles] by Siebenrock (1909a:559), and to "Insel Mahé" [Seychelles] by Siebenrock (1909b:362).

Type specimen: NMW 13247, lectotype, designated as "type specimen" by Broadley (1981a:655) and as lectotype by Bour (1983:353), see also Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Gemel et al. (2019); genotyped by Stuckas et al. (2013) and Kindler et al. (2016).

Comment: Only 3 known specimens, unlikely to have been native to the Seychelles, most likely from coastal western Central Africa.

Pelusios castanoides Hewitt 1931 (11:19, 12:42)

Yellow-bellied Mud Turtle

(includes 2 subspecies)

*

(subspecies: *castanoides* = red, *intergularis* = Seychelles [clustered orange dots])

Distribution: Kenya, Madagascar (prehistoric introduction?), Malawi, Mozambique, Seychelles (prehistoric introduction?), South Africa, Tanzania

Presumed Historic Indigenous Range: 937,734 sq. km

Size (Max SCL): male 19.0 cm, female 23.0 cm (see subspp.)

IUCN Red List: Least Concern (LC) (TFTSG 1996)

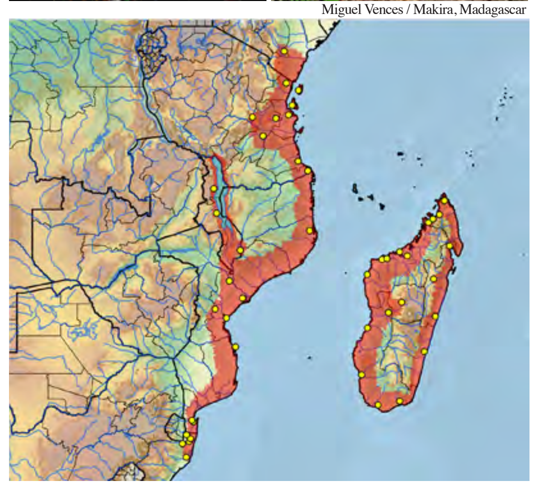
TFTSG Provisional Red List: Least Concern (LC) (2013)

Pelusios castanoides castanoides Hewitt 1931 (11:19, 12:42)

East African Yellow-bellied Mud Turtle

Miguel Vences / Lac Alaotra, Madagascar

Miguel Vences / Makira, Madagascar



*

(subspecies: *castanoides* = red)

Distribution: Kenya, Madagascar (prehistoric introduction?), Malawi, Mozambique, South Africa, Tanzania

Presumed Historic Indigenous Range: 937,494 sq. km

Size (Max SCL): female 23.0 cm (Branch 2008; Itescu et al. 2014)

Synonymy:

Pelusios nigricans castanoides Hewitt 1931:463

Pelusios subniger castanoides, Pelusios castaneus castanoides, Pelusios castanoides, Pelusios castanoides castanoides

Type locality: "Richards Bay, Zululand" [South Africa]. Restricted to "Lake St. Lucia estuary, KwaZulu" [South Africa] by Broadley (1981a:673).

Type specimen: TMP 13433, holotype.

Pelusios castaneus kapika Bour 1979:149

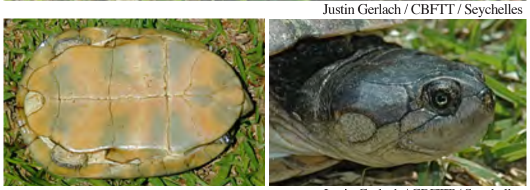
Pelusios castanoides kapika

Type locality: "Delta du Sambirano (Province de Diégo-Suarez), nord de Madagascar."

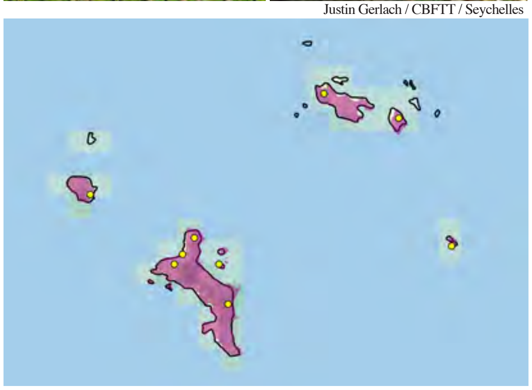
Type specimen: MNHN 1929.238, holotype, see Broadley (1981a).

Pelusios castanoides intergularis Bour 1983 (11:19, 12:42)
Seychelles Yellow-bellied Mud Turtle

Justin Gerlach / CBFTT / Seychelles



Justin Gerlach / CBFTT / Seychelles



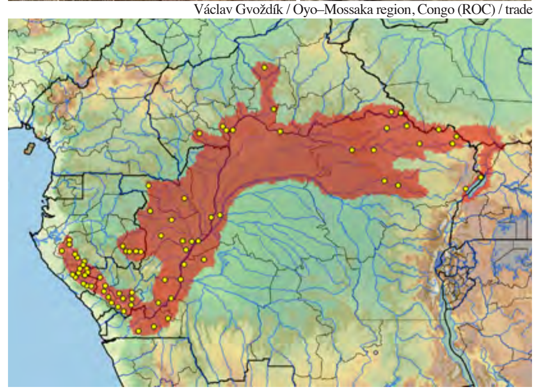
(subspecies: *intergularis* = purple)

Distribution: Seychelles (Cerf, Fregate, La Digue, Mahé, Praslin, Silhouette) (prehistoric introduction?)
Presumed Historic Indigenous Range: 240 sq. km
Size (Max SCL): male 19.0 cm, female 23.0 cm [both estimated]; Max CCL: male 19.4 cm, female 23.5 cm (Gerlach 2008a CBFTT)
CBFTT Account: Gerlach (2008a)
IUCN Red List: Critically Endangered (CR A2c, B2ab) (Gerlach 2003)
Synonymy:
Pelusios castanoides intergularis Bour 1983:355
Type locality: “La Digue Island, Seychelles.”
Type specimen: NHMUK 1874.8.7.1, holotype.

Pelusios chapini Laurent 1965 (11:19, 17:102)
Central African Mud Turtle

Jérôme Maran / Mandji, Gabon

Václav Gvoždík / Oyo–Mossaka region, Congo (ROC) / trade



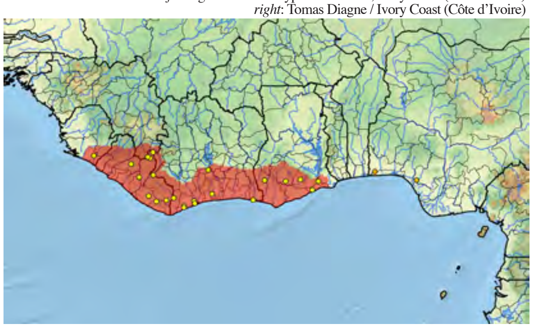
*

Distribution: Cameroon (?), Central African Republic, Congo (DRC), Congo (ROC), Gabon, South Sudan, Uganda
Presumed Historic Indigenous Range: 974,361 sq. km
Size (Max SCL): 38.0 cm (Schmidt 1919; Laurent 1965; Maran 2006a; Itescu et al. 2014)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2013)
Synonymy:
Pelusios castaneus chapini Laurent 1965:21
Pelusios chapini
Type locality: “Kasenyi, Lake Albert, Bunia Terr., Ituri, Congo” [Democratic Republic of Congo (DRC)].
Type specimen: MRAC 20937, holotype.

Pelusios cupulatta Bour and Maran 2003
Ivory Coast Mud Turtle


Jérôme Maran / San Pédro, Ivory Coast (Côte d'Ivoire)


left: Roger Bour / holotype / San Pédro, Ivory Coast (Côte d'Ivoire)
right: Tomas Diagne / Ivory Coast (Côte d'Ivoire)


*

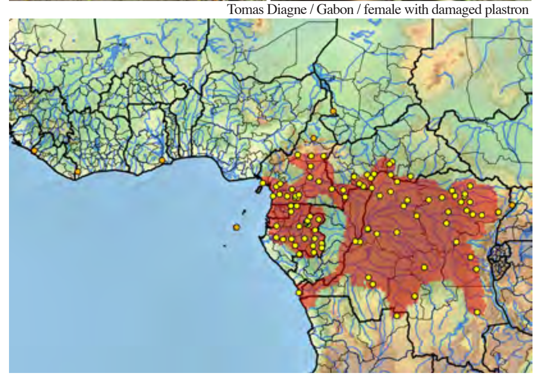
(orange dots = uncertain or trade)

Distribution: Ghana, Guinea, Ivory Coast (Côte d'Ivoire), Liberia, Sierra Leone
Presumed Historic Indigenous Range: 274,784 sq. km
Size (Max SCL): male 31.3 cm, female 27.1 cm (Luiselli and Petrozzi, unpubl. data)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Least Concern (LC) (2013)
Synonymy:
Pelusios cupulatta Bour and Maran 2003:28
Type locality: "environs de San Pédro, Côte d'Ivoire, précisément entre San Pédro (10 km W) et Grand-Bérébi (20 km E) (4°50' N, 6°47' W)." [Ivory Coast].
Type specimen: MNHN 2000.2605, holotype.

Pelusios gabonensis (Duméril 1856) [17:102]
African Forest Turtle


Jérôme Maran / Gabon


Tomas Diagne / Gabon / female with damaged plastron



(orange dots = uncertain, trade, or misidentified)

Distribution: Angola, Cameroon, Central African Republic, Congo (DRC), Congo (ROC), Equatorial Guinea, Gabon
Presumed Historic Indigenous Range: 2,167,086 sq. km
Size (Max SCL): male 32.0 cm, female 27.2 cm (Maran 2006c); maximum estimated: 33.0 cm (Branch 2008; Itescu et al. 2014)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2013)
Synonymy:
Pentonyx gabonensis Duméril 1856:373
Pelomedusa gabonensis, Sternothaerus gabonensis, Pelusios gabonensis
Type locality: "Gabon."
Type specimen: MNHN 4237, holotype, discussed by Bour (2008d); MNHN 4137 listed by Iverson (1992), Bour and Maran (2003), and Uetz et al. (2019).
Pentonyx gaboonensis Gray 1863f:194 (*nomen novum*)
Comment: Unjustified emendation or error for *gabonensis*.
Pelomedusa gabonica Peters 1864:644 (*nomen novum*)
Comment: Unjustified replacement name for *gabonensis*.
Sternothaerus steindachneri Siebenrock 1902a:6
Type locality: "Madagascar" [in error]. Restricted to "Gabon?" by Tiedemann and Häupl (1980:8).
Type specimen: NMW 23392, holotype, see Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Gemel et al. (2019).

Pelusios marani Bour 2000
Gabon Mud Turtle


Jérôme Maran / Fouganou, Gabon

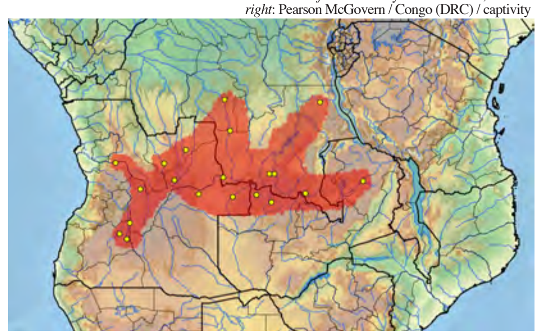
Distribution: Congo (ROC), Gabon
Presumed Historic Indigenous Range: 56,056 sq. km
Size (Max SCL): male 27.2 cm, female 22.9 cm (Bour 2000; Maran 2006a)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2018)
Synonymy:
Pelusios marani Bour 2000:3
Type locality: "Yombi (01°26' S, 10°37' E), province de N'Gounié, Gabon; environ 30 km SSE de Fougamou, entre Lambaréné et Mouïla."
Type specimen: MNHN 2000.2601, holotype.

Pelusios nanus Laurent 1956 (17:102)
African Dwarf Mud Turtle


William R. Branch / northwest Zambia



left: Christo Deysel / Kalumbila, Zambia
right: Pearson McGovern / Congo (DRC) / captivity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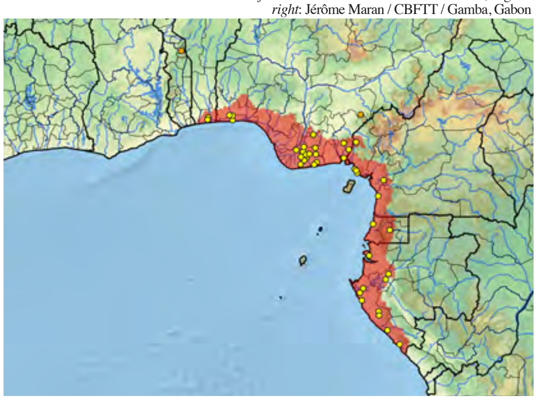
Distribution: Angola, Congo (DRC), Zambia
Presumed Historic Indigenous Range: 864,849 sq. km
Size (Max SCL): male 11.1 cm, female 12.2 cm (Laurent 1956; Bour, unpubl. data)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Data Deficient (DD) (2018)
Synonymy:
Pelusios nanus Laurent 1956:31
Pelusios adansonii nanus
Type locality: "Dilolo, Haut Lualaba" [Democratic Republic of Congo (DRC)].
Type specimen: MRAC 7833, holotype.

Pelusios niger (Duméril and Bibron 1835)
West African Black Mud Turtle


Gerald Kuchling / Kribi, Cameroon



left: Luca Luiselli / CBFTT / Port Harcourt, Nigeria
right: Jérôme Maran / CBFTT / Gamba, Gabon


*

(orange dots = uncertain native or trade or introduced)

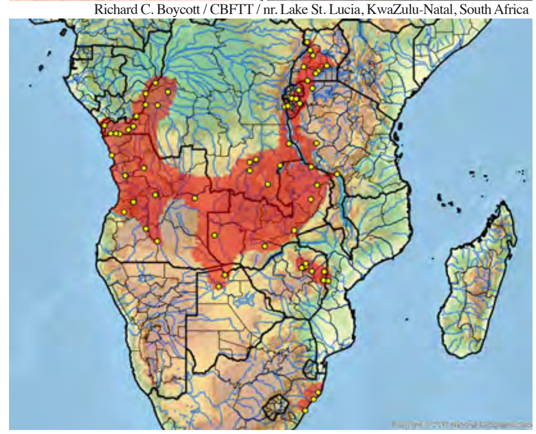
Distribution: Benin, Cameroon, Equatorial Guinea, Gabon, Nigeria, Togo (?)
Presumed Historic Indigenous Range: 209,728 sq. km
Size (Max SCL): male 35.5 cm, female 26.5 cm (Maran 2006a; Luiselli et al. 2018 CBFTT)
CBFTT Account: Luiselli, Bour, Petrozzi, Akani, and Segniagbeto (2018)
IUCN Red List: Near Threatened (NT) (Luiselli et al. 2019); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Sternotherus niger Duméril and Bibron 1835:397
Sternothaerus niger, Sternothaerus (Anota) niger, Pelusios niger
Type locality: "probablement...originaire de l'île de Madagascar" [in error]; restricted to "Région du Littoral, République du Cameroun" [Cameroon] by Bour (2009d:37).
Type specimen: MNHN 8954, holotype, discussed by Bour (2009d).
Sternothaerus oxyrhinus Boulenger 1897b:919
Type locality: "unknown...but probably...from some part of Tropical Africa."
Type specimen: NHMUK s/n, holotype, type specimen figured (pl.53), apparently lost.
Sternothaerus heinrothi Kanberg 1924:195
Type locality: "Kamerun" [Cameroon].
Type specimen: ZMB 8232, holotype, see Fritz et al. (1994).

Pelusios rhodesianus Hewitt 1927 (11:19, 17:102)
Variable Mud Turtle, Mashona Hinged Terrapin


Richard C. Boycott / CBFTT / nr. Lake St. Lucia, KwaZulu-Natal, South Africa

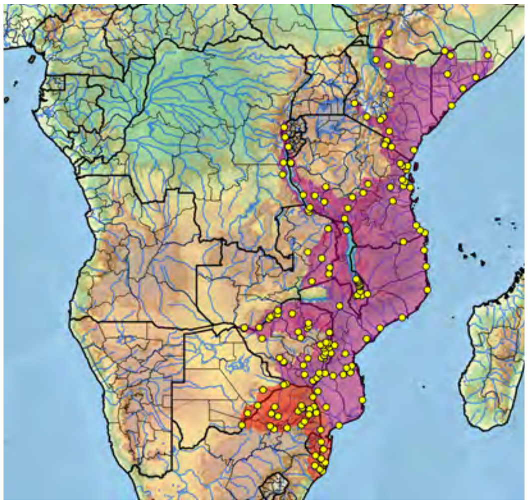


Richard C. Boycott / CBFTT / nr. Lake St. Lucia, KwaZulu-Natal, South Africa



Distribution: Angola, Botswana, Burundi, Congo (DRC), Congo (ROC), Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, Zambia, Zimbabwe
Presumed Historic Indigenous Range: 2,250,980 sq. km
Size (Max SCL): 25.5 cm (Broadley and Boycott 2008 CBFTT)
CBFTT Account: Broadley and Boycott (2008)
IUCN Red List: Least Concern (LC) (TFTSG 1996)
Synonymy:
Pelusios nigricans rhodesianus Hewitt 1927:375
Pelusios subniger rhodesianus, Pelusios rhodesianus, Pelusios castaneus rhodesianus, Pelusios rhodesianus rhodesianus
Type locality: "Mpika district, N.E. Rhodesia" [Zambia].
Type specimen: PEM R14956 (formerly AMG 5432), holotype, see Broadley (1981a); PEM R14957, R14959, paratypes, genotyped by Kindler et al. (2016).

Pelusios sinuatus (Smith 1838) (11:19) (**36**)
Serrated Hinged Terrapin
(includes 2 subspecies)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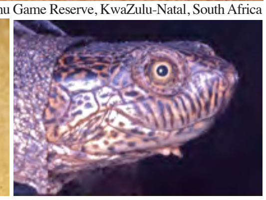
(subspecies: *sinuatus* = red, *bottegi* = purple)

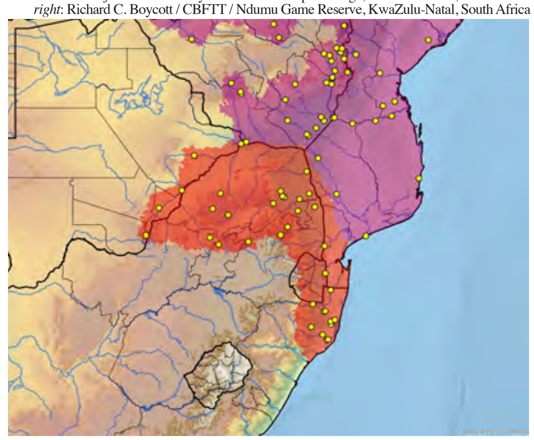
Distribution: Botswana, Burundi, Congo (DRC), Eswatini (Swaziland), Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Somalia, South Africa, Tanzania, Zambia, Zimbabwe
Presumed Historic Indigenous Range: 2,570,192 sq. km
Size (Max SCL): male: 35.0 cm, female: 55.0 cm (see subspp.)
CBFTT Account: Broadley and Boycott (2009)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2013)

Pelusios sinuatus sinuatus (Smith 1838) (11:19) (**36**)
Southern Serrated Hinged Terrapin

Richard C. Boycott / CBFTT / Ndumu Game Reserve, KwaZulu-Natal, South Africa



left: Richard C. Boycott / CBFTT / Mpumalanga, KwaZulu-Natal, South Africa
right: Richard C. Boycott / CBFTT / Ndumu Game Reserve, KwaZulu-Natal, South Africa


*

(subspecies: *sinuatus* = red, *bottegi* = purple)

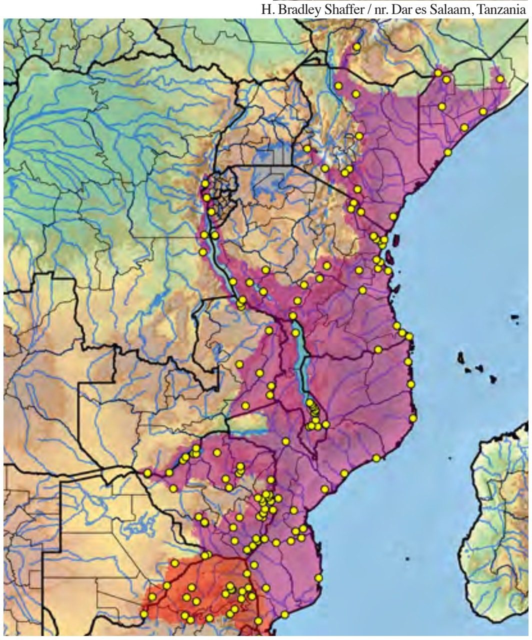
Distribution: Botswana, Eswatini (Swaziland), Mozambique, South Africa, Zimbabwe (?)
Presumed Historic Indigenous Range: 281,529 sq. km
Size (Max SCL): female: 34.7 cm (Broadley and Boycott 2009 CBFTT; Vamberger et al. 2019)
Synonymy:
Sternotherus sinuatus Smith 1838:Reptilia,pl.1
Sternothaerus (Tanoa) sinuatus, Sternothaerus sinuatus, Pelusios sinuatus, Pelusios sinuatus sinuatus
Type locality: "rivers to the north of 25° south latitude" [South Africa]. Restricted to "the Crocodile-Marico confluence, northern Transvaal" [South Africa] by Broadley (1981a:654).
Type specimen: NMSZ 1859.13.1684 (formerly RSM), lectotype, designated as the type by FitzSimons (1937:261,pl.X) and Broadley (1981a:654), listed as "syntype" by Herman et al. (1990); NMSZ 1859.13.1686, paralectotype, listed as "?syntype" by Herman et al. (1990).
Sternotherus dentatus Peters 1848:494 (*nomen nudum*)
Sternothaerus dentatus
Pelusios sinuatus zuluensis Hewitt 1927:371
Type locality: "near the Umsinene River, Zululand" [South Africa].
Type specimen: NMB 609, holotype, see Broadley (1981a).

Pelusios sinuatus bottegi (Boulenger 1895a) (11:19) (36)
Northern Serrated Hinged Terrapin


Mike Parr / Nairobi National Park, Kenya

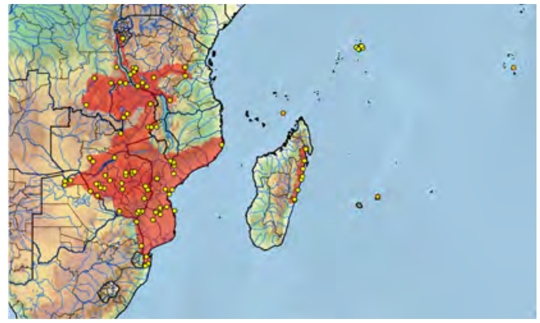


H. Bradley Shaffer / nr. Dar es Salaam, Tanzania


*
(subspecies: *sinuatus* = red, *bottegi* = purple)

Distribution: Botswana, Burundi, Congo (DRC), Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Somalia, Tanzania, Zambia, Zimbabwe
Presumed Historic Indigenous Range: 2,288,663 sq. km
Size (Max SCL): male: 35.0 cm, female: 55.0 cm (Spawls et al. 2002; Broadley and Boycott 2009 CBFTT; Ceballos et al. 2013)
Synonymy:
Sternothaerus bottegi Boulenger 1895a:9
Pelusios sinuatus bottegi
Type locality: "Bardera...Giuba e dei suoi affluenti" [Italian Somaliland] [Somalia].
Type specimen: MSNG CE2319, holotype, see Capocaccia (1961).
Pelusios sinuatus leptus Hewitt 1933a:45
Type locality: "Isoka, North-East Rhodesia" [Zambia].
Type specimen: PEM R 14960 (formerly AMG s/n), holotype, see Broadley (1981a).
Sternothaerus rudolphi † Arambourg 1947:461
Pelusios rudolphi
Type locality: "basin du Lac Rodolphe et de la basse vallée de l'Omo" [Ethiopia]. Emended to "Shungura Formation...Omo River Basin...Ethiopia" by Lapparent de Broin (2000b:59).
Type specimen: MNHN P1933-9-449, holotype, fossil, incomplete plastron; P1933-9-448, paratype, incomplete carapace; figured (f.79-80, pl.34,f.4, pl.35,f.3) and in Broin (1969:pl.25,f.4).
Geologic age: Late Pliocene–Early Pleistocene, Villafranchian, Shungura Formation, ca. 3.79–1.6 million ybp, see Broin (1969) and Lapparent de Broin (2000b).

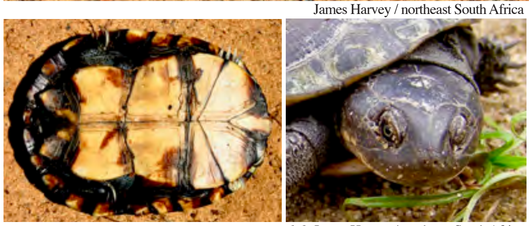
Pelusios subniger (Bonnaterre 1789) (12:43)
East African Black Mud Turtle
(includes 2 subspecies)


*
(subspecies: *subniger* = red, *parietalis* = Seychelles [clustered yellow dots]; orange dots = introduced)

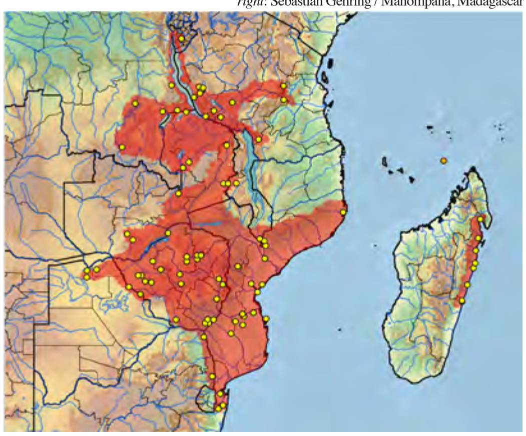
Distribution: Botswana, Burundi, Congo (DRC), Madagascar (prehistoric introduction?), Malawi, Mozambique, Seychelles (prehistoric introduction?), South Africa, Tanzania, Zambia, Zimbabwe
Introduced: British Indian Ocean Territory (Diego Garcia, Chagos Archipelago), French Southern Territories (Glorieuse), Mauritius
Presumed Historic Indigenous Range: 1,664,490 sq. km
Size (Max SCL): male 15.0 cm, female 20.0 cm (see subspp.)
IUCN Red List: Least Concern (LC) (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2013)

Pelusios subniger subniger (Bonnaterre 1789) (12:43)
East African Black Mud Turtle

James Harvey / northeast South Africa



left: James Harvey / northeast South Africa
right: Sebastian Gehring / Manompana, Madagascar



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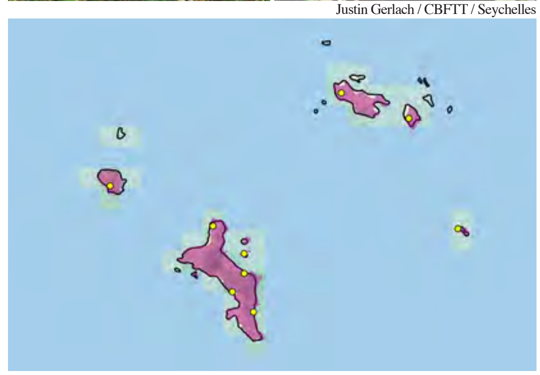
(subspecies: *subniger* = red; orange dot = introduced)

Distribution: Botswana, Burundi, Congo (DRC), Madagascar (prehistoric introduction?), Malawi, Mozambique, South Africa, Tanzania, Zambia, Zimbabwe
Presumed Historic Indigenous Range: 1,664,250 sq. km
Size (Max SCL): 20.0 cm (Branch 2008; Itescu et al. 2014)
Synonymy:
Testudo subnigra Lacepède 1788:175, synopsis[table] (09:6) (*nomen suppressum*)
Type locality: Not known. Restricted to "Tamatave, est de Madagascar" by Bour (1979:152).
Type specimen: MNHN 8366, holotype, type specimen figured (pl. opp.175), discussed by Bour (2004b).
Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).
Testudo subnigra Bonnaterre 1789:30 (*nomen conservandum*)
Emys subnigra, Pelusios subniger, Sternotherus subniger, Clemmys (Pelusios) subnigra, Clemmys subnigra, Sternothaerus subniger, Sternothaerus (Notoa) subniger, Pelusios subniger, Pelusios subniger subniger
Type locality: Not known. Restricted to "Tamatave, est de Madagascar" by Bour (1979:152).
Type specimen: MNHN 8366, holotype, type specimen figured in Lacepède (1788:pl.opp.175), discussed by Bour (2004b).
Comment: Name conserved by ICZN (1989), see Smith et al. (1980b).
Testudo nigricans Donndorff 1798:34 (*nomen novum*)
Terrapene nigricans, Kinosternon nigricans, Sternotherus nigricans, Sternothaerus nigricans, Sternothaerus nigricans nigricans, Pelusios nigricans, Pelusios nigricans nigricans
Comment: Unjustified replacement name for *subnigra*.

Pelusios subniger parietalis Bour 1983 (12:43)
Seychelles Black Mud Turtle

Justin Gerlach / CBFTT / Seychelles

Justin Gerlach / CBFTT / Seychelles



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(subspecies: *parietalis* = purple)

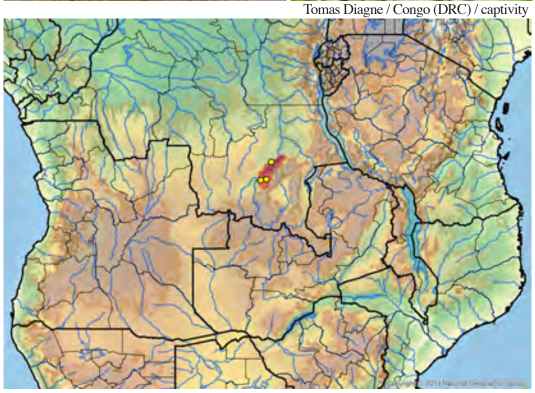
Distribution: Seychelles (Cerf, Cousin [extirpated], Fregate, La Digue, Mahé, Praslin, Silhouette, St. Anne [extirpated]) (prehistoric introduction?)
Presumed Historic Indigenous Range: 240 sq. km
Size (Max SCL): male 15.0, female 19.0 cm [both estimated]; Max CCL: male 15.8 cm, female 20.0 cm (Gerlach 2008b CBFTT)
CBFTT Account: Gerlach (2008b)
IUCN Red List: Critically Endangered (CR A2c, B2ab(ii,iii)) (Gerlach 2003)
Synonymy:
Pelusios subniger parietalis Bour 1983:359
Type locality: "La Digue Island, Seychelles."
Type specimen: USNM 19802, holotype, see Reynolds et al. (2007).

Pelusios upembae Broadley 1981a
Upemba Mud Turtle


Tomas Diagne / Congo (DRC) / captivity

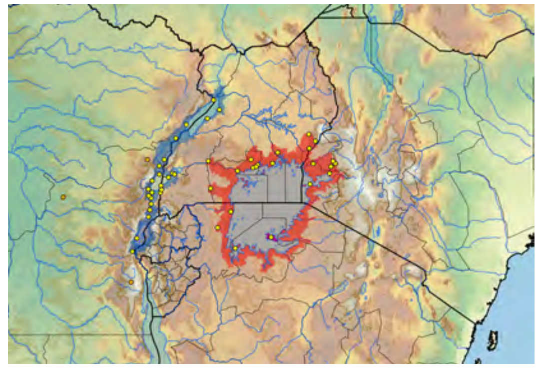


Tomas Diagne / Congo (DRC) / captivity



Distribution: Congo (DRC)
Presumed Historic Indigenous Range: 16,887 sq. km
Size (Max SCL): 23.0 cm (Branch 2008; Itescu et al. 2014)
IUCN Red List: Data Deficient (DD) (TFTSG 1996)
TFTSG Provisional Red List: Data Deficient (DD) (2018)
Synonymy:
Pelusios bechuanicus upembae Broadley 1981a:667
Pelusios upembae
Type locality: "Kanonga River, tributary of the right bank of the Fungwe River (695 m), Upemba National Park, Shaba Province, Zaire" [Democratic Republic of Congo (DRC)].
Type specimen: TMP 38178, holotype.

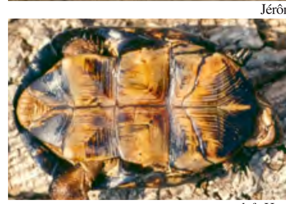
Pelusios williamsi Laurent 1965 (37)
Williams' Mud Turtle
(includes 3 subspecies)


*
(subspecies: *williamsi* = red, *laurenti* = purple, *lutescens* = blue; orange dots = probable trade or questionable)

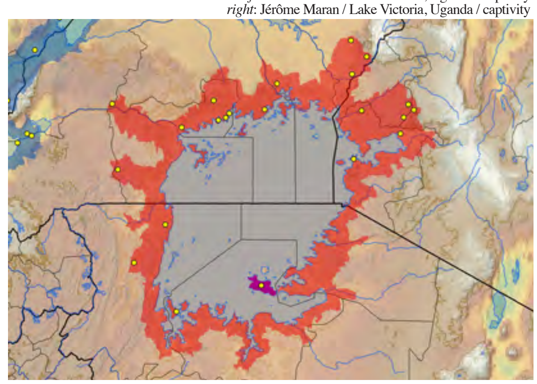
Distribution: Congo (DRC), Kenya, Rwanda, Tanzania, Uganda
Presumed Historic Indigenous Range: 79,575 sq. km
Size (Max SCL): male 19.7 cm, female 23.8 cm (see subspp.)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2013)

Pelusios williamsi williamsi Laurent 1965
Lake Victoria Mud Turtle


Jérôme Maran / Lake Victoria, Uganda / captivity



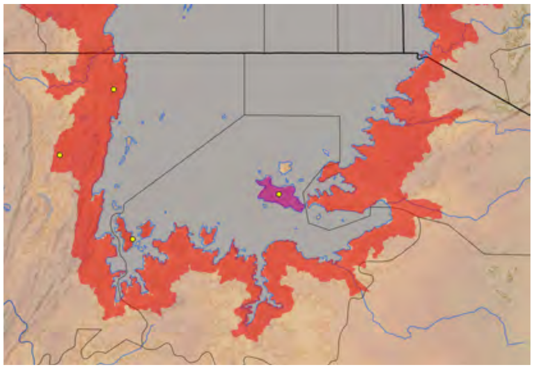
left: Harald Artner / Lake Victoria, Uganda / captivity
right: Jérôme Maran / Lake Victoria, Uganda / captivity


*
(subspecies: *williamsi* = red, *laurenti* = purple, *lutescens* = blue)

Distribution: Kenya, Tanzania, Uganda
Presumed Historic Indigenous Range: 54,068 sq. km
Size (Max SCL): male 19.7 cm, female 23.8 cm (Bour 1984a)
Synonymy:
Pelusios williamsi Laurent 1965:12
Pelusios williamsi williamsi, *Pelusios castaneus williamsi*,

Pelusios williamsii
Type locality: "Kakamega, Kaimosi, Kenya."
Type specimen: MCZ 40021, holotype.

Pelusios williamsi laurenti Bour 1984a
Ukerewe Island Mud Turtle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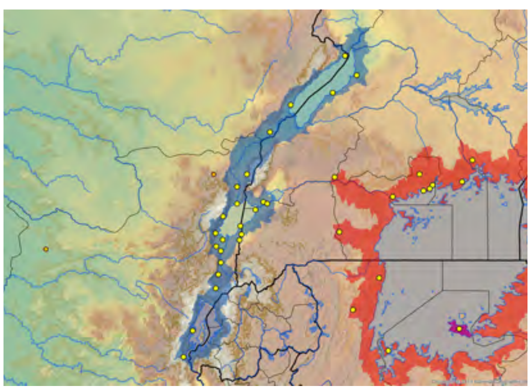
(subspecies: *williamsi* = red, *laurenti* = purple)
Distribution: Tanzania
Presumed Historic Indigenous Range: 551 sq. km
Size (Max SCL): male 18.7 cm, female 22.6 cm (Bour 1984a)
Synonymy:
Pelusios williamsi laurenti Bour 1984a:29
Type locality: "Ukerewe Island (Lake Victoria), Tanzania, altitude 1150 m."
Type specimen: MCZ 30016, holotype.

Pelusios williamsi lutescens Laurent 1965
Albert Nile Mud Turtle


*

(subspecies: *williamsi* = red, *laurenti* = purple, *lutescens* = blue; orange dots = probable trade or questionable)
Distribution: Congo (DRC), Rwanda, Uganda
Presumed Historic Indigenous Range: 24,956 sq. km
Size (Max SCL): male 17.8 cm, female 22.4 cm (Bour 1984a)
Synonymy:
Pelusios williamsi lutescens Laurent 1965:16
Pelusios castaneus lutescens
Type locality: "Semliki River, 1 km below the Lake Edward" [Democratic Republic of Congo (DRC)].
Type specimen: IRSNB 6822, holotype.

PODOCNEMIDIDAE Cope 1869 (07:104, 09:48, 11:20) **(3, 9, 38)**
Hydraspidina Bonaparte 1836:3 (*partim*)
Podocnemididae Cope 1869:282 **(6)**
Peltocephalidae Gray 1870c:70,82
Podocneminae Zangerl 1947:39
Podocnemidae Meylan 1996:31
(includes 3 subfamilies)
ERYMNOCHELYINAE
PELTOCEPHALINAE
PODOCNEMIDINAE

Podocnemididae Species Richness

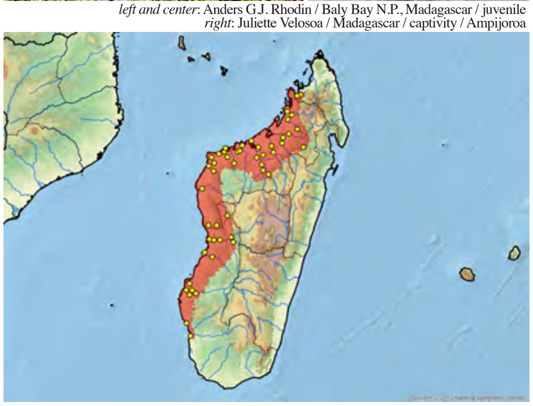
ERYMNOCHELYINAE Broin 1988 **(3, 9)**
Erymnochelyinae Broin 1988:105,137

Erymnochelys Baur 1888a
Dumerilia Grandidier 1867:232 (junior homonym, not = *Dumerilia* Leach 1824 [= Coleoptera] or *Dumerilia* Robineau-Desvoidy 1835 [= Diptera] or *Dumerilia* Bocage 1866 [= Sauria])
Type species: *Dumerilia madagascariensis* Grandidier 1867, by original monotypy.
Erymnochelys Baur 1888a:421 (*nomen novum*)
Type species: *Erymnochelys madagascariensis* [= *Dumerilia madagascariensis* Grandidier 1867], by application of ICZN Article 67.8.

Erymnochelys madagascariensis (Grandidier 1867)
Madagascan Big-headed Turtle, *Rere*

Anders G.J. Rhodin / TCC / CRM 6 / Madagascar / captivity / Ampijoroa

left and center: Anders G.J. Rhodin / Baly Bay N.P., Madagascar / juvenile
right: Juliette Velosoa / Madagascar / captivity / Ampijoroa



*

Distribution: Madagascar
Presumed Historic Indigenous Range: 151,139 sq. km
Size (Max SCL): male 45.8 cm, female 43.0 cm (Pedrono and Smith 2013)
IUCN Red List: Critically Endangered (CR A4d) (Leuteritz et al. 2008); Previously: Endangered (EN) (1996)
CITES: Appendix II (1975)
Synonymy:
Dumerilia madagascariensis Grandidier 1867:232
Podocnemis madagascariensis, Erymnochelys madagascariensis, Dumerilia madagascarensis, Erymnochelys madagascarensis, Podocnemis madagascarensis
Type locality: "Mouroundava Tsidsibonque flumina in occidentali insulae Madagascar littore" [Morondava and Tsiribihina rivers on the western coast of Madagascar Island]. Restricted to "Morondava River...Madagascar" by Bour (2006a:37).
Type specimen: MNHN 9544, holotype, see Bour (2006a).
Podocnemis madagascariensis bifilaris Boettger 1893:14
Type locality: "Mojanga, West-Madagaskar" [Mahajanga, Madagascar].
Type specimen: SMF 7982, holotype, see Mertens (1967b).

PELTOCEPHALINAE Gray 1870f [3,9]

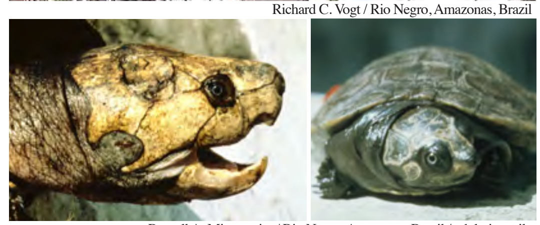
Peltocephalina Gray 1870f:719
Peltocephalinae Joyce, Anquetin, Cadena, Claude, Danilov, Evers, Ferreira, Gentry, Georgalis, Lyson, Pérez-García, Rabi, Sterli, Vitek, and Parham 2021:21

Peltocephalus Duméril and Bibron 1835

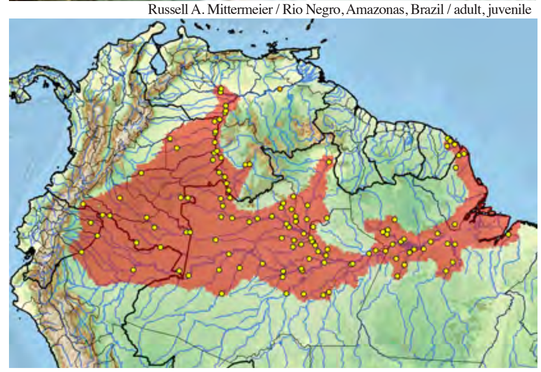
Peltocephalus Duméril and Bibron 1835:377
Type species: *Peltocephalus tracaxa* [= *Emys tracaxa* Spix 1824] [= subjective synonym of *Emys dumeriliana* Schweigger 1812], by original monotypy.

Peltocephalus dumerilianus (Schweigger 1812)
Big-headed Sideneck Turtle, *Cabeçudo, Cabezón*

Richard C. Vogt / Rio Negro, Amazonas, Brazil



Russell A. Mittermeier / Rio Negro, Amazonas, Brazil / adult, juvenile



*

(orange dot = probable trade)

Distribution: Brazil (Amapá, Amazonas, Pará, Roraima), Colombia (Amazonas, Caquetá, Guainía, Guaviare, Meta, Putumayo, Vaupés, Vichada), Ecuador, French Guiana, Peru (Loreto), Venezuela (Amazonas, Apure)
Presumed Historic Indigenous Range: 2,058,635 sq. km
Size (Max SCL): male 50.0 cm, female 47.0 cm (Iverson and Vogt 2002; Ceballos et al. 2013)
IUCN Red List: Vulnerable (VU A1acd) (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
CITES: Appendix II (1975)
Synonymy:
Emys dumeriliana Schweigger 1812:300
Podocnemis dumeriliana, Hydraspis dumeriliana,

Peltocephalus dumerilianus, Chelonemys dumeriliana, Peltocephalus dumeriliana

Type locality: "America meridionali." Restricted to "French Guiana" by Bour (2006a:29).

Type specimen: MNHN 8364, neotype, designated by Bour (2006a:29). Original holotype apparently lost, possibly MNHN 7893, its identification as either *Podocnemis unifilis* or *P. expansa* discussed by Williams (1954), Hoogmoed and Gruber (1983), Pritchard and Trebbau (1984), and Bour (2006a).

Emys macrocephala Spix 1824:5 (senior homonym, not = *Emys macrocephalus* Gray 1844 [= *Malaclemys terrapin terrapin*])

Peltocephalus macrocephala

Type locality: "Airon ad ripam fluminis Yau, confluentis Rio Negro" [Airão, Rio Jáu, Amazonas, Brazil].

Type specimen: RMNH 6164, lectotype, designated by Hoogmoed and Gruber (1983:347), see Pritchard and Trebbau (1984) and Hoogmoed et al. (2010).

Emys tracaxa Spix 1824:6

Hydraspis tracaxa, Podocnemis tracaxa, Peltocephalus tracaxa, Peltocephalus tracaxus

Type locality: "fluminis Solimoëns" [Rio Solimões, Amazonas, Brazil].

Type specimen: ZSM 16/0, lectotype, designated by Hoogmoed and Gruber (1983:347), see Pritchard and Trebbau (1984) and Franzen and Glaw (2007).

Chelys (Hydraspis) dumerilliana Gray 1830e:17 (*nomen novum*)

Comment: Unjustified emendation or error for *dumeriliana*.

Emys icterocephala Spix *in* Gray 1830e:17 (*nomen nudum*)

Peltocephalus tracaya Troschel 1848:646 (*nomen novum*)

Comment: Unjustified replacement name for *tracaxa*.

Podocnemidinae Gray 1870 [3, 9]

Podocnemina Gray 1870f:719

Podocnemidina Gray 1873j:73

Podocneminae Zangerl 1947:39

Podocnemidinae Bour and Dubois 1984:80

Podocnemis Wagler 1830b [38]

Podocnemis Wagler 1830b:135

Type species: *Podocnemis expansa* [= *Emys expansa* Schweigger 1812], by subsequent designation by Fitzinger (1843:29).

Chelonemys Gray 1864d:134 (junior homonyn, not = *Chelonemys* Jourdan 1862 [= fossil sea turtle, Eurysternidae])

Type species: *Chelonemys dumeriliana* sensu Gray 1864 (non *Emys dumeriliana* Schweigger 1812) [= subjective synonym of *Podocnemis unifilis* Troschel 1848], by original monotypy.

Bartlettia Gray 1870f:720 (junior homonym, not = *Bartlettia* Adams 1867 [= Mollusca])

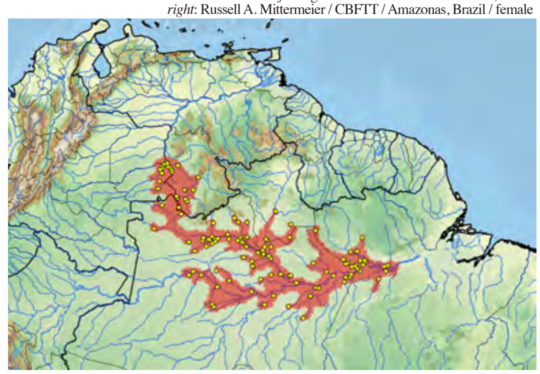
Type species: *Bartlettia pitipii* Gray 1870 [= subjective synonym of *Podocnemis sextuberculata* Cornalia 1849], by original monotypy.

Podocnemis erythrocephala (Spix 1824) [10:46, 10:48, 14:50, 17:104] [39]

Red-headed Amazon River Turtle, *Irapuca, Chipiro*

Richard C. Vogt / CBFTT / Rio Jufari, Amazonas, Brazil / male

left: Virginia C.D. Bernardes / Amazonas, Brazil
right: Russell A. Mittermeier / CBFTT / Amazonas, Brazil / female



*

Distribution: Brazil (Amazonas, Pará, Roraima), Colombia (Guainía, Vichada), Venezuela (Amazonas)

Presumed Historic Indigenous Range: 516,656 sq. km

Size (Max SCL): male 24.4 cm, female 32.2 cm (Mittermeier et al. 2015 CBFTT)

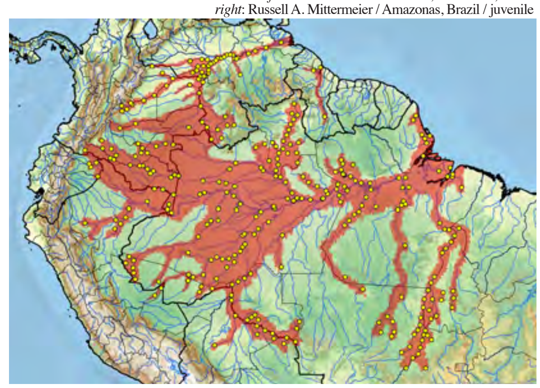
CBFTT Account: Mittermeier, Vogt, Bernhard, and Ferrara (2015)

IUCN Red List: Vulnerable (VU A1bd) (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
CITES: Appendix II, as *Podocnemis* spp. (1975)
Synonymy:
Emys cayennensis Schweigger 1812:298 [10:48, 14:50] [41] (*partim*, misidentified type [= *Podocnemis unifilis*])
Chelys (Hydraspis) cayennensis, Chelys cayennensis, Hydraspis cayennensis, Podocnemis cayennensis
Type locality: “Cayenna” [Cayenne, French Guiana].
Type specimen: MNHN 8359, lectotype, designated by Bour (2006a:33), discussed by Pritchard and Trebbau (1984), Ceríaco and Bour (2012), and Vogt et al. (2013); MNHN 4152, erroneously designated lectotype by Hoogmoed and Gruber (1983:343), is a *P. expansa* (Bour 2006:32).
Comment: A proposal to the ICZN by Vogt et al. (2013) to give *Podocnemis unifilis* Troschel 1848 precedence over *Emys cayennensis* Schweigger 1812 whenever the two are considered synonyms, was approved by ICZN (2019).
Emys erythrocephala Spix 1824:9
Podocnemis erythrocephala, Hydraspis expansa erythrocephala, Chelys (Hydraspis) erythrocephala, Chelys erythrocephala
Type locality: “aquis ripariis fluminis Solimoens” [Rio Solimões, Amazonas, Brazil].
Type specimen: ZSM 2517/0, holotype, see Hoogmoed and Gruber (1983) and Franzen and Glaw (2007).
Emys bitentaculata Cuvier *in* Gray 1830e:17 [14:48] (*nomen nudum et dubium*)
Hydraspis bitentaculata Gray 1831d:42 [14:48] (*nomen oblitum et dubium*)
Type locality: “Brasilia” [Brazil].
Type specimen: MNHN s/n, holotype, apparently lost.
Podocnemis agassizii Coutinho *in* Göldi 1886:277 [10:46]
Type locality: “Rio Negro” [Amazonas, Brazil].
Type specimen: Not located, type specimen figured (pl.5).
Podocnemis coutinhii Göldi 1886:279 (*nomen novum*)
Comment: Unjustified replacement name for *agassizii*.

Podocnemis expansa (Schweigger 1812)
Giant South American River Turtle, Giant Amazon River Turtle, *Tartaruga-da-Amazônia, Charapa, Arrau*

Richard C. Vogt / Rio Trombetas, Pará, Brazil / female

left: Camila Ferrara / Rio Purus, Amazonas, Brazil
right: Russell A. Mittermeier / Amazonas, Brazil / juvenile



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Distribution: Bolivia (Beni, La Paz, Pando, Santa Cruz), Brazil (Acre, Amapá, Amazonas, Goiás, Maranhão, Mato Grosso, Pará, Rondônia, Roraima, Tocantins), Colombia (Amazonas, Arauca, Caquetá, Casanare, Guainía, Meta, Putumayo, Vaupés, Vichada), Ecuador, Guyana, Peru (Loreto, Ucayali), Venezuela (Amazonas, Anzoátegui, Apure, Bolívar, Delta Amacuro, Guárico, Monagas)
Presumed Historic Indigenous Range: 2,962,702 sq. km
Size (Max SCL): male 55.0 cm, female 109.0 cm (Ceballos et al. 2013; Ferrara et al. 2017)
IUCN Red List: Lower Risk/conservation dependent (LR/cd) (TFTSG 1996)
TFTSG Provisional Red List: Critically Endangered (CR) (2011)
CITES: Appendix II, as *Podocnemis* spp. (1975)
Synonymy:
Emys expansa Schweigger 1812:299
Podocnemis expansa, Chelys (Hydraspis) expansa, Chelys expansa, Hydraspis expansa
Type locality: “America meridionali.” Restricted to “French Guiana” by Bour (2006a:35).
Type specimen: MNHN 7997, lectotype, designated by Bour (2006a:35), see also Ceríaco and Bour (2012).
Testudo arrau Humboldt 1819a:243 [14:49]
Emys arrau

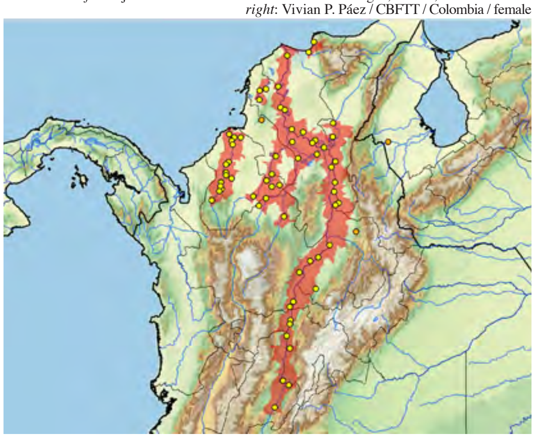
Type locality: "entre le confluent de l'Orénoque avec l'Apure et les grandes cataractes ou *Raudales*...entre Cabruta et la mission d'Aturès...les trois pêches de l'Encaramada ou Boca del Cabullare, de Cucuruparu ou Boca de la Tortuga, et de Pararuma, un peu au-dessous de Carichana" [Venezuela]. Restricted to "zwischen dem Zusammenfluss des Apure mit dem Orinoko und den grossen Wasserfällen" [Venezuela] by Wermuth and Mertens (1961:296).
Type specimen: Not known or located.

Emys amazonica Spix 1824:1
Type locality: "fluvio Solimoens et confluentibus Javary, Rio Branco" [Rio Solimões, Amazonas, Brazil].
Type specimen: ZSM 2446/0/1, lectotype, designated by Hoogmoed and Gruber (1983:343), discussed by Franzen and Glaw (2007) and Hoogmoed et al. (2010).

Podocnemis lewyana Duméril 1852 (12:44)
Magdalena River Turtle, *Tortuga del río Magdalena*

Alejandra Cadavid / CBFTT / TCC / Río Chicagua, Bolivar, Colombia

left: Alejandra Cadavid / CBFTT / TCC / Río Chicagua, Bolivar, Colombia / male
right: Vivian P. Páez / CBFTT / Colombia / female



*

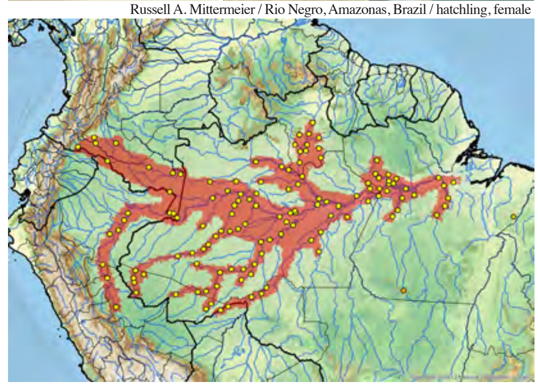
(orange dots = probable trade, introduced, or questionable)

Distribution: Colombia (Antioquia, Atlántico, Bolívar, Boyacá, Caldas, Cesar, Córdoba, Cundinamarca, La Guajira, Magdalena, Santander, Sucre, Tolima)
Introduced: Venezuela (Zulia)
Presumed Historic Indigenous Range: 63,815 sq. km
Size (Max SCL): male 42.4 cm, female 50.0 cm (Gallego-García and Castaño-Mora 2008; Ceballos et al. 2013; Vergara-Ríos et al. 2015)
CBFTT Account: Páez, Restrepo, Vargas-Ramírez, and Bock (2009)
IUCN Red List: Critically Endangered (CR A2acd+4acd) (Páez et al. 2016); Previously: Endangered (EN) (TFTSG 1996)
CITES: Appendix II, as *Podocnemis* spp. (1975)
Synonymy:
Podocnemis lewyana Duméril 1852:242
Type locality: "Santa Fé de Bogota...et...la République de Venezuella" [Colombia and Venezuela]. Restricted to "Bogotá, Colombia" by Williams (1954:281).
Type specimen: MNHN 8985, lectotype, designated "holotype" by Williams (1954:281), discussed by Bour (2006a).

Podocnemis sextuberculata Cornalia 1849 (10:47, 17:105) (**40**)
Six-tubercled Amazon River Turtle, *Iaçá, Pitiú, Cupiso*

Richard C. Vogt / Paraná Floresta, Roraima, Brazil / female

Russell A. Mittermeier / Rio Negro, Amazonas, Brazil / hatchling, female



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(orange dots = probable trade)

Distribution: Bolivia (Pando), Brazil (Acre, Amazonas, Pará, Rondônia, Roraima), Colombia (Amazonas, Caquetá, Putomayo, Vaupés), Ecuador (?), Peru (Loreto, Ucayali)
Presumed Historic Indigenous Range: 1,210,901 sq. km
Size (Max SCL): male 25.0 cm, female 34.0 cm (Fachín-Terán et al. 2003; Ferrara et al. 2017; Iverson et al. 2017)
IUCN Red List: Vulnerable (VU A1acd) (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
CITES: Appendix II, as *Podocnemis* spp. (1975)
Synonymy:
Podocnemis sextuberculata Cornalia 1849:13 (17:105)
Bartlettia sextuberculata

Type locality: “Fl. Amazonum” [Rio Amazonas, Brazil].
Type specimen: MSNM, holotype, type specimen figured (pl.12,f.3), apparently lost (Bour *in* Iverson 1992).

Podocnemis pitiu Coutinho 1868:150 (10:47)
Type locality: “l’Amazone” [Amazonas, Brazil].
Type specimens: Not known or located.

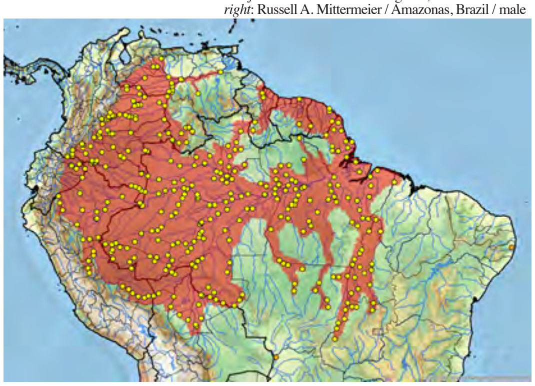
Bartlettia pitipii Gray 1870f:720
Bartlettia pitipiti
Type locality: “Lakes of the Upper Amazons” [Brazil].
Type specimens: NHMUK 1946.1.22.90, 1947.3.5.82–83 (formerly 1869.6.7.8–9), syntypes (3), see Iverson et al. (2017).

Podocnemis unifilis Troschel 1848 (07:105, 08:16, 09:49, 10:48, 10:49, 14:50) (**41**)
Yellow-spotted River Turtle, Yellow-spotted Sideneck Turtle, *Tracajá, Taricaya*


Richard C. Vogt / Amazonas, Brazil / female



left: Andreas Nöllert / Rio Tiguino, Ecuador / female
right: Russell A. Mittermeier / Amazonas, Brazil / male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(orange dots = introduced)

Distribution: Bolivia (Beni, Cochabamba, La Paz, Pando, Santa Cruz), Brazil (Acre, Amapá, Amazonas, Goiás, Mato Grosso, Maranhão, Pará, Rondônia, Roraima, Tocantins), Colombia (Amazonas, Arauca, Caquetá, Casanare, Guainía, Meta, Putumayo, Vaupés, Vichada), Ecuador, French Guiana, Guyana, Peru (Huanuco, Loreto, Madre de Dios, Pasco, Ucayali), Suriname, Venezuela (Amazonas, Anzoátegui, Apure, Barinas, Bolívar, Cojedes, Delta Amacuro, Guárico, Monagas)
Introduced: Brazil (Mato Grosso do Sul, Pernambuco)
Presumed Historic Indigenous Range: 5,094,278 sq. km
Size (Max SCL): male 33.2 cm, female 50.0 cm (Barrio Amorós 2001; Ceballos et al. 2013)
IUCN Red List: Vulnerable (VU A1acd) (TFTSG 1996)
TFTSG Provisional Red List: Endangered (EN) (2011)
CITES: Appendix II, as *Podocnemis* spp. (1975)
Synonymy:

Emys cayennensis Schweigger 1812:298 (10:48, 14:50) (**41**) (*partim*, misidentified type [= *Podocnemis unifilis*])
Chelys (Hydraspis) cayennensis, Chelys cayennensis, Hydraspis cayennensis, Podocnemis cayennensis
Type locality: “Cayenna” [Cayenne, French Guiana].
Type specimen: MNHN 8359, lectotype, designated by Bour (2006a:33), discussed by Pritchard and Trebbau (1984), Ceríaco and Bour (2012), and Vogt et al. (2013); not MNHN 4152, designated lectotype by Hoogmoed and Gruber (1983:343).
Comment: A proposal to the ICZN by Vogt et al. (2013) to give *Podocnemis unifilis* Troschel 1848 precedence over *Emys cayennensis* Schweigger 1812 whenever the two are considered synonyms, was approved by ICZN (2019).

Testudo terekay Humboldt 1819a:243 (14:49) (*nomen oblitum*)
Emys terekay
Type locality: “Haut-Orénoque...l’Apure, l’Uritucu, la Guarico et...les Llanos de Caracas” [= Upper Orinoco, Apure, Uritucu, Guarico, and the Llanos of Caracas, Venezuela].
Type specimen: Not known or located, see Vogt et al. (2013).

Chelys (Hydraspis) lata Bell *in* Gray 1830e:17 (08:16, 10:7) (*nomen oblitum*)
Chelys lata, Hydraspis lata
Type locality: “Demerara” [Guyana].
Type specimen: Not located, possibly OUM, apparently lost.

Podocnemis unifilis Troschel 1848:647 (14:50) (**41**)
Type locality: “Britisch-Guiana...Rupununi und Takutu” [Guyana].
Type specimen: ZMB 142, lectotype, designated by Vogt et al. (2013:35).
Comment: A proposal to the ICZN by Vogt et al. (2013) to give *Podocnemis unifilis* Troschel 1848 precedence over *Emys cayennensis* Schweigger 1812 whenever the two are considered synonyms, was approved by ICZN (2019).

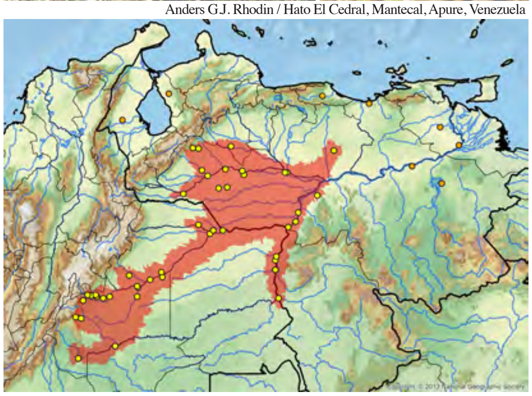
Podocnemis tracaya Coutinho 1868:149 (10:49)
Type locality: “l’Amazone” [Amazonas, Brazil].
Type specimens: Not known or located.

Emys quadripunctata Lidth de Jeude *in* Gray 1873j:74 (*nomen nudum*)
Type locality: “India” [in error], restricted to “Tropical America” by Gray (1873j:74).
Type specimen: NHMUK 1866.8.14.223, see Gray (1873j).

Podocnemis vogli Müller 1935
Savanna Sideneck Turtle, Llanos Sideneck Turtle, *Galápago Sabanero*

Anders G.J. Rhodin / Hato El Cedral, Mantecal, Apure, Venezuela

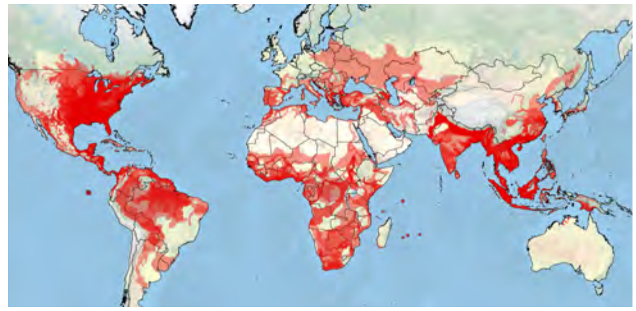
Anders G.J. Rhodin / Hato El Cedral, Mantecal, Apure, Venezuela



(orange dots = probable introduced or trade)

Distribution: Colombia (Arauca, Casanare, Guaviare, Meta, Vichada), Venezuela (Anzoátegui, Apure, Barinas, Bolívar, Cojedes, Delta Amacuro, Guárico, Monagas, Portuguesa)
Introduced: Venezuela (Zulia)
Presumed Historic Indigenous Range: 231,099 sq. km
Size (Max SCL): male 27.7 cm, female 36.0 cm (Ceballos et al. 2013)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
CITES: Appendix II, as *Podocnemis* spp. (1975)
Synonymy:
Podocnemis vogli Müller 1935:104
Type locality: "Barinas (Staat Zamora), Venezuela" [= Barinas Province].
Type specimen: ZSM 128/1928, holotype, see Franzen and Glaw (2007).

CRYPTODIRA Cope 1869 (08:20) (3, 8)
Cryptodères Duméril and Bibron 1834:354
Cryptodera Lichtenstein and von Martens 1856:1 (08:20) (8)
Cryptodira Cope 1869:282 (6)



Cryptodira Species Richness

DUROCRYPTODIRA Danilov and Parham 2006 (3)
Durocryptodira Danilov and Parham 2006:577

CHELONIOIDEA Oppel 1811
Chelonii Oppel 1811:8
Chlonopteria Rafinesque 1814:66
Cheloniae Schmid 1819:14
Edigitata Haworth 1825:373
Oiacopodae Wagler 1828:861
Chelonidae Bonaparte 1831:64
Oeacopodes Burmeister 1837:731
Pterodactyli Mayer 1849:199
Chelonioidea Baur 1893b:673
(includes 2 families)
CHELONIIDAE
DERMOCHELYIDAE

CHELONIIDAE Oppel 1811 (09:5, 12:7, 12:8, 12:9)
Chelonii Oppel 1811:8 (partim)
Cheloniadae Gray 1825:212
Carettidae Gray 1825:212
Mydae Ritgen 1828:269
Chelonina Bonaparte 1831:64
Cheloniidae Cope 1869:282 (6)
Cheloniadi Portis 1890:23
(includes 2 subfamilies)
CARETTINAE
CHELONIINAE

CARETTINAE Gray 1825 (12:7)
Carettidae Gray 1825:212
Carettinae Deraniyagala 1952:57

Caretta Rafinesque 1814 (12:8)
Caretta Rafinesque 1814:66
Type species: *Caretta nasuta* Rafinesque 1814 [= subjective synonym of *Testudo caretta* Linnaeus 1758], by original monotypy.
Thalassochelys Fitzinger 1835:121
Type species: *Thalassochelys caouana* Fitzinger [= *Testudo caouana* Lacepède 1788 (*nomen suppressum*) = *Testudo caouana* Bonnaterre 1789 = subjective synonym of *Testudo caretta* Linnaeus 1758], by subsequent designation by Fitzinger (1843:30).
Caouana Cocteau and Bibron 1838:31
Type species: *Chelonia* (*Caouana*) *cephalo* [= *Testudo cephalo* Schneider 1783 = subjective synonym of *Testudo caretta* Linnaeus 1758],

by original monotypy.

Halichelys Fitzinger 1843:30

Type species: *Thalassochelys* (*Halichelys) atra* Fitzinger [= *Caretta atra* Merrem 1820 = subjective synonym of *Testudo caretta* Linnaeus 1758], by original designation.

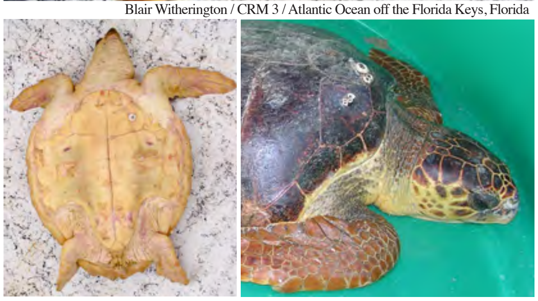
Eremonia Gray 1873i:408

Type species: *Eremonia elongata* Gray [= *Caouana elongata* Gray 1844 = subjective synonym of *Testudo caretta* Linnaeus 1758], by original designation.

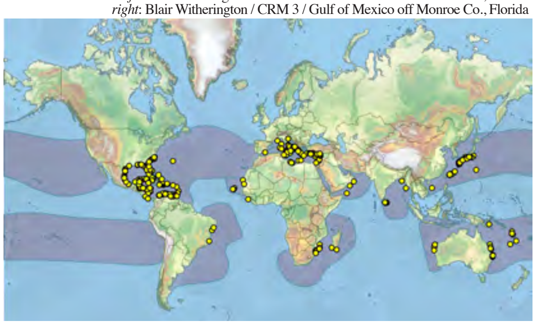
Caretta caretta (Linnaeus 1758) [10:5, 14:2, 17:5] **[42]**

Loggerhead, Loggerhead Sea Turtle

Blair Witherington / CRM 3 / Atlantic Ocean off the Florida Keys, Florida



left: Blair Witherington / CRM 3 / Atlantic Ocean off St. Lucie Co., Florida
right: Blair Witherington / CRM 3 / Gulf of Mexico off Monroe Co., Florida



(blue lines delimit purple Regional Management Units)

Nesting: Aruba, Australia (Queensland, Western Australia), Bahamas, Bangladesh, Belize, Bermuda, Bonaire, Brazil (Bahia, Espirito Santo, Rio de Janeiro, Sergipe), Cape Verde, Cayman Islands, China, Colombia, Costa Rica, Cuba, Curacao, Cyprus, Dominican Republic, Egypt, France, Greece, Haiti, Honduras, Israel, Italy, Japan, Lebanon, Libya, Madagascar, Mauritania, Mexico, Montserrat, Mozambique, Myanmar, New Caledonia, Oman, Panama, Papua New Guinea (Trobriand Islands), Saint Lucia, Saint Vincent and the Grenadines, Sierra Leone, South Africa, Spain, Sri Lanka, Syria, Tunisia, Turkey, Turks and Caicos, USA (Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Texas), US Virgin Islands, Vanuatu, Venezuela, Yemen

Foraging: Albania, Algeria, Anguilla, Antigua and Barbuda, Argentina, Bahrain, Barbados, British Virgin Islands, Canada, Chile, Comoros, Croatia, Djibouti, Dominica, Eritrea, Fiji, French Guiana, Gambia, Grenada, Guadeloupe, Guinea-Bissau, Guatemala, Guyana, India, Indonesia, Iran, Jamaica, Kenya, Malta, Martinique, Mauritius, Monaco, Montenegro, Morocco, Namibia, Netherlands Antilles (Bonaire, Saba, St. Eustatius), Nicaragua, North Korea, Pakistan, Peru, Philippines, Portugal, Puerto Rico, Qatar, Réunion, Saint Kitts and Nevis, Samoa, Saudi Arabia, Senegal, Seychelles, Sint Maarten, Slovenia, Solomon Islands, Somalia, South Korea, Sudan, Suriname, Taiwan, Tanzania, Tonga, Trinidad and Tobago, United Arab Emirates, Uruguay, USA (California, Hawaii, Oregon), Vietnam, Western Sahara

Vagrant: Angola, Benin, Brunei, Cambodia, Cameroon, Congo (DRC), Congo (ROC), Ecuador, El Salvador, Equatorial Guinea, Gabon, Ghana, Great Britain, Guinea, Iraq, Ireland, Ivory Coast (Côte d'Ivoire), Kuwait, Liberia, Malaysia, Maldives, New Zealand, Nigeria, Thailand, Togo, Tuvalu

Size (Max SCL): male ca. 125 cm [estimate], female 114.9 cm (Caldwell et al. 1959; Pritchard and Trebbau 1984; Dodd 1988); alleged maximum of 213 cm, first cited by Conant (1958) and widely by many others since, is suspect (Pritchard and Trebbau 1984); maximum of 146.7 cm cited by Dodd (1988) is total body length (Brongersma 1972)

IUCN Red List: Vulnerable (VU A2b) (Casale and Tucker 2015, 2017); Subpopulations: Mediterranean: Least Concern (LC) (2015); North East Atlantic: Endangered (EN B2ab(iii)) (2015); North East Indian Ocean: Critically Endangered (CR D) (2015); North Pacific: Least Concern (LC) (2015); North West Atlantic: Least Concern (LC) (2015); North West Indian Ocean: Critically Endangered (CR A4b) (2015); South East Indian Ocean: Near Threatened (NT) (2015); South Pacific: Critically Endangered (CR A2b) (2015); South West Atlantic: Least Concern (LC) (2015); South West Indian Ocean: Near Threatened (NT) (2015); Previously: Endangered (EN) (1996)

CITES: Appendix I, as Cheloniidae spp. (1981)

Synonymy:

Testudo caretta Linnaeus 1758:197 **[42]**

Chelone caretta, Chelonia caretta, Thalassochelys caretta, Talassochelys caretta, Caouana caretta, Caretta caretta, Caretta caretta caretta

Type locality: "insulas Americanas." Restricted to "Mari Mediterraneo, Atlantico" by Schoepff (1793a:70); to "Bermuda Islands" by Smith and Taylor (1950a:315, 1950b:16); and to "Bimini, British Bahamas" by Schmidt (1953:107).

Type specimens: Not known or located, description based on cited literature, see Brongersma (1961) and Wallin (1985); Brongersma (1961) recommended that a neotype be designated.

Comment: Description cited as sourced from Gronovius (1756:85,n.69), Browne (1756:465), Catesby (1743:39,pl.39), and Ray (1693:258).

Testudo marina Garsault 1764:pl.675 [10:5]

Type locality: Not designated.

Type specimen: Not located, type specimen figured (pl.675).

Testudo cephalo Schneider 1783:303

Caretta cephalo, Chelonia cephalo, Thalassochelys cephalo

Type locality: Not designated. Restricted to "Charleston, South Carolina" [USA] by Smith and Taylor (1950a:360).

Type specimen: Not known or located.

Testudo caouana Lacepède 1788:95, synopsis[table] [09:6] (*nomen suppressum*)

Type locality: "les contrées chaudes du nouveau Continent."

Type specimen: Possibly MNHN, not located.

Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo nasicornis Lacepède 1788:103, synopsis[table] (09:7) (*nomen suppressum*)
Testudo caretta nasicornis, Caretta nasicornis
Type locality: "mers du nouveau Continent, voisines de l'équateur." Restricted to "Ascension Island" by Smith and Smith (1980:302).
Type specimen: Possibly MNHN, not located.
Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo caouana Bonnaterre 1789:20
Chelonia caouana, Caretta caouana, Thalassochelys caouana
Type locality: "Les contrées chaudes de l'ancien & du nouveau Continent, les côtes de la Jamaïque, très-fréquemment dans la Méditerranée, auprès de Cagliari en Sardaigne & de Castel-Sardo, vers le quarante-uniéme degré de latitude."
Type specimen: Possibly MNHN, not located.

Testudo lauanna Meyer 1790:82 (09:8) (*nomen novum et oblitum*)
Comment: Unjustified replacement name for *caouana*.

Testudo gigas Walbaum *in* Donndorff 1798:35
Type locality: Not designated. Restricted to "Westindischen Meere" by Bechstein (1800:273).
Type specimen: Not known or located.

Caretta nasuta Rafinesque 1814:66
Type locality: "Sicil." [Sicily, Italy].
Type specimen: Not known or located.

Caretta atra Merrem 1820:17
Chelonia (Thalassochelys) atra, Thalassochelys atra, Thalassochelys (Halichelys) atra, Halichelys atra
Type locality: "mari ad Insulam Adscensionis" [Ascension].
Type specimen: Not known or located.
Comment: Description cited as sourced from Linnaeus (1749b:284,n.7, *T. mydas* γ; 1754:50, *T. atra*; and 1766:351, *T. mydas* γ), a mix of *Caretta caretta* and *Chelonia mydas*.

Chelonia radiata Cuvier 1829:14
Type locality: Not designated.
Type specimen: MNHN s/n, holotype, not located; Cuvier (1829) and Cogger et al. (1983) cite Schoepff (1793b:pl.16B) [plate number corrected from Schoepff (1793a:pl.17B)] as the figured type specimen, which is a *Caretta caretta*.

Testudo corianna Gray 1831d:53 (*nomen novum*)
Comment: Unjustified emendation or error for *caouana*.

Chelonia pelasgorum Valenciennes *in* Bory de Saint-Vincent 1833:planches, pl.6 (14:2)
Type locality: "sur la plage sablonneuse entre Arcadia et l'embouchure de la Neda" [Greece].
Type specimen: MNHN 7907, holotype, figured (pl.6).

Chelonia pelasgica Bibron and Bory de Saint-Vincent 1833:64 (*nomen novum*) (14:2)
Comment: Unjustified emendation or error for *pelasgorum*.

Caouana elongata Gray 1844:53
Thalassochelys elongata, Eremonia elongata
Type locality: Not designated. Restricted to "Ascension Island" by Smith and Smith (1980:303).
Type specimen: NHMUK 1947.3.5.41, holotype, see Cogger et al. (1983).

Thalassochelys corticata Girard 1858:431
Type locality: "Madeira" [Canary Islands]. Restricted to "Funchal, Madeira (Portugal)" by Cochran (1961:235).
Type specimen: USNM 7778, holotype, see Cochran (1961) and Reynolds et al. (2007).

Caretta gigas Deraniyagala 1933:66
Caretta caretta gigas
Type locality: "Ceylon" [Sri Lanka]. Restricted to "Gulf of Mannar" [Sri Lanka] by Deraniyagala (1939:164).
Type specimen: NHMUK 1946.1.22.64, 1947.3.5.76 (separate parts of one specimen) (formerly 1934.5.1.1), holotype, see Das (2009).

Eretmochelys Fitzinger 1843 (09:5, 12:7, 12:8, 14:3)

Eretmochelys Fitzinger 1843:30
Type species: *Chelonia (Eretmochelys) imbricata* Cuvier [= *Testudo imbricata* Linnaeus 1766], by original designation.

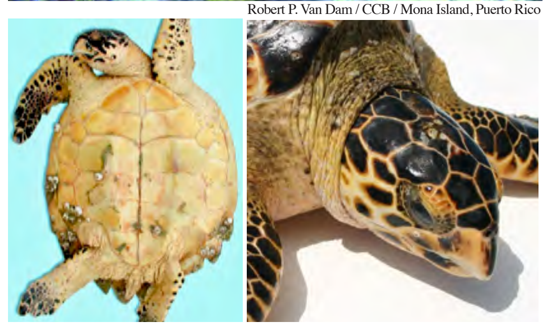
Herpysmostes Gistel 1868:145
Type species: *Herpysmostes imbricatus* [= *Testudo imbricata* Linnaeus 1766], by original monotypy.

Onychochelys Gray 1873i:397
Type species: *Onychochelys kraussi* Gray 1873i [= subjective synonym of *Testudo imbricata* Linnaeus 1766], by original monotypy.

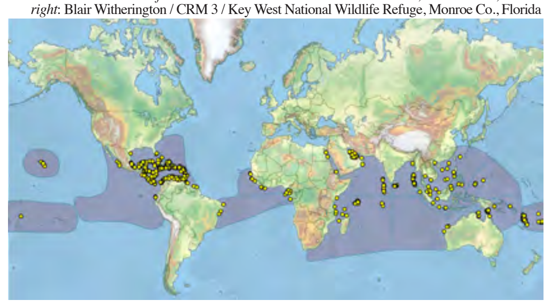
Eretmochelys imbricata (Linnaeus 1766) (07:5, 09:9, 12:9, 14:4, 17:6)

Hawksbill Turtle, Hawksbill Sea Turtle

Robert P. Van Dam / CCB / Mona Island, Puerto Rico



left: Richard Herren / CRM 3 / Hutchinson Island, St. Lucie Co., Florida
right: Blair Witherington / CRM 3 / Key West National Wildlife Refuge, Monroe Co., Florida



(blue lines delimit purple Regional Management Units)

Nesting: Anguilla, Antigua and Barbuda, Aruba, Australia, Bahamas, Bangladesh, Barbados, Belize, Brazil, British Indian Ocean Territory, British Virgin Islands, Cameroon, Cayman Islands, China, Colombia, Congo (ROC), Costa Rica, Cuba, Curacao, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Fiji, French Guiana, French Southern Territories, Gabon, Grenada, Guadeloupe, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran, Ivory Coast (Côte d'Ivoire), Jamaica, Japan, Kenya, Liberia, Madagascar, Malaysia, Maldives, Martinique, Mexico (Campeche, Yucatán), Micronesia, Montserrat, Mozambique, Netherlands Antilles (Bonaire, Sint Eustatius), Nicaragua, Oman, Palau, Panama, Papua New Guinea, Philippines, Puerto Rico, Qatar, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, São Tomé and Príncipe, Saudi Arabia, Senegal, Seychelles, Sint Maarten, Solomon Islands, Sri Lanka, Suriname, Taiwan, Tanzania, Thailand, Trinidad and Tobago, Turks and Caicos, USA (Florida, Hawaii, Texas), US Virgin Islands, Vanuatu, Venezuela, Vietnam

Foraging: American Samoa, Argentina, Ascension, Bahrain, Benin, Bermuda, Brunei, Cambodia, Cook Islands, Djibouti, French Polynesia, Gambia, Ghana, Guam, Iraq, Israel, Kuwait, Mauritania, Mauritius, Mayotte, Myanmar, Nigeria, Northern Mariana Islands, Pakistan, Peru, Réunion, Sierra Leone, Singapore, Society Islands, Somalia, South Africa, Sudan, Togo, Tokelau, Tonga, Tuamotu, Tuvalu, United Arab Emirates, Wallis and Futuna, Yemen

Vagrant: Algeria, Angola, Cape Verde, Chile, Comoros, Congo (DRC), Kiribati, Marshall Islands, Morocco, Namibia, Nauru, New Caledonia, North Korea, Pitcairn Island, Portugal, South Korea, Spain, Uruguay

Size (Max SCL): male 85.0 cm, female 94.0 cm (Witzell 1983)

IUCN Red List: Critically Endangered (CR A2bd) (Mortimer and Donnelly 2008); Previously: Critically Endangered (CR) (1996)

CITES: Appendix I, as Cheloniidae spp. (1981); subspecies *E. i. imbricata* listed as Appendix I (1975, 1977), and as Cheloniidae spp. (1981); subspecies *E. i. bissa* listed as Appendix II (1975), and Appendix I (1977), and as Cheloniidae spp. (1981)

Synonymy:

Testudo imbricata Linnaeus 1766:350

Chelone imbricata, Chelonia imbricata, Caretta imbricata, Eretmochelys imbricata, Herpysmostes imbricatus, Herpysmostes imbricata, Chelonius imbricatus, Eretmochelys imbricata imbricata

Type locality: "Mari Americano, Asiatico." Restricted to "Bermuda Islands" by Smith and Taylor (1950a:315, 1950b:17), and to "Belize, British Honduras" by Schmidt (1953:106).

Type specimens: UPSZTY 130 (formerly UUZM 130), possible syntype, listed by Thunberg (1828), identified as a *Testudo imbricata* by Lönnberg (1896), but as a *Testudo mydas* (*Chelonia mydas*) by Wallin (1985, 2001).

Comment: Description cited as sourced from Gronovius (1763:16, n.72), Bontius (1658:82), Du Tertre (1667:229), and Ray (1693:258).

Testudo nasicornis Bonnaterre 1789:21 (09:7)

Type locality: "La Zone torride, les mers du nouveau Continent."

Type specimen: Not located, type specimen figured (pl.3,f.3), lectotype, designated "holotype" by TTWG (2009:62).

Chelonia pseudomydas Lesson 1831b:299

Chelonia pseudo-mydas

Type locality: "l'Océan atlantique." Restricted to "Bermuda Islands" by Smith and Taylor (1950a:315).

Type specimen: Possibly MNHN, not located.

Chelonia pseudocaretta Lesson 1831b:302

Chelonia pseudo-caretta

Type locality: "l'Océan atlantique." Restricted to "Bermuda Islands" by Smith and Taylor (1950a:315).

Type specimen: Possibly MNHN, not located.

Caretta bissa Rüppell 1835:4 (07:5, 09:9)

Eretmochelys imbricata bissa

Type locality: "im rothen Meere...Abyssinien" [Red Sea...Ethiopia].

Type specimen: SMF 7886, lectotype, designated by Mertens (1967b:52).

Eretmochelys squamata Agassiz 1857a:382

Caretta squamata, Eretmochelys imbricata squamata

Type locality: "Singapore and Bengal, India." Restricted to "Singapore, Straits Settlements" by Smith and Taylor (1950a:315, 1950b:17).

Type specimen: MCZ 1416, lectotype, designated by Smith and Taylor (1950b:17).

Caretta squamosa Girard 1858:442 (*nomen novum*)

Eretmochelys squamosa, Eretmochelys imbricata squamosa

Type locality: "Sooloo Seas and Indian Ocean." [Sulu Sea, Philippines]

Type specimen: USNM, not listed by Cochran (1961) or Reynolds et al. (2007).

Comment: Unjustified replacement name for *squamata*.

Caretta rostrata Girard 1858:446

Type locality: "Feejee Islands" [Fiji].

Type specimens: USNM 257185–86 (formerly USNM Osteo 12387–88), syntypes (2), see Cochran (1961) and Reynolds et al. (2007).

Onychochelys kraussi Gray 1873i:398

Type locality: "Ocean, French Guiana."

Type specimens: NHMUK 1947.3.4.37 and 1947.3.5.43 (formerly 1873.3.13.3–4), syntypes (2), see Cogger et al. (1983).

Lepidochelys **Fitzinger 1843** (12:8)

Lepidochelys Fitzinger 1843:30

Type species: *Thalassochelys (Lepidochelys) olivacea* Eschscholtz 1829a [= *Chelonia olivacea* Eschscholtz 1829a], by original designation.

Cephalochelys Gray 1873i:408

Type species: *Cephalochelys oceanica* Gray 1873i [= subjective synonym of *Chelonia olivacea* Eschscholtz 1829a], by original monotypy.

Colpochelys Garman 1880:124

Type species: *Thalassochelys (Colpochelys) kempii* Garman 1880, by original monotypy.

Lepidochelys kempii (Garman 1880)

Kemp's Ridley, Kemp's Ridley Sea Turtle, Atlantic Ridley

Blair Witherington / CRM 3 / Florida Bay, Monroe Co., Florida

left: Jeffrey R. Schmid / CRM 3 / Levy Co., Florida
right: Peter C.H. Pritchard / CCB / Tamaulipas, Mexico

(blue line delimits purple Regional Management Unit)

Nesting: Mexico (Tamaulipas, Veracruz), USA (Texas)

Foraging: USA (Alabama, Connecticut, Delaware, Florida, Georgia, Louisiana, Maryland, Massachusetts, Mississippi, New Jersey, New York, North Carolina, Rhode Island, South Carolina, Virginia)

Vagrant: Algeria, Anguilla, Bahamas, Bermuda, British Virgin Islands, Canada, Cayman Islands, Cuba, France, Ireland, Italy, Morocco, Portugal, Spain

Size (Max SCL): male 71.0 cm, female 76.0 cm (Ernst and Lovich 2009)

IUCN Red List: Critically Endangered (CR A2bd) (Wibbels and Bevan 2019); Previously: Critically Endangered (CR) (1996)

CITES: Appendix I, as Cheloniidae spp. (1981)

Synonymy:

Testudo viridisquamosa Lacepède 1788:92, synopsis[table] (09:6) (*partim, nomen dubium et suppressum*)

Testudo viridi-squamosa

Type locality: "la mer du Sud, auprès du Cap Blanco, de la nouvelle Espagne...aussi dans le golfe du Mexique...&...les rivages chauds du nouveau monde." Restricted to "Bocas del Toro, Panama, Golf von Mexico" by Wermuth (1956:405); and to "the island of Blanquilla... West Indies" [Venezuela] by Brongersma (1961:27).

Type specimen: Possibly MNHN, not located.

Comment: Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961), and by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo viridisquamosa Bonnaterre 1789:20 (*partim, nomen dubium*)

Testudo viridi-squamosa

Type locality: "La mer du Sud, le golfe du Mexique, les rivages du Nouveau-Monde."

Type specimen: Possibly MNHN, not located.

Testudo bomarii Meyer 1790:82 (09:8) (*partim, nomen dubium et oblitum*)

Comment: Unjustified replacement name for *viridisquamosa*.

Testudo mydas minor Suckow 1798:30 (*partim, nomen dubium et suppressum*)

Type locality: "Amazonen-Flusse..[&]..Südsee..[&]..Cap Blanco in Mexico." Restricted to "the island of Blanquilla...West Indies" [Venezuela] by Brongersma (1961:27).

Type specimen: Not known or located.

Comment: Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Thalassochelys (Colpochelys) kempii Garman 1880:123 (*nomen conservandum*)

Lepidochelys kempii, Colpochelys kempii, Caretta kempii, Lepidochelys olivacea kempii

Type locality: "Gulf of Mexico." Restricted to "Key West, Monroe Co., Florida" [USA] by Smith and Taylor (1950a:358, 1950b:15).

Type specimens: MCZ 46538–39, syntypes (2), see Barbour and Loveridge (1929).

Comment: Name conserved by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Lepidochelys olivacea (Eschscholtz 1829a) (17:7)

Olive Ridley, Olive Ridley Sea Turtle, Pacific Ridley

Nicolas J. Pilcher / Red Sea, nr. Assab, Eritrea

Anders G.J. Rhodin / Puerto Escondido, Oaxaca, Mexico / male, female

(blue lines delimit purple Regional Management Units)

Nesting: Angola, Australia (Northern Territory), Bangladesh, Benin, Brazil (Bahia, Espirito Santo, Sergipe), Brunei, Cameroon, Colombia, Congo (ROC), Costa Rica, Ecuador, El Salvador, Equatorial Guinea, Eritrea, French Guiana, Gabon, Ghana, Guatemala, Guinea-Bissau, Guyana, Honduras, India, Indonesia (Java, Papua), Iran, Ivory Coast (Côte d'Ivoire), Kenya, Liberia, Malaysia, Mexico (Baja California Sur, Chiapas, Guerrero, Jalisco, Michoacán, Nayarit, Oaxaca, Sinaloa), Mozambique, Myanmar, Nicaragua, Oman, Pakistan, Panama, Peru, São Tomé and Príncipe, Sierra Leone, Sri Lanka, Suriname, Thailand, Togo, Trinidad and Tobago, Vanuatu, Vietnam

Foraging: Bahrain, Cambodia, Cape Verde, China, Comoros, Congo (DRC), Djibouti, Egypt, Gambia, Guinea, Iran, Iraq, Israel (Southern), Kuwait, Liberia, Madagascar, Maldives, Mauritius, New Caledonia, Nigeria, Papua New Guinea, Philippines, Qatar, Saudi Arabia, Senegal, Seychelles, Singapore, Solomon Islands, Somalia, Sudan, Tanzania, Timor-Leste, United Arab Emirates, USA (Hawaii), Venezuela, Yemen

Vagrant: Antigua and Barbuda, Barbados, Canada, Chile, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Japan, Marshall Islands, Martinique, Mauritania, Micronesia, Morocco, Namibia, New Zealand, North Korea, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, South Africa, South Korea, Spain, Taiwan, Uruguay, US Virgin Islands

Size (Max SCL): male 72.0 cm, female 79.3 cm (Ceballos et al. 2013)

IUCN Red List: Vulnerable (VU A2bd) (Abreu-Grobois and Plotkin 2008); Previously: Endangered (EN) (1996)

CITES: Appendix I, as Cheloniidae spp. (1981); Previously: Appendix II (1975)

Synonymy:

Testudo mydas minor Suckow 1798:30 (*partim, nomen dubium et suppressum*)
Type locality: "Amazonen-Flusse..[&]..Südsee..[&]..Cap Blanco in Mexico." Restricted to "the island of Blanquilla...West Indies" [Venezuela] by Brongersma (1961:27).
Type specimen: Not known or located.
Comment: Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Chelonia multiscutata Kuhl 1820:78 (*nomen suppressum*)
Type locality: Not designated.
Type specimen: Not known or located.
Comment: Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Chelonia olivacea Eschscholtz 1829a:15 (17:7)
Chelonia caretta olivacea, Caretta olivacea, Thalassochelys (Lepidochelys) olivacea, Caouana olivacea, Lepidochelys olivacea, Caretta caretta olivacea, Lepidochelys olivacea olivacea, Caretta olivacea olivacea
Type locality: "Bai von Manilla" [Philippines].
Type specimens: Originally in MZT, syntypes (2), see Smith and Smith (1980:327) and Flores-Villela et al. (2016:161); transferred to ZMMU, now apparently lost, see Flores-Villela et al. (2016); type specimen figured in Eschscholtz (1829b:pl.3).

Chelonia dussumierii Duméril and Bibron 1835:557
Lepidochelys dussumierii
Type locality: "mers de la Chine et sur la côte de Malabar" [China and India].
Type specimens: MNHN 7908 and 8009, syntypes (2).

Caouana ruppellii Gray 1844:53 (*nomen nudum*)
Type locality: "India?"
Type specimen: NHMUK s/n, holotype, apparently lost (Zug et al. 1998).

Chelonia subcarinata Rüppell *in* Gray 1844:53 (*nomen nudum*)

Chelonia polyaspis Bleeker 1857b:239 (*nomen nudum*)
Type locality: "Batavia...Java" [Indonesia]. Restricted to "Borneo" by Gray (1873j:90).
Type specimen: NHMUK 1863.12.4.119, holotype, see Gray (1873j).

Chelonia dubia Bleeker *in* Gray 1864a:13 (*nomen nudum*)
Type locality: Not designated. Restricted to "Borneo" by Gray (1873j:90).
Type specimen: NHMUK 1863.12.4.122, holotype, see Gray (1873j).

Cephalochelys oceanica Gray 1873i:408
Type locality: "West Coast of America – Mexico?"
Type specimen: NHMUK 1947.3.5.40 (formerly 1871.2.7.48), holotype, see Cogger et al. (1983).

Thalassochelys tarapacana Philippi 1887:85
Thalassiochelys tarapacona, Thalassochelys tarapacona
Type locality: "Iquique...Chile." Emended to "Iquique (20°12'S; 70°10'O)" [Chile] by Ortiz and Nuñez (1986:6).
Type specimen: MNHNC 1511, holotype, see Ortiz and Nuñez (1986).

Thalassochelys controversa Philippi 1899:731
Type locality: "Quinteros...Chile." Emended to "Quinteros (32°46'S; 71°32'O)" [Chile] by Ortiz and Nuñez (1986:6).
Type specimen: MNHNC 1512, lectotype, designated by Ortiz and Nuñez (1986:6).

Caretta remivaga Hay 1908a:194
Lepidochelys olivacea remivaga
Type locality: "Ventosa Bay, Gulf of Tehuantepec, Oaxaca, Mexico."
Type specimen: USNM 243393 (formerly USNM Osteo 9973), holotype, see Cochran (1961) and Reynolds et al. (2007).

CHELONIINAE Oppel 1811 (12:7)

Chelonii Oppel 1811:8 (*partim*)
Cheloniadae Gray 1825:212
Mydae Ritgen 1828:269
Cheloniidae Cope 1869:282 **(6)**

Chelonia Brongniart 1800 (09:5, 12:8)

Chelonia Brongniart 1800b:89
Type species: *Chelonia mydas* [= *Testudo mydas* Linnaeus 1758], by subsequent designation by Bell (1828c:516).

Chelone Brongniart 1805:610 (*nomen novum*)

Chelona Fleming 1828:149 (*nomen novum*)

Mydas Cocteau and Bibron 1838:22
Type species: *Chelonia (Mydas) viridis* [= *Testudo viridis* Schneider 1783 = subjective synonym of *Testudo mydas* Linnaeus 1758], by tautonymy.

Mydasea Gervais 1843:457
Type species: *Chelonia (Mydasea) mydas* [= *Testudo mydas* Linnaeus 1758], by tautonymy.

Euchelonia Tschudi 1846:22
Type species: *Chelonia (Euchelonia) midas* Schweigger [= *Testudo mydas* Linnaeus 1758], by original monotypy.

Megemys Gistel 1848:8 (*nomen novum*)

Euchelys Girard 1858:447
Type species: *Euchelys macropus* Girard [= *Testudo macropus*

Walbaum 1782 = subjective synonym of *Testudo mydas* Linnaeus 1758], by original monotypy.

Midas Herrera 1901:68 (*nomen novum et suppressum*)

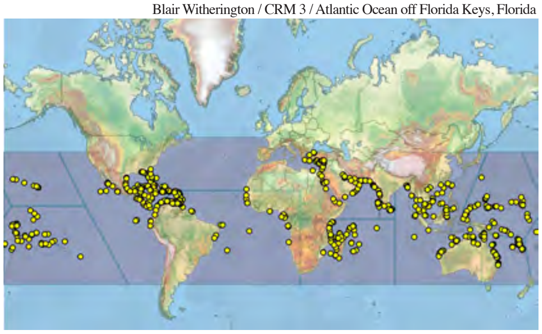
Comment: Unjustified replacement name for *Mydas*. Name suppressed by ICZN (1922).

Chelonia mydas (Linnaeus 1758) (07:4, 09:5, 12:9, 12:10, 17:8) **(43)**

Green Turtle, Green Sea Turtle

L.M. Ehrhart / CRM 3 / Melbourne Beach, Brevard Co., Florida

Blair Witherington / CRM 3 / Atlantic Ocean off Florida Keys, Florida



(blue lines delimit purple Distinctive Population Segments)

Nesting: American Samoa, Angola, Anguilla, Antigua and Barbuda, Aruba, Ascension, Australia (Northern Territory, Queensland, Western Australia), Bahamas, Bangladesh, Barbados, Belize, Brazil, British Virgin Islands, Cayman Islands, China, Cocos (Keeling) Islands, Colombia, Comoros, Congo (ROC), Costa Rica, Cuba, Curacao, Cyprus, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, French Guiana, French Polynesia, French Southern Territories, Gambia, Grenada, Guadeloupe, Guam, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran, Jamaica, Japan, Kenya, Lebanon, Madagascar, Malaysia, Martinique, Mauritania, Mayotte, Mexico (Baja California, Campeche, Michoacán, Quintana Roo, Sinaloa, Sonora, Tabasco, Tamaulipas, Veracruz, Yucatán), Micronesia, Montserrat, Mozambique, Myanmar, Netherlands Antilles (Bonaire, Sint Eustatius), Nicaragua, Oman, Pakistan, Panama, Papua New Guinea, Peru, Philippines, Puerto Rico, Réunion, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, São Tomé and Príncipe, Saudi Arabia, Senegal, Seychelles, Sint Maarten, Sri Lanka, Suriname, Syria, Taiwan, Tanzania, Thailand, Trinidad and Tobago, Turkey, Turks and Caicos, USA (Florida, Hawaii), US Virgin Islands, Vanuatu, Venezuela, Vietnam, Yemen

Foraging: Argentina, Bahrain, Benin, Bermuda, British Indian Ocean Territory, Brunei, Cambodia, Cameroon, Cape Verde, Chile, Christmas Island, Congo (DRC), Cook Islands, Djibouti, Fiji, Gabon, Ghana, Greece, Guatemala, Guinea, Iraq, Israel, Ivory Coast (Côte d'Ivoire), Kuwait, Liberia, Libya, Maldives, Marshall Islands, Mauritius, Namibia, New Caledonia, Nigeria, Niue, Palau, Qatar, Samoa, Sierra Leone, Singapore, Somalia, South Africa, Sudan, Timor-Leste, Togo, Tonga, United Arab Emirates, Uruguay, Wallis and Futuna, Western Sahara

Vagrant: Algeria, Canada, Italy, Kiribati, Malta, Northern Mariana Islands, Morocco, Nauru, New Zealand, Portugal, Saint Helena, Slovenia, Solomon Islands, Spain, Tokelau, Tuamotu, Tunisia, Tuvalu

Size (Max SCL): male 108.0 cm, female 141.0 cm (Carr and Hirth 1962; Hirth 1997); Max CCL: male 118.0, female 153.0 (Hirth 1980; Sanches and Bellini 2002)

IUCN Red List: Endangered (EN A2bd) (Seminoff 2004); Subpopulation: Hawaiian: Least Concern (LC) (2012); Previously: Endangered (EN) (1996)

CITES: Appendix I, as Cheloniidae spp. (1981)

Synonymy:

Testudo atra Linnaeus 1754:50 (unavailable name)

Type locality: "Mari ad insulam Adscensionis" [Ascension]

Type specimen: NRM s/n (formerly MAF s/n), holotype, possibly lost, included in composite syntype series of *Testudo mydas* Linnaeus 1758, see Andersson (1900) and Wallin (1985), who identified it as *Chelonia mydas*.

Comment: Description cited as sourced from Linnaeus (1749b:284,n.7, *T. mydas* γ), a specimen in MAF, as well as Seba (1734:pl.79,f.4–6) and Grew (1681:pl.3,f.4). Unavailable pre-1758 binomial name.

Testudo mydas Linnaeus 1758:197

Chelonia mydas, Chelone mydas, Caretta mydas, Mydas mydas, Mydasea mydas, Chelonia (Euchelonia) midas, Euchelonia mydas, Megemys mydas, Chelonia mydas mydas

Type locality: "insulas Pelagi: insulam Adscensionis." [Ascension] Restricted to "Insel Ascension" by Mertens and Müller (1928:23).

Type specimens: UPSZTY 19, 26, 231 (formerly UUZM), syntypes (3), all three listed as *T. mydas* by Linné and Thunberg (1780) and Thunberg (1828), no. 19 listed by Lönnberg (1896) as the type, but all later identified by Wallin (1985) as = *Testudo caretta* Linnaeus (= *Caretta caretta*), see also Wallin (2001); NRM 5000, 6880–82, possible syntypes (4), see Andersson (1900) and Wallin (1985), listed on NRM website as = *Chelonia mydas*; UUZM 20, listed as "type" by Stuart (1963), Smith and Smith (1980), and Cogger et al. (1983), is a syntype of *Testudo geometrica* Linnaeus (= *Psammobates geometricus*), but the specimen is actually a *Geochelone elegans*, see Wallin (1977, 2001).

Comment: Description by Linnaeus (1758) of three different varieties of *T. mydas*, cited as sourced from the following: *T. mydas* α: Linnaeus (1749a:138,n.22, *T. mydas* α; 1754:50, *T. atra*), Osbeck (1757:293), Gesner (1558:1131["78"], *T. marina*), Aldrovandi (1637:712,pl.714), Grew (1681:38,pl.3,f.4), Olearius (1674:25,pl.XVII,f.1), Bradley (1721:pl.IV,f.IV); *T. mydas* β: Linnaeus (1749a:137,n.21, *T. mydas* β), Seba (1734:pl.80,f.9), Marggraf (1648:241), Ray (1693:256); *T. mydas* γ: Linnaeus (1749b:284["287"],n.7, *T. mydas* γ; 1754:50, *T. atra*), Seba (1734:pl.79,f.4–6).

Testudo macropus Walbaum 1782:112 (unavailable name)

Euchelys macropus, Chelone macropus

Type locality: Not designated.
Type specimen: Not located, type specimen figured in Edwards (1751:pl.206,top) and Seligmann (1764:pl.101, top).
Comment: Description cited as sourced from Seligmann (1764:pl.101), the same figure as Edwards (1751:pl.206). Unavailable name in a non-binomial work, see Wermuth (1956).

Testudo viridis Schneider 1783:299
Chelonia viridis, Chelone viridis, Chelonia (Mydas) viridis, Mydas viridis, Chelonia mydas viridis
Type locality: Not designated. Restricted to "Charleston, South Carolina" [USA] by Smith and Taylor (1950a:360).
Type specimen: Not located, type specimen figured (pl.opp.364).

Testudo japonica Thunberg 1787:178
Testudo japanica, Chelonia japonica, Chelonia mydas japonica
Type locality: "Japan."
Type specimen: UUZM, holotype, listed by Thunberg (1828), possibly lost, not listed by Wallin (2001); type specimen figured (pl.7,f.1).

Testudo marina vulgaris Lacepède 1788:54, synopsis[table] (09:6) (*nomen suppressum*)
Type locality: "contrées équatoriales."
Type specimen: Possibly MNHN, not located, type specimen figured (pl.opp.54).
Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo viridisquamosa Lacepède 1788:92, synopsis[table] (09:6) (*partim, nomen dubium et suppressum*)
Testudo viridi-squamosa
Type locality: "la mer du Sud, auprès du Cap Blanco, de la nouvelle Espagne...aussi dans le golfe du Mexique...&...les rivages chauds du nouveau monde." Restricted to "Bocas del Toro, Panama, Golf von Mexico" by Wermuth (1956:405); and to "the island of Blanquilla... West Indies" [Venezuela] by Brongersma (1961:27).
Type specimen: Possibly MNHN, not located.
Comment: Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961), and by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo viridisquamosa Bonnaterre 1789:20 (*partim, nomen dubium*)
Testudo viridi-squamosa
Type locality: "La mer du Sud, le golfe du Mexique, les rivages du Nouveau-Monde."
Type specimen: Possibly MNHN, not located.

Testudo macropus Gmelin 1789:1038
Euchelys macropus, Chelone macropus
Type locality: Not designated.
Type specimen: Not located, type specimen figured in Edwards (1751:pl.206,top) and Seligmann (1764:pl.101,top).
Comment: Description cited as sourced from Walbaum (1782:112), which was based on Seligmann (1764:pl.101), the same figure as Edwards (1751:pl.206).

Testudo bomarii Meyer 1790:82 (09:8) (*partim, nomen dubium et oblitum*)
Comment: Unjustified replacement name for *viridisquamosa*.

Testudo chloronotus Bechstein 1800:107
Type locality: Not designated.
Type specimen: Not designated.

Testudo rugosa Van-Ernest *in* Daudin 1801:37 (senior homonym, not = *Testudo rugosa* Shaw 1802 [= *Trachemys decussata decussata* or *Trachemys terrapen*])
Type locality: "la mer des Indes...près de la ligne à environ trois dégrés des îles Maldives."
Type specimen: Possibly MNHN, not located.

Testudo cepediana Daudin 1801:50
Type locality: Not known.
Type specimen: Possibly MNHN, not located, type specimen figured (pl.17,f.1).

Chelonia virgata Schweigger 1812:291
Caretta virgata, Chelonia (Mydas) virgata, Mydas virgata, Chelone virgata
Type locality: "mari sub zona torrida." Restricted to "Bermuda Islands" by Smith and Taylor (1950a:315).
Type specimens: MNHN 7900, 7914–15, 8014, 9376, 9539, syntypes (6), see Ceríaco and Bour (2012).

Caretta cepedii Merrem 1820:18 (*nomen novum*)
Comment: Unjustified emendation or error for *cepediana*.

Caretta esculenta Merrem 1820:18
Chelonia esculenta
Type locality: "Oceano Atlantico."
Type specimen: Not known or located.

Caretta thunbergii Merrem 1820:19 (*nomen novum*)
Comment: Unjustified replacement name for *japonica*.

Chelonia castanea Eschscholtz 1829a:11 (14:5, 17:7) (*nomen oblitum*)
Type locality: "karaibischen Meere; küste von Surinam."
Type specimens: Originally in MZT, syntypes (3), transferred to ZMMU, now apparently lost, see Flores-Villela et al. (2016).

Chelonia grisea Eschscholtz 1829a:13 (14:4, 17:7)
Chelonia griseam
Type locality: "kaspische Meer" [Caspian Sea] [in error].
Type specimen: Originally in MZT, holotype, transferred to ZMMU, now apparently lost, see Flores-Villela et al. (2016).

Chelonia maculosa Cuvier 1829:13
Chelone maculosa
Type locality: Not designated. Restricted to "Ascension Island" by Smith and Taylor (1950a:315).
Type specimen: Possibly MNHN, not located.

Chelonia lachrymata Cuvier 1829:13
Type locality: Not designated.
Type specimen: Possibly MNHN, not located.

Chelonia midas Wagler 1830b:133 (*nomen novum*)
Comment: Unjustified emendation or error for *mydas*.

Chelonia bicarinata Lesson 1831b:301
Type locality: "l'Océan atlantique."
Type specimen: Possibly MNHN, not located.

Chelonia marmorata Duméril and Bibron 1835:546
Chelone marmorata
Type locality: "l'île de l'Ascension."
Type specimens: MNHN 7878 and 9535, syntypes (2).

Chelonia formosa Girard 1858:456
Type locality: "Feejee Islands" [Fiji].
Type specimen: USNM 257183 (formerly USNM Osteo 12386), see Cochran (1961) and Reynolds et al. (2007).

Chelonia tenuis Girard 1858:459
Type locality: "Honden Island, Paumotu Group; Tahiti and Eimo; Rosa Island." Rosa Island identified by Hirth (1980:1) as Rose Atoll, American Samoa; restricted to "Rosa Island [Rose Island, Rose Atoll, American Somoa]" by Reynolds et al. (2007:10).
Type specimen: USNM 257184 (formerly USNM Osteo 12390), holotype, see Cochran (1961) and Reynolds et al. (2007).

Chelonia albiventer Nardo 1864:1420
Type locality: "Adriatico...prossimata del porto di Malamocco" [Italy].
Type specimen: MSNVE s/n, holotype, see Hirth (1980).

Chelonia agassizii Bocourt 1868:122 (07:4)
Chelonia mydas agassizii
Type locality: "embouchure du Nagualate...Pacifique (Guatémala)" [mouth of Rio Nagualate, Pacific coast of Guatemala].
Type specimen: MNHN 9537, holotype, see Iverson (1992) and Bour (2006b); MNHN 1871–72 erroneously listed as syntypes by Stuart (1963), Cogger et al. (1983), and King and Burke (1989).

Chelonia maculata Lidth de Jeude *in* Gray 1873j:94 (*nomen nudum*)
Type locality: "Ocean, Guiana?" [Guyana].
Type specimen: NHMUK 1867.4.2.186, see Gray (1873j).

Chelonia picta Lidth de Jeude *in* Gray 1873j:95 (*nomen nudum*)
Type locality: "Guiana?" [Guyana].
Type specimen: NHMUK 1866.8.14.236, see Gray (1873j).

Chelonia lata Philippi 1887:84
Type locality: "Valparaiso..[&]..Insel Chiloe" [Chile].
Type specimen: MNHNC s/n, syntypes (3), apparently lost, discussed by Ortiz and Nuñez (1986); MNHNC 100201, erroneously listed as "holotype" by Hirth (1980).
Chelonia mydas carrinegra Caldwell 1962:4
Type locality: "waters adjacent to Isla Angel de la Guarda, Bahia de Los Angeles, central Gulf of California, Mexico."
Type specimen: LACM 1696, holotype, see Cogger et al. (1983).
Testudo nigrita Tamayo 1962:358 (*nomen nudum*)

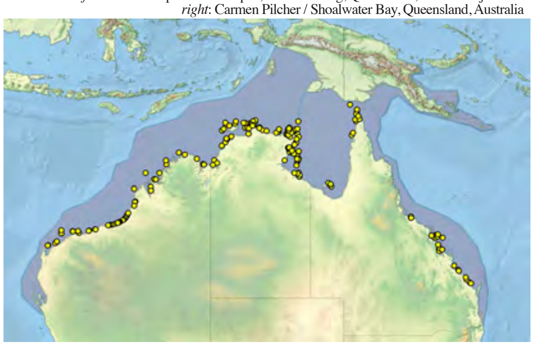
Natator McCulloch 1908 (12:8)

Natator McCulloch 1908:127
Type species: *Natator tessellatus* McCulloch 1908 [= subjective synonym of *Chelonia depressa* Garman 1880], by original monotypy.

Natator depressus (Garman 1880)
Flatback, Flatback Sea Turtle


Carmen Pilcher / Shoalwater Bay, Queensland, Australia


left: Colin J. Limpus / Mon Repos, nr. Bundaberg, Queensland, Australia / juvenile
right: Carmen Pilcher / Shoalwater Bay, Queensland, Australia


(blue lines delimit purple Regional Management Units)

Nesting: Australia (Northern Territory, Queensland, Western Australia)
Foraging: Indonesia (Papua), Papua New Guinea (Southern)
Vagrant: Indonesia (Java, Lesser Sundas), Timor-Leste
Size (Max SCL): male 88.4 cm; female 93.0 cm [estimated]; Max CCL: male 93.1 cm, female 100.0 cm (Limpus 2007, unpubl. data; Whittock et al. 2014)
IUCN Red List: Data Deficient (DD) (RLSPS 1996); Previously: Vulnerable (VU) (1996)
CITES: Appendix I, as Cheloniidae spp. (1981); Previously: Appendix II (1975)
Synonymy:

Chelonia depressa Garman 1880:124
Chelonia depressus, Natator depressus, Natator depressa
Type locality: "East Indies and North Australia." Restricted to "North Australia" by Loveridge (1934:261).
Type specimen: MCZ 4473, lectotype, designated by Loveridge (1934:261).
Natator tessellatus McCulloch 1908:127
Type locality: "near Port Darwin, North Australia."
Type specimen: AMS R4158, holotype, apparently lost, see Cogger et al. (1983) and Shea and Sadlier (1999).

Dermochelyidae Fitzinger 1843 (12:9)

Sphargidae Gray 1825:212
Sphargidina Bonaparte 1831:64
Dermatochelydae Fitzinger 1843:30
Athecae Cope 1871:235
Athecata Lydekker 1889:223
Dermochelyidae Lydekker 1889:223

Dermochelys Blainville 1816

Chelonias Rafinesque 1814:66 (*nomen oblitum*)
Chelyra Rafinesque 1815:74 (*nomen nudum*)
Dermochelys Blainville 1816:119 ["111"]
Type species: *Dermochelys coriacea* [= *Testudo coriacea* Vandelli 1761], by subsequent monotypy by Boulenger (1889:10), in accordance with ICZN Article 67.2.2.
Sphargis Merrem 1820:19
Type species: *Sphargis mercurialis* Merrem 1820 [= subjective synonym of *Testudo coriacea* Vandelli 1761], by original monotypy.
Coriudo Fleming 1822:271
Type species: *Coriudo coriacea* [= *Testudo coriacea* Vandelli 1761], by original monotypy.
Scytina Wagler 1828:861 (*nomen novum*)
Dermochelis Cuvier 1829:14 (*nomen novum*)
Dermatochelys Wagler 1830b:133 (*nomen novum*) (17:9)
Chelyra Rafinesque 1832:64
Type species: *Chelyra coriacea* [= *Testudo coriacea* Vandelli 1761], by original designation.

Dermochelys coriacea (Vandelli 1761) (12:9, 14:6, 14:7, 17:10)
Leatherback, Leatherback Sea Turtle


Chris Johnson / CRM 3 / Juno Beach, Palm Beach Co., Florida


Anders G.J. Rhodin / *left*: Guancaste, Costa Rica / *right*: Culebra, Puerto Rico

(blue lines delimit purple Regional Management Units)

Nesting: Angola, Anguilla, Antigua and Barbuda, Aruba, Australia (Northern Territory), Bahamas, Bangladesh, Barbados, Benin, Brazil, British Virgin Islands, Cameroon, Colombia, Congo (ROC), Costa Rica, Cuba, Curacao, Dominica, Dominican Republic, Ecuador, El Salvador, Equatorial Guinea, French Guiana, Gabon, Ghana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, India, Indonesia (Java, Papua, West Papua), Ivory Coast (Côte d'Ivoire), Jamaica, Malaysia, Martinique, Mexico (Baja California Sur, Guerrero, Jalisco, Michoacán, Oaxaca), Mozambique, Netherlands Antilles (Bonaire, Sint Eustatius), Nicaragua, Panama, Papua New Guinea (Northern), Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, São Tomé and Príncipe, Sierra Leone, Sint Maarten, Solomon Islands, South Africa, Sri Lanka, Suriname, Thailand, Togo, Trinidad and Tobago, USA (Florida, Texas), US Virgin Islands, Vanuatu, Venezuela, Vietnam

Foraging: Albania, Algeria, Argentina, Belize, Brunei, Cambodia, Canada (British Columbia, New Brunswick, Newfoundland, Nova Scotia), Chile, China, Comoros, Congo (DRC), Croatia, Cyprus, Egypt, Fiji, France, Gambia, Great Britain, Greece, Guinea, Guinea-Bissau, Ireland, Israel, Italy, Japan, Kenya, Kiribati, Lebanon, Liberia, Libya, Madagascar, Malta, Marshall Islands, Mauritania, Mauritius, Micronesia, Montenegro, Monaco, Morocco, Myanmar, Namibia, Nauru, New Zealand, Nigeria, North Korea, Palau, Peru, Philippines, Portugal, Russia, Samoa, Senegal, Seychelles, Slovenia, South Korea, Spain, Syria, Taiwan, Tanzania, Tonga, Tunisia, Turkey, Turks and Caicos, Tuvalu, Uruguay, USA (Alaska, California, Connecticut, Delaware, Georgia, Hawaii, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Rhode Island, South Carolina, Washington)

Vagrant: Bahrain, Denmark, Djibouti, Eritrea, Iceland, Iran, Iraq, Kuwait, Maldives, Netherlands, Norway, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Sweden, United Arab Emirates, Yemen

Size (Max SCL): male ca. 226.0 cm [estimated], female 187.5 cm (Márquez 1990); Max CCL: male 256.5 cm, female 213.0 cm (Eckert and Luginbuhl 1988; Márquez 1990; McClain et al. 2015)

IUCN Red List: Vulnerable (VU A2bd) (Wallace et al. 2013); Subpopulations: East Pacific Ocean: Critically Endangered (CR A2bd+4bd) (2013); Northeast Indian Ocean: Data Deficient (DD) (2013); Northwest Atlantic Ocean: Endangered (EN) (Northwest Atlantic Leatherback Working Group 2019); Southeast Atlantic Ocean: Data Deficient (DD) (2013); Southwest Atlantic Ocean: Critically Endangered (CR D) (2013); Southwest Indian Ocean: Critically Endangered (CR C2a(ii)) (2013); West Pacific Ocean: Critically Endangered (CR A2bd+4bd) (2013); Previously: Critically Endangered (CR) (2000); Endangered (EN) (1996); Subpopulations: Northwest Atlantic Ocean: Least Concern (LC) (2013)

CITES: Appendix I (1977); Previously: Appendix II (1975)

Synonymy:

Testudo coriacea Vandelli 1761:1

Chelone coriacea, Chelonia coriacea, Dermochelys coriacea, Coriudo coriacea, Scytina coriacea, Sphargis coriacea, Dermatochelys coriacea, Dermochelys coriacea coriacea, Chelyra coriacea

Type locality: "maris Tyrrheni oram in agro Laurentiano" [Italy]. Restricted to "Palermo, Sicily" [Italy] by Smith and Taylor (1950a:315, 1950b:13); to "la côte romaine (Italie), Mer Tyrrhénienne, Méditerranée occidentale" [Italy] by Fretey and Bour (1980:198); and to "Laurentum, between Lido di Ostia and Tor Paterno, shore of the Tyrrhenian Sea, Italy" by Bour and Dubois (1984a:359).

Type specimen: MZP (previously ZMUP) s/n, holotype, identified by Fretey and Bour (1980), discussed by Rhodin and Smith (1982), Bour and Dubois (1984a), and Smith and Rhodin (1986).

Testudo arcuata Catesby 1771:40

Type locality: Not designated. Restricted to "Küsten-Gebiete von Carolina und Florida" [USA] by Mertens and Wermuth (1955:386).

Type specimen: Not designated.

Testudo lyra Lacepède 1788:111, synopsis[table] (09:6) (*nomen suppressum*)

Type locality: "Méditerranée."

Type specimen: Possibly MNHN, not located, type specimen figured opp.111).

Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo lyra Bonnaterre 1789:22

Chelonia lyra

Type locality: "La Méditerranée, l'Océan, les côtes du Pérou, du Mexique, & la plupart de celles d'Afrique, qui sont sous la Zone torride."

Type specimen: Possibly MNHN, not located, type specimen figured in Lacepède (1788:opp.111).

Testudo tuberculata Pennant *in* Schoepff 1801:123

Sphargis tuberculata, Dermochelydis tuberculata

Type locality: Not designated. Restricted to "Palermo, Sicily" [Italy] by Smith and Smith (1980:244).

Type specimens: Not located, type specimens figured in Pennant (1771:pl.10,f.4) and Schoepff (1801:pl.28).

Chelonias lutaria Rafinesque 1814:66

Type locality: "Sicil." [Sicily, Italy].

Type specimen: Not designated.

Sphargis mercurialis Merrem 1820:19 (*nomen suppressum*)

Type locality: "Mari mediterraneo et Oceano atlantico."

Type specimen: Not known or located.

Comment: Name suppressed by ICZN (1956).

Dermochelis atlantica LeSueur *in* Cuvier 1829:14 (*nomen nudum*)

Dermochelys atlantica, Dermatochelys atlantica

Dermatochelys porcata Wagler 1830c:expl.tab.f.1 (14:6, 17:9)

Type locality: None designated.

Type specimen: Not known or located.

Testudo coriacea marina Ranzani 1832:3 (14:7)

Type locality: Not designated.

Type specimen: Not located, type specimen figured (pl.4).

Sphargis coriacea schlegelii Garman 1884:303

Dermochelys schlegelii, Dermochelys coriacea schlegelii, Sphargis schlegelii

Type locality: "Tropical Pacific and Indian Oceans." Restricted to "Guaymas, Sonora, Mexico" by Smith and Taylor (1950a:344, 1950b:13).

Type specimens: Not designated, description included specimens figured in "Temminck and Schlegel (1838:pl.1-3)" [actually Temminck and Schlegel (1834:pl.1-3)]; Pritchard (1980a) erroneously designated type specimens figured in plates 1-2 in Siebold (1826), a publication which contains no references to turtles and has no figures; type specimen figured in Temminck and Schlegel (1834:pl.1), hereby designated lectotype.

Sphargis angusta Philippi 1899:730

Dermatochelys angusta

Type locality: "cerca de Tocopilla" [Chile]. Emended to "Tocopilla (22º04'S; 70º12'O)" [Chile] by Ortiz and Nuñez (1986:7).

Type specimen: MNHNC 1515, holotype, see Ortiz and Nuñez (1986).

CHELYDROIDEA Gray 1831d (3, 44)

Chelydrae Gray 1831d:4

Chelydroidae Agassiz 1857:341,409

Chelydroidea Baur 1893b:673

(includes 3 families)

CHELYDRIDAE

DERMATEMYDIDAE

KINOSTERNIDAE

CHELYDRIDAE Gray 1831d (09:3)

Chelydrae Gray 1831d:4

Chelydridae Swainson 1839:113

Chelydradae Gray 1869a:178

Chelydridae Species Richness

Chelydra Schweigger 1812 (07:2)

Chelydra Schweigger 1812:292

Type species: *Chelydra serpentina* Schweigger [= *Testudo serpentina* Linnaeus 1758], by subsequent designation by Fitzinger (1843:29).

Cheliurus Rafinesque 1815:75 (*nomen nudum*)

Chelonura Fleming 1822:270 (senior homonym, not = *Chelonura* Rafinesque 1832 = *Cylindraspis*)

Type species: *Chelonura serpentina* [= *Testudo serpentina* Linnaeus 1758], by original monotypy.

Ophichelone Jarocki 1822:21

Type species: *Ophichelone serpentina* [= *Testudo serpentina* Linnaeus 1758], by original monotypy.

Rapara Gray 1825:210

Type species: *Rapara serpentina* Gray [= *Testudo serpentina* Linnaeus 1758], by original monotypy.

Saurochelys Latreille 1825:92

Type species: *Saurochelys* "Tortue à longue queue" [= *Testudo serpentina* Linnaeus 1758], by original monotypy.

Cheliurus Rafinesque 1832:64

Type species: *Cheliurus serpentina* [= *Testudo serpentina* Linnaeus 1758], by original monotypy.

Emysaurus Duméril and Bibron 1835:348

Type species: *Emysaura serpentina* [= *Testudo serpentina* Linnaeus 1758], by original monotypy.

Devisia Ogilby 1905:11

Type species: *Devisia mythodes* Ogilby 1905 [= subjective synonym of *Testudo serpentina* Linnaeus 1758], by original monotypy.

Chelydra acutirostris Peters 1862

South American Snapping Turtle, *Tortuga Pímpano*

Katherine Young-Valencia / Quindío, Colombia

left: Katherine Young-Valencia / Quindío, Colombia / male
right: Vivian P. Páez / Colombia / captivity / Cali Zoo

*

Distribution: Colombia (Antioquia, Caldas, Cauca, Chocó, Córdoba, Nariño, Quindio, Valle del Cauca), Costa Rica, Ecuador, Honduras, Nicaragua, Peru (?), Panama

Presumed Historic Indigenous Range: 328,705 sq. km

Size (Max SCL): male 41.0 cm, female 39.1 cm (Medem 1977; Ceballos et al. 2013; Young-Valencia et al. 2014)

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Near Threatened (NT) (2011, 2018)

Synonymy:

Chelydra serpentina acutirostris Peters 1862:627

Chelydra acutirostris

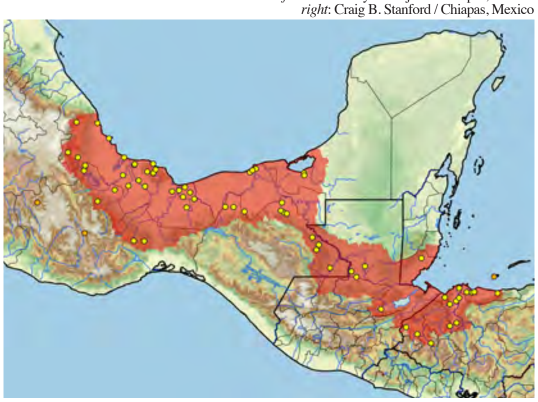
Type locality: "Guayaquil" [Ecuador].

Type specimen: ZMB 4500, holotype, see Medem (1977) and Fritz et al. (1994).

Chelydra rossignonii (Bocourt 1868)
Central American Snapping Turtle, *Servengue, Chiquiguao*


Richard C. Vogt / Laguna Oaxaca, Rio Lacantun, Selva Lacandona, Chiapas, Mexico


left: Eduardo Reyes-Grajales / Chiapas, Mexico
right: Craig B. Stanford / Chiapas, Mexico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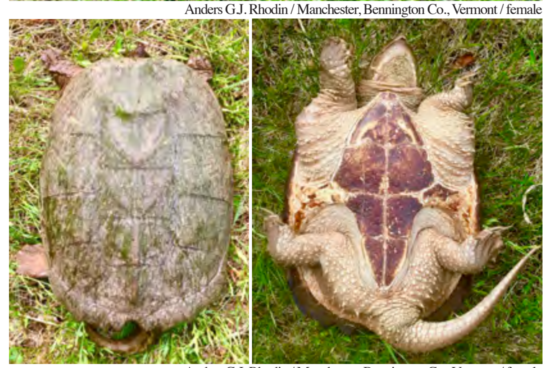
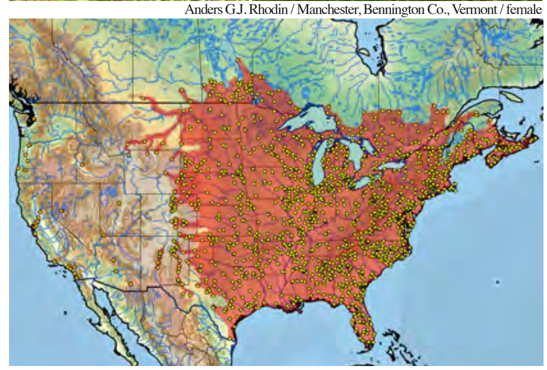
(orange dots = probable introduced)

Distribution: Belize, Guatemala, Honduras, Mexico (Campeche, Chiapas, Oaxaca, Tabasco, Veracruz)
Presumed Historic Indigenous Range: 170,968 sq. km
Size (Max SCL): male 47.0 cm, female 33.0 cm (Legler and Vogt 2013)
IUCN Red List: Vulnerable (VU A2d) (van Dijk et al. 2007)
Synonymy:
Emysaurus rossignonii Bocourt 1868:121
Chelydra rossignonii, Chelydra serpentina rossignonii
Type locality: "marais de Pansos, près le Rio Polochic (Guatémala)."
Type specimens: MNHN 1501, 1501A, syntypes (2); MNHN 1230, erroneously listed as "type" by Stuart (1963:47), is not a type, see Duméril and Bocourt (1870) and Bour (2005b).
Chelydra serpentina mexicanae Cope *in* Gray 1870c:64 (*nomen nudum*)

Chelydra serpentina (Linnaeus 1758) (08:5)
North American Snapping Turtle, Common Snapping Turtle


Anders G.J. Rhodin / Manchester, Bennington Co., Vermont / female


Anders G.J. Rhodin / Manchester, Bennington Co., Vermont / female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(orange dots = introduced)

Distribution: Canada (Manitoba, New Brunswick, Nova Scotia, Ontario, Québec, Saskatchewan), USA (Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Wyoming)
Introduced: China, Japan (mainland), Taiwan, USA (Arizona, California, Nevada, Oregon, Washington)
Presumed Historic Indigenous Range: 5,355,623 sq. km
Size (Max SCL): male 50.3 cm, female 39.0 cm (Gerholdt and Oldfield 1987; Pritchard 1989; Iverson et al. 1997; Johnston et al. 2012)
IUCN Red List: Least Concern (LC) (van Dijk 2012); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix III (USA) (2016)
Synonymy:
Testudo serpentina Linnaeus 1758:199
Chelydra serpentina, Emys serpentina, Chelonura serpentina, Ophichelone serpentina, Rapara serpentina,

Saurochelys serpentina, Chelidra serpentina, Cheliurus serpentina, Emysaurus serpentina, Emysaura serpentina, Hydraspis (Chelydra) serpentina, Emysaurus serpentinus, Chelydra serpentina serpentina

Type locality: "Calidis regionibus." Restricted to "Algiriae, Chinae aquis dulcibus" [Algeria and China] by Linnaeus (1766:354); to "New Orleans, La." [Louisiana, USA] by Smith and Taylor (1950a:358, 1950b:21); and to "vicinity of New York City" [New York, USA] by Schmidt (1953:86).

Type specimen: UPSZTY 280 (formerly UUZM 280, MGA 49, and MAF s/n), holotype, see Linnaeus (1764), Thunberg (1828), Holm (1957), and Wallin (2001); not lost as per Andersson (1900), Gibbons et al. (1988), and Uetz et al. (2019).

Comment: Description later cited by Linnaeus (1766:354) as sourced from Linnaeus (1764:36), a work that was actually written in 1754.

Testudo serpentaria Wiedemann 1802:191 (*nomen novum*)

Comment: Unjustified emendation or error for *serpentina*.

Chelydra lacertina Schweigger 1812:293 (senior homonym, not = *Gypochelys lacertina* Agassiz 1857a = *Macrochelys temminckii*)

Chelydra serpentina lacertina

Type locality: Not known. Restricted to "vicinity of New York City" [New York, USA] by Schmidt (1953:86).

Type specimen: MNHN 9580, holotype, see Gibbons et al. (1988).

Testudo serrata Pennant *in* Gray 1830e:14 (*nomen nudum* and junior homonym, not = *Testudo serrata* Daudin 1801 [= *Trachemys scripta scripta*], nor = *Testudo serrata* Shaw 1802 [= *Geoemyda spengleri*])

Testudo longicauda Shaw *in* Gray 1831d:36 (*nomen nudum*)

Chelydra emarginata Agassiz 1857a:417

Type locality: "Mobile and New Orleans." Restricted to "Mobile" [Alabama, USA] by Schmidt (1953:86).

Type specimens: MCZ 1472, syntype (one of several), others apparently lost, see Gibbons et al. (1988).

Devisia mythodes Ogilby 1905:11

Type locality: "Fly River, British New Guinea" [Papua New Guinea, in error].

Type specimen: QM J20207, holotype, see Covacevich (1971).

Chelydra laticarinata † Hay 1916a:72 (*nomen suppressum*)

Type locality: "Vero, St. Lucie County, Florida" [USA].

Type specimen: USNM (formerly FGS 7094), holotype, fossil, peripheral bone, figured (pl.6,f.6–7).

Geologic age: Pleistocene.

Comment: Name suppressed by ICZN (1986), see Smith et al. (1983).

Chelydra sculpta † Hay 1916a:73 (*nomen suppressum*)

Type locality: "Vero, St. Lucie County, Florida" [USA].

Type specimen: USNM (formerly FGS 5510), holotype, fossil, peripheral bone, figured (pl.4,f.7,pl.6,f.8–9).

Geologic age: Pleistocene.

Comment: Name suppressed by ICZN (1986), see Smith et al. (1983).

Chelydra osceola Stejneger 1918:89 (08:5) (*nomen conservandum*)

Chelydra serpentina osceola

Type locality: "Clearwater, Pinellas County, Florida" [USA].

Type specimen: USNM 10369, holotype, see Cochran (1961) and Reynolds et al. (2007).

Comment: Name conserved by ICZN (1986), see Smith et al. (1983).

Macrochelys Gray 1856a (07:3, 17:2)

Macrochelys Gray 1856a:200

Type species: *Macrochelys temminckii* [= *Chelonura temminckii* Troost *in* Harlan 1835], by original monotypy.

Macroclemys Gray 1856b:48 (*nomen novum*)

Gypochelys Agassiz 1857a:248, 413

Type species: *Gypochelys lacertina* Agassiz 1857a [= subjective synonym of *Chelonura temminckii* Troost *in* Harlan 1835], by original monotypy.

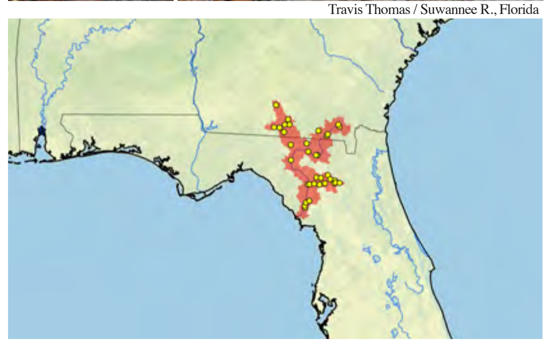
Macroclemmys Strauch 1862:35 (*nomen novum*)

Macrochelys suwanniensis Thomas, Granatosky, Bourque, Krysko, Moler, Gamble, Suarez, Leone, Enge, and Roman 2014 (14:1, 17:2, 17:3, 17:4) (**5**)

Suwannee Alligator Snapping Turtle

Kevin Enge / White Springs, Suwannee R., Florida

Travis Thomas / Suwannee R., Florida



*

Distribution: USA (Florida, Georgia)

Presumed Historic Indigenous Range: 11,382 sq. km

Size (Max SCL): male 80.0 cm, female 49.2 cm (Pritchard 1980; Johnston et al. 2015)

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Vulnerable (VU) (2018)

Synonymy:

Macrochelys suwanniensis Thomas, Granatosky, Bourque, Krysko, Moler, Gamble, Suarez, Leone, Enge, and Roman 2014:150 (14:1, 17:3, 17:4) (**5**)

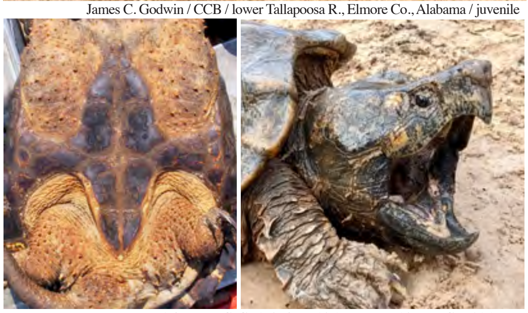
Type locality: "Santa Fe River and State Road 235, Alachua County, Florida (29.87872ºN, 82.33619ºW...elev. 23 m)" [USA].

Type specimen: UF 166146, holotype.

Comment: Valid replacement name (aspidonym) for *Macrochelys maxhoseri* Hoser 2013, as per Wüster et al. (2021) and TTWG.

Macrochelys temminckii (Troost *in* Harlan 1835) (09:4, 14:1, 17:2) **(5)**
Alligator Snapping Turtle, Western Alligator Snapping Turtle

James C. Godwin / CCB / lower Tallapoosa R., Elmore Co., Alabama / juvenile



left: James C. Godwin / Tombigbee R., Washington Co., Alabama
right: Eric Munscher / Houston, Texas

*

(orange dots = uncertain)

Distribution: USA (Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, Texas)
Presumed Historic Indigenous Range: 388,787 sq. km
Size (Max SCL): male 77.5 cm, female 53.3 cm (Pritchard 1989; Boundy and Kennedy 2006)
IUCN Red List: Vulnerable (VU A1cd) (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
CITES: Appendix III (USA) (2006)
Synonymy:
Testudo planitia Gmelin 1789:1045 (junior homonym, not = *Testudo planitia* Meuschen 1778 [= *Pelomedusa subrufa*]; *nomen suppressum*)
Chersine planitia
Type locality: “Surinami” [Suriname, in error].
Type specimen: Not located, no known figured type specimens.
Comment: Description cited as sourced from Gronovius (1756:86,n.70 and 1763:17,n.76). Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).
Chelonura temminckii Troost *in* Harlan 1835:158 (*nomen conservandum*)
Emysaurus temminckii, Macrochelys temminckii, Macroclemys temminckii, Chelydra temminckii, Gypochelys temminckii, Macrochelys temminckii temminckii
Type locality: “a tributary stream of the Mississippi, which enters that river above Memphis, in west Tennessee” [USA]. Restricted to “Wolf River, Shelby County, Tennessee, USA” by Bour (1987b:343).
Type specimen: RMNH 6166, holotype, designated and discussed by Hoogmoed et al. (2010:4); MNHN A.4540, designated “holotype” by Bour (1987b:343), is apparently not a type (Hoogmoed et al. (2010).
Comment: Name conserved by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).
Gypochelys lacertina Agassiz 1857a:414 (junior homonym, not = *Chelydra lacertina* Schweigger 1812 [= *Chelydra serpentina*])
Macrochelys lacertina, Macroclemys lacertina
Type locality: “New Orleans...Mississippi...and...south-western Georgia” [USA].
Type specimens: Probably MCZ, syntypes, not located.
Macrochelys apalachicolae Thomas, Granatosky, Bourque, Krysko, Moler, Gamble, Suarez, Leone, Enge, and Roman 2014:151 (14:1, 17:2, 17:3, 17:4) **(5)**
Type locality: “Apalachicola River, Gadsden County, Florida” [USA]
Type specimen: UF 3998, holotype.
Comment: Valid replacement name (aspidonym) for *Macrochelys temminckii muscati* Hoser 2013, as per Wüster et al. (2021).

Dermatemydidae Gray 1870e

Dermatemydae Gray 1870e:714
Dermatemydidae Baur 1888b:595

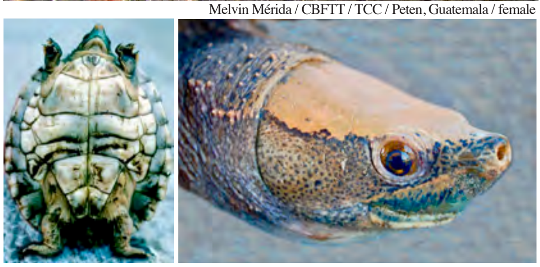
Dermatemydidae Species Richness

Dermatemys Gray 1847

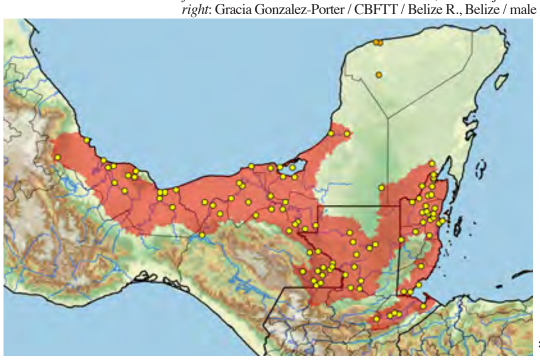
Dermatemys Gray 1847:55
Type species: *Dermatemys mawii* Gray 1847, by original monotypy.
Chloremys Gray 1870c:50
Type species: *Chloremys abnormis* [= *Dermatemys abnormis* Cope 1868 = subjective synonym of *Dermatemys mawii* Gray 1847], by original monotypy.
Limnochelone Werner 1901b:297
Type species: *Limnochelone micrura* Werner 1901b [= subjective synonym of *Dermatemys mawii* Gray 1847], by original monotypy.

Dermatemys mawii Gray 1847 (14:8)
Central American River Turtle, Hicatee, *Tortuga Blanca*

Melvin Mérida / CBFTT / TCC / Peten, Guatemala / female



left: Russell A. Mittermeier / CBFTT / Veracruz, Mexico / juvenile
right: Gracia Gonzalez-Porter / CBFTT / Belize R., Belize / male



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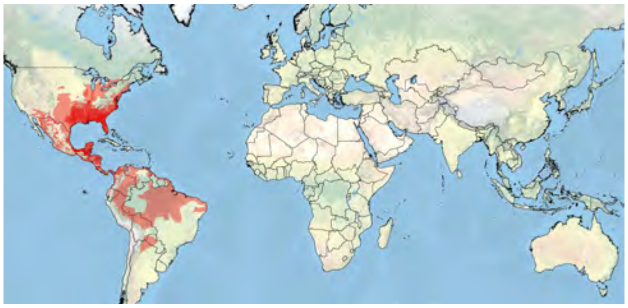
(orange dots = probable introduced or trade)

Distribution: Belize, Guatemala, Mexico (Campeche, Chiapas, Oaxaca (?), Quintana Roo, Tabasco, Veracruz)
Presumed Historic Indigenous Range: 150,282 sq. km
Size (Max SCL): male 47.9 cm, female 60.0 cm (Vogt et al. 2011 CBFTT; Legler and Vogt 2013)
CBFTT Account: Vogt, Polisar, Moll, and Gonzalez-Porter (2011)
IUCN Red List: Critically Endangered (CR A2abd+4d) (Vogt et al. 2006); Previously: Endangered (EN) (TFTSG 1996)
CITES: Appendix II (1981)
Synonymy:
Dermatemys mawii Gray 1847:55
Emys mawii
Type locality: "South America." Restricted to "Alvarado, Veracruz, Mexico" by Smith and Taylor (1950a:346).
Type specimen: NHMUK 1947.3.4.12, holotype, see Stuart (1963).
Emys berardii Duméril and Bibron *in* Duméril and Duméril 1851:11
Ptychemys berardii, *Clemmys berardii*, *Dermatemys berardii*, *Pseudemys berardi*
Type locality: "l'Amérique mérid., ...environs de Vera-Cruz" [Veracruz, Mexico].
Type specimens: MNHN 7835 and 9518, syntypes (2).
Dermatemys mavei Cope 1865:187 (*nomen novum*)
Dermatemys marvei
Comment: Unjustified emendation of *mawii*.
Dermatemys abnormis Cope 1868:120
Chloremys abnormis
Type locality: "Belize River, Yucatan" [Belize]. Restricted to "Belize [city], British Honduras" by Smith and Taylor (1950a:316, 1950b:19); restriction reversed by Dunn and Stuart (1951:59).
Type specimen: ANSP 61 (formerly USNM 6545), holotype, see Malnate (1971) and Reynolds et al. (2007).
Dermatemys salvinii Gray 1870c:50
Type locality: "Guatemala."
Type specimen: NHMUK 1946.1.22.96 (formerly 1864.2.19.5), holotype, see Stuart (1963).
Limnochelone micrura Werner 1901b:298
Type locality: "Mexico." Restricted to "Alvarado, Veracruz, Mexico" by Smith and Taylor (1950a:316, 1950b:19).
Type specimen: KZM s/n, holotype, apparently destroyed during World War II.
Dermatemys mawei Neill and Allen 1959:28 (*nomen novum*)
Comment: Unjustified emendation of *mawii*.

KINOSTERNIDAE Agassiz 1857a (14:9)

Cinosternoidae Agassiz 1857a:249
Kinosterna Gray 1869a:180
Kinosternidae Hay 1892:560
(includes 2 subfamilies)
KINOSTERNINAE
STAUROTYPINAE



Kinosternidae Species Richness

KINOSTERNINAE Agassiz 1857a (14:9)

Cinosternoidae Agassiz 1857a:249
Kinosternina Gray 1869a:180
Kinosterninae Lindholm 1929:277

Kinosternon Spix 1824 (14:9, 17:11)

Monoclida Rafinesque 1815:75 (*nomen nudum*)
Uronyx Rafinesque 1815:75 (*nomen nudum*)
Kinosternon Spix 1824:17 (*nomen conservandum*)
Type species: *Kinosternon longicaudatum* Spix 1824 [= subjective synonym of *Testudo scorpioides* Linnaeus 1766], by subsequent designation by Bell (1828c:515).
Comment: Name conserved by ICZN (1989), see Smith et al. (1980b).
Kinosternum Bonaparte 1830:166 (*nomen novum*)
Cinosternon Wagler 1830b:137 (*nomen novum*)
Monoclida Rafinesque 1832:64
Type species: *Monoclida retziana* Rafinesque 1832 [= subjective synonym of *Testudo scorpioides* Linnaeus 1766], by original monotypy.
Uronyx Rafinesque 1832:64
Type species: *Uronyx scorpioides* [= *Testudo scorpioides* Linnaeus 1766], by original monotypy.
Cinosternum Burmeister 1837:731 (*nomen novum*)
Swanka Gray 1844:32
Type species: *Swanka scorpiodes* Gray [= *Testudo scorpioides* Linnaeus 1766], by original monotypy.
Thyrosternum Agassiz 1857a:418,427
Type species: *Thyrosternum pensilvanica* [= *Testudo pensilvanica* Gmelin 1789 = subjective synonym of *Testudo subrubra* Bonnaterre 1789], by subsequent designation by Lindholm (1929:277).
Platythyra Agassiz 1857a:420,429
Type species: *Platythyra flavescens* Agassiz 1857a, by original monotypy.
Cinosternos Herrera 1901:35 (*nomen novum et suppressum*)
Comment: Unjustified replacement name for *Cinosternon*. Name suppressed by ICZN (1922).
Cryptochelys Iverson, Le, and Ingram 2013:933 (*partim*) (14:9, 17:11)
Type species: *Cryptochelys leucostomum* [= *Cinosternon leucostomum* Duméril and Bibron *in* Duméril and Duméril 1851], by original designation.

Kinosternon abaxillare Baur *in* Stejneger 1925 (14:10) (**45**)

Central Chiapas Mud Turtle, *Casquito Pardo*

Eduardo Reyes-Grajales / Villa Hidalgo, Chiapas, Mexico

left: Nora López-León / CBFTT / Tuxtla Gutiérrez, Chiapas, Mexico
right: Eduardo Reyes-Grajales / Villa Hidalgo, Chiapas, Mexico

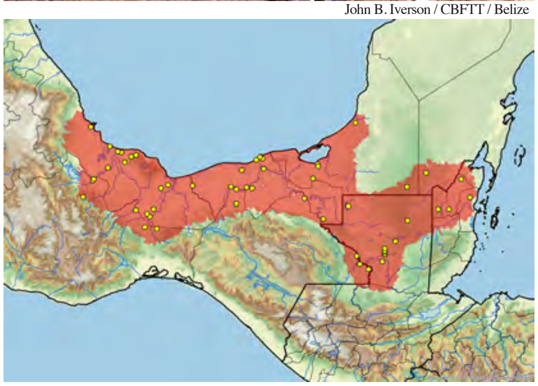
*

Distribution: Guatemala, Mexico (Chiapas, Oaxaca [?])
Presumed Historic Indigenous Range: 21,458 sq. km
Size (Max SCL): male 15.8 cm, female 15.7 cm (Iverson 2008, 2010; Legler and Vogt 2013; Reyes-Grajales et al. 2021)
IUCN Red List: Vulnerable (VU A2cd+4cd) (Reyes-Grajales and Guichard-Romero 2021)
Synonymy:
Kinosternon abaxillare Baur *in* Stejneger 1925:462
Kinosternon scorpioides abaxillare, *Kinosternon cruentatum abaxillare*
Type locality: "Tuxtla, Chiapas, Mexico." Emended to "Tuxtla Gutiérrez, Chiapas" [Mexico] by Legler and Vogt (2013:142).
Type specimens: USNM 7518, holotype, apparently lost, see Reynolds et al. (2007); USNM 7519–21, 7523–29, paratypes (10), 7520 also apparently lost.

Kinosternon acutum Gray 1831d (14:9) **(45)**
Tabasco Mud Turtle, *Montera*, *Pochitoque*

John B. Iverson / CBFTT / Belize


John B. Iverson / CBFTT / Belize



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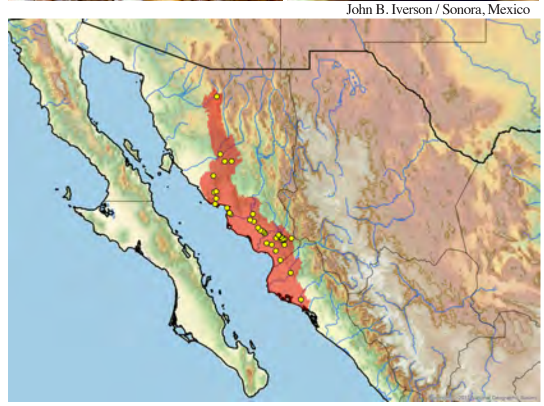
Distribution: Belize, Guatemala, Mexico (Campeche, Chiapas, Quintana Roo, Tabasco, Veracruz)
Presumed Historic Indigenous Range: 139,451 sq. km
Size (Max SCL): male 10.5 cm, female 12.0 cm (Iverson and Vogt 2011 CBFTT; Ceballos et al. 2013)
CBFTT Account: Iverson and Vogt (2011)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
Synonymy:
Kinosternon scorpioides acuta Gray 1831d:34
Kinosternon scorpoides acuta, *Kinosternon acutum*, *Cryptochelys acuta*
Type locality: Not designated. Restricted to "C. America" [Central America] by Gray (1844:33); to "British Honduras" [Belize] by Schmidt (1941:476); and to "Cosamaloapan, Veracruz, Mexico" by Smith and Taylor (1950a:347, 1950b:23).
Type specimen: NHMUK 1947.3.4.58, holotype, see Stuart (1963).
Cinosternum berendtianum Cope 1865:189
Cinosternon berendtianum, *Kinosternon berendtianum*
Type locality: "Tabasco" [Mexico].
Type specimens: USNM 6517, 106293–94, syntypes (3); 6517 now lost, see Reynolds et al. (2007).
Cinosternon effeldtii Peters 1873:603
Cinosternum effeldtii
Type locality: "angeblich aus Mexico (Veracruz)." Restricted to "Cosamaloapan, Veracruz, Mexico" by Smith and Taylor (1950a:347).
Type specimen: ZMB 7868, lectotype, designated by Fritz et al. (1994:168); erroneously listed as "holotype" by Iverson (1980).

Kinosternon alamosae Berry and Legler 1980
Alamos Mud Turtle, *Casquito de Alamos*

John B. Iverson / Sonora, Mexico


John B. Iverson / Sonora, Mexico

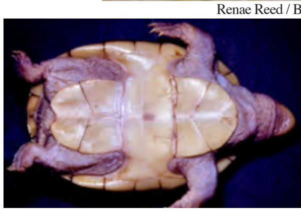


*

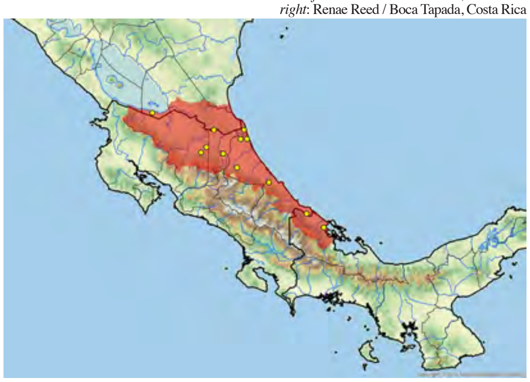
Distribution: Mexico (Sinaloa, Sonora)
Presumed Historic Indigenous Range: 51,888 sq. km
Size (Max SCL): male 13.5 cm, female 12.6 cm (Berry and Legler 1980; Ceballos et al. 2013)
IUCN Red List: Data Deficient (DD) (Frost et al. 2007); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2018)
Synonymy:
Kinosternon alamose Pritchard 1979:556 (*nomen suppressum*)
Type locality: "vicinity of Alamos, Sonora, and the lower Rio Yaqui" [Mexico].
Type specimen: Not designated.
Comment: Name suppressed by ICZN (1985c), see Pritchard and Pronek (1982).
Kinosternon alamosae Berry and Legler 1980:1 (*nomen conservandum*)
Type locality: "Rancho Carrizal, 7.2 km north and 11.5 km west of Alamos, Sonora, Mexico (27º 05' N, 109º 03' W)."
Type specimen: LACM 127639, holotype.
Comment: Name conserved by ICZN (1985c), see Pritchard and Pronek (1982).

Kinosternon angustipons Legler 1965 (14:9) (**45**)
Narrow-bridged Mud Turtle

Renae Reed / Boca Tapada, Costa Rica



left: John B. Iverson / Limon, Costa Rica
right: Renae Reed / Boca Tapada, Costa Rica



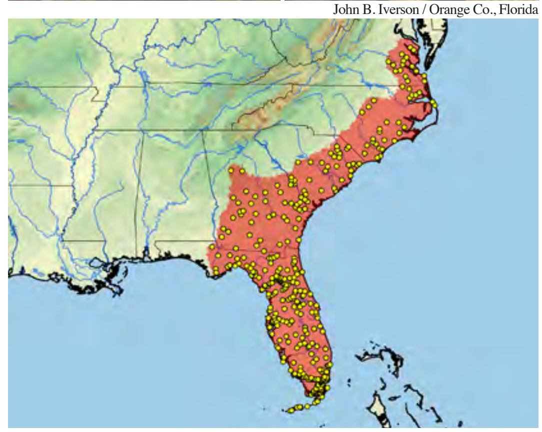
*

Distribution: Costa Rica, Nicaragua, Panama
Presumed Historic Indigenous Range: 24,179 sq. km
Size (Max SCL): male 11.5 cm, female 12.0 cm (Legler 1965; Acuña-Mesén 1993; Ceballos et al. 2013)
IUCN Red List: Vulnerable (VU B1+2c) (TFTSG 1996)
Synonymy:
Kinosternon angustipons Legler 1965:617
Cryptochelys angustipons
Type locality: "Los Diamantes, Limón Province, Costa Rica."
Type specimen: KU 43631, holotype.

Kinosternon baurii Garman 1891
Striped Mud Turtle

Dawn Wilson / CRM 3 / Hillsborough Co., Florida

John B. Iverson / Orange Co., Florida



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Distribution: USA (Florida, Georgia, North Carolina, South Carolina, Virginia)
Presumed Historic Indigenous Range: 355,427 sq. km
Size (Max SCL): male 11.5 cm, female 12.7 cm (Pritchard 1980; Mitchell 1994; Wilson et al. 2006; Ceballos et al. 2013)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Cinosternum baurii Garman 1891:141
Kinosternon baurii, *Kinosternon baurii baurii*
Type locality: "the island Key West...Florida..[&]..Cuba." Restricted to "Key West, Monroe County, Florida" [USA] by Uzzell and Schwartz (1955:33).
Type specimens: MCZ 282–87 (now 184720–1, 184723–6), 1558, 1563, 4380, UMMZ 53038 (Peters 1952; formerly MCZ 4718, but formerly MCZ 4379 according to Kluge 1984), FMNH 73481 (Marx 1958; formerly MCZ 4050), syntypes (11); Barbour and Loveridge (1929) listed only MCZ 1563 (2), 4380 (1), 4718 (5), and 4050 (1).
Kinosternon bauri palmarum Stejneger 1925:463
Kinosternon baurii palmarum
Type locality: "Royal Palm State Park, Dade County, Florida" [USA]. Restricted to "Paradise Key, Dade County, Florida" [USA] by Uzzell and Schwartz (1955:34).
Type specimen: USNM 61065, holotype, see Cochran (1961) and Reynolds et al. (2007).

Kinosternon chimalhuaca Berry, Seidel, and Iverson 1997 (07:7, 14:11) (**46**)
Jalisco Mud Turtle

John B. Iverson / Rio Purificación, Jalisco, Mexico

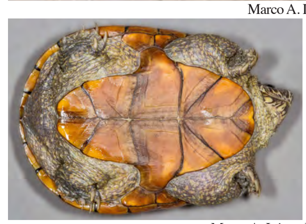
left: John B. Iverson, *right*: James F. Berry / Rio Purificación, Jalisco, Mexico

*

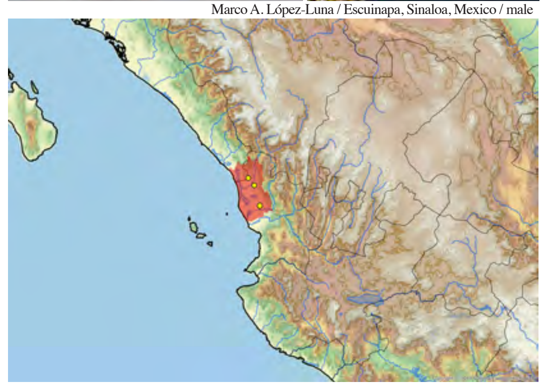
Distribution: Mexico (Colima, Jalisco)
Presumed Historic Indigenous Range: 6,701 sq. km
Size (Max SCL): male 16.0 cm, female 12.7 cm (Berry et al. 1997; Legler and Vogt 2013)
IUCN Red List: Least Concern (LC) (van Dijk et al. 2007)
Synonymy:
Kinosternon chimalhuaca Berry, Seidel, and Iverson *in* Rogner 1996:23 (*nomen suppressum* pending)
Comment: Name pending suppression by ICZN, see Rogner et al. (2013, 2016).
Kinosternon chimalhuaca Berry, Seidel, and Iverson 1997:331
Type locality: "30 m southeast of Mexico Highway 80, 1.9 km northeast of Barra de Navidad, Jalisco, Mexico (19º 15' N, 104º 43' S)."
Type specimen: CM 140201, holotype.

Kinosternon cora Loc-Barragán, Reyes-Velasco, Woolrich-Piña, Grünwald, Venegas de Anaya, Rangel-Mendoza, and López-Luna 2020 (**47**)
Cora Mud Turtle, *Casquito Cora, Chacuanita Cora*

Marco A. López-Luna / Escuinapa, Sinaloa, Mexico



Marco A. López-Luna / Escuinapa, Sinaloa, Mexico / male



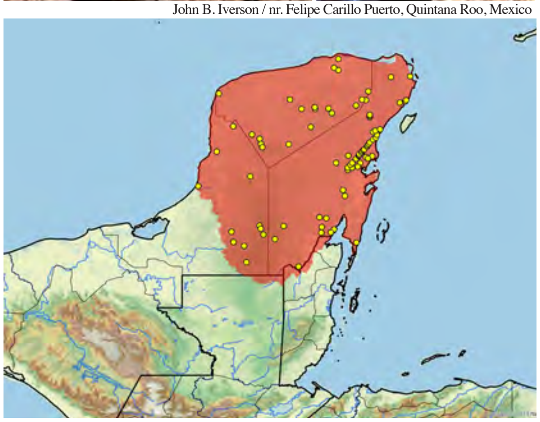
*

Distribution: Mexico (Nayarit, Sinaloa)
Presumed Historic Indigenous Range: 7,200 sq. km
Size (Max SCL): female 10.8 cm (Loc-Barragán et al. 2020)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Vulnerable (VU) (2020)
Synonymy:
Kinosternon cora Loc-Barragán, Reyes-Velasco, Woolrich-Piña, Grünwald, Venegas de Anaya, Rangel-Mendoza, and López-Luna 2020:512
Type locality: "Mexico: Sinaloa: Ejido La Concepción (La Concha), Municipio de Escuinapa (22.531758°, -105.450767°; datum WGS 84; elev. 10 masl)."
Type specimen: MZFC-HE 35627, holotype.

Kinosternon creaseri Hartweg 1934 (14:9) **(45)**
Creaser's Mud Turtle, *Casquito de Creaser*


John B. Iverson / nr. Felipe Carillo Puerto, Quintana Roo, Mexico


John B. Iverson / nr. Felipe Carillo Puerto, Quintana Roo, Mexico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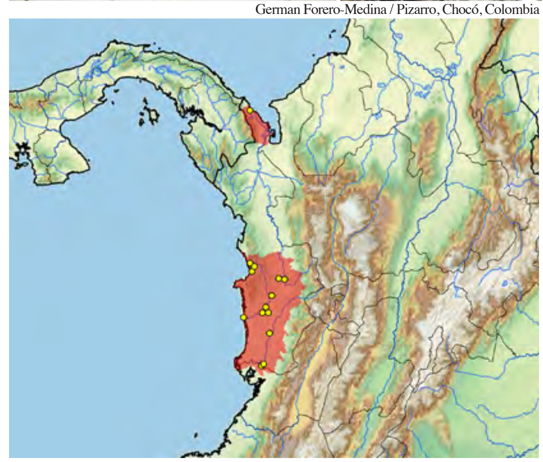
Distribution: Belize, Guatemala (?), Mexico (Campeche, Quintana Roo, Yucatán)
Presumed Historic Indigenous Range: 120,545 sq. km
Size (Max SCL): male 12.5 cm, female 12.1 cm (Iverson 1991; Ceballos et al. 2013; Legler and Vogt 2013)
IUCN Red List: Least Concern (LC) (van Dijk et al. 2007)
Synonymy:
Kinosternon creaseri Hartweg 1934:1
Cryptochelys creaseri
Type locality: "one mile south of the Hacienda, Chichen Itza, Yucatan" [Mexico].
Type specimen: UMMZ 73090, holotype, see Peters (1952) and Kluge (1984).

Kinosternon dunni Schmidt 1947 (14:9) **(45)**
Dunn's Mud Turtle


German Forero-Medina / CBFTT / Rio Atrato, Chocó, Colombia


German Forero-Medina / Pizarro, Chocó, Colombia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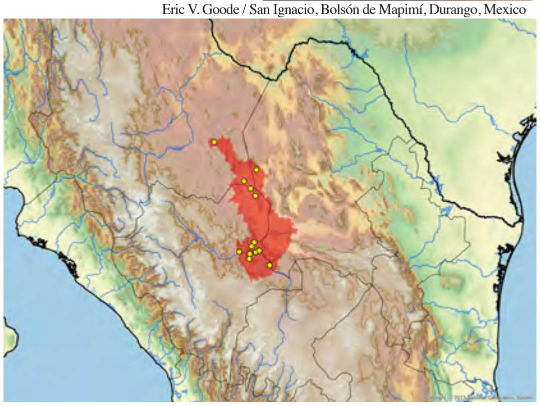
Distribution: Colombia (Chocó, Valle del Cauca)
Presumed Historic Indigenous Range: 21,653 sq. km
Size (Max SCL): male 18.0 cm, female 16.6 cm (Iverson et al. 2012 CBFTT)
CBFTT Account: Iverson, Carr, Castaño-Mora, Galvis-Rizo, Rentería-Moreno, and Forero-Medina (2012)
IUCN Red List: Vulnerable (VU B1+2c) (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
Synonymy:
Kinosternon dunni Schmidt 1947:109
Cryptochelys dunni
Type locality: "Pizarro, Choco, Colombia."
Type specimen: FMNH 42804, holotype, see Marx (1958).

Kinosternon durangoense Iverson 1979b (07:6)
Durango Mud Turtle, *Casquito de Durango*

John B. Iverson / Pedriceña, Durango, Mexico


Eric V. Goode / San Ignacio, Bolsón de Mapimí, Durango, Mexico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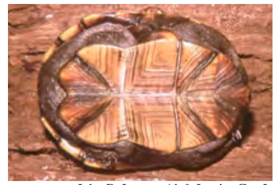
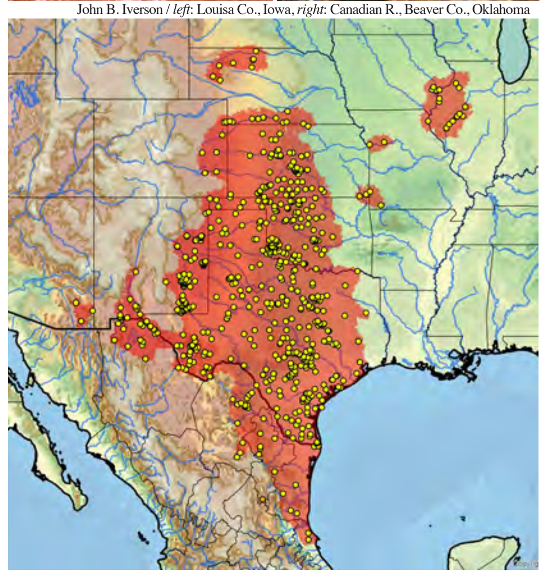
Distribution: Mexico (Chihuahua, Coahuila, Durango)
Presumed Historic Indigenous Range: 27,807 sq. km
Size (Max SCL): male 19.2 cm, female 14.5 cm (Iverson 1989; Ceballos et al. 2013; Iverson et al. 2018)
IUCN Red List: Data Deficient (DD) (van Dijk 2007)
TFTSG Provisional Red List: Least Concern (LC) (2018)
Synonymy:
Kinosternon flavescens durangoense Iverson 1979b:219
Kinosternon durangoense
Type locality: "8 km from Ceballos, in Lago de los Palomas, Durango, Mexico."
Type specimen: UF 16180, holotype.

Kinosternon flavescens Agassiz 1857a (07:6)
Yellow Mud Turtle, *Casquito Amarillo*

John B. Iverson / Canadian R., Beaver Co., Oklahoma




John B. Iverson / *left*: Louisa Co., Iowa, *right*: Canadian R., Beaver Co., Oklahoma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(orange dot = probable introduced or questionable)

Distribution: Mexico (Chihuahua, Coahuila, Nuevo Leon, Tamaulipas, Veracruz), USA (Arizona, Colorado, Illinois, Iowa, Kansas, Missouri, Nebraska, New Mexico, Oklahoma, Texas)
Presumed Historic Indigenous Range: 1,349,735 sq. km
Size (Max SCL): male 14.7 cm, female 13.5 cm (Iverson 1989; Ceballos et al. 2013; Brown et al. 2020)
IUCN Red List: Least Concern (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Platythyra flavescens Agassiz 1857a:430
Cinosternon flavescens, Cinosternum flavescens, Kinosternum flavescens, Kinosternon flavescens, Kinosternon flavescens flavescens
Type locality: "Texas, near San Antonio;...lower Rio Grande;...Red River, Arkansas;...Camp Yuma;...Gila River" [USA]. Restricted to "Waco, McLennan County, Texas, USA" by Smith and Taylor (1950a:362, 1950b:24), but rejected by Maslin (1959:22); and to "Rio Blanco, near San Antonio, Texas" [USA] by Schmidt (1953:89) and Iverson (1978:478).
Type specimen: USNM 50, lectotype, designated by Iverson (1978:478), discussed also by Reynolds et al. (2007).
Kinosternon flavescens spooneri Smith 1951:195
Kinosternon spooneri

Type locality: "Henderson County State Forest, 7 miles north of Oquawka, Illinois" [USA].
Type specimen: INHS 4244, holotype.

Kinosternon herrerai Stejneger 1925 (14:9) **(45)**
Herrera's Mud Turtle, *Casquito de Herrera*

John B. Iverson / nr. Gutiérrez Zamora, Veracruz, Mexico


John B. Iverson / nr. Gutiérrez Zamora, Veracruz, Mexico

*

Distribution: Mexico (Hidalgo, Puebla, San Luis Potosi, Tamaulipas, Veracruz)
Presumed Historic Indigenous Range: 70,887 sq. km
Size (Max SCL): male 17.2 cm, female 15.7 cm (Carr and Mast 1988; Legler and Vogt 2013)
IUCN Red List: Near Threatened (NT) (van Dijk et al. 2007); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Kinosternon herrerai Stejneger 1925:462
Cryptochelys herrerai
Type locality: "Xochimilco, Valley of Mexico" [in error; market specimen]. Restricted to "La Laja, Veracruz, Mexico" by Smith and Taylor (1950a:349, 1950b:24); and to "vicinity of Tampico" [Tamaulipas, Mexico] by Smith and Brandon (1968:54).
Type specimen: USNM 61249, holotype, see Cochran (1961) and Reynolds et al. (2007).

Kinosternon hirtipes Wagler 1830c (09:11, 17:9)
Rough-footed Mud Turtle, Rough-legged Mud Turtle, *Casquito de Pata Rugosa*
(includes 6 subspecies)

*

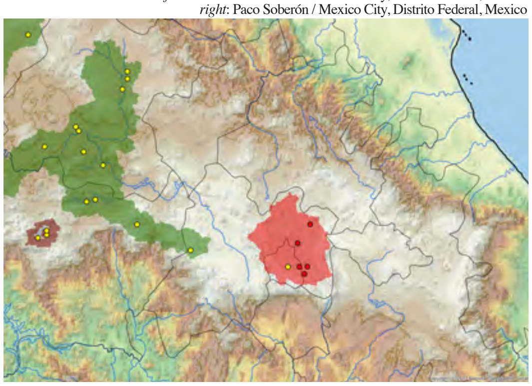
(subspecies: *hirtipes* = red, *chapalaense* = purple, *magdalense* = blue, *megacephalum* = pink, *murrayi* = green, *tarascense* = brown; red dots = extinct or extirpated, orange dots = questionable or misidentified)

Distribution: Mexico (Aguascalientes, Chihuahua, Coahuila, Distrito Federal, Durango, Guanajuato, Jalisco, México, Michoacán, Zacatecas), USA (Texas)
Introduced: Mexico (San Luis Potosi)
Presumed Historic Indigenous Range: 127,057 sq. km
Size (Max SCL): male 18.6 cm, female 16.0 cm (see subspp.)
IUCN Red List: Least Concern (LC) (van Dijk et al. 2007); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)

Kinosternon hirtipes hirtipes Wagler 1830c (09:11, 17:9)
Valley of Mexico Mud Turtle

Sergio Nolasco-Perez / Mexico City, Distrito Federal, Mexico

left: Gracia Gonzalez-Porter / Mexico City, Distrito Federal, Mexico
right: Paco Soberón / Mexico City, Distrito Federal, Mexico



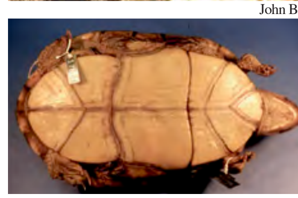
*

(subspecies: *hirtipes* = red, *murrayi* = green, *tarascense* = brown; red dots = probably extirpated)

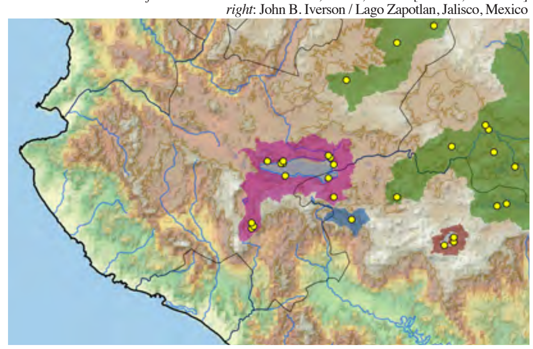
Distribution: Mexico (Distrito Federal, México)
Presumed Historic Indigenous Range: 5,620 sq. km
Size (Max SCL): male 14.0 cm, female 14.0 cm (Iverson 1981; Legler and Vogt 2013)
TFTSG Provisional Red List: Critically Endangered (CR) (2019)
Synonymy:
Cinosternon hirtipes Wagler 1830b:137 (*nomen nudum*) (17:9)
Cinosternon hirtipes Wagler 1830c:expl.tab:pl.V, f.29-30 (09:11, 17:9)
Clemmys (Cinosternon) hirtipes, Kinosternum hirtipes, Kinosternon hirtipes, Cinosternum hirtipes, Thyrosternum hirtipes, Ozotheca hirtipes, Kinosternon hirtipes hirtipes
Type locality: Not designated. Restricted to "Mexico" by Wagler (1833:unpaginated); to "Mazatlán, Sinaloa" [Mexico] [in error] by Smith and Taylor (1950a:343, 1950b:25); and to "lakes near Mexico City" [Mexico] by Schmidt (1953:89).
Type specimen: ZSM 2374/0, holotype, see Franzen and Glaw (2007) and Uetz (2019); Iverson (1981, 1992) erroneously listed the holotype as ZSM 1374/0.

Kinosternon hirtipes chapalaense Iverson 1981
Lake Chapala Mud Turtle

John B. Iverson / Lago Zapotlan, Jalisco, Mexico



left: John B. Iverson / nr. Ocotlan, Jalisco, Mexico [AMNH, New York]
right: John B. Iverson / Lago Zapotlan, Jalisco, Mexico



*

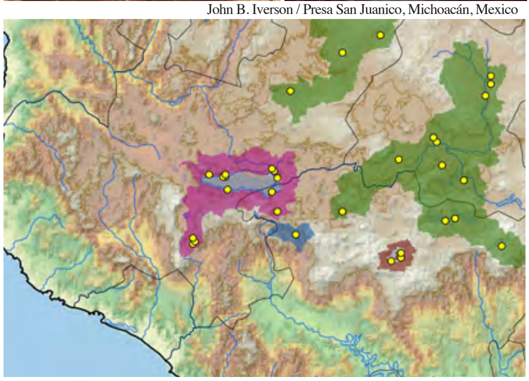
(subspecies: *chapalaense* = purple, *magdalense* = blue, *murrayi* = green, *tarascense* = brown)

Distribution: Mexico (Jalisco, Michoacán)
Presumed Historic Indigenous Range: 5,359 sq. km
Size (Max SCL): male 15.2 cm, female 14.9 cm (Legler and Vogt 2013)
TFTSG Provisional Red List: Critically Endangered (CR) (2018)
Synonymy:
Kinosternon hirtipes chapalaense Iverson *in* Pritchard 1979:557 (*nomen nudum*)
Kinosternon hirtipes chapalaense Iverson 1981:51
Kinosternon hirtipes chapalense
Type locality: "Lake Chapala, 0.25 mile off Chapala, Jalisco, Mexico [20° 18' N, 103° 12' W]."
Type specimen: UMMZ 97128, holotype, see Kluge (1984).

Kinosternon hirtipes magdalense Iverson 1981
San Juanico Mud Turtle

John B. Iverson / Presa San Juanico, Michoacán, Mexico


John B. Iverson / Presa San Juanico, Michoacán, Mexico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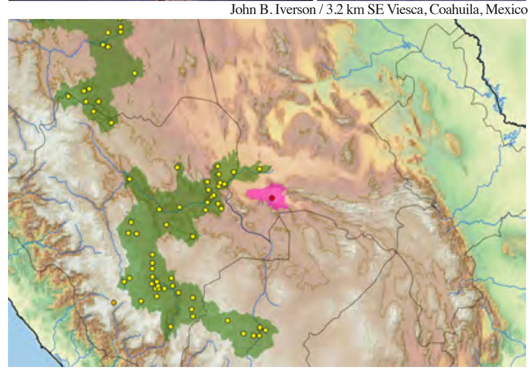
(subspecies: *chapalaense* = purple, *magdalense* = blue, *murrayi* = green, *tarascense* = brown)

Distribution: Mexico (Michoacán)
Presumed Historic Indigenous Range: 694 sq. km
Size (Max SCL): male 13.6 cm, female 13.2 cm (Legler and Vogt 2013)
TFTSG Provisional Red List: Critically Endangered (CR) (2018)
Synonymy:
Kinosternon hirtipes magdalense Iverson 1981:53
Type locality: "along the face of the dam at *Presa* San Juanico, Michoacán [ca. 19º 50' N, 102º 40' W]" [Mexico].
Type specimen: UF 45035, holotype.

Kinosternon hirtipes megacephalum Iverson 1981
Viesca Mud Turtle
(Extinct, ca. 1970)

John B. Iverson / 3.2 km SE Viesca, Coahuila, Mexico


John B. Iverson / 3.2 km SE Viesca, Coahuila, Mexico

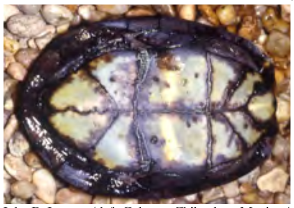

*

(subspecies: *megacephalum* = pink, *murrayi* = green; orange dot = questionable or introduced, red dot = extinct)

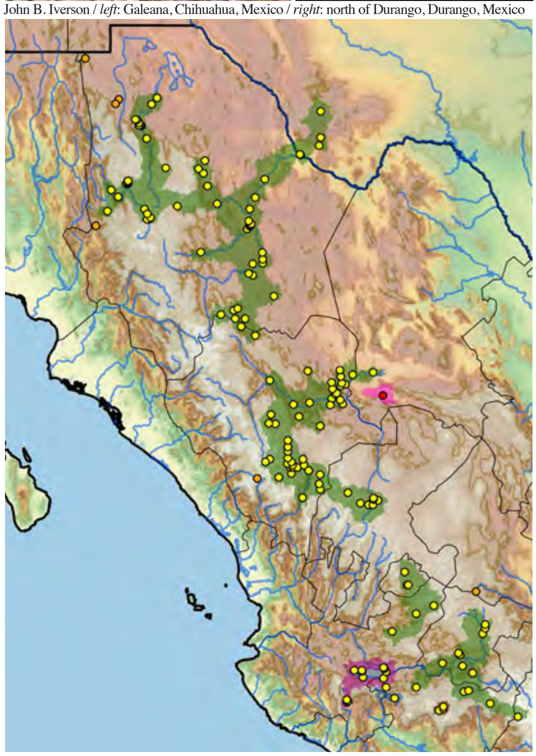
Distribution: Mexico (Coahuila [extinct])
Presumed Historic Indigenous Range: 1,659 sq. km
Size (Max SCL): male 9.9 cm, female 11.7 cm (Iverson 1981; Legler and Vogt 2013)
TFTSG Provisional Red List: Extinct (EX) (2018)
Synonymy:
Kinosternon hirtipes megacephalum Iverson 1981:52
Kinosternon hirtipes megalocephala, Kinosternon megacephalum
Type locality: "3.2 km SE Viesca [25º 21' N, 102º 48' W], Coahuila" [Mexico].
Type specimen: SM(BCB) 11466, holotype, see Auth et al. (2000).

Kinosternon hirtipes murrayi Glass and Hartweg 1951
Mexican Plateau Mud Turtle

John B. Iverson / Nazas, Durango, Mexico




John B. Iverson / *left*: Galeana, Chihuahua, Mexico / *right*: north of Durango, Durango, Mexico



*

(subspecies: *hirtipes* = red, *chapalaense* = purple, *magdalense* = blue, *megacephalum* = pink, *murrayi* = green, *tarascense* = brown; orange dots = questionable or misidentified, red dot = extinct)

Distribution: Mexico (Aguascalientes, Chihuahua, Coahuila, Durango, Guanajuato, Jalisco, México, Michoacán, Zacatecas), USA (Texas)

Presumed Historic Indigenous Range: 113,016 sq. km

Size (Max SCL): male 18.6 cm, female 16.0 cm (Legler and Vogt 2013)

TFTSG Provisional Red List: Least Concern (LC) (2018)

Synonymy:

Kinosternon murrayi Glass and Hartweg 1951:50

Kinosternon hirtipes murrayi

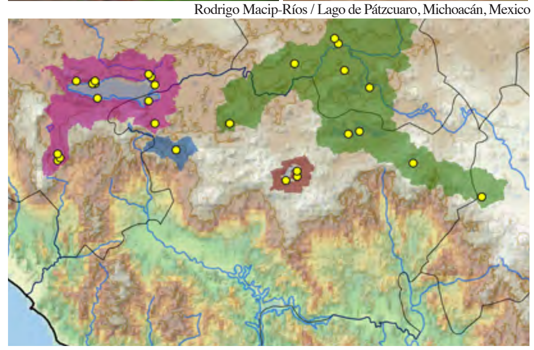
Type locality: "Harper Ranch, 37 miles south of Marfa, Presidio County, Texas" [USA].

Type specimen: TCWC 650, holotype.

Kinosternon hirtipes tarascense Iverson 1981
Pátzcuaro Mud Turtle

Rodrigo Macip-Ríos / Lago de Pátzcuaro, Michoacán, Mexico


Rodrigo Macip-Ríos / Lago de Pátzcuaro, Michoacán, Mexico



*

(subspecies: *chapalaense* = purple, *magdalense* = blue, *murrayi* = green, *tarascense* = brown)

Distribution: Mexico (Michoacán)

Presumed Historic Indigenous Range: 709 sq. km

Size (Max SCL): male 13.6 cm, female 13.2 cm (Legler and Vogt 2013)

TFTSG Provisional Red List: Critically Endangered (CR) (2018)

Synonymy:

Kinosternon hirtipes tarascense Iverson 1981:52

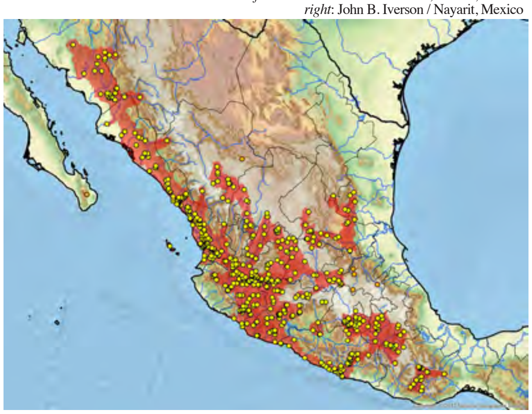
Type locality: "Lago de Pátzcuaro, adjacent to city of Pátzcuaro [19° 32' N, 101° 36' W]" [Michoacán, Mexico].

Type specimen: UF 43506, holotype.

Kinosternon integrum Le Conte 1854
Mexican Mud Turtle, *Casquito de Burro*

John B. Iverson / Alamos, Sonora, Mexico

left: Anders G.J. Rhodin / Alamos, Sonora, Mexico
right: John B. Iverson / Nayarit, Mexico

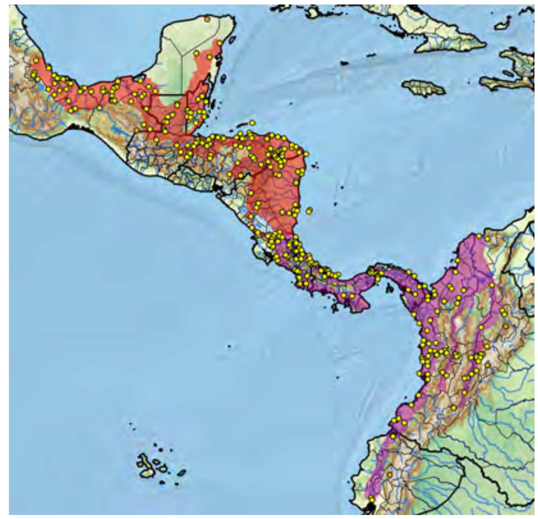


*

(orange dots = probable or possible introduced)

Distribution: Mexico (Colima, Durango, Guanajuato, Guerrero, Hidalgo, Jalisco, Michoacán, Morelos, Nayarit, Oaxaca, Puebla, San Luis Potosi, Sinaloa, Sonora, Tamaulipas, Zacatecas)
Introduced: Mexico (Baja California Sur)
Presumed Historic Indigenous Range: 309,188 sq. km
Size (Max SCL): male 22.3 cm, female 19.6 cm (Macip-Ríos et al. 2009; Ceballos et al. 2013; Legler and Vogt 2103)
IUCN Red List: Least Concern (LC) (van Dijk et al. 2007); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Kinosternum integrum Le Conte 1854:183
Cinosternum integrum, Thyrosternum integrum, Thyrosternon integrum, Cinosternon integrum, Kinosternon integrum, Swanka integra, Cinosternum scorpioides integrum, Kinosternon scorpioides integrum
Type locality: "Mexico." Restricted to "Acapulco, Guerrero, Mexico" by Smith and Taylor (1950a:331, 1950b:25).
Type specimen: Possibly ANSP, apparently lost, not listed by Malnate (1971).
Cinosternon rostellum Bocourt 1876a:391
Cinosternum rostellum
Type locality: "Guanajuato" [Mexico].
Type specimen: MNHN 2112, holotype.
Cinosternon guanajuatense Dugès 1888:107 (*nomen nudum*)
Cinosternum scorpioides integrum mexicana Siebenrock 1907:579 (unavailable name)
Type locality: "Mexiko." Restricted to "Mazatlan" [Mexico] by Smith and Smith (1980:115).
Type specimen: Possibly NMW, not located, not listed by Tiedemann et al. (1994) or Tiedemann and Grillitsch (1999).

Kinosternon leucostomum Duméril and Bibron *in* Duméril and Duméril 1851 (14:9) **(45)**
White-lipped Mud Turtle, *Pochitoque, Chechahua*
(includes 2 subspecies)



*

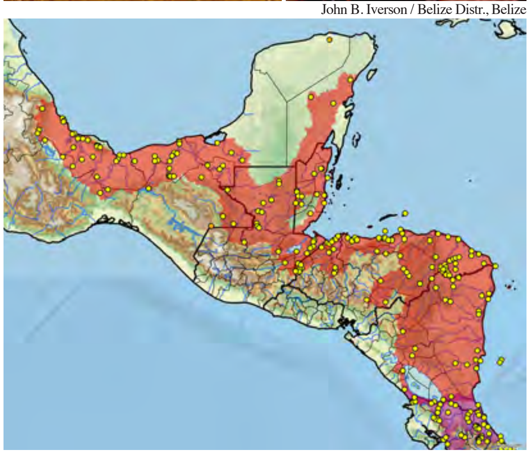
(subspecies: *leucostomum* = red, *postinguinale* = purple; overlap = intergrades; orange dots = possible trade or questionable)

Distribution: Belize, Colombia (Antioquia, Atlántico, Bolívar, Boyacá, Caldas, Cauca, Cesar, Chocó, Córdoba, Cundinamarca, Huila [?], Magdalena, Nariño, Santander, Sucre, Tolima, Valle del Cauca), Costa Rica, Ecuador, Guatemala, Honduras, Mexico (Campeche, Chiapas, Oaxaca, Quintana Roo, Tabasco, Veracruz, Yucatán [?]), Nicaragua, Panama
Presumed Historic Indigenous Range: 677,999 sq. km
Size (Max SCL): male 21.4 cm, female 20.8 cm (see subspp.)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Regional (South America): Least Concern (LC) (2011)

Kinosternon leucostomum leucostomum Duméril and Bibron *in* Duméril and Duméril 1851
Northern White-lipped Mud Turtle

John B. Iverson / Belize Distr., Belize

John B. Iverson / Belize Distr., Belize



*

(subspecies: *leucostomum* = red, *postinguinale* = purple; overlap = intergrades; orange dots = possible trade or questionable)

Distribution: Belize, Guatemala, Honduras, Mexico (Campeche, Chiapas, Oaxaca, Quintana Roo, Tabasco, Veracruz, Yucatán [?]), Nicaragua

Presumed Historic Indigenous Range: 354,958 sq. km

Size (Max SCL): male 21.4 cm, female 20.8 cm (Legler and Vogt 2013)

Synonymy:

Cinosternon leucostomum Duméril and Bibron *in* Duméril and Duméril 1851:17

Kinosternum leucostomum, Kinosternon leucostomum, Cinosternum leucostomum, Thyrosternum leucostomum, Swanka leucostoma, Kinosternon leucostomum leucostomum, Cryptochelys leucostoma

Type locality: "N.-Orléans; Mexique; Rio-Sumasinta (Amér. centr.)." Restricted to "Rio Usumacinta, El Peten, Guatemala" by Schmidt (1941:488); and to "Cosamaloapam, Veracruz, Mexico" by Smith and Taylor (1950a:347, 1950b:26).

Type specimen: MNHN 9087 (formerly 8311), lectotype, designated (as "type") by Stuart (1963:49).

Swanka maculata Gray 1869a:182

Type locality: "Mexico...Papalco Apoia; Vera Paz" [Mexico; Guatemala]. Restricted to "Cosamaloapam, Veracruz, Mexico" by Stejneger (1941:457).

Type specimen: NHMUK 1946.1.22.25 (formerly 1862.6.6.1), lectotype, designated as the "type" by Boulenger (1889:43); some of the original syntypes (now paralectotypes) are identified as *K. acutum*, see Stuart (1963), Iverson (1980), Smith and Smith (1980), and Berry and Iverson (2001a).

Cinosternum brevigulare Günther 1885:17 (senior homonym, not = *Cinosternum brevigulare* Cope 1885 [= *Kinosternon leucostomum postinguinale*])

Type locality: "Mexico, Playa Vicente" [Veracruz].

Type specimen: NHMUK 1946.1.22.38 (formerly 1860.6.17.24), holotype.

Cinosternum cobanum Günther 1885:18

Cinosternon cobanum

Type locality: "Guatemala, Coban; Cahabon." Restricted to "Cobán, Alta Verapaz, Guatemala" by Smith and Taylor (1950a:317, 1950b:25).

Type specimens: NHMUK 1946.1.22.18–19 (formerly 1875.2.26.5 and 1880.11.20.18), syntypes (2), see Stuart (1963).

Kinosternon mopanum Neill 1965:117

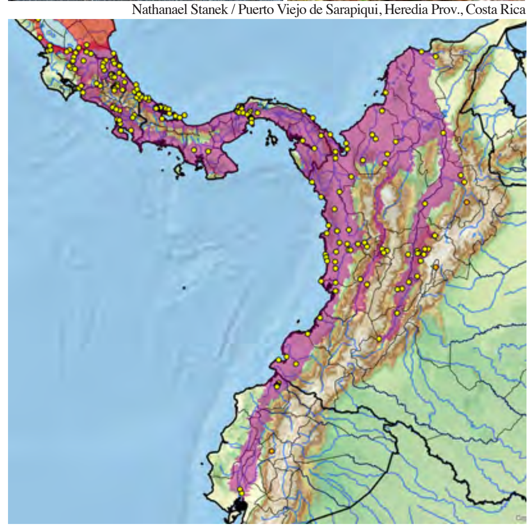
Type locality: "Waha Leaf Creek, southern Stann Creek District, British Honduras" [Belize].

Type specimen: MCZ 71635, holotype, apparently lost (Iverson 1976), specimen figured (f.6-7).

Kinosternon leucostomum postinguinale Cope 1887
Southern White-lipped Mud Turtle

John B. Iverson / Turbo, Antioquia, Colombia

Nathanael Stanek / Puerto Viejo de Sarapiqui, Heredia Prov., Costa Rica



*

(subspecies: *leucostomum* = red, *postinguinale* = purple; overlap = intergrades; orange dots = possible trade or questionable)

Distribution: Colombia (Antioquia, Atlántico, Bolívar, Boyacá, Caldas, Cauca, Cesar, Chocó, Córdoba, Cundinamarca, Huila [?], Magdalena, Nariño, Santander, Sucre, Tolima, Valle del Cauca), Costa Rica, Ecuador, Nicaragua, Panama

Presumed Historic Indigenous Range: 327,957 sq. km

Size (Max SCL): male 17.4 cm, female 15.8 cm (Acuña-Mesén 1993; Ceballos et al. 2016)

Synonymy:

Cinosternum brevigulare Cope 1885:389 (junior homonym, not = *Cinosternum brevigulare* Günther 1885 [= *Kinosternon leucostomum leucostomum*])

Cinosternon brevigulare

Type locality: "Tierra Caliente of Costa Rica at Sipurio, on the east coast."

Type specimens: USNM 45582, 51165 (lost), syntypes (2); USNM 19797, listed as a "syntype" by Cochran (1961) and Uetz et al. (2019), is not a type, discussed by Reynolds et al. (2007).

Cinosternum postinguinale Cope 1887:23 (*nomen novum*)

Kinosternon postinguinale, *Kinosternon leucostomum postinguinale*

Type locality: "E. coast Costa Rica."

Type specimens: USNM 45582, 51165 (lost), syntypes (2) by default; USNM 19797, listed as a "syntype" by Cochran (1961), is not a type, discussed by Reynolds et al. (2007).

Comment: Justified emendation for *brevigulare*.

Cinosternum spurrelli Boulenger 1913:1030

Kinosternon spurrelli, *Kinosternon leucostomum spurrelli*

Type locality: "Choco, Colombia...Peña Lisa, Condoto, altitude 300 feet."

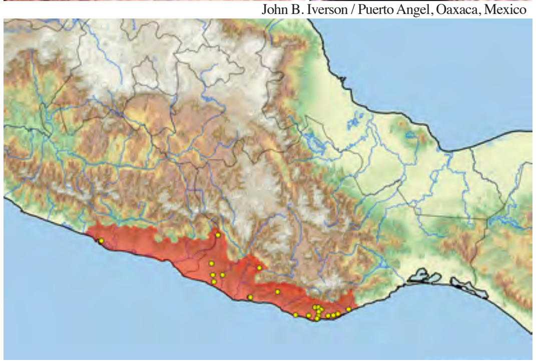
Type specimen: NHMUK 1946.11.12.1 (formerly 1913.11.12.1), holotype.

Kinosternon oaxacae Berry and Iverson 1980

Oaxaca Mud Turtle, *Casquito de Oaxaca*

John B. Iverson / Puerto Angel, Oaxaca, Mexico


John B. Iverson / Puerto Angel, Oaxaca, Mexico



*

Distribution: Mexico (Guerrero, Oaxaca)

Presumed Historic Indigenous Range: 21,275 sq. km

Size (Max SCL): male 17.5 cm, female 15.7 cm (Iverson 1986; Ceballos et al. 2013)

IUCN Red List: Data Deficient (DD) (van Dijk and Canseco-Marquez 2007); Previously: Near Threatened (TFTSG 1996)

TFTSG Provisional Red List: Least Concern (LC) (2018)

Synonymy:

Kinosternon oaxacae Pritchard 1979:557 (*nomen suppressum*)

Type locality: "vicinity of Pochutla, Oaxaca" [Mexico].

Type specimen: Not designated.

Comment: Name suppressed by ICZN (1985c), see Pritchard and Pronek (1982).

Kinosternon oaxacae Berry and Iverson 1980:313 (*nomen conservandum*)

Type locality: "11.6 km N. of Pochutla (San Pedro Pochutla), along Mexican Hwy. 175 (ca. 235 m), Oaxaca, Mexico (15°46'N, 96°28'W)."

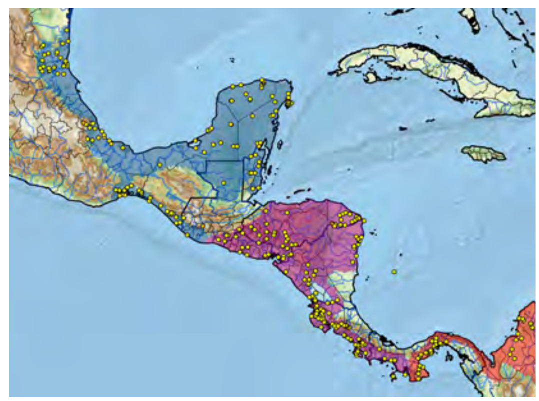
Type specimen: UCM 48857, holotype.

Comment: Name conserved by ICZN (1985c), see Pritchard and Pronek (1982).

Kinosternon scorpioides (Linnaeus 1766)

Scorpion Mud Turtle

(includes 3 subspecies)



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(subspecies: *scorpioides* = red, *albogulare* = purple, *cruentatum* = blue; orange dots = questionable or trade or introduced)

Distribution: Argentina (Chaco, Formosa, Jujuy, Salta, Tucumán), Belize, Bolivia, Brazil (Acre, Alagoas, Amapá, Amazonas, Bahia, Ceará, Goiás, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Paraiba, Pernambuco, Piauí, Rio Grande do Norte, Rondônia, Sergipe, Tocantins), Colombia (Amazonas, Antioquia, Arauca, Atlántico, Bolívar, Caldas, Caquetá, Casanare, Cesar, Chocó, Córdoba, Guainía, Magdalena, Meta, Norte de Santander, Putumayo, San Andrés, Sucre, Vaupés, Vichada), Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico (Campeche, Chiapas, Oaxaca, Quintana Roo, Tabasco, Tamaulipas, Veracruz, Yucatán), Nicaragua, Panama, Paraguay, Peru (Amazonas, Huánuco, Loreto, Madre de Dios, Ucayali), Suriname, Trinidad, Venezuela (Amazonas, Apure, Aragua, Bolívar, Cojedes, Falcón, Guárico, Lara, Monagas, Portuguesa, Sucre, Táchira, Trujillo, Yaracuy, Zulia)

Presumed Historic Indigenous Range: 7,782,398 sq. km

Size (Max SCL): male 20.5 cm, female 19.5 cm (see subspp.)

CBFTT Account: Berry and Iverson (2011)

IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

TFTSG Provisional Red List: Regional (South America): Least Concern (LC) (2011)

Kinosternon scorpioides scorpioides (Linnaeus 1766) (07:8)

Scorpion Mud Turtle, *Muçuã, Tapaculo*

Frank Deschandol / French Guiana

John B. Iverson / CBFTT / *left*: Colombia / *right*: Cojedes, Venezuela

*

(subspecies: *scorpioides* = red, *albogulare* = purple)

Distribution: Argentina (Chaco, Formosa, Jujuy, Salta, Tucumán), Bolivia, Brazil (Acre, Alagoas, Amapá, Amazonas, Bahia, Ceará, Goiás, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Paraiba, Pernambuco, Piauí, Rio Grande do Norte, Rondônia, Sergipe, Tocantins), Colombia (Amazonas, Antioquia, Arauca, Atlántico, Bolívar, Caldas, Caquetá, Casanare, Cesar, Chocó, Córdoba, Guainía, Magdalena, Meta, Norte de Santander, Putumayo, Sucre, Vaupés, Vichada), Ecuador, French Guiana, Guyana, Panama, Paraguay, Peru (Amazonas, Huánuco, Loreto, Madre de Dios, Ucayali), Suriname, Trinidad, Venezuela (Amazonas, Apure, Aragua, Bolívar, Cojedes, Falcón, Guárico, Lara, Monagas, Portuguesa, Sucre, Táchira, Trujillo, Yaracuy, Zulia)

Presumed Historic Indigenous Range: 7,136,270 sq. km

Size (Max SCL): male 18.5 cm, female 19.5 cm (Freiberg 1936; Métrailler and Le Gratiet 1996)

Synonymy:

Testudo scorpioides Linnaeus 1766:352

Emys scorpioides, Chersine scorpioides, Terrapene scorpioidea, Cinosternon scorpioidea, Kinosternon scorpioides, Kinosternon scorpoides, Uronyx scorpioides, Terrapene scorpioides, Cinosternon scorpioides, Clemmys (Cinosternon) scorpioidea, Kinosternum scorpioides, Cinosternum scorpioides, Thyrosternum scorpioides, Swanka scorpioides, Swanka scorpoides, Swanka scorpioides, Cinosternum scorpioides scorpioides, Kinosternon scorpioides scorpioides

Type locality: "Surinami" [Surinam].

Type specimen: Possibly UUZM or NRM, but no types located, see Schoepff (1792:xi), not listed by Linné and Thunberg (1780), Thunberg (1828), Lönnberg (1896), Andersson (1900), Holm (1957), or Wallin (2001).

Comment: Description did not cite any sourced references or designated specimens, see also Schoepff (1792:xi).

Testudo tricarinata Retzius *in* Schoepff 1792:9 (senior homonym, not = *Testudo tricarinata* Bory de Saint-Vincent 1804 [= *Geoemyda spengleri*])

Terrapene tricarinata, Clemmys tricarinata

Type locality: Not known. Restricted to "Surinam" by Fritz and Havaš (2007:256).

Type specimen: UPSZTY 284 (formerly UUZM 284 and MGA 53), holotype, listed by Thunberg (1810, 1828), Holm (1957), and Wallin (2001), type specimen figured in Schoepff (1792:pl.2).

Testudo retzii Daudin 1801:174 (*nomen novum*)

Emys retzii, Terrapene retzii

Type locality: Not known. Restricted to "Surinam" by Fritz and Havaš (2007:256).

Type specimen: Type specimen: UPSZTY 284 (formerly UUZM 284 and MGA 53), holotype by default, see Thunberg (1828), Holm (1957), and Wallin (2001).

Comment: Unjustified replacement name for *tricarinata*.

Kinosternon longicaudatum Spix 1824:17 (*nomen conservandum*)

Cinosternon longicaudatum, Kinosternum longicaudatum, Cinosternum longicaudatum, Thyrosternum longicaudatum, Swanka longicaudata

Type locality: "Brasiliam...ad campis aquosis" [Brazil].

Type specimen: ZSM 2375/0, lectotype, designated by Hoogmoed and Gruber (1983:353), see Franzen and Glaw (2007).

Comment: Name conserved by ICZN (1989), see Smith et al. (1980b).

Kinosternon brevicaudatum Spix 1824:18

Cinosternon brevicaudatum, Kinosternum brevicaudatum, Cinosternum brevicaudatum

Type locality: "Brasiliam...ad ripam fluminis Solimöens" [Amazonas, Brazil].

Type specimens: ZSM, holotype or syntypes, apparently lost, including type specimen figured (pl.13), see Hoogmoed and Gruber (1983).

Kinosternon shavianum Bell 1825a:302

Cinosternon shavianum, Cinosternum shavianum, Thyrosternum shavianum

Type locality: Not known.

Type specimen: Originally OUM, not located, not listed by Nowak-Kemp and Fritz (2010)..

Monoclida retziana Rafinesque 1832:64 (*nomen novum*)

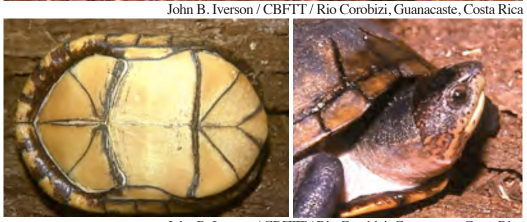
Testudo retziana

Comment: Unjustified replacement name for *tricarinata*.

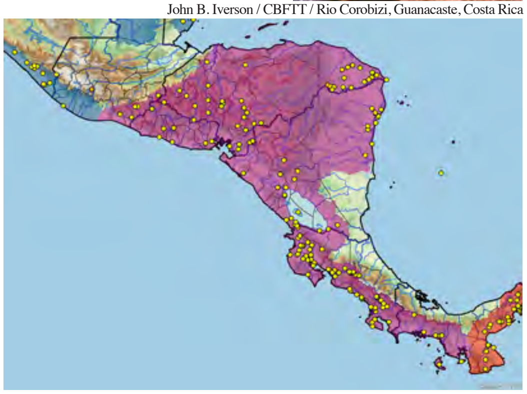
Cinosternon shawianum Bocourt 1876a:387 (*nomen novum*)
Comment: Unjustified emendation of *shavianum*.
Cinosternum scorpioides integrum brasiliana Siebenrock 1907:579 (unavailable name)
Type locality: “Südamerika” [Brazil].
Type specimen: Possibly NMW, not located, not listed by Tiedemann et al. (1994) or Tiedemann and Grillitsch (1999).
Kinosternon scorpioides pachyurum Müller and Hellmich 1936:100
Type locality: “Bolivien...Chaco...Villa Montes” [Bolivia].
Type specimens: ZSM 129/1928/1–2, syntypes (2); ZSM 128/1928a–b, also syntypes (2), destroyed during WW II, see Franzen and Glaw (2007).
Kinosternon scorpioides seriei Freiberg 1936:169 (07:8)
Type locality: “El Tabacal (Salta)” [Argentina].
Type specimen: MACN 1247, holotype.
Kinosternon panamensis Schmidt 1946:5
Type locality: “Panama Railroad, Canal Zone” [Panama].
Type specimen: USNM 117369 (formerly MCZ 7996), holotype, see Cochran (1961) and Reynolds et al. (2007).
Kinosternon scorpioides carajasensis Cunha 1970:1 (07:8)
Type locality: “compartimento da serra dos Carajás (serra Norte) Pará” [Brazil].
Type specimen: MPEG 15, holotype.

Kinosternon scorpioides albogulare Duméril and Bocourt 1870
White-throated Mud Turtle

John B. Iverson / CBFTT / Rio Corobizi, Guanacaste, Costa Rica



John B. Iverson / CBFTT / Rio Corobizi, Guanacaste, Costa Rica



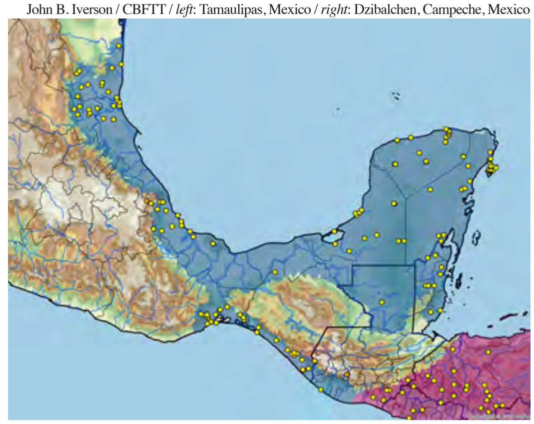
*
(subspecies: *scorpioides* = red, *albogulare* = purple, *cruentatum* = blue; orange dot = questionable or trade or introduced)

Distribution: Colombia (Archipiélago de San Andrés, Providencia y Santa Catalina [prehistoric or modern introduction?]), Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama
Presumed Historic Indigenous Range: 290,776 sq. km
Size (Max SCL): male 20.5 cm, female 17.1 cm (Iverson 2010; Berry and Iverson 2011 CBFTT; Legler and Berry, unpubl. data)
CBFTT Account: Forero-Medina and Castaño-Mora (2011)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Cinosternon albogulare Duméril and Bocourt 1870:24
Cinosternum albogulare, Kinosternon cruentatum albogulare, Kinosternon scorpioides albogulare
Type locality: “S. Jose (Costa Rica).”
Type specimens: MNHN 1760 and 4349, syntypes (2), 1760 erroneously listed as “holotype” by Berry and Iverson (2001b:5); Uetz et al. (2019) listed MNHN 1760 and 4349 as syntypes.

Kinosternon scorpioides cruentatum Duméril and Bibron *in* Duméril and Duméril 1851
Red-cheeked Mud Turtle, *Chachagua*

John B. Iverson / CBFTT / Manuel, Tamaulipas, Mexico

John B. Iverson / CBFTT / *left*: Tamaulipas, Mexico / *right*: Dzibalchen, Campeche, Mexico



*
(subspecies: *albogulare* = purple, *cruentatum* = blue; orange dots = questionable or trade or introduced)

Distribution: Belize, Guatemala, Mexico (Campeche, Chiapas, Oaxaca, Quintana Roo, Tamaulipas, Veracruz, Yucatán)
Presumed Historic Indigenous Range: 355,352 sq. km
Size (Max SCL): male 16.6 cm, female 14.8 cm (Iverson 2010; Berry and Iverson 2011 CBFTT)
Synonymy:
Cinosternon cruentatum Duméril and Bibron *in* Duméril and Duméril 1851:16
Kinosternum cruentatum, Kinosternon cruentatum,

Cinosternum cruentatum, Swanka cruentata, Thyrosternum cruentatum, Kinosternon cruentatum cruentatum, Kinosternon scorpioides cruentatum

Type locality: "Amér. septentr." Restricted to "San Mateo del Mar, Oaxaca, Mexico" by Smith and Taylor (1950a:339, 1950b:23).

Type specimen: MNHN 1759, holotype, discussed by Bour (2004a).

Kinosternum mexicanum Le Conte 1854:182

Cinosternum mexicanum, Cinosternon mexicanum, Kinosternon mexicanum, Swanka mexicana

Type locality: "Mexico." Restricted to "San Mateo del Mar, Oaxaca, Mexico" by Smith and Taylor (1950a:339, 1950b:23).

Type specimen: ANSP 90, holotype, see Malnate (1971).

Kinosternum triliratum Le Conte 1860:6

Cinosternon triliratum, Swanka trilirata, Cinosternum triliratum

Type locality: "Mexico." Restricted to "San Mateo del Mar, Oaxaca, Mexico" by Smith and Taylor (1950a:339, 1950b:23).

Type specimen: Possibly ANSP, apparently lost, not listed by Malnate (1971).

Kinosternon cruentatum consors Stejneger 1941:458

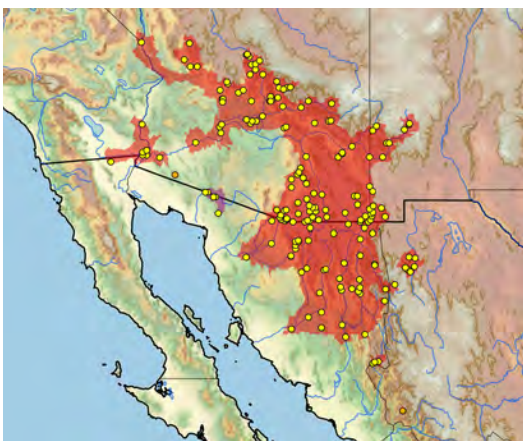
Type locality: "Cozumel Island, Yucatan, Mexico."

Type specimen: USNM 13912, holotype, see Cochran (1961) and Reynolds et al. (2007).

Kinosternon sonoriense Le Conte 1854

Sonora Mud Turtle, *Casquito de Sonora*

(includes 2 subspecies)



*

(subspecies: *sonoriense* = red, *longifemorale* = purple; orange dots = questionable)

Distribution: Mexico (Baja California, Chihuahua, Sonora), USA (Arizona, California [extirpated], New Mexico)

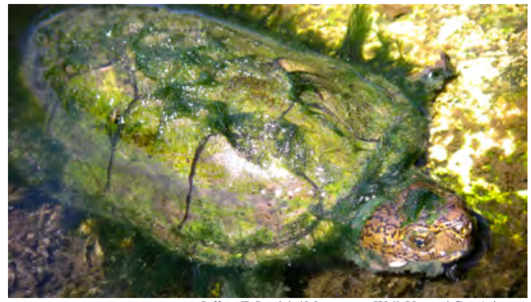
Presumed Historic Indigenous Range: 170,011 sq. km

Size (Max SCL): male 16.9 cm, female 17.5 cm (see subspp.)

IUCN Red List: Near Threatened (NT) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)

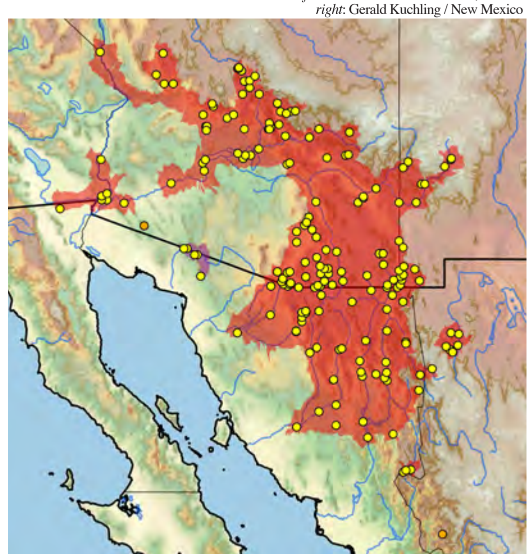
Kinosternon sonoriense sonoriense Le Conte 1854

Sonora Mud Turtle, *Casquito de Sonora*



Jeffrey E. Lovich / Montezuma Well, Yavapai Co., Arizona

left: John B. Iverson / Chihuahua, Mexico
right: Gerald Kuchling / New Mexico



*

(subspecies: *sonoriense* = red, *longifemorale* = purple; orange dots = questionable)

Distribution: Mexico (Chihuahua, Sonora), USA (Arizona, California [extirpated], New Mexico)

Presumed Historic Indigenous Range: 168,307 sq. km

Size (Max SCL): male 16.9 cm, female 17.5 cm (Iverson 1981; van Loben Sels et al. 1997; Ceballos et al. 2013; Legler and Vogt 2013)

Synonymy:

Kinosternum sonoriense Le Conte 1854:184

Kinosternon sonoriense, Cinosternum sonoriense, Thyrosternum sonoriense, Cinosternon sonoriense, Kinosternon sonoriense sonoriense

Type locality: "Tucson...province of Sonora" [originally Mexico, now Arizona, USA].

Type specimen: Possibly ANSP, apparently lost, not listed by Malnate (1971); Uetz et al. (2019) erroneously list USNM 21710, the holotype for *Kinosternon sonoriense longifemorale*.

Kinosternum henrici Le Conte 1860:4

Thyrosternum henrici, Cinosternon henrici, Cinosternum henrici, Swanka henrici

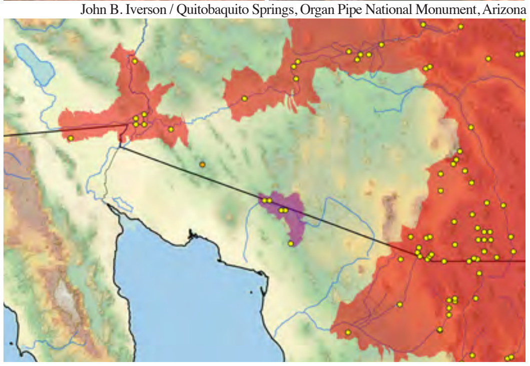
Type locality: "New Mexico" [USA]. Data with holotype is "Gila River, New Mexico"; incorrectly restricted to "vicinity of Las Cruces" [New Mexico, USA] by Schmidt (1953:91), see Malnate (1971).

Type specimen: ANSP 83, holotype, see Malnate (1971).

Kinosternon sonoriense longifemorale Iverson 1981
Sonoyta Mud Turtle, *Casquito de Sonoyta*


John B. Iverson / Quitobaquito Springs, Organ Pipe National Monument, Arizona


John B. Iverson / Quitobaquito Springs, Organ Pipe National Monument, Arizona

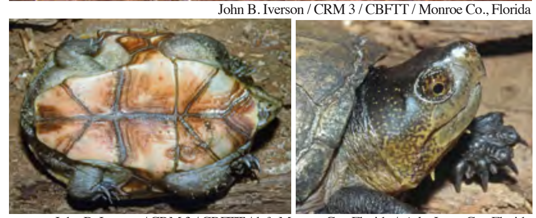

*

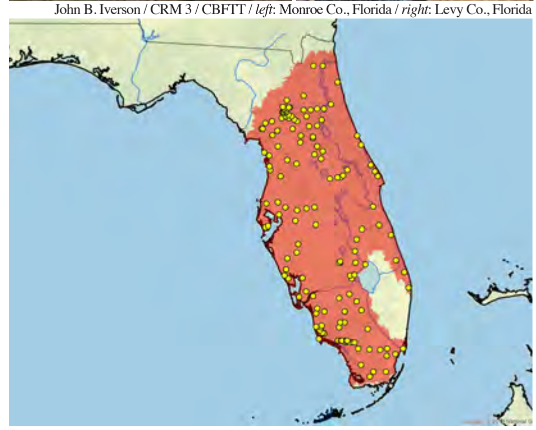
(subspecies: *sonoriense* = red, *longifemorale* = purple; orange dot = questionable)

Distribution: Mexico (Sonora), USA (Arizona)
Presumed Historic Indigenous Range: 1,704 sq. km
Size (Max SCL): male 14.8 cm, female 16.0 cm (Rosen and Stone 2017 IUCN; Bogan and Grageda García, unpubl. data)
IUCN Red List: Critically Endangered (CR A3c) (Rosen and Stone 2017)
Synonymy:
Kinosternon sonoriense longifemorale Iverson 1981:43
Type locality: "artificial pond fed by springs, Sonoyta, Sonora, Mexico (31°51' N, 112°50' W)."
Type specimen: USNM 21710, holotype, see Reynolds et al. (2007).

Kinosternon steindachneri Siebenrock 1906b (12:11, 14:12, 17:12)
Florida Mud Turtle


John B. Iverson / CRM 3 / CBFTT / Monroe Co., Florida


John B. Iverson / CRM 3 / CBFTT / *left*: Monroe Co., Florida / *right*: Levy Co., Florida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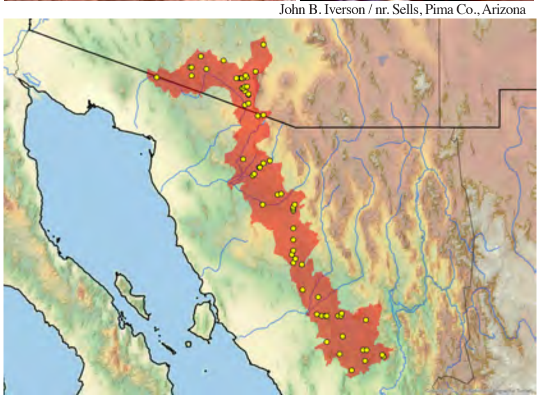
Distribution: USA (Florida)
Presumed Historic Indigenous Range: 93,472 sq. km
Size (Max SCL): male 11.4 cm, female 10.6 cm (Meshaka et al. 2017 CBFTT)
CBFTT Account: Meshaka, Gibbons, Hughes, Klemens, and Iverson (2017) as part of *Kinosternon subrubrum*
IUCN Red List: Least Concern (LC) (van Dijk 2011), as subspecies of *Kinosternon subrubrum*
Synonymy:
Cinosternum steindachneri Siebenrock 1906b:727
Kinosternon steindachneri, Kinosternon subrubrum steindachneri
Type locality: "Orlando in Florida" [USA].
Type specimens: NMW 23388:1–2, NHMUK 1946.1.22.23–24 (formerly 1922.6.16.3–4), syntypes (4), see Tiedemann and Häupl (1980), Iverson (1992), Tiedemann et al. (1994), and Gemel et al. (2019); Uetz et al. (2019) listed only NHMUK 1946.1.22.23–24.

Kinosternon stejnegeri (Hartweg 1938) (07:6, 09:10, 17:13)
[previously *Kinosternon arizonense*]
Arizona Mud Turtle

John B. Iverson / nr. Sells, Pima Co., Arizona

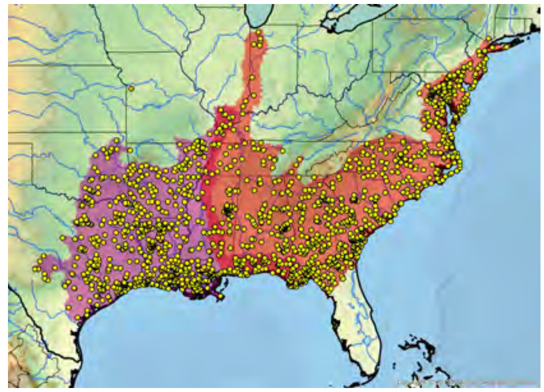
John B. Iverson / nr. Sells, Pima Co., Arizona



*

Distribution: Mexico (Sonora), USA (Arizona)
Presumed Historic Indigenous Range: 28,423 sq. km
Size (Max SCL): male 18.1 cm, female 16.7 cm (Iverson 1989; Ceballos et al. 2013)
IUCN Red List: Least Concern (LC) (Frost et al. 2007), as *Kinosternon arizonense*
Synonymy:
Kinosternon flavescens stejnegeri Hartweg 1938:1 (17:13)
Kinosternon stejnegeri
Type locality: "Llano, Sonora...approximately midway between Nogales and Hermosillo" [Mexico].
Type specimen: UMMZ 72235, holotype, see Peters (1952) and Kluge (1984).
Comment: The Arizona Mud Turtle was listed in our checklists prior to TTWG (2017) as *Kinosternon arizonense* † Gilmore 1923, but that taxon is now considered a separate extinct species from the Pliocene–Pleistocene, with *K. stejnegeri* (Hartweg 1938) considered the extant species.

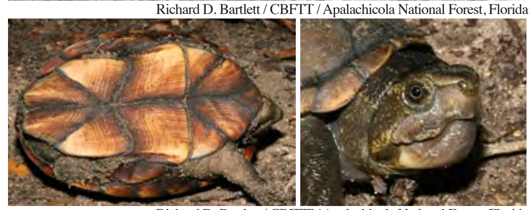
Kinosternon subrubrum (Bonnaterre 1789) (09:6, 14:12)
Common Mud Turtle
(includes 2 subspecies)



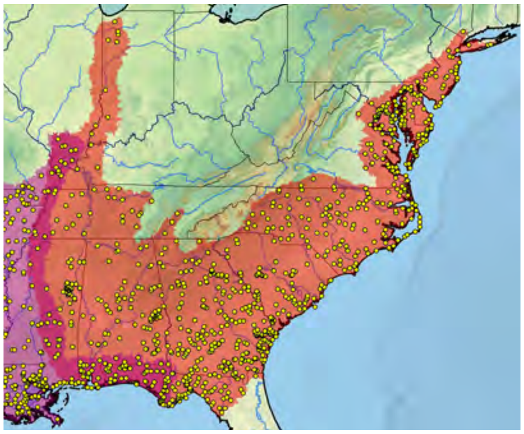
(subspecies: *subrubrum* = red, *hippocrepis* = purple; overlap = intergrades; orange dot = possibly introduced)
Distribution: USA (Alabama, Arkansas, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Mississippi, Missouri, New Jersey, New York, North Carolina, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia)
Presumed Historic Indigenous Range: 1,401,264 sq. km
Size (Max SCL): male 11.6 cm, female 12.5 cm (see subspp.)
CBFTT Account: Meshaka, Gibbons, Hughes, Klemens, and Iverson (2017)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)

Kinosternon subrubrum subrubrum (Bonnaterre 1789) (09:6)
Eastern Mud Turtle

Richard D. Bartlett / CBFTT / Apalachicola National Forest, Florida



Richard D. Bartlett / CBFTT / Apalachicola National Forest, Florida


*
(subspecies: *subrubrum* = red, *hippocrepis* = purple; overlap = intergrades)

Distribution: USA (Alabama, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Maryland, Mississippi, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Virginia)

Presumed Historic Indigenous Range: 819,921 sq. km

Size (Max SCL): male 11.6 cm, female 12.5 cm (Meshaka et al. 2017 CBFTT)

Synonymy:

Testudo subrubra Lacepède 1788:132, synopsis[table] (09:6) (*nomen suppressum*)
Type locality: "Pensylvanie" [Pennsylvania, USA]. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:90).
Type specimen: Not located, holotype, originally live, figured in Edwards (1760:pl.287), sent to England in 1757 by W. Bartram.
Comment: Description cited as sourced from Edwards (1760:pl.287). Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo subrubra Bonnaterre 1789:27
Kinosternon subrubrum, Kinosternon subrubrum subrubrum
Type locality: "Pensylvanie" [Pennsylvania, USA].
Type specimen: Not located, holotype, originally live, figured in Edwards (1760:pl.287), sent to England in 1757 by W. Bartram.
Comment: Description cited as sourced from Lacepède (1788) and Edwards (1760).

Testudo pensilvanica Gmelin 1789:1042
Emydes pensilvanica, Kinosternon pensilvanicum, Cinosternum pensilvanicum
Type locality: "Pensilvaniae aquis stagnantibus" [Pennsylvania, USA]. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:90).
Type specimen: Not located, holotype, originally live, type specimen figured in Edwards (1760:pl.287) and Seligmann (1773:pl.77), sent to England in 1757 by W. Bartram.
Comment: Description cited as sourced from Seligmann (1773:pl. LXXVII), which is the same figure as in Edwards (1760:pl.287).

Emys pensylvanica Schweigger 1812:282 (*nomen novum*)
Terrapene pensylvanica, Terrapene pensyluanica, Cistuda pensylvanica, Sternotherus pensylvanica, Kinosternum pensylvanicum, Cinosternon pensylvanicum, Clemmys (Cinosternon) pensylvanica, Kinosternon pensylvanicum, Cinosternum pensylvanicum
Comment: Unjustified emendation of *pensilvanica*.

Kinosternon pennsylvanicum Bell 1825a:304 (*nomen novum*)
Emys (Kinosternon) pennsylvanica, Kinosternum pennsylvanicum, Cinosternon pennsylvanicum, Cinosternum pennsylvanicum, Cistudo pennsylvanica, Terrapene pennsylvanica, Thyrosternum pennsylvanicum
Comment: Unjustified emendation of *pensilvanica*.

Kinosternon (Kinosternon) doubledayii Gray 1844:33
Kinosternon doubledayii, Kinosternum doubledayii, Cinosternum doubledayii, Cinosternon doubledayii
Type locality: "California" [in error]. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:90).
Type specimen: NHMUK 1947.3.4.67, holotype.

Kinosternon (Kinosternon) oblongum Gray 1844:33
Kinosternon oblongum, Cinosternum oblongum
Type locality: "America." Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:90).
Type specimens: NHMUK 1947.3.4.65–66, syntypes (2).

Kinosternon punctatum Gray 1856a:198
Cinosternum punctatum
Type locality: "North America." Restricted to "East Florida" [USA] by Gray (1856b:46).
Type specimen: NHMUK 1946.1.22.30, holotype.

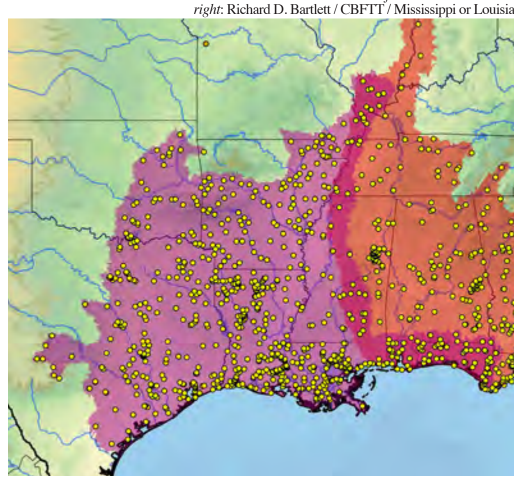
Swanka fasciata Gray 1869a:183
Type locality: Not known. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:90).
Type specimen: NHMUK 1946.1.22.92, holotype.

Kinosternon subrubrum hippocrepis Gray 1856a (17:14)
Mississippi Mud Turtle


Richard D. Bartlett / CBFTT / Mississippi or Louisiana



left: John B. Iverson / Texas
right: Richard D. Bartlett / CBFTT / Mississippi or Louisiana


*
(subspecies: *subrubrum* = red, *hippocrepis* = purple; overlap = intergrades; orange dot = possibly introduced)

Distribution: USA (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, Texas)

Presumed Historic Indigenous Range: 682,552 sq. km

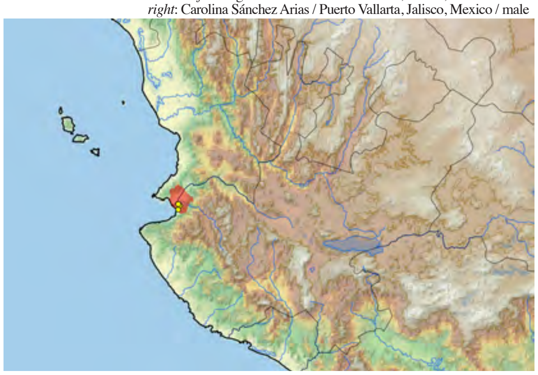
Size (Max SCL): male 10.7 cm, female 11.1 cm (Meshaka et al. 2017 CBFTT)
Synonymy:
Kinosternon hippocrepis Gray 1856a:198 [17:14]
Cinosternum hippocrepis, *Cinosternon hippocrepis*, *Kinosternon subrubrum hippocrepis*
Type locality: "North America; New Orleans" [Louisiana, USA].
Type specimens: NHMUK 1946.1.22.16–17, syntypes (2).
Kinosternon louisianae Baur 1893c:676
Cinosternum louisianae
Type locality: "New Orleans, La." [Louisiana, USA].
Type specimen: USNM 15527, holotype, see Cochran (1961) and Reynolds et al. (2007).

Kinosternon vogti López-Luna, Cupul-Magaña, Escobedo-Galván, González-Hernández, Centenero-Alcala, Rangel-Mendoza, Ramírez-Ramírez, and Cazares-Hernández 2018 [**48**]
Vallarta Mud Turtle, *Casquito de Vallarta*


Carolina Sánchez Arias / CCB / Puerto Vallarta, Jalisco, Mexico / male



left: Craig B. Stanford / Puerto Vallarta, Jalisco, Mexico / male
right: Carolina Sánchez Arias / Puerto Vallarta, Jalisco, Mexico / male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Distribution: Mexico (Jalisco, Nayarit [?])
Presumed Historic Indigenous Range: 700 sq. km
Size (Max SCL): male 10.2 cm, female 8.9 cm (López-Luna et al. 2018)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Critically Endangered (CR) (2018)
Synonymy:
Kinosternon vogti López-Luna, Cupul-Magaña, Escobedo-Galván, González-Hernández, Centenero-Alcala, Rangel-Mendoza, Ramírez-Ramírez, and Cazares-Hernández 2018:4
Type locality: "Puerto Vallarta, Jalisco, Mexico (WSG84, 20º38'24.99"N, 105º13'55.57"W, 10 m elev. masl)."
Type specimen: CNAR 31568 (formerly IBH), holotype.

Sternotherus Bell *in* Gray 1825 [07:9, 17:10]

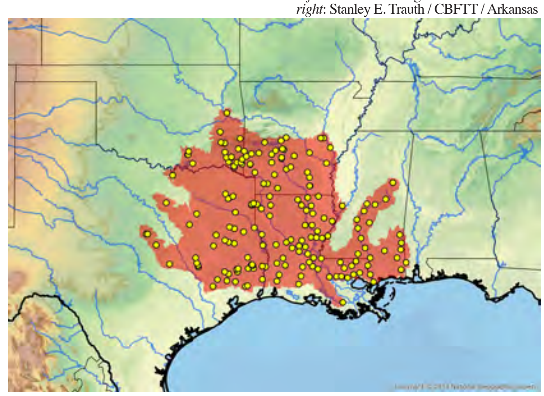
Sternothaerus Bell 1825a:305 (*partim, nomen suppressum*)
Type species: *Sternothaerus leachianus* Bell 1825a [= subjective synonym of *Emys castanea* Schweigger 1812 = *Pelusios castaneus*], by subsequent designation by Bell (1828c:515); not *Sternothaerus odoratus* Bell [= *Testudo odorata* Latreille *in* Sonnini and Latreille 1801], by subsequent incorrect designation by Fitzinger (1843:290).
Comment: Name suppressed by ICZN (1989), see Smith et al. (1980b).
Sternotherus Bell *in* Gray 1825:211 [Bell 1825b] (*nomen conservandum*)
Type species: *Sternotherus odoratus* [= *Testudo odorata* Latreille *in* Sonnini and Latreille 1801], by subsequent designation by Stejneger (1902:237).
Comment: Name conserved by ICZN (1989), see Smith et al. (1980b).
Aromochelys Gray 1856a:199
Type species: *Aromochelys odorata* [= *Testudo odorata* Latreille *in* Sonnini and Latreille 1801], by subsequent designation by Strauch (1862:38).
Ozotheca Agassiz 1857a:251,424
Type species: *Ozotheca odorata* [= *Testudo odorata* Latreille *in* Sonnini and Latreille 1801], by subsequent designation by Lindholm (1929:277).
Goniochelys Agassiz 1857a:420,423
Type species: *Goniochelys triquetra* Agassiz 1857a [= subjective synonym of *Aromochelys carinata* Gray 1856a], by subsequent designation by Lindholm (1929:277).

Sternotherus carinatus (Gray 1856a)
Razor-backed Musk Turtle


Robert C. Thomson / CBFTT / Pascagoula R., Mississippi



left: James H. Harding / CBFTT / Louisiana
right: Stanley E. Trauth / CBFTT / Arkansas



Distribution: USA (Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Texas)

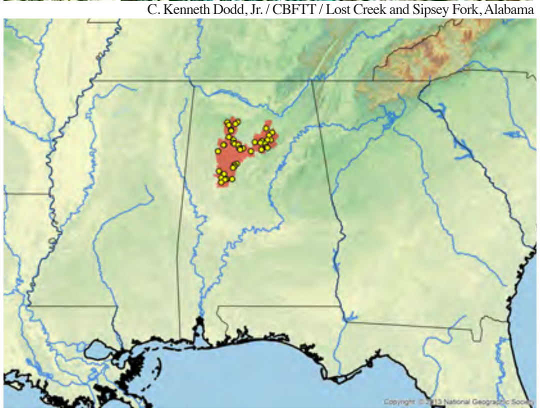
Presumed Historic Indigenous Range: 365,144 sq. km
Size (Max SCL): male 20.9 cm, female 15.5 cm (Iverson 2002; Lindeman 2008 CBFTT)
CBFTT Account: Lindeman (2008)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Aromochelys carinata Gray 1856a:199
Aromochelys carinatum, Aromochelys carinatus, Goniochelys carinata, Cinosternum carinata, Kinosternon carinatum, Sternotherus carinata, Sternotherus carinata carinata, Kinosternon carinata, Sternothaerus carinatus, Sternotherus carinatus
Type locality: "North America, Louisiana" [USA]. Restricted to "vicinity of New Orleans" [Louisiana, USA] by Schmidt (1953:87).
Type specimens: NHMUK 1947.3.4.32, 1947.3.4.64, 1947.3.4.83–84 (formerly 1854.7.1.15, 1855.12.17.5, 1856.12.17.4), syntypes (4).
Goniochelys triquetra Agassiz 1857a:420,423
Type locality: "Lake Concordia, in Louisiana" [USA].
Type specimens: MCZ 15085–86, 46634–35, USNM 2, syntypes (5), see Barbour and Loveridge (1929); USNM 2 lost, see Reynolds et al. (2007).

Sternotherus depressus Tinkle and Webb 1955 (07:10, 17:15)
Flattened Musk Turtle


C. Kenneth Dodd, Jr. / CBFTT / TCC / Gurley Creek, Alabama



C. Kenneth Dodd, Jr. / CBFTT / Lost Creek and Sipsey Fork, Alabama



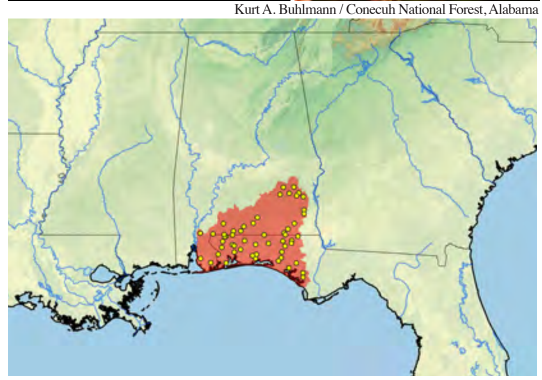
Distribution: USA (Alabama)
Presumed Historic Indigenous Range: 7,285 sq. km
Size (Max SCL): male 9.9 cm, female 12.5 cm (Dodd 2008 CBFTT)
CBFTT Account: Dodd (2008)
IUCN Red List: Critically Endangered (CR A2bce+4bce) (van Dijk 2011); Previously: Vulnerable (VU) (TFTSG 1996)
Synonymy:
Sternotherus depressus Tinkle and Webb 1955:53
Sternothaerus depressus, Sternotherus minor depressus, Kinosternon depressum, Kinosternon depressus
Type locality: "Mulberry Fork of the Black Warrior River, 9 miles east of Jasper, Walker County, Alabama, near the bridge crossing of U.S. highway 78" [USA].
Type specimen: LSUM 109567 (formerly TU 16171), holotype.

Sternotherus intermedius Scott, Glenn, and Rissler 2018 (49)
Intermediate Musk Turtle


Peter A. Scott / Econfina River, Florida



Kurt A. Buhlmann / Conecuh National Forest, Alabama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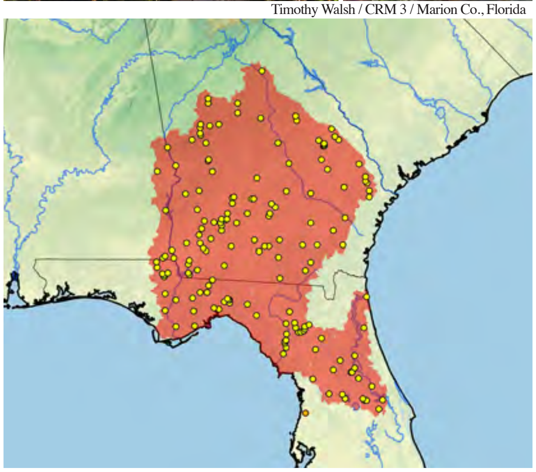
Distribution: USA (Alabama, Florida)
Presumed Historic Indigenous Range: 36,307 sq. km
Size (Max SCL): male 11.6 cm, female 10.8 cm (Iverson and Scott, unpubl. data)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Least Concern (LC) (2018)
Synonymy:
Sternotherus intermedius Scott, Glenn, and Rissler 2018:13
Type locality: "Blackwater River ca. 1 mi NW of Milton airfield (now Peter Prince Field), Santa Rosa Co. FL" [Florida, USA].
Type specimen: UAHC 68-814, holotype.

Sternotherus minor (Agassiz 1857a) [(49)]
Loggerhead Musk Turtle

John B. Iverson / Levy Co., Florida

Timothy Walsh / CRM 3 / Marion Co., Florida



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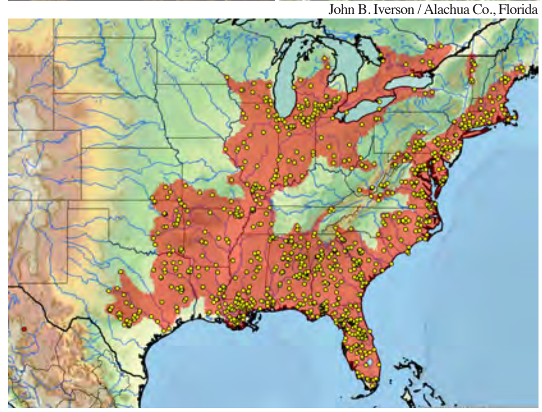
(orange dot = introduced)

Distribution: USA (Alabama, Florida, Georgia)
Presumed Historic Indigenous Range: 154,167 sq. km
Size (Max SCL): male 14.4 cm, female 14.5 cm (Camp 1986; Enge and Foster 1986; Zappalorti and Iverson 2006)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Goniochelys minor Agassiz 1857a:424
Aromochelys minor, Sternotherus minor, Sternotherus carinatus minor, Sternotherus minor minor, Sternothaerus minor minor, Kinosternon minor, Kinosternon minor minor
Type locality: "neighborhood of Mobile;...Columbus, Georgia;...and New Orleans" [USA]. Restricted to "Columbus, Georgia" [USA] by Schmidt (1953:88).
Type specimens: MCZ 1570, 1571(2), 1573, USNM 7111 (formerly MCZ 1572), UMMZ 63520 (formerly MCZ 1572), syntypes (6); MCZ 1573, USNM 7111, and UMMZ 63520 identified as *Sternotherus odoratus* by Tinkle (1958); see Barbour and Loveridge (1929), Peters (1952), Cochran (1961), Kluge (1984), and Reynolds et al. (2007).

Sternotherus odoratus (Latreille *in* Sonnini and Latreille 1801) [(50)]
Musk Turtle, Stinkpot, Common Musk Turtle

Peter May / CRM 3 / Volusia Co., Florida

John B. Iverson / Alachua Co., Florida



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(red dot = extirpated?)

Distribution: Canada (Ontario, Québec), Mexico? (Chihuahua? [extirpated?]); USA (Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin)
Presumed Historic Indigenous Range: 2,104,014 sq. km
Size (Max SCL): male 13.7 cm, female 15.0 cm (Ewert 2005; Ernst and Lovich 2009)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Testudo odorata Latreille *in* Sonnini and Latreille 1801:122 (*nomen conservandum*)
Emys odorata, Terrapene odorata, Cistuda odorata, Sternotherus odorata, Sternothaerus odoratus, Kinosternum odoratum, Emys (Kinosternon) odoratum, Kinosternon odoratum, Didicla odorata, Staurotypus odoratus, Clemmys (Sternothaerus) odorata, Cistudo odorata, Sternotherus odoratus, Aromochelys odorata, Aromochelys odoratum, Cinosternum odoratum, Ozotheca odorata
Type locality: "les eaux dormantes de la Caroline" [USA]. Restricted to "vicinity of Charleston, South Carolina" [USA] by Schmidt (1953:87).
Type specimen: Not located, type specimen figured (pl.opp.112,f.3).
Comment: Name conserved by ICZN (1989), see Smith et al. (1980b).

Testudo glutinata Daudin 1801:194

Emys glutinata, Clemmys glutinata

Type locality: "les Etats-Unis d'Amérique" [USA]. Restricted to "vicinity of Lancaster, Pennsylvania" [USA] by Schmidt (1953:87).

Type specimens: Possibly MNHN, not located, type specimens figured in Schoepff (1895:pl.24,f.B) and Daudin (1801:pl.24,f.4).

Terrapene boscii Merrem 1820:27

Sternothaerus boscii

Type locality: "America septentrionali." Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:87).

Type specimen: Not known or located.

Kinosternum guttatum Le Conte 1854:185

Cinosternum guttatum, Aromochelys guttata

Type locality: "Pennsylvania" [USA]. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:87).

Type specimen: ANSP 63, holotype, see Malnate (1971).

Ozotheca tristycha Agassiz 1857a:392,425

Aromochelys tristycha

Type locality: "Osage River, in Missouri, and in Williamson County, in Texas...near San Antonio,...Medina River, in Texas" [USA]. Restricted to "San Antonio" [Texas, USA] by Schmidt (1953:87).

Type specimens: MCZ 1574 (4), 1576 (2), 1922 (formerly USNM 70), USNM 64–65, 69–72, 7890, syntypes (14), see Barbour and Loveridge (1929), Cochran (1961), and Reynolds et al. (2007).

Testudo glutinosa Agassiz 1857a:425 (*nomen novum*)

Emys glutinosa

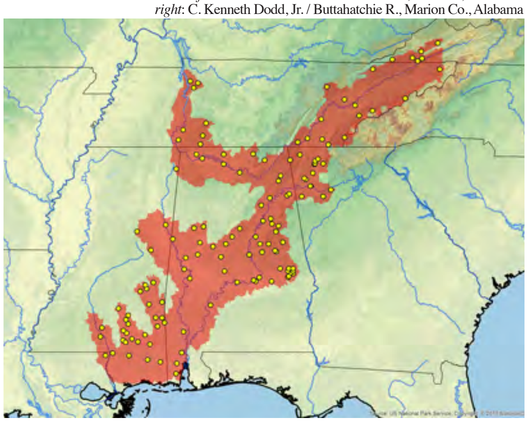
Comment: Unjustified emendation or error for *glutinata*.

Sternotherus peltifer Smith and Glass 1947 (17:16) (**49**)

Stripe-necked Musk Turtle

C. Kenneth Dodd, Jr. / Buttahatchie R., Marion Co., Alabama

left: Matthew L Niemiller / Hiwassee R., Polk Co., Tennessee
right: C. Kenneth Dodd, Jr. / Buttahatchie R., Marion Co., Alabama



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Distribution: USA (Alabama, Georgia, Louisiana, Mississippi, North Carolina, Tennessee, Virginia)

Presumed Historic Indigenous Range: 152,672 sq. km

Size (Max SCL): male 12.6 cm, female 12.4 cm (Scott, unpubl. data)

IUCN Red List: Least Concern (LC) (van Dijk 2011), as subspecies of *Sternotherus minor*

Synonymy:

Sternotherus peltifer Smith and Glass 1947:22

Sternotherus carinatus peltifer, Sternotherus minor peltifer, Sternothaerus minor peltifer, Kinosternon minor peltifer

Type locality: "Bassfield, Jefferson Davis County, 30 miles west of Hattiesburg, Miss." [Mississippi, USA].

Type specimen: TCWC 1205, holotype, see Tinkle and Webb (1955).

STAUROTYPINAE Gray 1869a (14:13) (**51**)

Staurotypina Gray 1869a:180
Staurotypinae Siebenrock 1907:531
Staurotypidae Bickham and Carr 1983:925

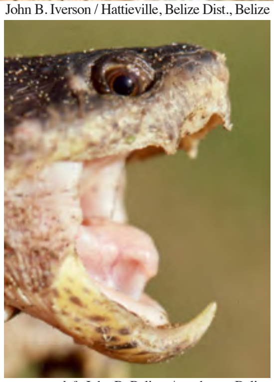
Claudius Cope 1865

Claudius Cope 1865:187
Type species: *Claudius angustatus* Cope 1865, by original monotypy.
Staurosternon Duméril *in* Bocourt 1868:122
Type species: *Claudius megalocephalus* Bocourt 1868 [= subjective synonym of *Claudius angustatus* Cope 1865], by original monotypy.

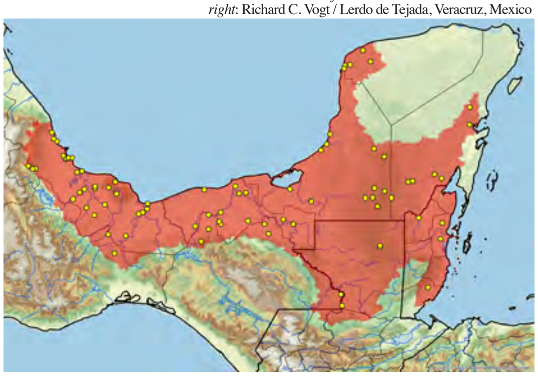
Claudius angustatus Cope 1865

Narrow-bridged Musk Turtle, *Chopontil*

John B. Iverson / Hattieville, Belize Dist., Belize



left: John R. Polisar / northwest Belize
right: Richard C. Vogt / Lerdo de Tejada, Veracruz, Mexico



*

Distribution: Belize, Guatemala, Mexico (Campeche, Chiapas, Oaxaca, Quintana Roo, Tabasco, Veracruz, Yucatán)
Presumed Historic Indigenous Range: 206,849 sq. km
Size (Max SCL): male 16.5 cm, female 15.0 cm (Iverson and Berry 1980; Ceballos et al. 2013; Legler and Vogt 2013)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
Synonymy:
Claudius angustatus Cope 1865:187
Claudius angustatum
Type locality: "Tabasco, Mexico."
Type specimen: USNM 6518, holotype (parts of the same specimen formerly USNM 6525), see Cochran (1961) and Reynolds et al. (2007).
Claudius megalocephalus Bocourt 1868:122
Type locality: "Mexico." Restricted to "Tabasco, Mexico" by Smith and Taylor (1950a:345).
Type specimen: MNHN 1600, holotype, see Smith and Smith (1980:34).
Claudius macrocephalus Gray 1873d:69 (*nomen novum*)
Comment: Unjustified emendation or error for *megalocephalus*.
Claudius megacephalus Boulenger 1889:33 (*nomen novum*)
Comment: Unjustified emendation or error for *megalocephalus*.
Claudius agassizii Smith and Taylor 1950a:345 (*nomen nudum*)

Staurotypus Wagler 1830b

Staurotypus Wagler 1830b:137
Type species: *Staurotypus triporcata* [= *Terrapene triporcata* Wiegmann 1828], by original monotypy.
Stauremys Gray 1864c:127
Type species: *Staurotypus (Stauremys) salvinii* Gray 1864c, by original monotypy.

Staurotypus salvinii Gray 1864c

Pacific Coast Musk Turtle, *Crucilla*

John B. Iverson / Puerto Arista, Chiapas, Mexico

John B. Iverson / Puerto Arista, Chiapas, Mexico

*

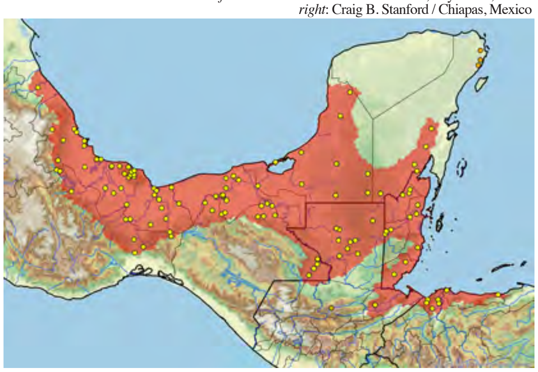
Distribution: El Salvador, Guatemala, Mexico (Chiapas, Oaxaca)
Introduced: USA (Florida)
Presumed Historic Indigenous Range: 36,949 sq. km
Size (Max SCL): male 18.6 cm, female 20.6 cm (Legler and Vogt 2013); Smith and Smith (1980) and Dean and Bickham (1983) cite ca. 25 cm as maximum, but without documentation.

IUCN Red List: Near Threatened (NT) (TFTSG 1996)
Synonymy:
Staurotypus (Stauremys) salvinii Gray 1864c:127
Stauremys salvinii, Staurotypus salvinii, Staurotypus salvini
Type locality: "Haumanchal, Guatemala." Emended to "Huamuchal, Guatemala" by Boulenger (1889:32); and to "Huamuchal, 14º04'N, 91º34'W, Suchitepequez Province, Guatemala...immediately west of the mouth of Rio Nagua" by Legler and Vogt (2013:99).
Type specimen: NHMUK 1946.1.22.79, holotype, see Stuart (1963).
Staurotypus marmoratus Fischer 1872:265
Type locality: "Mexico, Tejas." Restricted to "Santa Efigenia, Oaxaca, Mexico" by Smith and Taylor (1950a:339, 1950b:27).
Type specimens: Not located, possibly ZIN, type specimen figured (pl.10).
Claudius severus Cope 1872:24
Staurotypus (Claudius) severus
Type locality: "Santa Efigenia, on the western side of the Isthmus of Tehuantepec, Mexico."
Type specimen: USNM 64005, holotype, see Cochran (1961) and Reynolds et al. (2007).
Staurotypus biporcatus Gadow 1905:209 (*nomen nudum*)

Staurotypus triporcatus (Wiegmann 1828)
Northern Giant Musk Turtle, *Guao*

John B. Iverson / nr. Central Farms, Cayo Dist., Belize

left: John B. Iverson / nr. Central Farms, Cayo Dist., Belize
right: Craig B. Stanford / Chiapas, Mexico


*

(orange dots = probable trade or introduced)

Distribution: Belize, Guatemala, Honduras, Mexico (Campeche, Chiapas, Oaxaca, Quintana Roo, Tabasco, Veracruz)
Presumed Historic Indigenous Range: 216,934 sq. km
Size (Max SCL): male 37.8, female 40.2 cm (Legler and Vogt 2013)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
Synonymy:
Terrapene triporcata Wiegmann 1828:364
Staurotypus triporcata, Staurotypus triporcatus, Staurotypus (Staurotypus) triporcatus, Emys (Kinosternon) triporcata, Kinosternon triporcatum, Clemmys (Staurotypus) triporcata
Type locality: "Rio Alvarado" [Veracruz, Mexico].
Type specimen: ZMB 127, holotype, see Fritz et al. (1994); figured in Gutsche (2016:f.2).
Claudius pictus Cope 1872:26
Type locality: "Vera Paz" [Guatemala]. Emended to "Alta Verapaz" [Guatemala] by Smith and Taylor (1950a:317, 1950b:27); and to "a tributary of the Rio Polochic...Alta Verapaz, Guatemala" by Dunn and Stuart (1951:59).
Type specimen: MNHN 1589, holotype, apparently lost, see Iverson (1983); type specimen figured in Duméril and Bocourt (1870:pl.5,f.3).

TESTUDINOIDEA Fitzinger 1826 (52)

Testudinoidea Fitzinger 1826:5

(includes 4 families)

EMYDIDAE

PLATYSTERNIDAE

GEOEMYDIDAE

TESTUDINIDAE

EMYDIDAE Rafinesque 1815 (09:12, 17:17)

Emidania Rafinesque 1815:75

Emydes Schmid 1819:11

Emydidae Bell 1825a:302

Emydae Swainson 1839:113

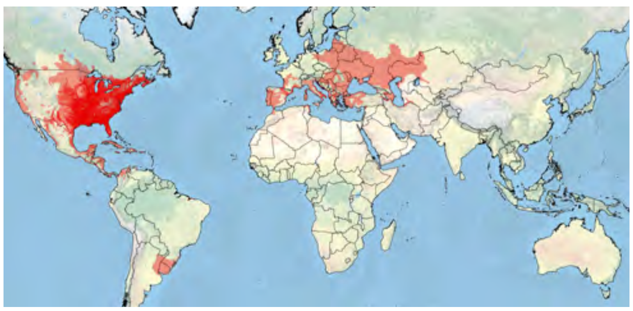
Emydides Pictet 1853:446

Emididi Portis 1890:12

(includes 2 subfamilies)

DEIROCHELYINAE

EMYDINAE



Emydidae Species Richness

DEIROCHELYINAE Agassiz 1857a (09:12, 17:17)

Deirochelyoidae Agassiz 1857a:355

Deirochelyinae Gaffney and Meylan 1988:201

Chrysemys Gray 1844 (12:12)

Hydrochelys Wagler 1821:12 (12:12) (*nomen oblitum*)

Type species: *Hydrochelys picta* [= *Testudo picta* Schneider 1783], by original monotypy.

Chrysemys Gray 1844:27

Type species: *Emys* (*Chrysemys*) *picta* Schweigger [= *Testudo picta* Schneider 1783], by subsequent designation by Brown (1908:114).

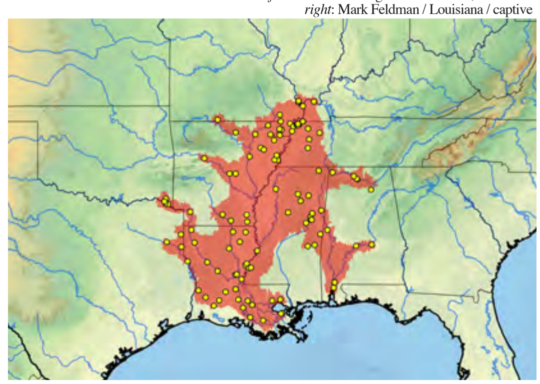
Chrysemys dorsalis Agassiz 1857a (07:11, 10:6, 17:18)

(**or *Chrysemys picta dorsalis***)

Southern Painted Turtle

James H. Harding / Reelfoot Lake, Tennessee

left: James H. Harding / Reelfoot Lake, Tennessee
right: Mark Feldman / Louisiana / captive



*

Distribution: USA (Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, Texas)

Introduced: USA (Florida)

Presumed Historic Indigenous Range: 331,540 sq. km

Size (Max SCL): male 11.5 cm, female 15.6 cm (Carr 1952; Ernst and Lovich 2009)

IUCN Red List: Least Concern (LC) (van Dijk 2011), as subspecies of *Chrysemys picta*

Synonymy:

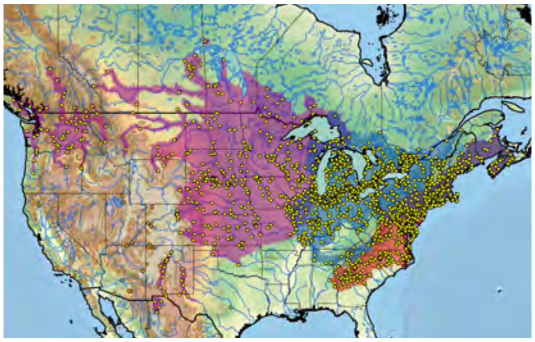
Chrysemys dorsalis Agassiz 1857a:439,440 (07:11, 10:6)

Clemmys picta dorsalis, *Chrysemys cinerea dorsalis*, *Chrysemys marginata dorsalis*, *Chrysemys bellii dorsalis*, *Chrysemys picta dorsalis*

Type locality: "Mississippi and Louisiana...Lake Concordia" [USA]. Restricted to "vicinity of New Orleans" [Louisiana, USA] by Schmidt (1953:100), and to "vicinity of Natchez, Mississippi" [USA] by Ernst (1967:133).

Type specimen: MCZ 31960 (formerly 1802), lectotype, designated by Smith and Smith (1980:423); USNM 21, MCZ 1801, paralectotypes, see Barbour and Loveridge (1929), Cochran (1961), and Reynolds et al. (2007); Tiedemann et al. (1994) listed NMW 26218:1–2 as additional syntypes (possible paralectotypes).

Chrysemys picta (Schneider 1783) (07:11, 10:6, 12:13, 17:18)
Painted Turtle
(includes 3 subspecies)


*

(subspecies: *picta* = red, *bellii* = purple, *marginata* = blue; overlap = intergrades; orange dots = probably introduced)

Distribution: Canada (Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia, Ontario, Québec, Saskatchewan), Mexico (Chihuahua), USA (Alabama, Arizona, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming)

Introduced: Germany, Indonesia, Philippines, Spain, USA (California)

Presumed Historic Indigenous Range: 4,130,180 sq. km

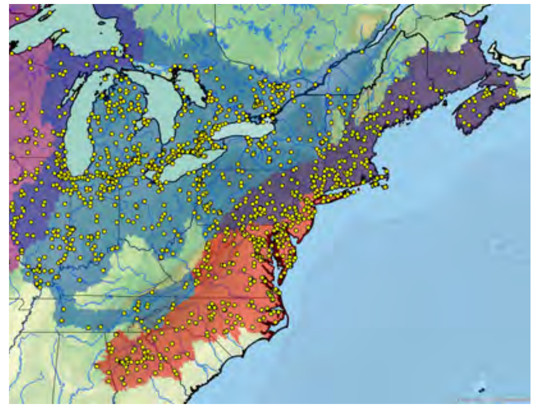
Size (Max SCL): male 22.5 cm, female 26.6 cm (see subspp.)

IUCN Red List: Least Concern (van Dijk 2011); Previously: Least Concern [Not Listed] (TFTSG 1996)

Chrysemys picta picta (Schneider 1783) (07:11, 12:13)
Eastern Painted Turtle

Anders G.J. Rhodin / Acadia National Park, Bar Harbor, Mt. Desert Island, Maine

Anders G.J. Rhodin / Acadia National Park, Pretty Marsh, Mt. Desert Island, Maine


*

(subspecies: *picta* = red, *bellii* = purple, *marginata* = blue; overlap = intergrades)

Distribution: Canada (New Brunswick, Nova Scotia, Québec), USA (Alabama, Connecticut, Delaware, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia)

Presumed Historic Indigenous Range: 648,144 sq. km

Size (Max SCL): male 16.0 cm, female 19.1 cm (Rhodin and Mittelhauser 1994; Ultsch et al. 2000; Rhodin, unpubl. data)

Synonymy:

Testudo picta Schneider 1783:348

Emys picta, Hydrochelys picta, Clemmys picta, Terrapene picta, Emys (Chrysemys) picta, Chrysemys picta, Chrysemys picta picta, Pseudemys picta

Type locality: "England" [in error]. Restricted to "Lancaster, Pennsylvania" [USA] by Mittleman (1945:171); and to "vicinity of New York City" [New York, USA] by Schmidt (1953:99) [in error according to Smith and Smith (1980:424)].

Type specimens: UPSZTY 279 (formerly UUZM 279 and MGA 48), possible syntype, see Thunberg (1828), Holm (1957), and Wallin (2001); MZUS s/n, possible syntype, listed as possible "holotype" (Bour, pers. comm. *in* Iverson 1992); MCZ 1764, listed by Uetz et al. (2019) as a syntype, is not apparently a type.

Comment: Original description cited as sourced from Hermann (pers. comm.), whose own description of *Testudo picta* was later published posthumously (Hermann 1804:219).

Testudo cinerea Bonnaterre 1789:25

Emys cinerea, Chrysemys cinerea, Chrysemys cinerea cinerea

Type locality: Not known. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:99).

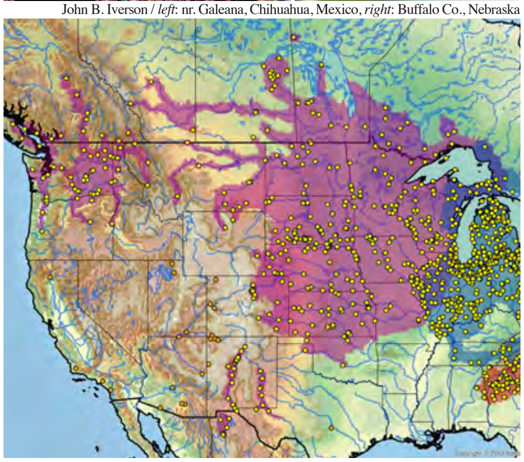
Type specimen: Not located, type specimen figured in Brown (1776:pl.48,f.1-2).

Comment: Description cited as sourced from Brown (1776:115,pl.48).

Chrysemys picta bellii (Gray 1830e) (10:7, 17:18) **(52)**
Western Painted Turtle

John B. Iverson / Oshkosh, Garden Co., Nebraska

John B. Iverson / *left*: nr. Galeana, Chihuahua, Mexico, *right*: Buffalo Co., Nebraska



*

(subspecies: *picta* = red, *bellii* = purple, *marginata* = blue; overlap = intergrades; orange dots = probably introduced)

Distribution: Canada (Alberta, British Columbia, Manitoba, Ontario, Saskatchewan), Mexico (Chihuahua), USA (Arizona, Colorado, Idaho, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wisconsin, Wyoming)

Presumed Historic Indigenous Range: 2,579,476 sq. km

Size (Max SCL): male 20.8 cm, female 26.6 cm (MacCulloch and Secoy 1983; Rowe 1997; Ernst and Lovich 2009; Ceballos et al. 2013; Marchand et al. 2015)

Synonymy:

Emys bellii Gray 1830e:12 (10:7)

Clemmys (Clemmys) bellii, Emys (Chrysemys) bellii, Chrysemys bellii, Emys bellii, Chrysemys cinerea bellii, Chrysemys marginata bellii, Chrysemys bellii bellii, Chrysemys picta bellii

Type locality: Not known. Restricted to "West coast of North America; British Columbia" by Gray (1873a:147); to "Manhattan, Kans." [Kansas, USA] by Smith and Taylor (1950b:34); and to "Puget Sound, Washington" [USA] by Schmidt (1953:100).

Type specimens: RCSM s/n, holotype, see Gray (1831d), destroyed during WW II (Iverson 1992); MCZ 1793, listed as "syntype" in MCZ online database, is not apparently a type.

Emys oregoniensis Harlan 1837:382

Chrysemys oregoniensis, Clemmys oregoniensis, Chrysemys oregonensis

Type locality: "fresh water ponds in the vicinity of the Oregon or Columbia River" [Oregon, USA].

Type specimen: ANSP 165, holotype, see Malnate (1971).

Emys originensis Harlan *in* Gray 1844:23 (*nomen novum*)

Comment: Unjustified emendation or error for *oregoniensis*.

Chrysemys nuttalii Agassiz 1857a:451 (*nomen nudum*)

Chrysemys nuttalii Agassiz 1857b:642

Type locality: "Minesota and westward to the junction of the Yellowstone and Missouri" [Minnesota, USA].

Type specimens: MCZ 1771–78, syntypes (8), see MCZ online database.

Chrysemys pulchra Gray 1873a:147

Type locality: "North America, Mississippi" [USA]. Restricted to "upper Mississippi River" [USA] by Schmidt (1953:100).

Type specimens: NHMUK 1946.1.22.26–27, 1946.1.22.93, 1947.3.4.23, 1947.3.4.75–77 (formerly 1844.11.16.5, 1852.9.8.7, 1855.4.12.3, 1855.12.6.9, 1858.9.9.6, 1861.8.21.5–6, 1862.6.5.1), syntypes (7).

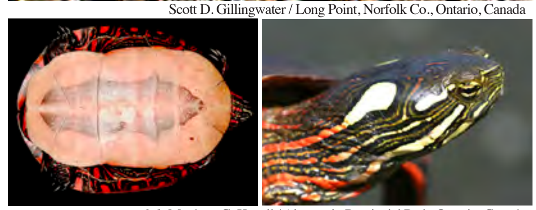
Chrysemys treleasei Hurter 1911:235

Type locality: "east side of the Mississippi River, in Madison, St. Clair, and Monroe Counties, Ill." [Illinois, USA].

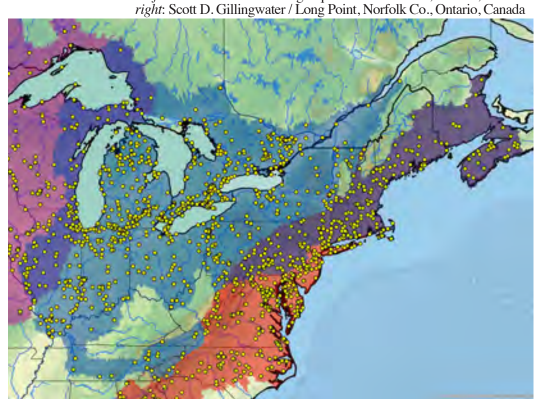
Type specimens: USNM 49427–29, syntypes (3), see Cochran (1961) and Reynolds et al. (2007).

Chrysemys picta marginata Agassiz 1857a
Midland Painted Turtle

Scott D. Gillingwater / Long Point, Norfolk Co., Ontario, Canada



left: Matthew G. Keevil / Algonquin Provincial Park, Ontario, Canada
right: Scott D. Gillingwater / Long Point, Norfolk Co., Ontario, Canada



*

(subspecies: *picta* = red, *bellii* = purple, *marginata* = blue; overlap = intergrades)

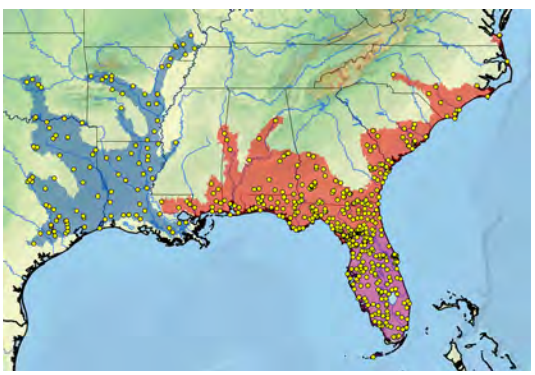
Distribution: Canada (Ontario, Québec), USA (Illinois, Indiana, Kentucky, Michigan, New York, North Carolina, Ohio,

Pennsylvania, Tennessee, Vermont, Virginia, West Virginia)
Presumed Historic Indigenous Range: 1,353,033 sq. km
Size (Max SCL): male 18.6 cm, female 19.5 cm (Ernst and Lovich 2009; Dolph 2017)
Synonymy:
Chrysemys marginata Agassiz 1857a:262,439
Clemmys marginata, Chrysemys marginata marginata, Chrysemys bellii marginata, Chrysemys picta marginata
Type locality: "Racine, Wisconsin...Milwaukee, Wisconsin...Flint, Michigan...Ann-Arbor, Michigan...Delphi, Indiana...Burlington, Iowa" [USA]. Restricted to "northern Indiana" [USA] by Schmidt (1953:99).
Type specimens: MCZ 1780 (3 specimens), one of them designated as lectotype by Smith and Smith (1980:423); MCZ 1780 (3), 1789–90 (3), 1791 (3), 1796 (9), listed as syntypes by Barbour and Loveridge (1929), including one specimen from 1791 subsequently transferred to UMMZ; MCZ 1789–91, 1796, UMMZ 63519, syntypes (5), listed by Iverson (1992), but UIMNH 41529 (formerly MCZ 1796) also listed as a syntype by Smith et al. (1964); MCZ 1780, 1784–90, 1792–1800, 1899, 182588–90, 182593–606, listed as syntypes in MCZ online database; MCZ 1796, UMMZ 63519, UIMNH 41529, listed as syntypes by Uetz et al. (2019); NMW 26218:1,2 listed as syntypes by Gemel et al. (2019).

Deirochelys Agassiz 1857a

Deirochelys Agassiz 1857a:252,441
Type species: *Deirochelys reticulata* Schweigger [= *Testudo reticulata* Daudin 1801 = objective synonym of *Testudo reticularia* Latreille *in* Sonnini and Latreille 1801], by original monotypy.
Hirochelys Beyer 1900:21 (*nomen novum*)

Deirochelys reticularia (Latreille *in* Sonnini and Latreille 1801)
Chicken Turtle
(includes 3 subspecies)

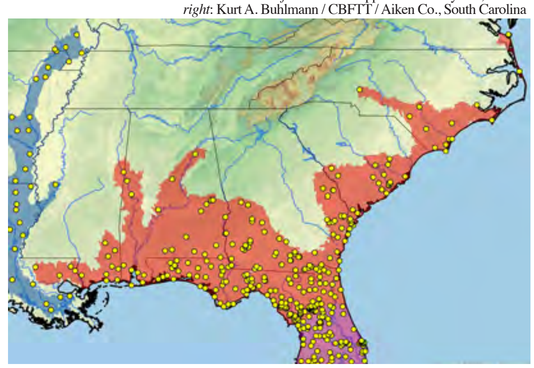

*
(subspecies: *reticularia* = red, *chrysea* = purple, *miaria* = blue)
Distribution: USA (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Texas, Virginia)
Presumed Historic Indigenous Range: 621,396 sq. km
Size (Max SCL): male 16.5 cm, female 26.0 cm (see subspp.)
CBFTT Account: Buhlmann, Gibbons, and Jackson (2008)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2011)

Deirochelys reticularia reticularia (Latreille *in* Sonnini and Latreille 1801)
Eastern Chicken Turtle


Kurt A. Buhlmann / Virginia



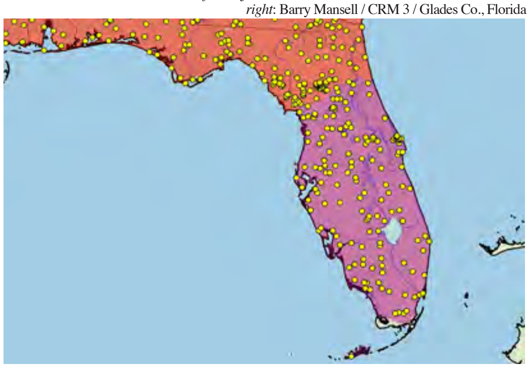
left: Robert T. Zappalorti / Liberty Co., Florida
right: Kurt A. Buhlmann / CBFTT / Aiken Co., South Carolina


*
(subspecies: *reticularia* = red, *chrysea* = purple, *miaria* = blue)
Distribution: USA (Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Virginia)
Presumed Historic Indigenous Range: 275,125 sq. km
Size (Max SCL): male 16.5 cm, female 26.0 cm (Buhlmann et al. 2008 CBFTT; Ernst and Lovich 2009)
Synonymy:
Testudo reticularia Latreille *in* Sonnini and Latreille 1801:124
Emys reticularia, Clemmys reticularia, Deirochelys reticularia, Deirochelys reticularia reticularia
Type locality: "Caroline" [USA]. Restricted to "Charleston" [South Carolina, USA] by Harper (1940:711); to "vicinity of Charleston, South Carolina" [USA] by Schmidt (1953:104); and to "9 miles northwest of Charleston, Charleston County, South Carolina" [USA] by neotype designation by Schwartz (1956a:466).
Type specimen: Originally in MNHN, apparently lost, type specimen figured in Sonnini and Latreille (1801:opp.124,f.1); NCSM 88836 (formerly CHM 54.48.1), neotype, designated by Schwartz (1956a:466); Zug and Schwartz (1971) erroneously listed the neotype as CHM 54.68.1 (a typo).
Testudo reticulata Bosc *in* Daudin 1801:144 (*nomen novum*)
Emys reticulata, Clemmys (Clemmys) reticulata, Deirochelys reticulata, Hirochelys reticulata, Chrysemys reticulata, Chrysemys reticulatus
Type locality: "Caroline" [USA]. Restricted to "vicinity of Charleston, South Carolina" [USA] by Schmidt (1953:104).
Type specimen: NCSM 88836 (formerly CHM 54.48.1), neotype by default, designated by Schwartz (1956a:466).
Comment: Unjustified replacement name for *reticularia*.

Deirochelys reticularia chrysea Schwartz 1956a
Florida Chicken Turtle

Kurt A. Buhlmann / CBFTT / central Florida

left: Benjamin K. Atkinson / CRM 3 / Hernando Co., Florida
right: Barry Mansell / CRM 3 / Glades Co., Florida



*

(subspecies: *reticularia* = red, *chrysea* = purple)

Distribution: USA (Florida)

Presumed Historic Indigenous Range: 87,533 sq. km

Size (Max SCL): male 16.5 cm, female 25.0 cm (Schwartz 1956a; Ewert et al. 2006)

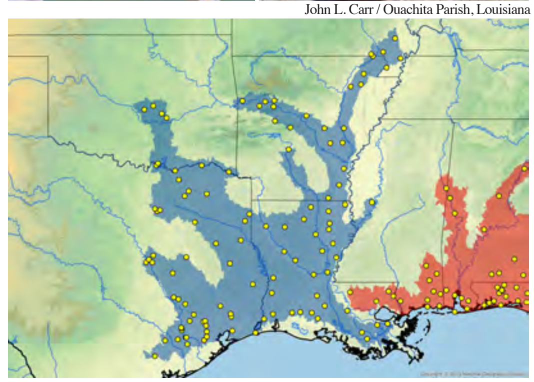
Synonymy:

Deirochelys reticularia chrysea Schwartz 1956a:476
Type locality: "5.8 miles east of Monroe Station, Collier County, Florida" [USA].
Type specimen: UMMZ 111440, holotype, see Kluge (1984).

Deirochelys reticularia miaria Schwartz 1956a
Western Chicken Turtle

John L. Carr / Ouachita Parish, Louisiana

John L. Carr / Ouachita Parish, Louisiana



*

(subspecies: *reticularia* = red, *miaria* = blue)

Distribution: USA (Arkansas, Louisiana, Mississippi, Missouri, Oklahoma, Texas)

Presumed Historic Indigenous Range: 258,738 sq. km

Size (Max SCL): male 16.1 cm, female 21.0 cm (Schwartz 1956a)

Synonymy:

Deirochelys reticularia miaria Schwartz 1956a:486
Type locality: "College Station, Brazos County, Texas" [USA].
Type specimen: FMNH 37478, holotype, see Marx (1958).

Graptemys **Agassiz 1857a** (12:14, 14:14, 17:19) **(53)**

Graptemys Agassiz 1857a:252,436

Type species: *Graptemys geographica* [= *Testudo geographica* LeSueur 1817], by subsequent designation by Stejneger and Barbour (1917:117).

Neoclemmys Baur *in* Lindeman 2013:20 (*nomen nudum*)

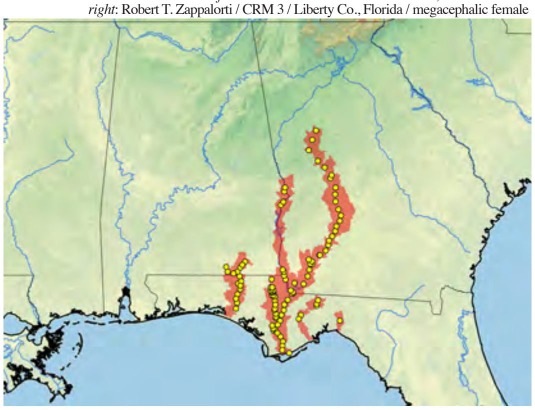
Megaloclemmys Baur *in* Lindeman 2013:20 (*nomen nudum*)

Graptemys barbouri **Carr and Marchand 1942** (17:19, 17:21) **(53)**

Barbour's Map Turtle

David Dennis / CRM 3 / Florida

left: Matthew Aresco / CRM 3 / Leon Co., Florida / female
right: Robert T. Zappalorti / CRM 3 / Liberty Co., Florida / megacephalic female



*

Distribution: USA (Alabama, Florida, Georgia)

Presumed Historic Indigenous Range: 23,021 sq. km

Size (Max SCL): male 13.0 cm, female 32.7 cm (Pritchard 1980; Ewert et al. 2006)

IUCN Red List: Vulnerable (VU A2bcde) (van Dijk 2011); Previously: Near Threatened (NT) (TFTSG 1996)

CITES: Appendix III (USA), as *Graptemys* spp. (2006)

Synonymy:

Graptemys barbouri Carr and Marchand 1942:98

Malaclemys barbouri

Type locality: "Chipola River north of Marianna, Jackson County, Florida" [USA].

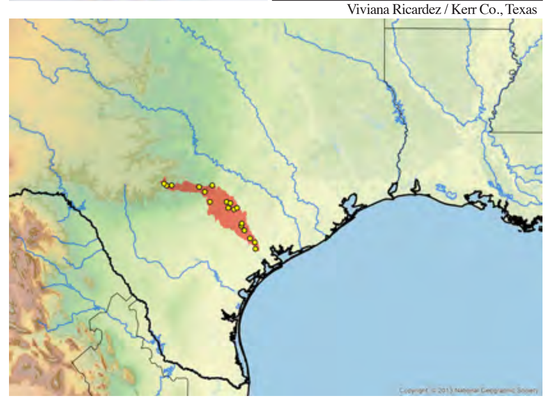
Type specimen: MCZ 46251, holotype, see Barbour and Loveridge (1946).

Graptemys caglei **Haynes and McKown 1974** (17:19, 17:20) **(53)**

Cagle's Map Turtle

James H. Harding / Texas / captivity

Viviana Ricardez / Kerr Co., Texas



Distribution: USA (Texas)

Presumed Historic Indigenous Range: 8,727 sq. km

Size (Max SCL): male 12.6 cm, female 21.3 cm (Killebrew and Porter 1989a, 1990; Ernst and Lovich 2009)

IUCN Red List: Endangered (EN A2c+4c; B2ab(iii)) (van Dijk 2011); Previously: Vulnerable (VU) (TFTSG 1996)

CITES: Appendix III (USA), as *Graptemys* spp. (2006)

Synonymy:

Graptemys caglei Haynes and McKown 1974:143

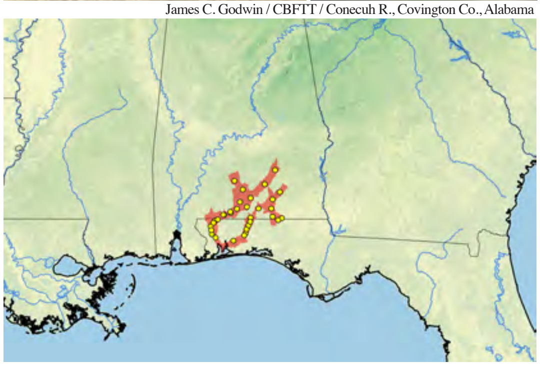
Type locality: "Guadalupe River, 8 km NW Cuero, DeWitt Co., Texas" [USA].

Type specimen: TNHC 36061, holotype.

Graptemys ernsti Lovich and McCoy 1992 (17:19, 17:21) (**53**)
Escambia Map Turtle

James C. Godwin / CBFTT / Yellow R., Covington Co., Alabama

James C. Godwin / CBFTT / Conecuh R., Covington Co., Alabama



*

Distribution: USA (Alabama, Florida)
Presumed Historic Indigenous Range: 7,757 sq. km
Size (Max SCL): male 13.1 cm, female 28.5 cm (Lovich et al. 2011 CBFTT)
CBFTT Account: Lovich, Godwin, and McCoy (2011)
IUCN Red List: Near Threatened (NT) (van Dijk 2011); Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Graptemys ernsti Lovich and McCoy 1992:300
Graptemys pulchra ernsti
Type locality: "Conecuh River, 1 mile upstream from County Road 4 Bridge, 14 km east of East Brewton, Escambia County, Alabama, USA."
Type specimen: CM 122408, holotype.

Graptemys flavimaculata Cagle 1954 (14:15, 17:19) (**53**)
Yellow-blotched Map Turtle, Yellow-blotched Sawback

Peter V. Lindeman / Merrill, Mississippi

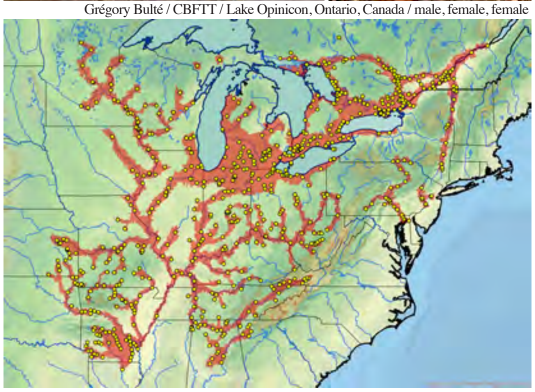
Will Selman / CBFTT / Pascagoula River, Jackson Co., Mississippi

Distribution: USA (Mississippi)
Presumed Historic Indigenous Range: 8,106 sq. km
Size (Max SCL): male 12.3 cm, female 22.3 cm (Selman and Jones 2011 CBFTT; Ceballos et al. 2013)
CBFTT Account: Selman and Jones (2011)
IUCN Red List: Vulnerable (VU A2bce+4ce) (van Dijk 2011); Previously: Endangered (EN) (TFTSG 1996)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Graptemys flavimaculata Cagle 1954:167
Graptemys oculifera flavimaculata, *Malaclemys flavimaculata*
Type locality: "Pascagoula River, 13 miles S.W. of Lucedale, George Co., Mississippi" [USA]. Emended to "Pascagoula River at Old Benndale Crossing (T3S, R8W, Sec. 1), George County" [Mississippi, USA] by Cliburn (1971:17).
Type specimen: LSUM 111650 (formerly TU 14798), holotype.

Graptemys geographica (LeSueur 1817) (08:18, 12:14, 17:19) (**53**)
Northern Map Turtle, Common Map Turtle


John B. Iverson / CBFTT / Dewart Lake, Kosciusko Co., Indiana


Grégory Bulté / CBFTT / Lake Opinicon, Ontario, Canada / male, female, female

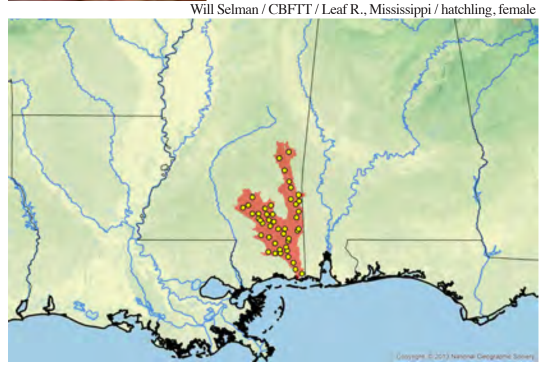

*

Distribution: Canada (Ontario, Québec), USA (Alabama, Arkansas, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin)
Presumed Historic Indigenous Range: 663,710 sq. km
Size (Max SCL): male 16.0 cm, female 29.2 cm (Vogt et al. 2018 CBFTT)
CBFTT Account: Vogt, Bulté, and Iverson (2018)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Testudo geographica LeSueur 1817:86
Emys geographica, Terrapene geographica, Clemmys (Clemmys) geographica, Clemmys geographica, Graptemys geographica, Malacoclemmys geographica, Malacoclemmys geographicus, Malaclemys geographica, Malaclemys geographicus, Malaclemmys geographicus, Graptemys geographicus
Type locality: "marsh, on the borders of Lake Erie" [USA]. Restricted to "peninsula of Presque Isle and adjacent Presque Isle Bay in Erie County, Pennsylvania" [USA] by Lindeman (2009:97).
Type specimen: MNHN, holotype or syntypes, not located, apparently lost, not listed by Roux-Esteve (1979) or Bonnemains and Bour (1996); type specimen figured (pl.5), designated lectotype by Lindeman (2009:96).
Emys lesueurii Gray 1830e:12 (08:18, 10:7)
Emys leseurii, Graptemys lesueurii, Malacoclemmys lesueurii, Malaclemys lesueurii, Malaclemys lesueurii lesueurii
Type locality: "North America."
Type specimen: NHMUK 1982.1297, holotype.
Emys megacephala Holbrook 1836:51 (senior homonym, not = *Emys megacephalus* Gray 1844 [= *Malaclemys terrapin terrapin*], nor = *Emys megacephala* Gray 1870 [= *Malayemys macrocephala*])
Type locality: "Cumberland river...[&]...in the neighbourhood of Nashville, Tennessee" [USA].
Type specimen: ANSP 255, holotype, listed by Malnate (1971) as *Emys megalocephala*.
Emys macrocephala Agassiz 1857a:436 (*nomen novum*)
Comment: Unjustified emendation or error for *megacephala*.
Emys megalocephala Holbrook *in* Malnate 1971 (*nomen novum et illegitimum*)
Comment: Unjustified emendation or error for *megacephala*.

Graptemys gibbonsi Lovich and McCoy 1992 (10:8, 17:19) (**53**)
Pascagoula Map Turtle


Jeffrey E. Lovich / CBFTT / Chickasawhay R., nr. Leakesville, Mississippi / male


Will Selman / CBFTT / Leaf R., Mississippi / hatchling, female



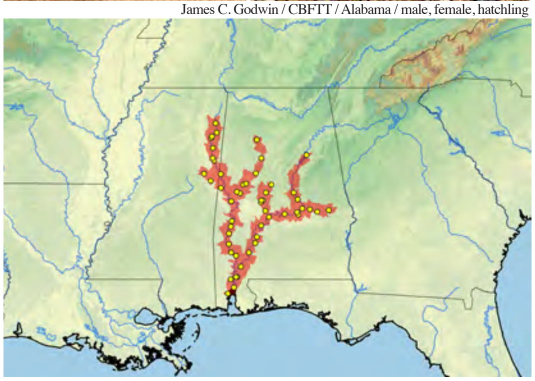
Distribution: USA (Mississippi)
Presumed Historic Indigenous Range: 12,514 sq. km
Size (Max SCL): male 14.1 cm, female 29.5 cm (Lovich et al. 2009 CBFTT)
CBFTT Account: Lovich, Selman, and McCoy (2009)
IUCN Red List: Endangered (EN A2bce+4ce) (van Dijk 2011); Previously: Near Threatened (NT) (TFTSG 1996)

CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Graptemys gibbonsi Lovich and McCoy 1992:302
Graptemys pulchra gibbonsi
Type locality: "Chickasawhay River, Leakesville, Greene Co., Mississippi, USA."
Type specimen: CM 94979, holotype.

Graptemys nigrinoda Cagle 1954 (17:19, 17:22) **(53)**
Black-knobbed Map Turtle, Black-knobbed Sawback


James C. Godwin / CBFTT / Alabama


James C. Godwin / CBFTT / Alabama / male, female, hatchling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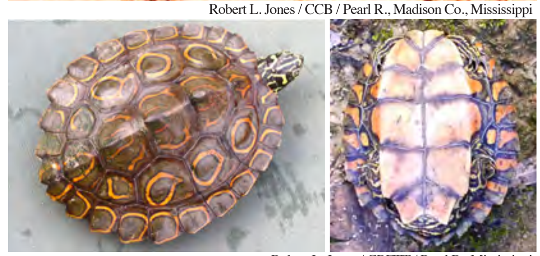
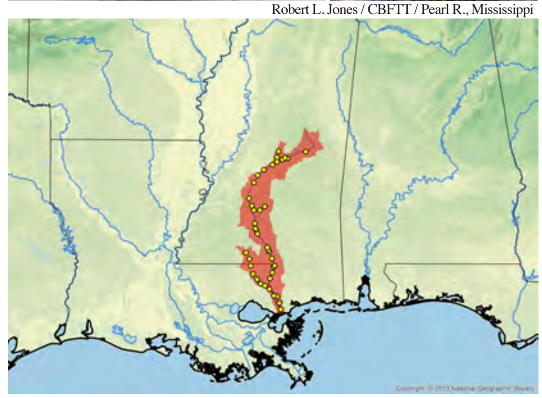
Distribution: USA (Alabama, Mississippi)
Presumed Historic Indigenous Range: 29,776 sq. km
Size (Max SCL): male 12.0 cm, female 22.1 cm (Blankenship et al. 2008 CBFTT; Ceballos et al. 2013)
CBFTT Account: Blankenship, Butterfield, and Godwin (2008)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Graptemys nigrinoda Cagle 1954:173 (17:22)
Graptemys oculifera nigrinoda, Graptemys nigrinoda nigrinoda, Malaclemys nigrinoda
Type locality: "Black Warrior River, above Lock 9, 17.5 miles SSW of Tuscaloosa, Tuscaloosa County, Alabama" [USA].
Type specimen: LSUM 111649 (formerly TU 14662), holotype.
Graptemys nigrinoda delticola Folkerts and Mount 1969:677 (17:22)
Type locality: "Hubbard's Landing on Tensaw Lake, 2.6 air miles SW of Latham, Baldwin County, Alabama" [USA].
Type specimen: UF 26238 (formerly AUM 9229), holotype.

Graptemys oculifera (Baur 1890a) (17:19) **(53)**
Ringed Map Turtle, Ringed Sawback


Robert L. Jones / CCB / Pearl R., Madison Co., Mississippi


Robert L. Jones / CBFTT / Pearl R., Mississippi



Distribution: USA (Louisiana, Mississippi)
Presumed Historic Indigenous Range: 16,297 sq. km
Size (Max SCL): male 10.9 cm, female 21.5 cm (Jones and Selman 2009 CBFTT)
CBFTT Account: Jones and Selman (2009)
IUCN Red List: Vulnerable (VU B2ab(iii)) (van Dijk 2011); Previously: Endangered (EN) (TFTSG 1996)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Malacoclemmys oculifera Baur 1890a:262
Graptemys oculifera, Malaclemys lesueurii oculifera, Graptemys pseudogeographica oculifera, Graptemys oculifera oculifera, Malaclemys oculifera
Type locality: "Mandeville, La." [Louisiana, USA]. Emended to "Pearl River, 26 miles east of Mandeville" [Louisiana, USA] by Cagle (1953b:138).
Type specimen: USNM 15511, lectotype, designated by Lindeman (2013:342), also discussed by Cochran (1961) and Reynolds et al. (2007).

Graptemys ouachitensis Cagle 1953a (12:14, 12:15, 14:16, 17:19) **(53)**
Ouachita Map Turtle


Peter V. Lindeman / CBFTT / Paris Landing State Park, Henry Co., Tennessee



left: Richard C. Vogt / CBFTT / Stoddard, Vernon Co., Mississippi River, Wisconsin / hatchling
right: John B. Iverson / Eufala, Pittsburg Co., Oklahoma


*

(orange dot = nonnative occurrence)

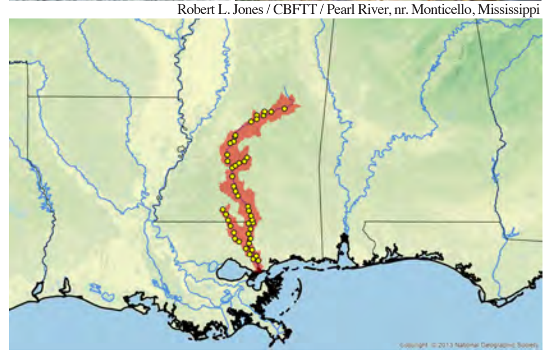
Distribution: USA (Alabama, Arkansas, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Ohio, Oklahoma, Tennessee, Texas, West Virginia, Wisconsin)
Presumed Historic Indigenous Range: 443,606 sq. km
Size (Max SCL): male 16.0 cm, female 26.0 cm (Vogt 2018 CBFTT)
CBFTT Account: Vogt (2018)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Testudo bigibbosa Rafinesque 1818:354 (*nomen nudum*) (7)
Type locality: "Ohio river" [USA].
Type specimen: Not located, type specimen figured in manuscript drawing by Rafinesque in 1818, reproduced by Bell and Bauer (2020:f.5).
Emyda nodosa Rafinesque 1822:3 (*nomen nudum et novum*) (7)
Testudo nodosa
Comment: Replacement name for *bigibbosa*.
Graptemys pseudogeographica ouachitensis Cagle 1953a:10
Malaclemys pseudogeographica ouachitensis, Graptemys ouachitensis, Graptemys ouachitensis ouachitensis
Type locality: "Ouachita River, four miles northeast of Harrisonburg, Louisiana" [USA].
Type specimen: UMMZ 104345, holotype, see Kluge (1984).

Graptemys pearlensis Ennen, Lovich, Kreiser, Selman, and Qualls 2010 (10:8, 17:19) **(53)**
Pearl River Map Turtle


Cris Hagen / CCB / Pearl River, Mississippi

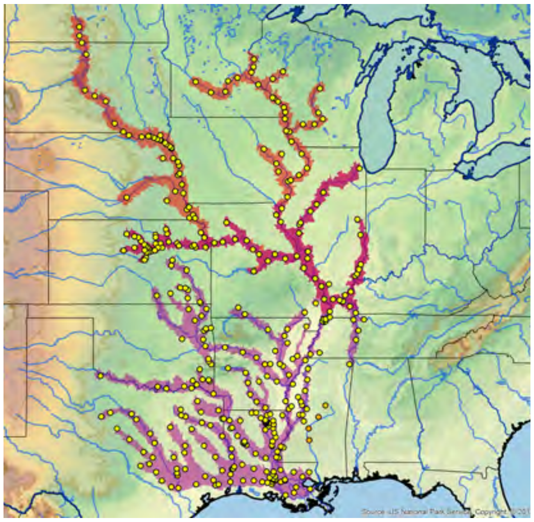


Robert L. Jones / CBFTT / Pearl River, nr. Monticello, Mississippi



Distribution: USA (Louisiana, Mississippi)
Presumed Historic Indigenous Range: 12,677 sq. km
Size (Max SCL): male 12.1 cm, female 29.5 cm (Ennen et al. 2018 CBFTT)
CBFTT Account: Ennen, Lovich, and Jones (2016)
IUCN Red List: Endangered (EN A1bcde+A4bcde) (van Dijk 2011)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Graptemys pearlensis Ennen, Lovich, Kreiser, Selman, and Qualls 2010:104
Type locality: "Mississippi, Copiah County, Pearl River at State Highway 28, near Georgetown" [USA].
Type specimen: CM 62162, holotype.

Graptemys pseudogeographica (Gray 1831d) (12:14, 12:15, 17:19, 17:23) (**53**)
False Map Turtle
(includes 2 subspecies)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(subspecies: *pseudogeographica* = red, *kohnii* = purple; overlap = intergrades; orange dots = introduced)

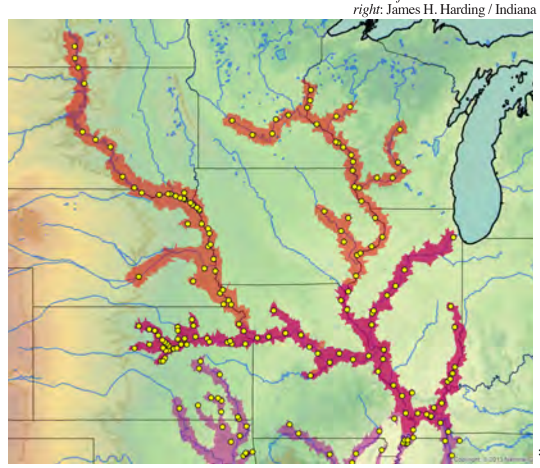
Distribution: USA (Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, Tennessee, Texas, Wisconsin)
Introduced: USA (Florida, Virginia)
Presumed Historic Indigenous Range: 503,092 sq. km
Size (Max SCL): male 15.0 cm, female 27.7 cm (see subspp.)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)

Graptemys pseudogeographica pseudogeographica (Gray 1831d) (08:19) (**53**)

Northern False Map Turtle

James H. Harding / Indiana

left: John B. Iverson / Iowa
right: James H. Harding / Indiana

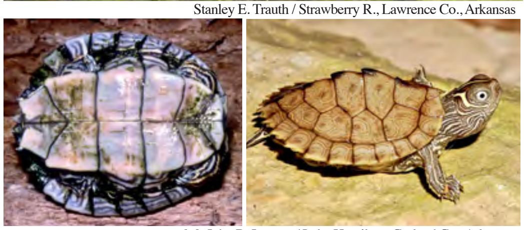

*

(subspecies: *pseudogeographica* = red, *kohnii* = purple; overlap = intergrades)

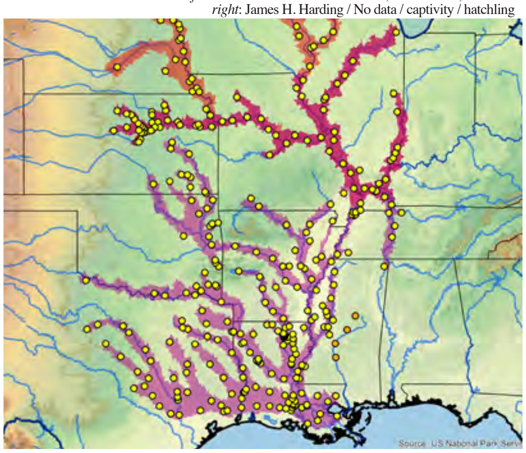
Distribution: USA (Illinois, Indiana, Iowa, Kansas, Kentucky, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin)
Introduced: USA (Florida, Virginia)
Presumed Historic Indigenous Range: 203,273 sq. km
Size (Max SCL): male 15.0 cm, female 27.7 cm (Vogt 1995; Ceballos et al. 2013)
Synonymy:
Emys pseudogeographica Gray 1831d:31
Clemmys pseudogeographica, Graptemys pseudogeographica, Malacoclemmys pseudogeographicus, Malaclemys pseudogeographica, Malaclemys pseudogeographicus, Graptemys pseudogeographicus, Graptemys pseudogeographica pseudogeographica, Malaclemys pseudogeographica pseudogeographica
Type locality: Not designated. Restricted to "Etats-Unis, Indiana, rivière Wabash, entre Mont Vernon et Chaumetown (= Shawneetown)...près du confluent de la Wabash et de l'Ohio" [USA] by Bour and Dubois (1983:45).
Type specimen: MNHN 9147, lectotype, designated by Bour and Dubois (1983:42).

Graptemys pseudogeographica kohnii (Baur 1890a) [(53)]
Mississippi Map Turtle

Stanley E. Trauth / Strawberry R., Lawrence Co., Arkansas



left: John B. Iverson / Lake Hamilton, Garland Co., Arkansas
right: James H. Harding / No data / captivity / hatchling



*

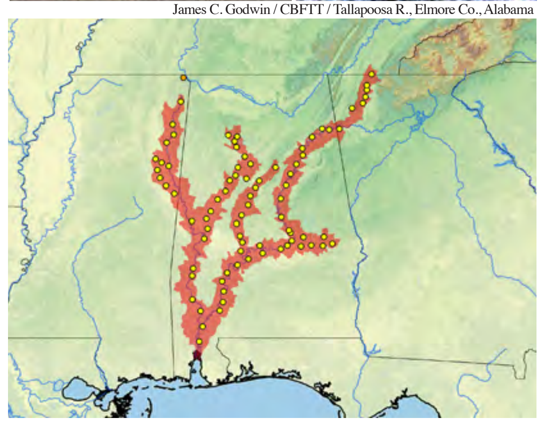
(subspecies: *pseudogeographica* = red, *kohnii* = purple; overlap = intergrades; orange dots = introduced)

Distribution: USA (Arkansas, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, Texas)
Presumed Historic Indigenous Range: 388,581 sq. km
Size (Max SCL): male 15.0 cm, female 27.0 cm (Vogt, unpubl. data)
Synonymy:
Malacoclemmys kohnii Baur 1890a:263
Graptemys kohnii, Malaclemys lesueurii kohnii, Graptemys pseudogeographica kohnii, Malaclemys kohnii
Type locality: "Bayou Lafourche, La.; Bayou Teche, St. Martinsville, La." [Louisiana, USA].
Type specimen: TU 16409, lectotype, designated by Lindeman (2013:321).

Graptemys pulchra Baur 1893c [(14:17, 17:19)] [(53)]
Alabama Map Turtle

James C. Godwin / CBFTT / Tallapoosa R., Elmore Co., Alabama

James C. Godwin / CBFTT / Tallapoosa R., Elmore Co., Alabama



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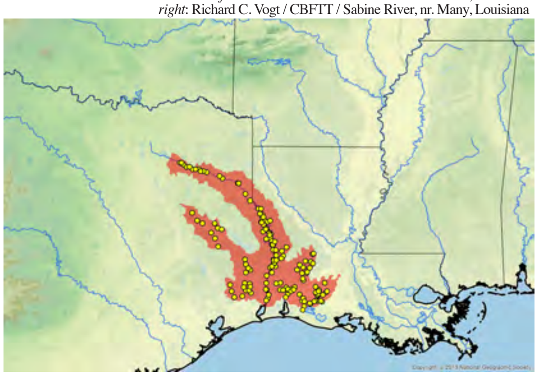
(orange dot = non-native occurrence)

Distribution: USA (Alabama, Georgia, Mississippi, Tennessee)
Presumed Historic Indigenous Range: 40,898 sq. km
Size (Max SCL): male 12.2 cm, female 27.9 cm (Lovich et al. 2014 CBFTT; Coleman 2020)
CBFTT Account: Lovich, Godwin, and McCoy (2014)
IUCN Red List: Near Threatened (NT) (van Dijk 2011); Previously: Least Concern (LC) (TFTSG 1996)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Graptemys pulchra Baur 1893c:675
Malacoclemmys pulchra, Malaclemys lesueurii pulchra, Malaclemys pulchra, Graptemys pulchra pulchra
Type locality: "Montgomery, Alabama" [USA].
Type specimen: USNM 8808, lectotype, designated by Lovich and McCoy (1992:304), see Reynolds et al. (2007) and Lindeman (2013).
Graptemys alabamensis Baur *in* Lindeman 2013:20 [(14:17)] (*nomen nudum*)
Graptemys grandis Baur *in* Lindeman 2013:20 [(14:17)] (*nomen nudum*)

Graptemys sabinensis Cagle 1953a (07:12, 12:15, 14:18, 17:19) (**53**)
Sabine Map Turtle

Peter V. Lindeman / CCB / CBFTT / nr. Estherwood, Acadia Parish, Louisiana

left: Peter V. Lindeman / CBFTT / Calcasieu R., Louisiana
right: Richard C. Vogt / CBFTT / Sabine River, nr. Many, Louisiana



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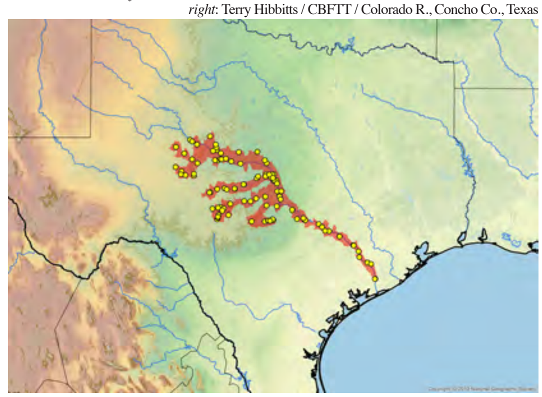
Distribution: USA (Louisiana, Texas)
Presumed Historic Indigenous Range: 43,223 sq. km
Size (Max SCL): male 10.6 cm, female 15.5 cm (Vogt 2018 CBFTT)
CBFTT Account: Vogt (2018), as subspecies of *Graptemys ouachitensis*
IUCN Red List: Least Concern (LC) (van Dijk 2011), as subspecies of *Graptemys ouachitensis*
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Malacoclemmys intermedia Baur *in* Beyer 1900:21 (14:19) (*nomen nudum*)
Graptemys intermedia
Graptemys pseudogeographica sabinensis Cagle 1953a:2
Malaclemys pseudogeographica sabinensis, *Graptemys ouachitensis sabinensis*, *Graptemys sabinensis*
Type locality: "Sabine River, eight miles southwest of Negreet, Louisiana" [USA].
Type specimen: UMMZ 104351, holotype, see Kluge (1984).

Graptemys versa Stejneger 1925 (17:19) (**53**)
Texas Map Turtle

Peter V. Lindeman / CBFTT / Live Oak Creek, Gillespie Co., Texas

left: Peter V. Lindeman / CBFTT / South Llano R., East Johnson Fork, Texas
right: Terry Hibbitts / CBFTT / Colorado R., Concho Co., Texas



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Distribution: USA (Texas)
Presumed Historic Indigenous Range: 28,475 sq. km
Size (Max SCL): male 11.6 cm, female 21.4 cm (Kizirian et al. 1991; Lindeman et al. 2016 CBFTT)
CBFTT Account: Lindeman, Stuart, and Killebrew (2016)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix III (USA), as *Graptemys* spp. (2006)
Synonymy:
Graptemys pseudogeographica versa Stejneger 1925:463
Graptemys versa, *Malaclemys versa*
Type locality: "Austin, Texas" [USA].
Type specimen: USNM 27473, holotype, see Cochran (1961) and Reynolds et al. (2007).

Malaclemys Gray 1844

Malaclemys Gray 1844:28

Type species: *Malaclemys concentrica* [= *Testudo concentrica* Shaw 1802 = subjective synonym of *Testudo terrapin* Schoepff 1793a], by original monotypy.

Malacoclemmys Agassiz 1857a:392,437 (*nomen novum*)

Euchyloclemmys Sclater 1858:292 (*nomen novum*)

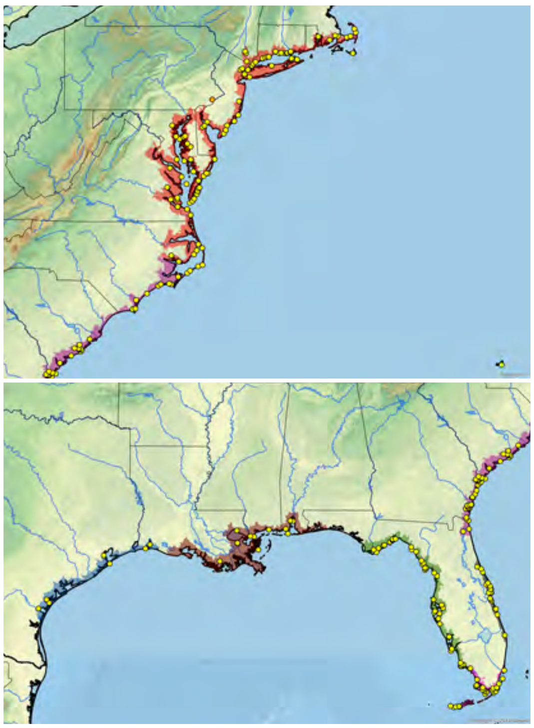
Euchyloclemys Sclater *in* Gray 1863c:181 (*nomen novum*)

Malaclemmys Gray 1870c:41 (*nomen novum*)

Malaclemys terrapin (Schoepff 1793a) [11:5, 17:24] **[54]**

Diamondback Terrapin, Diamond-backed Terrapin

(includes 7 subspecies)



(subspecies: *terrapin* = red, *centrata* = purple, *littoralis* = blue, *macrospilota* = green, *pileata* = brown, *rhizophorarum* = pink, *tequesta* = gray; orange dot = trade)

Distribution: Bermuda, USA (Alabama, Connecticut, Delaware, Florida, Georgia, Louisiana, Maryland, Massachusetts, Mississippi, New Jersey, New York, North Carolina, Rhode Island, South Carolina, Texas, Virginia)

Presumed Historic Indigenous Range: 129,013 sq. km

Size (Max SCL): male 18.0 cm, female 32.0 cm (see subspp.)

IUCN Red List: Vulnerable (VU A4acde) (Roosenburg et al. 2019); Previously: Near Threatened (NT) (TFTSG 1996)

CITES: Appendix II (2013)

Malaclemys terrapin terrapin (Schoepff 1793a)

Northern Diamondback Terrapin

Joseph C. Mitchell / Fisherman Island, Northampton Co., Virginia

Russell L. Burke / Jamaica Bay, Long Island, New York

*

(subspecies: *terrapin* = red, *centrata* = purple; orange dot = trade)

Distribution: USA (Connecticut, Delaware, Massachusetts, New Jersey, New York, North Carolina, Maryland, Rhode Island, Virginia)

Presumed Historic Indigenous Range: 48,206 sq. km

Size (Max SCL): male 18.0 cm, female 32.0 cm (Hurd et al. 1979; Lovich and Hart 2018; Roosenburg et al. 2019 IUCN)

Synonymy:

Testudo terrapin Schoepff 1793a:64

Emys terrapin, Clemmys terrapin, Malaclemys terrapin, Malacoclemmys terrapin, Malacoclemmys terrapen, Malaclemys terrapin terrapin

Type locality: "America septentrionali...in foris Philadelphiae...et... aquis subdulcibus Insulae Longae" [USA]. Restricted to "probably Delaware Bay" [Delaware and New Jersey, USA] by Hay (1905:16); and to "coastal waters of Long Island" [New York, USA] by Schmidt (1953:95).

Type specimens: Not located, type specimen figured (pl.15).

Testudo concentrica Shaw 1802:43

Emys concentrica, Malaclemys concentrica, Malaclemmys concentrica, Malaclemmys centrata concentrica, Malaclemys centrata concentrica, Malaclemys terrapin concentrica

Type locality: "North America...sold in the markets at Philadelphia" [Pennsylvania, USA]. Restricted to "probably Delaware Bay" [Delaware or New Jersey, USA] by Hay (1905:16).

Type specimens: Not located, type specimen figured (f.9,top).

Testudo ocellata Link 1807:52

Type locality: "Nord-Amerika." Restricted to "Philadelphia markets" [Pennsylvania, USA] by Schmidt (1953:96).

Type specimens: Not located, type specimen figured in Bechstein (1800:pl.4,f.2) and Schoepff (1793a:pl.15).

Emys concentrica polita Gray 1830e:11 (10:7)

Type locality: Not designated.

Type specimens: OUM 8475, syntype (1), discussed by Nowak-Kemp and Fritz (2010).

Testudo palustris Le Conte 1830:113 (*nomen novum* and junior homonym, not = *Testudo palustris* Gmelin 1789 [= *Trachemys terrapen*])

Emys palustris, Malacoclemmys palustris

Type locality: "New-York to Florida, and even in the West Indies, in salt water" [USA].

Type specimen: Possibly ANSP, apparently lost, not listed by Malnate (1971).

Comment: Unjustified replacement name for *centrata*.

Emys macrocephalus Gray 1844:26 (junior homonym, not = *Emys macrocephala* Spix 1824 [= *Peltocephalus dumerilianus*])

Emys macrocephala

Type locality: "America?" Restricted to "Philadelphia markets" [Pennsylvania, USA] by Schmidt (1953:96).

Type specimen: NHMUK, possibly lost, see Ernst and Bury (1982).

Comment: Description based on a lost manuscript ("Gray, Desc. Cat. Rept. 13, n. 33" = Gray, J.E. No date. Descriptive Catalogue of Reptiles), where it was originally named *Emys megacephalus*.

Emys megacephalus Gray 1844:26 (*nomen nudum*, junior homonym, not = *Emys megacephala* Holbrook 1836 [= *Graptemys geographica*], nor = *Emys megacephala* Gray 1870 [= *Malayemys macrocephala*])

Malaclemys terrapin centrata (Latreille *in* Sonnini and Latreille 1801) (11:5)

Carolina Diamondback Terrapin

Carla Van Ness / CRM 3 / Duval Co., Florida

*

(subspecies: *terrapin* = red, *centrata* = purple, incl. Bermuda)

Distribution: Bermuda, USA (Georgia, Florida, North Carolina, South Carolina)

Presumed Historic Indigenous Range: 19,405 sq. km

Size (Max SCL): male 15.0 cm, female 20.4 cm (Gibbons et al. 2001; Butler 2002)

Synonymy:

Testudo centrata Latreille *in* Sonnini and Latreille 1801:145

Emys centrata, Clemmys (Clemmys) centrata, Malaclemmys centrata, Malaclemys centrata, Malaclemys centrata centrata, Malaclemmys terrapin centrata, Malaclemys terrapin centrata

Type locality: "les grands marais de la Caroline" [USA]. Restricted to "neighborhood of Charleston, South Carolina" [USA] by Hay (1905:14).

Type specimen: Not located, type specimen figured in Sonnini and Latreille (1801:pl.opp.124,f.2).

Emys concentrica livida Gray 1831d:27

Emys livida

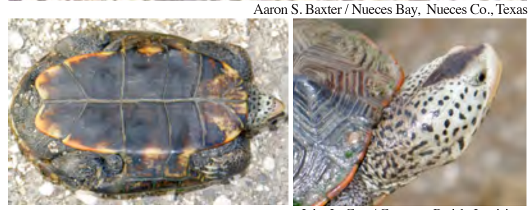
Type locality: "America Boreali." Restricted to "vicinity of Charleston, South Carolina" [USA] by Schmidt (1953:96).

Type specimen: OUM s/n, holotype, apparently lost, discussed by Nowak-Kemp and Fritz (2010).

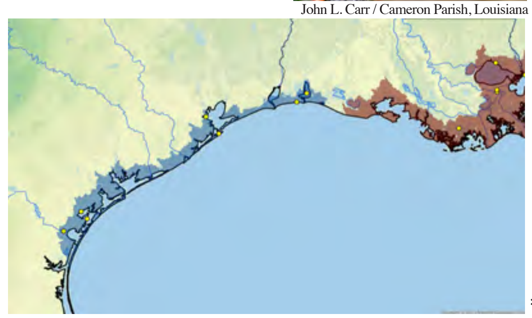
Malaclemys terrapin littoralis Hay 1905

Texas Diamondback Terrapin

Aaron S. Baxter / Nueces Bay, Nueces Co., Texas



John L. Carr / Cameron Parish, Louisiana



*

(subspecies: *littoralis* = blue, *pileata* = brown)

Distribution: USA (Louisiana, Texas)

Presumed Historic Indigenous Range: 12,043 sq. km

Size (Max SCL): male 14.8 cm, female 20.1 cm (Lovich and Hart 2018)

Synonymy:

Malaclemmys littoralis Hay 1905:18

Malaclemys centrata littoralis, Malaclemys pileata littoralis, Malaclemys terrapin littoralis

Type locality: "Rockport, Texas" [USA].

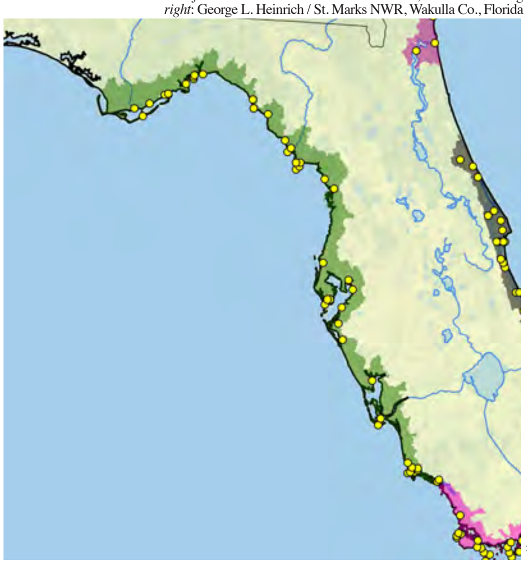
Type specimen: USNM 33913, holotype, see Cochran (1961) and Reynolds et al. (2007).

Malaclemys terrapin macrospilota Hay 1905
Ornate Diamondback Terrapin


George L. Heinrich / St. Marks NWR, Wakulla Co., Florida



left: Richard D. Bartlett / CRM 3 / Lee Co., Florida / hatchling
right: George L. Heinrich / St. Marks NWR, Wakulla Co., Florida


*

(subspecies: *centrata* = purple, *macrospilota* = green, *rhizophorarum* = pink, *tequesta* = gray)

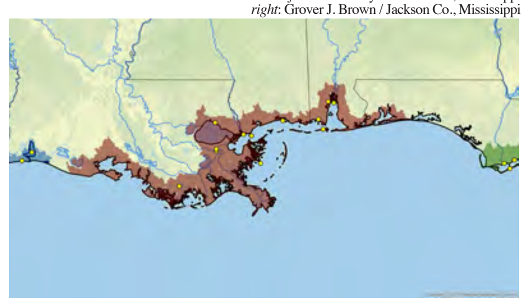
Distribution: USA (Florida)
Presumed Historic Indigenous Range: 15,629 sq. km
Size (Max SCL): female 20.8 cm (Mealey, unpubl. data)
Synonymy:
Malaclemmys macrospilota Hay 1905:16
Malaclemys centrata macrospilota, *Malaclemys pileata macrospilota*, *Malaclemys terrapin macrospilota*
Type locality: "Charlotte Harbor, Florida" [USA].
Type specimen: USNM 33917, holotype, see Cochran (1961) and Reynolds et al. (2007).

Malaclemys terrapin pileata (Wied-Neuwied 1865)
Mississippi Diamondback Terrapin


Andrew T. Coleman / CCB / Bayou Caddy, Hancock Co., Mississippi



left: Jennifer Frey / Jackson Co., Mississippi
right: Grover J. Brown / Jackson Co., Mississippi

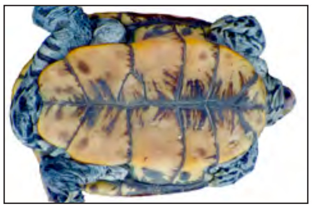

*

(subspecies: *littoralis* = blue, *macrospilota* = green, *pileata* = brown)

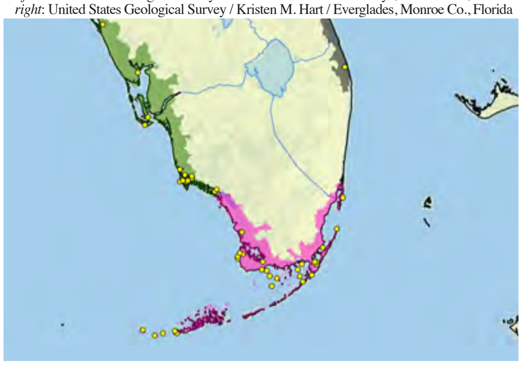
Distribution: USA (Alabama, Florida, Louisiana, Mississippi)
Presumed Historic Indigenous Range: 25,820 sq. km
Size (Max SCL): male 15.3 cm, female 24.3 cm (Selman et al. 2019, unpubl. data; Mann, Floyd, Floyd, and Floyd, unpubl. data)
Synonymy:
Emys pileata Wied-Neuwied 1865:17
Malaclemmys pileata, *Malaclemys centrata pileata*, *Malaclemys pileata pileata*, *Malaclemys terrapin pileata*
Type locality: "Sümpfen mit salzigem Wasser an der Mündung des Mississippi bei New-Orleans" [Louisiana, USA]. Emended to "New Orleans, Louisiana" [USA] by Hay (1905:17).
Type specimen: AMNH 916, lectotype, designated as "type?" by Hay (1905:17), and as lectotype by Fritz et al. (1994:167); Uetz et al. (2019) erroneously list AMNH 7064 as holotype.

Malaclemys terrapin rhizophorarum Fowler 1906
Mangrove Diamondback Terrapin

Brian K. Mealey / CRM 3 / Monroe Co., Florida



left: United States Geological Survey / Mathew Denton / Calusa Keys, Monroe Co., Florida
right: United States Geological Survey / Kristen M. Hart / Everglades, Monroe Co., Florida



*

(subspecies: *macrospilota* = green, *rhizophorarum* = pink, *tequesta* = gray)

Distribution: USA (Florida)

Presumed Historic Indigenous Range: 3,736 sq. km

Size (Max SCL male 14.2 cm, female 20.1 cm (Hart and McIvor 2008; Lovich and Hart 2018)

Synonymy:

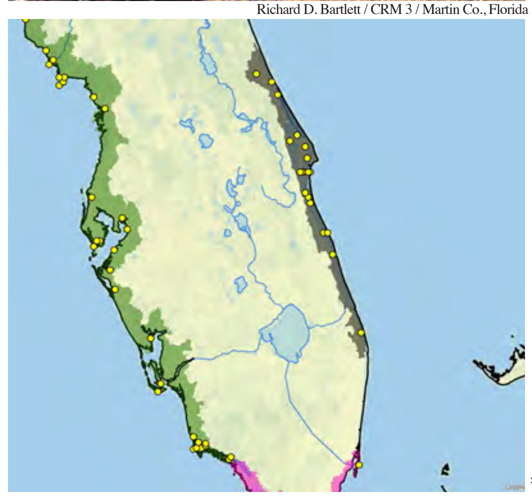
Malaclemys tuberculifera Gray 1844:29 (*nomen oblitum*)
Type locality: "California" [in error]. Restricted to "Philadelphia market" [Pennsylvania, USA] by Schmidt (1953:96) [in error]; shown to be from the Florida Keys [Florida, USA] by Ernst and Hartsell (2000:887), but they did not formally restrict the type locality.
Type specimen: NHMUK 1947.3.5.29, holotype.

Malaclemmys littoralis rhizophorarum Fowler 1906:112
Malaclemmys terrapin rhizophorarum, *Malaclemys terrapin rhizophorarum*
Type locality: "Boca Grande Key, Florida" [USA].
Type specimen: ANSP 16570, holotype, see Malnate (1971).

Malaclemys terrapin fordorum Wood 1994:1 (*nomen nudum*)

Malaclemys terrapin tequesta Schwartz 1955
Eastern Florida Diamondback Terrapin

Richard D. Bartlett / CRM 3 / Martin Co., Florida



*

(subspecies: *macrospilota* = green, *rhizophorarum* = pink, *tequesta* = gray)

Distribution: USA (Florida)

Presumed Historic Indigenous Range: 4,174 sq. km

Size (Max SCL): male 14.7 cm, female 22.0 cm (Butler et al. 2006; Seigel, unpubl. data).

Synonymy:

Malaclemys terrapin tequesta Schwartz 1955:158
Type locality: "Miami Beach, Dade County, Florida" [USA].
Type specimen: UMMZ 108482, holotype, see Kluge (1984).

Pseudemys **Gray 1856a** (09:13, 12:16, 14:20)

Pseudemys Gray 1856a:197

Type species: *Pseudemys concinna* [= *Testudo concinna* LeConte 1830], by subsequent designation by Baur (1893a:221).

Ptychemys Agassiz 1857a:252,431

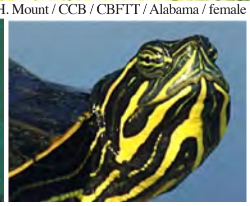
Type species: *Ptychemys concinna* [= *Testudo concinna* LeConte 1830], by subsequent designation by Brown (1908:114).

Nectemys Agassiz 1857b:642 (*nomen novum*)

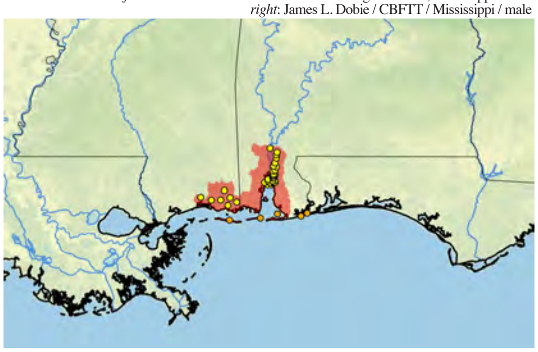
Pseudemys alabamensis **Baur 1893a**

Alabama Red-bellied Cooter

Robert H. Mount / CCB / CBFTT / Alabama / female



left: Thomas M. Mann / CBFTT / West Pascagoula River, Mississippi / male
right: James L. Dobie / CBFTT / Mississippi / male



(orange dots = waifs on offshore islands)

Distribution: USA (Alabama, Mississippi)

Presumed Historic Indigenous Range: 5,539 sq. km

Size (Max SCL): male 29.5 cm, female 37.5 cm (Leary et al. 2008 CBFTT)

CBFTT Account: Leary, Dobie, Mann, Floyd, and Nelson (2008)

IUCN Red List: Endangered (EN B1+2c) (TFTSG 1996)

TFTSG Provisional Red List: Endangered (EN) (2011)

Synonymy:

Pseudemys alabamensis Baur 1893a:224

Pseudemys rubriventris alabamensis, Chrysemys (Pseudemys) alabamensis, Chrysemys rubriventris alabamensis

Type locality: "Mobile bay, Ala." [Alabama, USA].

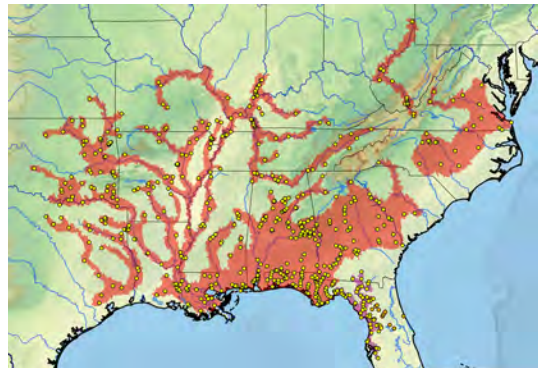
Type specimens: USNM 20966–67, syntypes (2), see Cochran (1961) and Reynolds et al. (2007); USNM 20966 listed as "holotype" by McCoy and Vogt (1985:1).

Pseudemys alabamiensis Beyer 1900:20 (*nomen nudum*)

Pseudemys concinna **(Le Conte 1830)** (09:13, 17:25)

River Cooter

(includes 2 subspecies)



*

(subspecies: *concinna* = red, *suwanniensis* = purple; orange dots = introduced)

Distribution: USA (Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, Pennsylvania (?), South Carolina, Tennessee, Texas, Virginia, West Virginia)

Presumed Historic Indigenous Range: 708,795 sq. km

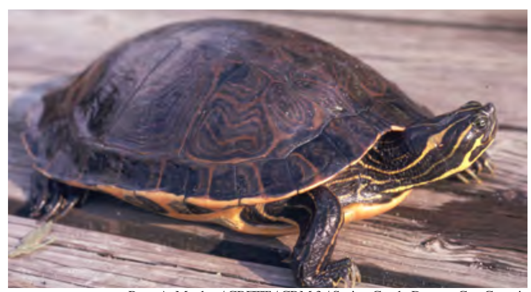
Size (Max SCL): male 33.0 cm, female 43.7 cm (see subspp.)

CBFTT Account: Ward and Jackson (2008)

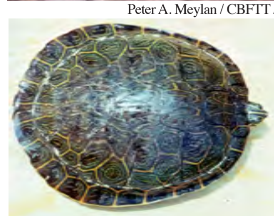
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)

Pseudemys concinna concinna **(Le Conte 1830)** (07:13, 09:13, 10:9, 17:25)

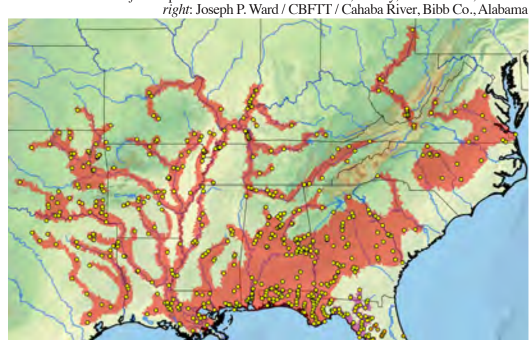
Eastern River Cooter



Peter A. Meylan / CBFTT / CRM 3 / Spring Creek, Decatur Co., Georgia



left: Joseph P. Ward / CBFTT / Flint River, Albany, Madison Co., Alabama
right: Joseph P. Ward / CBFTT / Cahaba River, Bibb Co., Alabama



*

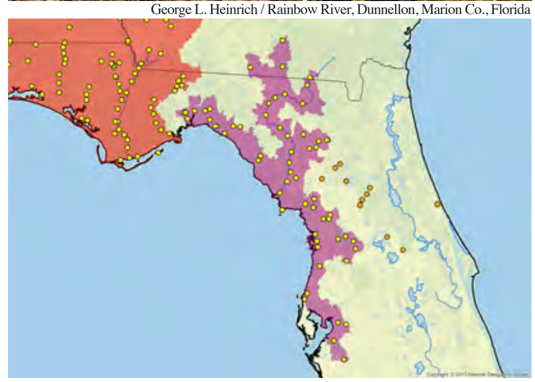
(subspecies: *concinna* = red, *suwanniensis* = purple; orange dots = introduced)

Distribution: USA (Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Ohio, Oklahoma, Pennsylvania (?), South Carolina, Tennessee, Texas, Virginia, West Virginia)
Presumed Historic Indigenous Range: 688,792 sq. km
Size (Max SCL): male 30.3 cm, female 42.0 cm (Buhlmann and Vaughan 1991; Ward and Jackson 2008 CBFTT)
Synonymy:
Testudo concinna Le Conte 1830:106 (junior homonym, not = *Emys concinna* Cuvier *in* Guérin 1829 (*nomen oblitum*) [= *Trachemys scripta elegans*]) [17:25]
Emys (Testudo) concinna, Terrapene concinna, Clemmys (Clemmys) concinna, Pseudemys concinna, Ptychemys concinna, Chrysemys concinna, Pseudemys floridana concinna, Pseudemys concinna concinna, Chrysemys concinna concinna
Type locality: "rivers of Georgia and Carolina, where the beds are rocky...never...below Augusta on the Savannah, or Columbia on the Congaree" [USA]. Restricted to "vicinity of Columbia, South Carolina" [USA] by Schmidt (1953:101).
Type specimen: MNHN 9172 (with body parts MNHN 2066 of the same specimen), lectotype, designated by Bour (2003:543).
Emys annulifera Gray 1830e:12 [10:7]
Trachemys annulifera
Type locality: Not known. Restricted to "Columbia, South Carolina" [USA] by Schmidt (1953:101).
Type specimen: NHMUK 1946.1.22.28, holotype, see Boulenger (1889:84).
Emys hieroglyphica Holbrook 1836:47
Pseudemys hieroglyphica, Ptychemys hieroglyphica, Clemmys hieroglyphica, Chrysemys hieroglyphica, Pseudemys floridana hieroglyphica, Pseudemys concinna hieroglyphica, Chrysemys concinna hieroglyphica
Type locality: "Cumberland river" [probably Tennessee, USA].
Type specimen: ANSP 217, holotype, see Baur (1893a) and Carr (1938b), not listed by Malnate (1971), apparently lost (Iverson 1992).
Emys mobilensis Holbrook 1838a:53
Ptychemys mobilensis, Clemmys mobilensis, Pseudemys mobilensis, Chrysemys mobilensis, Pseudemys floridana mobilensis, Pseudemys concinna mobilensis, Chrysemys concinna mobilensis
Type locality: "Alabama...in the neighbourhood of Mobile" [USA].
Type specimen: ANSP 242, holotype, see Malnate (1971).
Emys labyrinthica Duméril and Bibron *in* Duméril and Duméril 1851:13
Clemmys labyrinthica, Pseudemys labyrinthica, Chrysemys labyrinthica
Type locality: "Wabash-River (États-Unis)" [Indiana, USA].
Type specimens: MNHN 9179–81, 9521, syntypes (4), see Roux-Esteve (1979) and Bonnemains and Bour (1996).
Ptychemys hoyi Agassiz 1857a:433,
Pseudemys concinna hoyi, Pseudemys floridana hoyi, Chrysemys floridana hoyi
Type locality: "south-western Missouri" [USA]. Restricted by neotype designation to "Newton County, Missouri" [USA] by Stejneger (1938:175); invalid restriction to "vicinity of Springfield, Missouri" [USA] by Schmidt (1953:101).
Type specimen: USNM 55516, neotype, designated by Stejneger (1938:175), see Cochran (1961) and Reynolds et al. (2007).
Emys orthonyx Wied-Neuwied 1865:23
Type locality: "südlichen Gewässern bei New-Orleans" [Louisiana, USA].
Type specimen(s): Not located, syntypes (3), type specimens figured (pl.2,f.5,pl.3,f.1-2).
Pseudemys vioscana Brimley 1928:66
Type locality: "Lake Des Allemands, La." [Louisiana, USA].
Type specimen: USNM 79632 (formerly Brimley no. 115), holotype, see Cochran (1961) and Reynolds et al. (2007).
Pseudemys elonae Brimley 1928:67
Type locality: "a pond in Guilford County, North Carolina, not far from Elon College, in the Cape Fear drainage" [USA].
Type specimen: USNM 79631 (formerly Brimley no. 124), holotype, see Cochran (1961) and Reynolds et al. (2007).
Pseudemys concinna metteri Ward 1984:34
Type locality: "Old Fort Cobb, Caddo County, Oklahoma" [USA].
Type specimen: USNM 7173, holotype, see Reynolds et al. (2007).

Pseudemys concinna suwanniensis Carr 1937a [07:15, 09:13]
Suwannee Cooter

Dale R. Jackson / CBFTT / CRM 3 / Wakulla River, Wakulla Co., Florida

George L. Heinrich / Rainbow River, Dunnellon, Marion Co., Florida



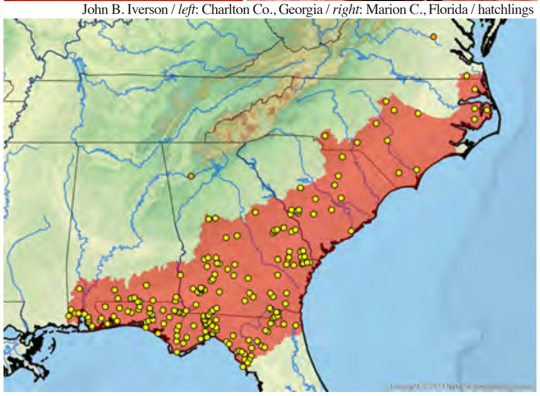
*
(subspecies: *concinna* = red, *suwanniensis* = purple; orange dots = introduced)

Distribution: USA (Florida, Georgia)
Presumed Historic Indigenous Range: 20,003 sq. km
Size (Max SCL): male 33.0 cm, female 43.7 cm (Jackson 2006)
Synonymy:
Pseudemys floridana suwanniensis Carr 1937a:4
Pseudemys concinna suwanniensis, Chrysemys concinna suwanniensis, Pseudemys suwanniensis
Type locality: "Suwannee River at Manatee Springs, Levy-Dixie County line, Florida" [USA].
Type specimen: UMMZ 81673, holotype, see Peters (1952) and Kluge (1984).

Pseudemys floridana (Le Conte 1830) (07:14, 09:13, 10:9)
(or *Pseudemys concinna floridana*)
(or *Pseudemys floridana floridana*)
Coastal Plain Cooter, Pond Cooter, Florida Cooter


John Jensen / CRM 3 / Okaloosa Co., Florida


John B. Iverson / *left*: Charlton Co., Georgia / *right*: Marion C., Florida / hatchlings

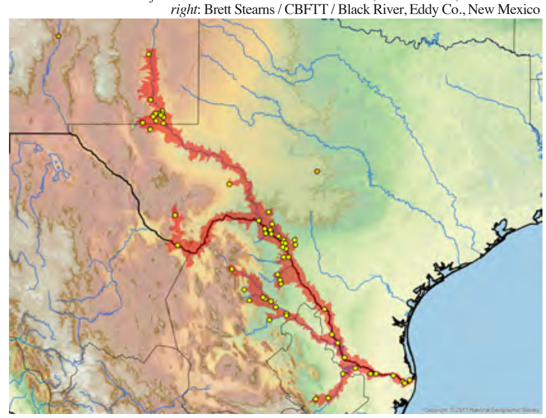

(orange dots = possibly introduced)

Distribution: USA (Alabama, Georgia, Florida, Mississippi, North Carolina, South Carolina, Virginia)
Presumed Historic Indigenous Range: 288,887 sq. km
Size (Max SCL): male 31.6 cm, female 39.7 cm (Ernst and Lovich 2009; Powell et al. 2016)
IUCN Red List: Least Concern (LC) (van Dijk 2011), as *Pseudemys concinna floridana*; Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Testudo floridana Le Conte 1830:100
Terrapene floridana, *Emys floridana*, *Clemmys (Clemmys) floridana*, *Pseudemys floridana*, *Chrysemys floridana*, *Pseudemys floridana floridana*, *Chrysemys floridana floridana*, *Pseudemys concinna floridana*
Type locality: "St. John's river of East Florida" [USA]. Emended to "lower reaches of the St. John's River (Duval County), Florida" [USA] by Bour (2003:540).
Type specimens: MNHN 9170, syntype (1), other syntypes apparently lost, discussed by Bour (2003); Uetz et al. (2019) erroneously listed MNHN 91170.

Pseudemys gorzugi Ward 1984 (07:16, 12:16, 14:19)
Rio Grande Cooter, *Jicotea del Rio Bravo*


Charles W. Painter / CBFTT / Black River, Eddy Co., New Mexico


left: Brett Stearns / CBFTT / Devil's River, Val Verde Co., Texas / female
right: Brett Stearns / CBFTT / Black River, Eddy Co., New Mexico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(orange dots = introduced or misidentified)

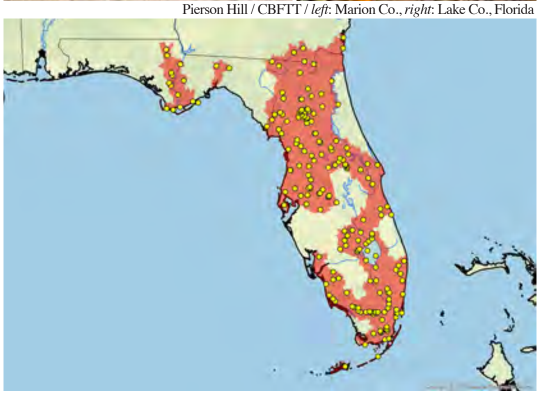
Distribution: Mexico (Chihuahua [?], Coahuila, Nuevo Leon, Tamaulipas), USA (New Mexico, Texas)
Presumed Historic Indigenous Range: 64,862 sq. km
Size (Max SCL): male 28.4 cm, female 40.0 cm (Legler and Vogt 2013; Pierce et al. 2016 CBFTT)
CBFTT Account: Pierce, Stuart, Ward, and Painter (2016)
IUCN Red List: Near Threatened (NT) (van Dijk 2011); Previously: Near Threatened (NT) (TFTSG 1996)
Synonymy:
Pseudemys concinna gorzugi Ward 1984:29
Pseudemys gorzugi
Type locality: "3 1/2 mi. W Jimenez, Río San Diego, Coahuila, México, 850 feet altitude." Emended to "Rio San Diego, 5.6 km W of Jimenez (29°15'N, 100°51'W), Coahuila, Mexico, 260 m elevation" by Legler and Vogt (2013:242).
Type specimen: KU 39986, holotype.

Pseudemys nelsoni Carr 1938a (09:13)
Florida Red-bellied Cooter


Gary Luciano / CBFTT / Big Cypress National Preserve, Collier Co., Florida



Pierson Hill / CBFTT / *left*: Marion Co., *right*: Lake Co., Florida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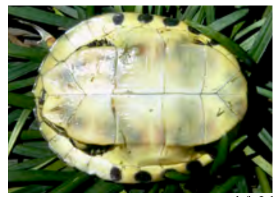
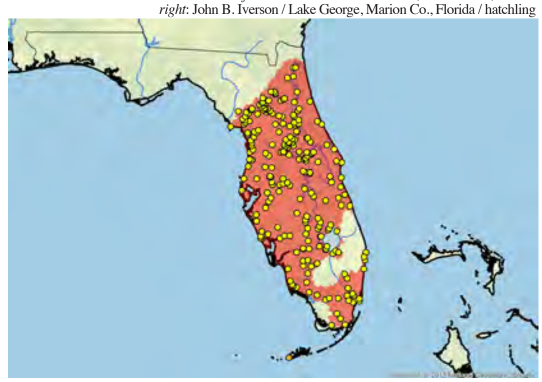
Distribution: USA (Florida, Georgia)
Introduced: British Virgin Islands (Tortola), USA (Texas)
Presumed Historic Indigenous Range: 88,219 sq. km
Size (Max SCL): male 30.0 cm, female 37.5 cm (Pritchard 1980; Jackson 2010 CBFTT)
CBFTT Account: Jackson (2010)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Pseudemys nelsoni Carr 1938a:307
Pseudemys rubriventris nelsoni, *Chrysemys (Pseudemys) nelsoni*, *Chrysemys nelsoni*, *Chrysemys rubriventris nelsoni*
Type locality: "Fellsmere, Indian River County, Florida" [USA].
Type specimen: MCZ 39888, holotype, see Barbour and Loveridge (1946).

Pseudemys peninsularis Carr 1938b (07:17, 09:13, 10:9)
(**or *Pseudemys floridana peninsularis***)
Peninsula Cooter


Richard D. Bartlett / CRM 3 / Lee Co., Florida



left: John B. Iverson / Gainesville, Alachua Co., Florida
right: John B. Iverson / Lake George, Marion Co., Florida / hatchling

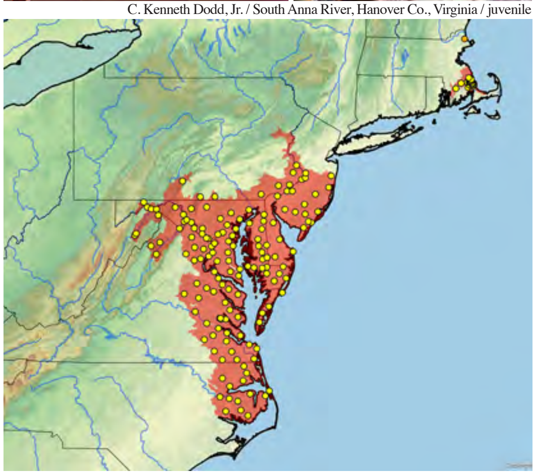

(orange dot = introduced)

Distribution: USA (Florida)
Presumed Historic Indigenous Range: 85,977 sq. km
Size (Max SCL): male 32.0 cm, female 38.0 cm (Thomas and Jansen 2006)
IUCN Red List: Least Concern (LC) (van Dijk 2011), as *Pseudemys peninsularis*
Synonymy:
Pseudemys floridana peninsularis Carr 1938b:105
Chrysemys floridana peninsularis, *Pseudemys peninsularis*
Type locality: "Crystal Springs, Pasco County, Florida" [USA].
Type specimen: MCZ 43849, holotype, see Barbour and Loveridge (1946); erroneously listed as MCZ 42849 by Reynolds et al. (2007).

Pseudemys rubriventris (Le Conte 1830)
Northern Red-bellied Cooter

James H. Harding / Virginia

C. Kenneth Dodd, Jr. / South Anna River, Hanover Co., Virginia / juvenile



*

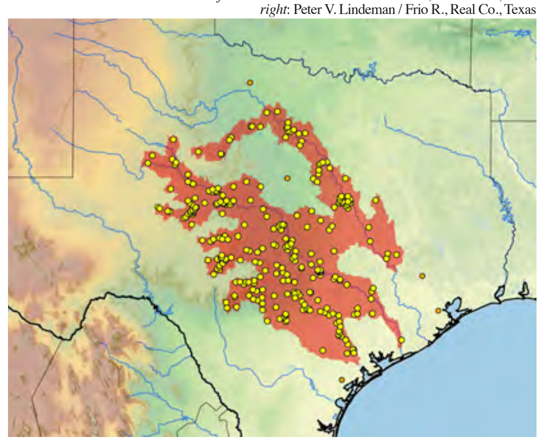
(orange dot = possible occurrence)

Distribution: USA (Delaware, Maryland, Massachusetts, New Jersey, North Carolina, Pennsylvania, Virginia, West Virginia)
Introduced: South Korea
Presumed Historic Indigenous Range: 98,917 sq. km
Size (Max SCL): male 31.2 cm, female 33.7 cm (Graham 1991; Ernst and Lovich 2009)
IUCN Red List: Near Threatened (NT) (van Dijk 2011); Previously: Near Threatened (NT) (TFTSG 1996)
Synonymy:
Testudo rubriventris Le Conte 1830:101
Terrapene rubriventris, *Emys rubriventris*, *Clemmys (Clemmys) rubriventris*, *Chrysemys rubriventris*, *Pseudemys rubriventris*, *Pseudemys rubiventris*, *Pseudemys rubriventris rubriventris*, *Chrysemys rubriventris rubriventris*
Type locality: "rivers from New-Jersey to Virginia, chiefly...in such as are rocky; in the Delaware, near Trenton" [USA]. Restricted to "in the Delaware, near Trenton" [New Jersey, USA] by Baur (1893a:224).
Type specimen: MNHN 9208 (with body parts 2069, 2070–71 of the same specimen), lectotype, designated by Bour (2003:541).
Emys irrigata Bell *in* Duméril and Bibron 1835:276
Emys irrigita
Type locality: "la partie septentrionale du Nouveau-Monde." Restricted to "vicinity of Trenton, New Jersey" [USA] by Schmidt (1953:103).
Type specimens: MNHN 9204, 9206, OUM 8441–42, syntypes (4), discussed by Nowak-Kemp and Fritz (2010).
Emys rivulata Gray 1844:22 (junior homonym, not = *Emys rivulata* Valenciennes *in* Bory de Saint-Vincent 1833 [= *Mauremys rivulata*])
Type locality: "N. America." Restricted to "vicinity of Trenton, New Jersey" [USA] by Schmidt (1953:103).
Type specimen: NHMUK 1947.3.5.25, holotype.
Pseudemys rubriventris bangsi Babcock 1937:293
Chrysemys rubriventris bangsi, *Pseudemys bangsi*
Type locality: "Boot Pond, Plymouth, Massachusetts" [USA]. Corrected to "Gunner's Exchange Pond, Plymouth Co., Massachusetts" [USA] by Barbour and Loveridge (1946:179).
Type specimen: MCZ 16778, holotype, see Barbour and Loveridge (1946).

Pseudemys texana Baur 1893a (12:16)
Texas Cooter

Peter V. Lindeman / South Llano R., Kimble Co., Texas

left: Peter V. Lindeman / South Llano R., Kimble Co., Texas
right: Peter V. Lindeman / Frio R., Real Co., Texas



*

(orange dots = probable introduced or misidentified)

Distribution: USA (Texas)
Presumed Historic Indigenous Range: 122,528 sq. km
Size (Max SCL): male 25.3 cm, female 33.0 cm (Killebrew and Porter 1989b; Ceballos et al. 2013)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)

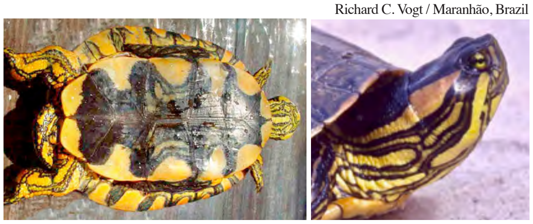
Synonymy:
Pseudemys texana Baur 1893a:223
Chrysemys texana, Pseudemys floridana texana, Pseudemys concinna texana, Chrysemys concinna texana
Type locality: "San Antonio, Texas" [USA].
Type specimen: ANSP 246, holotype, see Malnate (1971).

Trachemys Agassiz 1857a (07:18, 09:14, 11:6, 14:21, 14:22, 14:23, 17:26)

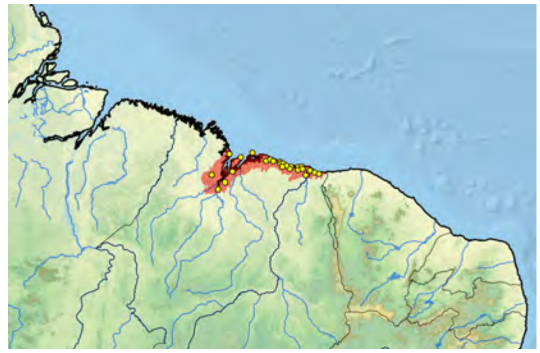
Trachemys Agassiz 1857a:252,434
Type species: Originally *Trachemys scabra* [= *Testudo scabra* Linnaeus 1758], by subsequent designation by Brown (1908:114), but its uncertain identity led Lindholm (1929:280) to designate *Trachemys troosti* [= *Emys troosti* Holbrook 1836] as the type species (see also Smith and Smith 1980:434). Rhodin and Carr (2009:14) demonstrated that *Testudo scabra* Linnaeus 1758 was synonymous with *Rhinoclemmys punctularia* [= *Testudo punctularia* Daudin 1801] and declared *T. scabra* a *nomen oblitum*, validating Lindholm's designation of *Trachemys troosti* as type species of *Trachemys*; they also identified the lost holotype of *Trachemys scripta* (*Testudo scripta* Thunberg *in* Schoepff 1792). As a result, Seidel and Ernst (2017:78) suggested that *Trachemys scripta* should be considered the type species for *Trachemys*, but *Trachemys troosti* retains that designation.
Callichelys Gray 1863c:179,181
Type species: *Callichelys ornata* [= *Emys ornata* Gray *in* Griffith and Pidgeon 1830], by original designation.
Redamia Gray 1870c:35
Type species: *Redamia olivacea* [= *Emys olivacea* Gray 1856b = subjective synonym of *Pseudemys stejnegeri* Schmidt 1928], by original monotypy.

Trachemys adiutrix Vanzolini 1995 (11:6, 17:27)
(or _Trachemys dorbigni adiutrix_)
Maranhao Slider, Carvalho's Slider

Richard C. Vogt / Maranhão, Brazil

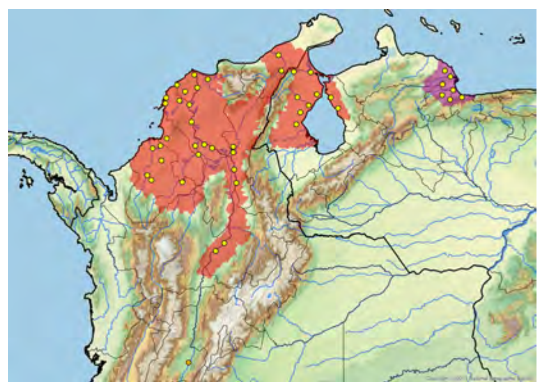


left: Richard C. Vogt / Maranhão, Brazil
right: Jérôme Maran / Santo Amaro, Maranhão, Brazil



Distribution: Brazil (Maranhão, Piauí)
Presumed Historic Indigenous Range: 24,010 sq. km
Size (Max SCL): male 18.6 cm, female 25.1 cm (Ernst et al. 2010)
IUCN Red List: Endangered (EN B1+2c) (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2011)
Synonymy:
Trachemys adiutrix Vanzolini 1995:111
Trachemys dorbigni adiutrix
Type locality: "Brasil: Maranhão: Santo Amaro, 02°33' S, 43°14' W" [Brazil].
Type specimen: MZUSP 3224, holotype.

Trachemys callirostris (Gray 1856b) (11:6, 17:26)
(or _Trachemys venusta callirostris_)
Colombian Slider, *Jicotea, Morrocoy de Agua*
(includes 2 subspecies)



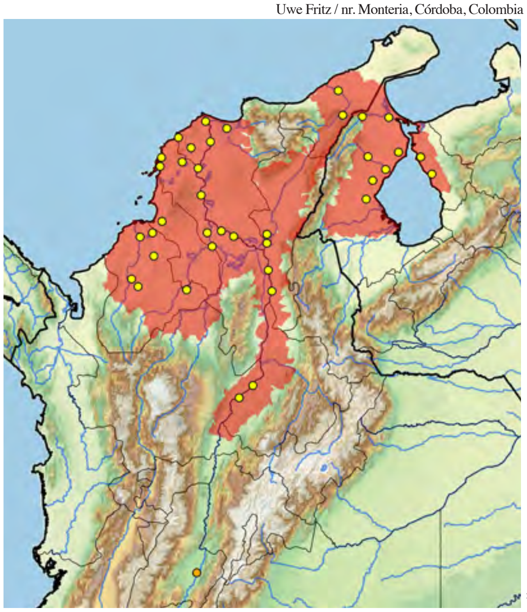
*

(subspecies: *callirostris* = red, *chichiriviche* = purple; orange dot = trade or introduced)
Distribution: Colombia (Antioquia, Atlántico, Bolívar, Cesar, Córdoba, Cundinamarca, La Guajira, Magdalena, Santander, Sucre), Venezuela (Carabobo, Falcón, Yaracuy, Zulia)
Presumed Historic Indigenous Range: 142,868 sq. km
Size (Max SCL): male 30.0 cm, female 33.0 cm (see subspp.)
CBFTT Account: Bock, Páez, and Daza (2010)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Vulnerable (VU) (2011)

Trachemys callirostris callirostris (Gray 1856b) (07:19, 11:6, 17:26)
(or *Trachemys venusta callirostris*)
Colombian Slider

Vivian P. Páez / CBFTT / Colombia

Uwe Fritz / nr. Monteria, Córdoba, Colombia



*

(subspecies: *callirostris* = red, orange dot = trade or introduced)

Distribution: Colombia (Antioquia, Atlántico, Bolívar, Cesar, Córdoba, Cundinamarca, La Guajira, Magdalena, Santander, Sucre), Venezuela (Zulia)

Presumed Historic Indigenous Range: 134,297 sq. km

Size (Max SCL): male 30.0 cm, female 31.5 cm (Bock et al. 2010 CBFTT; Ceballos et al. 2013)

Synonymy:

Emys callirostris Gray 1856b:25

Callichelys callirostris, Pseudemys callirostris, Chrysemys ornata callirostris, Pseudemys scripta callirostris, Pseudemys ornata callirostris, Chrysemys callirostris, Chrysemys scripta callirostris, Trachemys scripta callirostris, Trachemys callirostris, Trachemys ornata callirostris, Trachemys dorbigni callirostris, Trachemys callirostris callirostris, Trachemys venusta callirostris

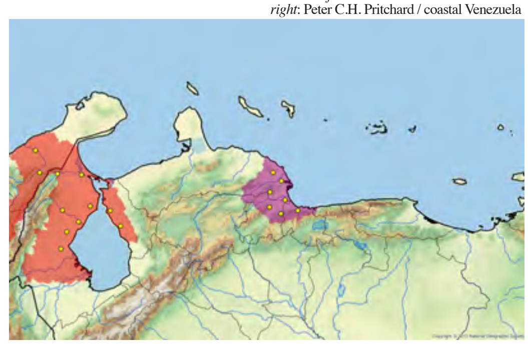
Type locality: "America." Restricted to "Unterlauf des Rio Magdalena" [Colombia] by Müller (1940:109).

Type specimen: NHMUK 1947.3.4.87 (formerly 1854.10.16.58), holotype.

Trachemys callirostris chichiriviche (Pritchard and Trebbau 1984) (07:19, 11:6, 17:26)
(or *Trachemys venusta chichiriviche*)
Venezuelan Slider

Hedelvy J. Guada / Jatira-Tacarigua, Falcón, Venezuela

left: Carl H. Ernst / coastal Venezuela
right: Peter C.H. Pritchard / coastal Venezuela



*

(subspecies: *callirostris* = red, *chichiriviche* = purple)

Distribution: Venezuela (Carabobo, Falcón, Yaracuy)

Presumed Historic Indigenous Range: 8,571 sq. km

Size (Max SCL): male 24.5 cm, female 33.0 cm (Pritchard and Trebbau 1984; Bock et al. 2010 CBFTT)

Synonymy:

Pseudemys scripta chichiriviche Pritchard and Trebbau 1984:191

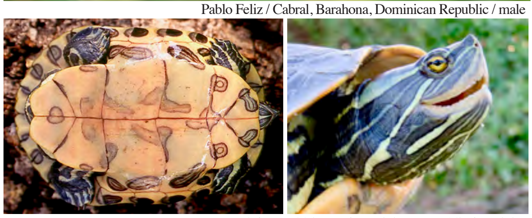
Trachemys scripta chichiriviche, Trachemys ornata chichiriviche, Trachemys callirostris chichiriviche, Trachemys venusta chichiriviche

Type locality: "Lago de Tacarigua, Edo. Falcón, Venezuela (68°15' W, 11°4' N)."

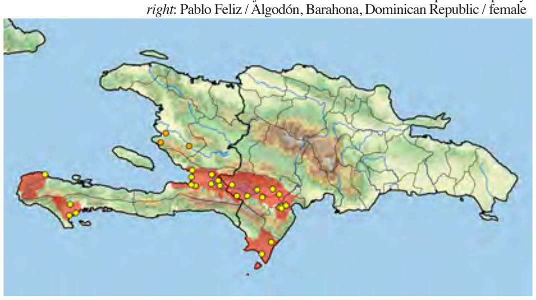
Type specimen: UF 53333, holotype.

Trachemys decorata (Barbour and Carr 1940) (14:21)
Hispaniolan Slider

Pablo Feliz / Cabral, Barahona, Dominican Republic / male



left: Harald Artner / Dominican Republic / captivity
right: Pablo Feliz / Algodón, Barahona, Dominican Republic / female



*

(orange dots = probable introduced)

Distribution: Dominican Republic, Haiti
Presumed Historic Indigenous Range: 7,110 sq. km
Size (Max SCL): male 21.9 cm, female 34.1 cm (Seidel and Inchaustegui Miranda 1984; Seidel 1988; Ceballos et al. 2013)
IUCN Red List: Vulnerable (VU B1+2c) (TFTSG 1996)
Synonymy:
Pseudemys decorata Barbour and Carr 1940:409
Pseudemys terrapen decorata, Chrysemys (Trachemys) decorata, Chrysemys terrapen decorata, Trachemys decorata, Trachemys stejnegeri decorata
Type locality: "Fond Parisien, Haiti."
Type specimen: MCZ 36862, holotype, see Barbour and Loveridge (1946) and Seidel (1988).

Trachemys decussata (Bell *in* Griffith and Pidgeon 1830) (14:22)
Cuban Slider
(includes 2 subspecies)

*

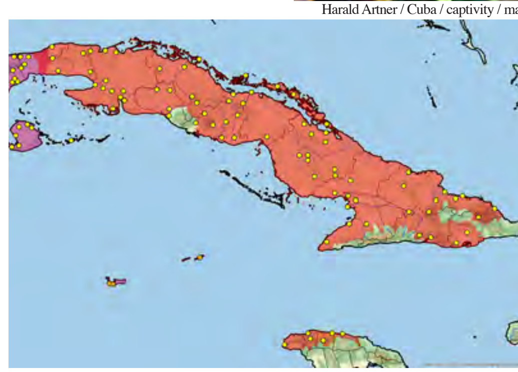
(subspecies: *decussata* = red, *angusta* = purple; orange dots = introduced *angusta*)

Distribution: Cayman Islands [historic introduction?], Cuba, Jamaica [prehistoric introduction?]
Presumed Historic Indigenous Range: 108,381 sq. km
Size (Max SCL): male 27.3 cm, female 38.8 cm (see subspp.)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

Trachemys decussata decussata (Bell *in* Griffith and Pidgeon 1830) (08:17, 14:22)
Eastern Cuban Slider

Vincenzo Ferri / Cuba / captivity / female

Harald Artner / Cuba / captivity / male



*

(subspecies: *decussata* = red, *angusta* = purple; orange dots = introduced *angusta*)

Distribution: Cuba, Jamaica [prehistoric introduction?]
Presumed Historic Indigenous Range: 93,634 sq. km
Size (Max SCL): male 26.8 cm (Seidel 1988)
Synonymy:

Testudo rugosa Shaw 1802:28 (*partim, nomen dubium* and junior homonym, not = *Testudo rugosa* Van-Ernest *in* Daudin 1801 [= *Chelonia mydas*])
Emys rugosa, Trachemys rugosa, Clemmys rugosa, Pseudemys rugosa, Pseudemys rugosa rugosa, Pseudemys terrapen rugosa, Chrysemys terrapen rugosa, Trachemys terrapen rugosa
Type locality: Not designated. Restricted to "Rio Jobabo drainage in eastern Cuba" by Mittleman (1947:176).
Type specimen: RCSM 990 (formerly LM s/n), holotype, figured in Shaw (1802,pl.4) and Barbour and Carr (1940:pl.1).

Emys decussata Bell *in* Griffith and Pidgeon 1830:76 (08:17)
Ptychemys decussata, Clemmys decussata, Pseudemys decussata, Pseudemys decussata decussata, Pseudemys rugosa decussata, Pseudemys terrapen decussata, Chrysemys (Trachemys) decussata, Chrysemys decussata decussata, Chrysemys terrapen decussata, Trachemys decussata, Trachemys decussata decussata
Type locality: Not designated. Restricted to "North America" by Gray (1830e:11); to "America Boreali" by Gray (1831d:28); to "W. Indies" by Boulenger (1889:80); and to "Cuba, exclusive of the drainage systems of the Rio Jobabo and the Caribbean slope of Pinar del Rio Province" by Mittleman (1947:176).
Type specimens: OUM 8452–58, NHMUK 1947.3.4.79, syntypes (8), discussed by Nowak-Kemp and Fritz (2010); NHMUK 1947.3.4.79 listed as "holotype" by Seidel (1988), King and Burke (1989), Iverson (1992), and Uetz et al. (2019).

Emys vermiculata Gray 1844:25
Emys vermicolata
Type locality: "Tropical America." Restricted to "W. Indies" by Gray (1873j:46).
Type specimen: NHMUK s/n, holotype, apparently lost (Seidel 1988; Bour, pers. comm.).

Emys jamao Duméril 1861b:435 (*nomen nudum*)

Emys jamao Viladró 1867a:121
Type locality: Not designated. [Cuba].
Type specimens: None designated.

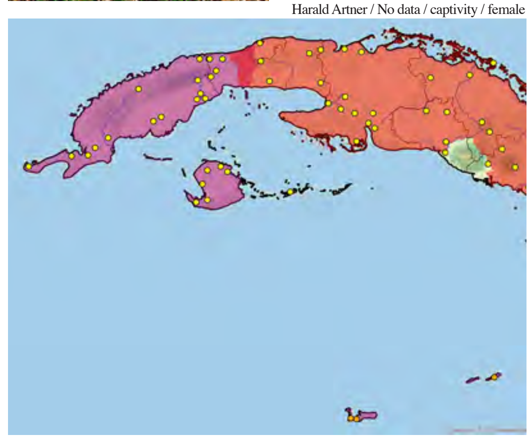
Emys gnatho Vilaró 1867b:204
Type locality: Not designated. [Cuba].
Type specimens: None designated.

Pseudemys decussata plana Barbour and Carr 1940:405
Pseudemys terrapen plana, Chrysemys terrapen plana, Trachemys decussata plana
Type locality: "Rio Jobabo, Western Oriente, Cuba."
Type specimen: MCZ 34134, holotype, see Barbour and Loveridge (1946).

Trachemys decussata angusta (Barbour and Carr 1940) (14:22)
Western Cuban Slider


James H. Harding / Grand Cayman Island, Cayman Islands / male


Harald Artner / No data / captivity / female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(subspecies: *decussata* = red, *angusta* = purple; orange dots = introduced *angusta*)

Distribution: Cayman Islands [historic introduction?], Cuba
Presumed Historic Indigenous Range: 16,212 sq. km
Size (Max SCL): male 27.3 cm, female 38.8 cm (Barbour and Carr 1940, 1941)
Synonymy:

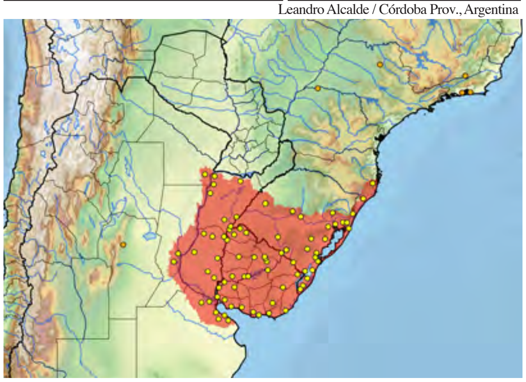
Pseudemys decussata angusta Barbour and Carr 1940:402
Pseudemys rugosa angusta, Pseudemys terrapen angusta, Chrysemys terrapen angusta, Trachemys decussata angusta, Trachemys decorata angusta
Type locality: "Taco River, Pinar del Rio, Cuba."
Type specimen: MCZ 34340, holotype, see Barbour and Loveridge (1946).

Pseudemys granti Barbour and Carr 1941:59
Pseudemys terrapen granti, Pseudemys decussata granti, Pseudemys stejnegeri granti, Chrysemys terrapen granti, Chrysemys decussata granti, Trachemys decussata granti, Trachemys granti, Trachemys stejnegeri granti
Type locality: "Grand Cayman" [Cayman Islands].
Type specimen: MCZ 46045, holotype, see Barbour and Loveridge (1946).

Trachemys dorbigni (Duméril and Bibron 1835) [07:20, 11:6, 17:27]
(or ***Trachemys dorbigni dorbigni***)
D'Orbigny's Slider

Jérôme Maran / Brazil

Leandro Alcalde / Córdoba Prov., Argentina



*

(orange dots = introduced)

Distribution: Argentina (Buenos Aires, Chaco, Corrientes, Entre Rios, Santa Fe), Brazil (Rio Grande do Sul, Santa Catarina), Uruguay

Introduced: Argentina (Córdoba), Brazil (Bahia, Goiás, Minas Gerais, Paraná, Rio de Janeiro, São Paulo, Sergipe, Tocantins)

Presumed Historic Indigenous Range: 583,349 sq. km

Size (Max SCL): male 23.0 cm, female 25.0 cm (Seidel 1989)

IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

TFTSG Provisional Red List: Least Concern (LC) (2011)

Synonymy:

Emys dorbigni Duméril and Bibron 1835:272

Clemmys dorbigni, Pseudemys dorbigni, Chrysemys (Trachemys) dorbigni, Pseudemys scripta dorbigni, Pseudemys dorbigni dorbigni, Chrysemys dorbigni dorbigni, Chrysemys scripta dorbigni, Trachemys scripta dorbigni, Trachemys dorbigni, Trachemys dorbigni dorbigni

Type locality: "Buenos-Ayres" [Buenos Aires, Argentina].

Type specimen: MNHN 9221, holotype, see Seidel (1989).

Clemmys (Rhinoclemmys) orbignyi Fitzinger 1835:124 (*nomen novum*)

Emys orbignyi

Comment: Unjustified emendation of *dorbigni*.

Clemmys dorbignyi Boulenger 1886b:424 (*nomen novum*)

Chrysemys dorbignyi, Emys dorbignyi, Pseudemys dorbignyi, Pseudemys dorbignyi dorbignyi, Pseudemys scripta dorbignyi, Chrysemys scripta dorbignyi, Trachemys scripta dorbignyi, Trachemys dorbignyi, Trachemys dorbignyi dorbignyi

Comment: Unjustified emendation of *dorbigni*.

Pseudemys dorbignyi brasiliensis Freiberg 1969:301 [07:20]

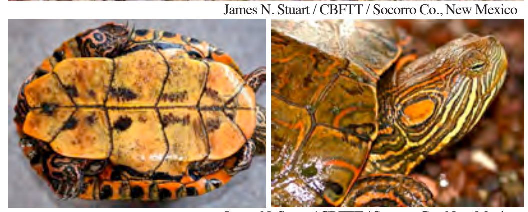
Pseudemys dorbigni brasiliensis, Pseudemys scripta brasiliensis, Chrysemys dorbigni brasiliensis, Chrysemys scripta brasiliensis, Trachemys scripta brasiliensis, Trachemys dorbigni brasiliensis, Trachemys dorbignyi brasiliensis

Type locality: "río Guaíba, Porto Alegre, Brasil."

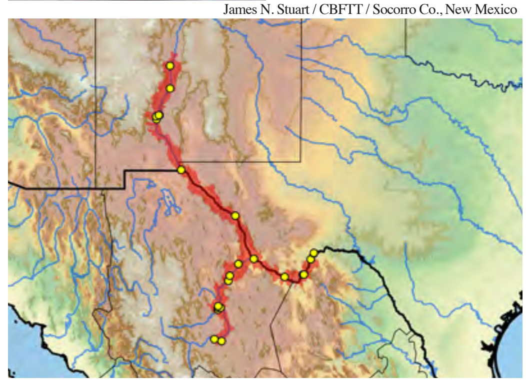
Type specimen: MACN 23628, holotype.

Trachemys gaigeae (Hartweg 1939) [07:18] **[56, 58]**
Big Bend Slider

James N. Stuart / CBFTT / Socorro Co., New Mexico



James N. Stuart / CBFTT / Socorro Co., New Mexico



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Distribution: Mexico (Chihuahua, Coahuila), USA (New Mexico, Texas)

Presumed Historic Indigenous Range: 39,807 sq. km

Size (Max SCL): male 22.2 cm, female 27.0 cm (Stuart and Ward 2009 CBFTT)

CBFTT Account: Stuart and Ward (2009)

IUCN Red List: Vulnerable (VU A2ce+4ce) (van Dijk 2011); Previously: Vulnerable (VU) (TFTSG 1996)

Synonymy:

Pseudemys scripta gaigeae Hartweg 1939:1

Pseudemys gaigeae, Chrysemys scripta gaigeae, Chrysemys gaigeae, Trachemys nebulosa gaigeae, Trachemys scripta gaigeae, Trachemys gaigeae, Trachemys ornata gaigeae, Trachemys gaigeae gaigeae

Type locality: "Boquillas, Rio Grande River, Brewster County, Texas" [USA].

Type specimen: UMMZ 66472, holotype, see Peters (1952) and Kluge (1984).

Trachemys grayi (Bocourt 1868) (07:18, 10:10, 12:6, 17:26, 17:28)
Western Meso-American Slider, *Jicotea Negra*
(includes 3 subspecies)


*

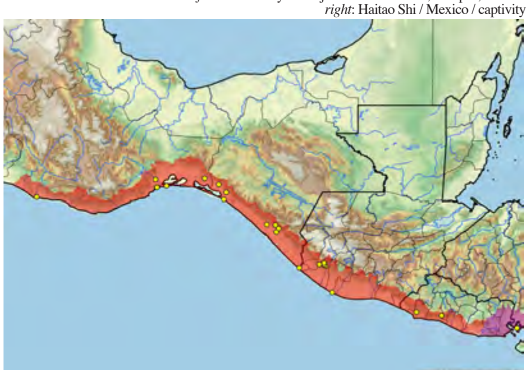
(subspecies: *grayi* = red, *emolli* = purple, *panamensis* = blue)
Distribution: Costa Rica, El Salvador, Guatemala, Honduras, Mexico (Chiapas, Oaxaca), Nicaragua, Panama
Presumed Historic Indigenous Range: 131,844 sq. km
Size (Max SCL): male 29.6 cm, female 54.8 cm (see subspp.)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2018)

Trachemys grayi grayi (Bocourt 1868) (07:18, 10:10, 12:6, 17:26, 17:28)
Gray's Slider, Tehuantepec Slider


Eduardo Reyes-Grajales / Puerto Arista, Chiapas, Mexico



left: Eduardo Reyes-Grajales / Puerto Arista, Chiapas, Mexico
right: Haitao Shi / Mexico / captivity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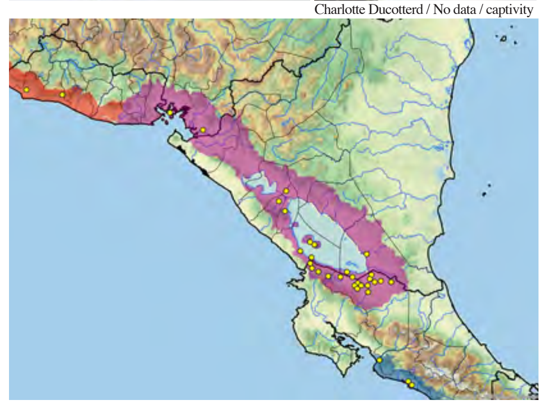
(subspecies: *grayi* = red, *emolli* = purple)
Distribution: El Salvador, Guatemala, Mexico (Chiapas, Oaxaca)
Presumed Historic Indigenous Range: 46,124 sq. km
Size (Max SCL): male 28.5 cm, female 39.5 cm (Legler 1990; Legler and Vogt 2013)
Synonymy:
Emys grayi Bocourt 1868:121 (senior homonym, not = *Emys grayi* Günther 1869 [= *Mauremys caspica*])
Callichelys grayi, Chrysemys grayi, Pseudemys grayi, Pseudemys ornata grayi, Pseudemys scripta grayi, Chrysemys scripta grayi, Trachemys scripta grayi, Trachemys grayi, Trachemys ornata grayi, Trachemys venusta grayi; Trachemys grayi grayi
Type locality: "l'embouchure du Nagualate, dans le Pacifique (Guatémala)."
Type specimen: MNHN 9220 (formerly 67.127), holotype, see Stuart (1963), Smith and Smith (1980), and Iverson (1992).
Callichelys concinna Gray 1873a:148 (17:28)
Type locality: "San Mateo, Tehuantepec" [Oaxaca, Mexico].
Type specimens: NHMUK 1871.2.7.43–44, syntypes (2).
Emys umbra Bocourt 1876b:26 (*nomen novum*)
Pseudemys umbra, Clemmys umbra, Chrysemys umbra, Pseudemys scripta umbra
Type locality: "l'embouchure du Nagualate, dans le Pacifique (Guatémala)," by default.
Type specimen: MNHN 9220 (formerly 67.127), holotype, by default.
Comment: Unjustified replacement name for *grayi*.

Trachemys grayi emolli (Legler 1990) (07:18, 11:6, 14:23, 17:26) (**55**)
Nicaraguan Slider


Haitao Shi / No data / captivity



Charlotte Ducotterd / No data / captivity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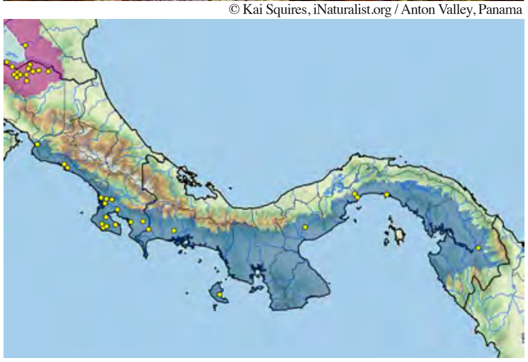
(subspecies: *grayi* = red, *emolli* = purple, *panamensis* = blue)
Distribution: Costa Rica, El Salvador, Honduras, Nicaragua
Presumed Historic Indigenous Range: 35,213 sq. km
Size (Max SCL): male 29.6 cm, female 54.8 cm (Ernst 2008)

Synonymy:
Emys valida Le Conte 1860:7 (*nomen oblitum*) [55]
Clemmys valida, Emys (Ptychemys) valida, Trachemys valida
Type locality: "Honduras." Restricted to "Pacific coastal drainages of Honduras" by McCord et al. (2010:40).
Type specimen: ANSP 216, holotype, listed by Malnate (1971), discussed by McCranie (2018).
Pseudemys scripta emolli Legler 1990:91
Trachemys scripta emolli, Trachemys ornata emolli, Trachemys emolli, Trachemys venusta emolli, Trachemys grayi emolli
Type locality: "Río Tepetate, 2.5 km northeast of Granada, Granada Province, Nicaragua."
Type specimen: UU 6728, holotype.

Trachemys grayi panamensis McCord, Joseph-Ouni, Hagen, and Blanck 2010 [10:10, 11:6, 17:26]
Panamanian Slider

© Kai Squires, iNaturalist.org / Anton Valley, Panama



*

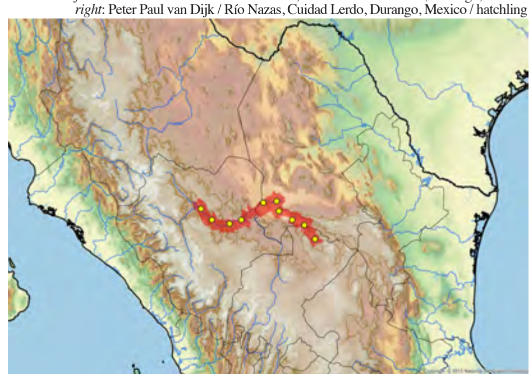
(subspecies: *emolli* = purple, *panamensis* = blue)

Distribution: Costa Rica, Panama
Presumed Historic Indigenous Range: 50,507 sq. km
Size (Max SCL): No data located
Synonymy:
Trachemys venusta panamensis McCord, Joseph-Ouni, Hagen, and Blanck 2010:46
Trachemys grayi panamensis
Type locality: "Chiva-Chiva Road (trail), 1 km from Gaillané (Gaillard) Highway (Fort Clayton entrance), north of Miraflores Lake, Pacific-side Panama Canal Zone, Panamá Province, Panama."
Type specimen: UF 52511, holotype.

Trachemys hartwegi (Legler 1990) [07:18] [56]
Nazas Slider

John B. Iverson / CBFTT / Río Nazas, Preza Francisco Zarco, Durango, Mexico

left: John B. Iverson / CBFTT / Río Nazas, Preza Francisco Zarco, Durango, Mexico
right: Peter Paul van Dijk / Río Nazas, Cuidad Lerdo, Durango, Mexico / hatchling



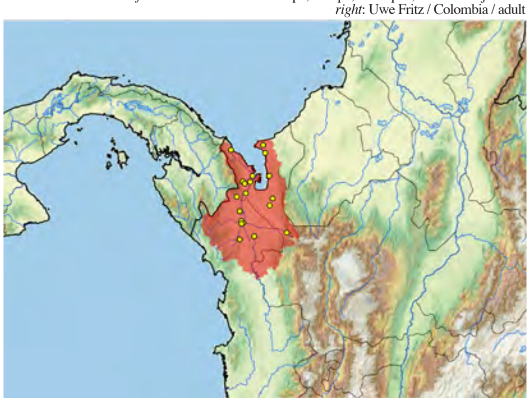
*

Distribution: Mexico (Coahuila, Durango)
Presumed Historic Indigenous Range: 13,516 sq. km
Size (Max SCL): male 14.9 cm, female 30.8 cm (Legler 1990; Stuart and Ward 2009 CBFTT)
CBFTT Account: Stuart and Ward (2009), as a subspecies of *Trachemys gaigeae*.
IUCN Red List: Vulnerable (VU A2ce+4ce) (van Dijk 2011), as subspecies of *Trachemys gaigeae*; Previously: Vulnerable (VU) (TFTSG 1996), as subspecies of *T. gaigeae*
Synonymy:
Pseudemys scripta hartwegi Legler 1990:89
Chrysemys scripta hartwegi, Trachemys scripta hartwegi, Trachemys ornata hartwegi, Trachemys nebulosa hartwegi, Trachemys gaigeae hartwegi
Type locality: "Río Nazas, 1.2 km east of Presa Lázaro Cardenas, Durango, Mexico."
Type specimen: UU 3802, holotype.

Trachemys medemi Vargas-Ramírez, del Valle, Ceballos, and Fritz 2017 [57]
Atrato Slider

Carlos del Valle / Ciénaga de Marriaga, Unguía, Chocó, Colombia

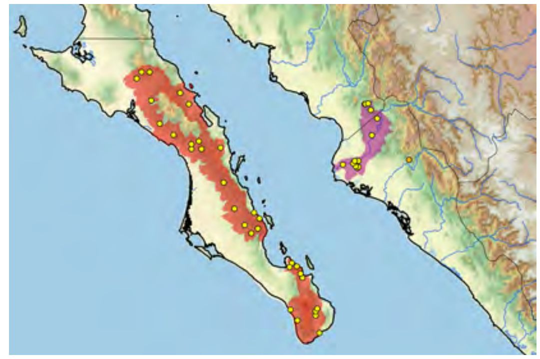
left: Claudia Ceballos / Tulenapa, Carepa, Antioquia, Colombia / juvenile
right: Uwe Fritz / Colombia / adult



*

Distribution: Colombia (Antioquia, Chocó), Panama (?)
Presumed Historic Indigenous Range: 19,644 sq. km
Size (Max SCL): male 19.8 cm, female 28.1 cm (Ceballos and Brand 2014; Vargas-Ramírez et al. 2017); Max CCL: female 38.5 cm (Ceballos and Brand 2014)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Vulnerable (VU) (2017)
Synonymy:
Trachemys medemi Vargas-Ramírez, del Valle, Ceballos, and Fritz 2017:333
Type locality: "Río Sucio, Chocó, Parque Nacional Natural Los Katíos, Colombia."
Type specimen: IAVH R-1606, holotype.

Trachemys nebulosa (Van Denburgh 1895) (07:18)
Baja California Slider
(includes 2 subspecies)



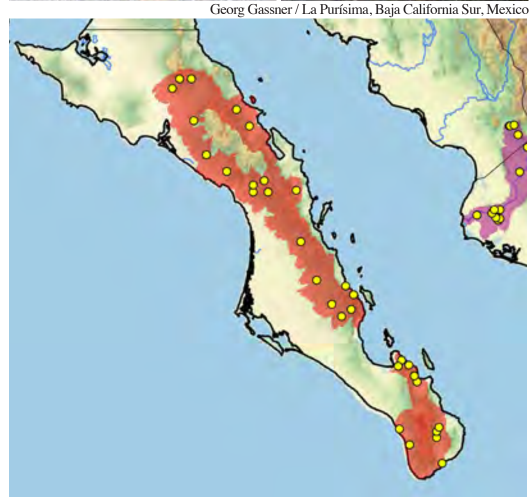
*

(subspecies: *nebulosa* = red, *hiltoni* = purple; orange dot = questionable)
Distribution: Mexico (Baja California Sur, Sinaloa, Sonora)
Presumed Historic Indigenous Range: 33,459 sq. km
Size (Max SCL): male 33.0 cm, female 37.0 cm (see subspp.)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2018)

Trachemys nebulosa nebulosa (Van Denburgh 1895) (07:18)
Baja California Slider

James R. Buskirk / Cadeje, Baja California Sur, Mexico

Georg Gassner / La Purísima, Baja California Sur, Mexico



*

(subspecies: *nebulosa* = red, *hiltoni* = purple)
Distribution: Mexico (Baja California Sur)

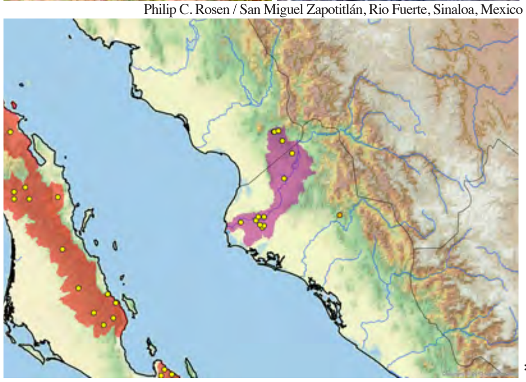
Presumed Historic Indigenous Range: 27,556 sq. km
Size (Max SCL): male 33.0 cm, female 37.0 cm (Seidel 2010)
Synonymy:
Chrysemys nebulosa Van Denburgh 1895:84
Chrysemys ornata nebulosa, Pseudemys ornata nebulosa, Pseudemys nebulosa, Pseudemys scripta nebulosa, Chrysemys scripta nebulosa, Trachemys scripta nebulosa, Trachemys dorbigni nebulosa, Trachemys ornata nebulosa, Trachemys nebulosa, Trachemys nebulosa nebulosa
Type locality: "Mainland abreast of San José Island, Lower California... Los Dolores, L.C." [Baja California Sur, Mexico].
Type specimen: CAS 2244, holotype, see Slevin and Leviton (1956) and Smith and Smith (1980).

Trachemys nebulosa hiltoni (Carr 1942) (07:18)
Fuerte Slider, Rio Fuerte Slider, *Jicotea del Fuerte*


Philip C. Rosen / San Miguel Zapotitlán, Rio Fuerte, Sinaloa, Mexico



Philip C. Rosen / San Miguel Zapotitlán, Rio Fuerte, Sinaloa, Mexico


*

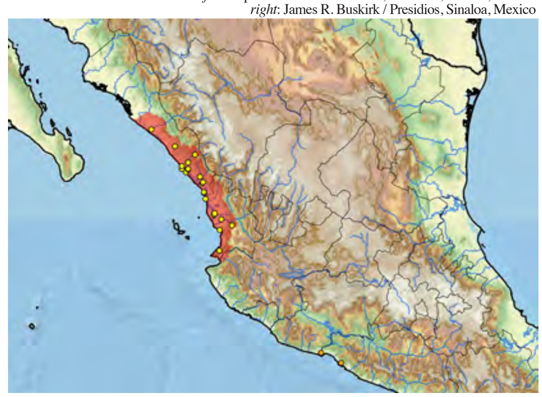
(subspecies: *nebulosa* = red, *hiltoni* = purple; orange dot = questionable)
Distribution: Mexico (Sinaloa, Sonora)
Presumed Historic Indigenous Range: 5,903 sq. km
Size (Max SCL): male 32.0 cm, female 35.1 cm (Legler 1990; Legler and Vogt 2013)
Synonymy:
Pseudemys scripta hiltoni Carr 1942:1
Pseudemys concinna hiltoni, Chrysemys scripta hiltoni, Chrysemys gaigeae hiltoni, Trachemys scripta hiltoni, Trachemys ornata hiltoni, Trachemys nebulosa hiltoni
Type locality: "Guirocoba about 28 miles southeast of Alamos, Sonora, Mexico, at an elevation of approximately 1,485 feet."
Type specimen: AMNH 63747, holotype.

Trachemys ornata (Gray *in* Griffith and Pidgeon 1830) (07:18, 07:19, 10:10, 11:6, 17:26)
Ornate Slider


Philip C. Rosen / Río Presídio, Mazatlan, Sinaloa, Mexico

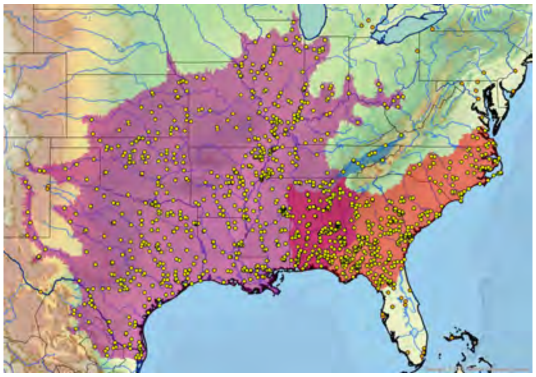


left: Philip C. Rosen / Río Presídio, Mazatlan, Sinaloa, Mexico
right: James R. Buskirk / Presidios, Sinaloa, Mexico


(orange dots = possibly introduced)

Distribution: Mexico (Jalisco, Nayarit, Sinaloa)
Possibly Introduced: Mexico (Guerrero?, Michoacán?)
Presumed Historic Indigenous Range: 29,089 sq. km
Size (Max SCL): male 35.9 cm, female 35.3 cm (Legler 1990; Legler and Vogt 2013)
IUCN Red List: Vulnerable (VU B1ab(iii)+2ab(iii)) (Frost et al. 2007)
Synonymy:
Emys ornata Gray *in* Griffith and Pidgeon 1830:76 [Gray 1830c]
Clemmys (Clemmys) ornata, Callichelys ornata, Pseudemys ornata, Chrysemys ornata, Chrysemys ornata ornata, Pseudemys ornata ornata, Pseudemys scripta ornata, Chrysemys scripta ornata, Trachemys scripta ornata, Trachemys ornata, Trachemys ornata ornata
Type locality: Not designated. Restricted to "South America" by Gray (1830e:12); and to "America Meridionali...Mazetland" by Gray (1831d:30). Emended to "Mazatlan" [Mazatlán, Sinaloa, Mexico] by Gray (1856b:24).
Type specimen: NHMUK 1946.1.22.40, lectotype, designated by Legler and Vogt (2013:301).

Trachemys scripta (Thunberg *in* Schoepff 1792) (09:15) **(58)**
Pond Slider, Common Slider
(includes 3 subspecies)



*

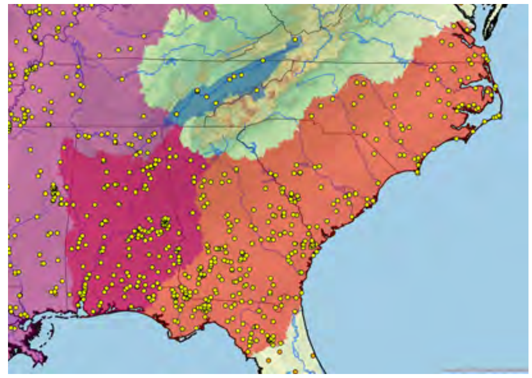
(subspecies: *scripta* = red, *elegans* = purple, *troostii* = blue; overlap = intergrades; orange dots = introduced *elegans*)

Distribution: Mexico (Nuevo Leon, Tamaulipas), USA (Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Nebraska, New Mexico [eastern], North Carolina, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia, Wisconsin)
Introduced: Multiple global locations, most apparently *Trachemys scripta elegans* (see below)
Presumed Historic Indigenous Range: 2,345,430 sq. km
Size (Max SCL): male 26.1 cm, female 32.8 cm (see subspp.)
IUCN Red List: Least Concern (LC) (van Dijk et al. 2011);
Previously: Near Threatened (NT) (TFTSG 1996)

Trachemys scripta scripta (Thunberg *in* Schoepff 1792) (09:15) **(58)**
Yellow-bellied Slider

Kurt A. Buhlmann / Savannah River Site, Aiken Co., South Carolina


Kurt A. Buhlmann / Savannah River Site, Aiken Co., South Carolina



*

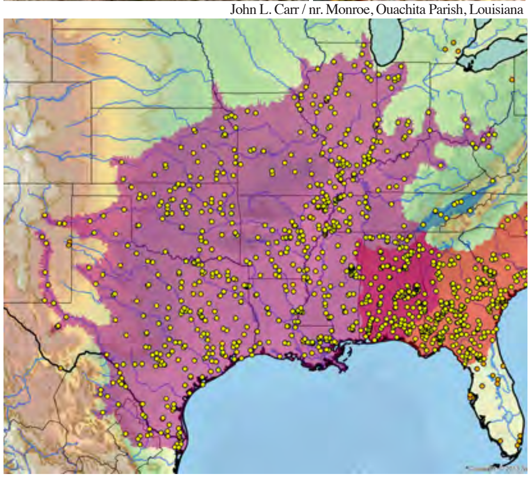
(subspecies: *scripta* = red, *elegans* = purple, *troostii* = blue; overlap = intergrades; orange dots = introduced *elegans*)

Distribution: USA (Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Virginia)
Introduced: South Korea, USA (Florida)
Presumed Historic Indigenous Range: 486,647 sq. km
Size (Max SCL): male 24.9 cm, female 30.9 cm (Ceballos et al. 2013)
Synonymy:
Testudo scripta Thunberg *in* Schoepff 1792:16 (09:15) (*nomen conservandum*)
Emys scripta, Trachemys scripta, Chrysemys scripta, Pseudemys scripta, Chrysemys scripta scripta, Chrysemys palustris scripta, Pseudemys scripta scripta, Trachemys scripta scripta
Type locality: Not known. Restricted to "Charleston, South Carolina" [USA] by Schmidt (1953:102).
Type specimen: UPSZTY 7455 (formerly UUZM 7455), holotype, listed by Thunberg (1828), not listed by Lönnberg (1896), Andersson (1900), Holm (1957), or Wallin (2001), rediscovered and designated by Rhodin and Carr (2009:13).
Comment: Name conserved by ICZN (1985b), see Legler et al. (1980).
Testudo serrata Daudin 1801:148 (senior homonym, not = *Testudo serrata* Shaw 1802 [= *Geoemyda spengleri*])
Emys serrata, Terrapene serrata, Clemmys (Clemmys) serrata, Pseudemys serrata
Type locality: "la Caroline" [South Carolina, USA].
Type specimen: Possibly MNHN, not located, type specimen figured (pl.21,f.1-2).
Emys occipitatis Gray *in* Griffith and Pidgeon 1830:75 [Gray 1830c]
Type locality: Not designated.
Type specimen: NHMUK s/n, holotype, apparently lost, redescribed as *Emys vittata* Gray 1830e.
Emys vittata Gray 1830e:11 (10:7) (*nomen novum*)
Type locality: "North America?"
Type specimen: NHMUK s/n, holotype, apparently lost, same specimen as holotype of *Emys occipitatis* Gray *in* Griffith and Pidgeon 1830 [Gray 1830c].
Comment: Unjustified replacement name for *occipitatis*.

Trachemys scripta elegans (Wied-Neuwied 1839) [17:25] **[58]**
Red-eared Slider

Matthew Aresco / CRM 3 / Leon Co., Florida

John L. Carr / nr. Monroe, Ouachita Parish, Louisiana



*

(subspecies: *scripta* = red, *elegans* = purple, *troostii* = blue; overlap = intergrades; orange dots = introduced *elegans*)

Distribution: Mexico (Coahuila, Nuevo Leon, Tamaulipas), USA (Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Nebraska, New Mexico [eastern], Ohio, Oklahoma, Tennessee, Texas, West Virginia, Wisconsin)

Introduced: Argentina, Australia (New South Wales, Queensland, Victoria), Austria, Bahamas, Bahrain, Belgium, Bermuda, Bulgaria, Brazil, British Virgin Islands, Cambodia, Canada (Ontario), Cayman Islands, Chile, China (Hong Kong), Colombia, Cyprus, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, Finland, France, French Polynesia, Germany, Great Britain, Greece, Guadeloupe, Guam, Guyana, Honduras, Hungary, Indonesia (Java, Kalimantan, Papua, Sulawesi, Sumatra), India (Goa), Iran (Mazandaran, Tehran), Ireland, Israel, Italy, Japan (mainland, Ryukyu Archipelago), Latvia, Malaysia (East, West), Martinique, Mexico, Micronesia, Myanmar, Netherlands, Netherlands Antilles, New Zealand, Nicaragua, Northern Mariana Islands [Saipan], Palau, Panama, Philippines (Cebu, Luzon, Mindanao), Poland, Portugal, Puerto Rico, Réunion, Russia, Saudi Arabia, Seychelles (Mahé), Singapore, Sint Maarten, Slovakia, Slovenia, South Africa, South Korea, Spain (Balearic Islands, Continental), Sri Lanka, Suriname, Sweden, Switzerland, Taiwan, Thailand, Trinidad, Turkey, USA (Arizona, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Maine, Maryland, Massachusetts, Michigan, New Jersey, New Mexico [western], New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Virginia, Washington), US Virgin Islands, Vietnam

Presumed Historic Indigenous Range: 1,991,029 sq. km

Size (Max SCL): male 26.1 cm, female 32.8 cm (Tucker et al. 2006; Brown et al. 2020)

Synonymy:

Testudo chlorops Rafinesque 1818:354 (*nomen nudum*) [7]
Type locality: "Kentucky" [USA].
Type specimen: Not located, type specimen figured in manuscript drawing by Rafinesque in 1818, reproduced by Bell and Bauer (2020:f.6).

Emyda semiradiata Rafinesque 1822:3 (*nomen nudum et novum*) [7]
Comment: Replacement name for *radiata*, a manuscript replacement name for *chlorops* (see below).

Emys concinna Cuvier *in* Guérin 1829:pl.1,f.3 (*nomen oblitum* and senior homonym, not = *Emys concinna* Le Conte 1830 [= *Pseudemys concinna concinna*]) [17:25]
Type locality: Not designated.
Type specimen: Not located, type specimen figured (pl.1,f.3).

Emys elegans Wied-Neuwied 1839:176(9),213
Trachemys elegans, Clemmys elegans, Pseudemys elegans, Chrysemys elegans, Chrysemys scripta elegans, Chrysemys palustris elegans, Pseudemys troostii elegans, Pseudemys scripta elegans, Trachemys scripta elegans
Type locality: "Gegend von Harmony...in dem Wabasch und Fox-River" [Indiana, USA]. Emended to "in Fox Rivers bei New-Harmony aus einem nebenflusse des Wabasch" [Indiana, USA] by Wied-Neuwied (1865:41).
Type specimen: Not located, type specimen figured in Wied-Neuwied (1865:pl.4).

Emys holbrookii Gray 1844:23
Trachemys holbrookii
Type locality: "N. America. Louisiana" [USA].
Type specimen: NHMUK 1947.3.4.78, holotype.

Emys sanguinolenta Gray 1856b:26,pl.15,f.1
Type locality: Not designated. Restricted to "N. America" by Gray (1873j:44), and to "Charleston, South Carolina" [USA] by Schmidt (1953:102).
Type specimen: NHMUK 1946.1.22.35 (formerly 1851.3.14.1), holotype.

Trachemys lineata Gray 1873a:147
Type locality: "North America." Restricted to "New Harmony, Posey County, Indiana" [USA] by Schmidt (1953:103).
Type specimen: NHMUK 1946.1.22.78 (formerly 1866.6.19.1), holotype.

Emys bicolor Berlandier *in* Bour 2017:55 (*nomen nudum*)
Type locality: Not designated. Restricted here to "Tamaulipas, Mexico."
Type specimen: Not located, type specimen figured in manuscript drawing by Berlandier in 1850 (pl.4), reproduced by Bour (2017:f.2).

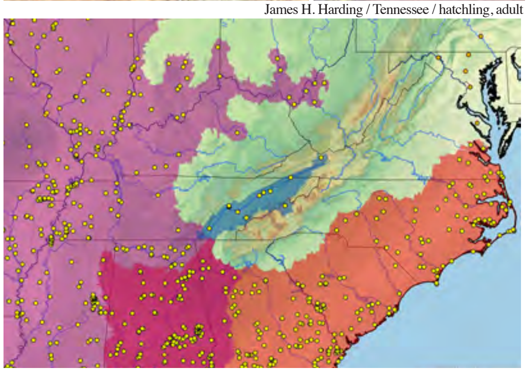
Testudo radiata Rafinesque *in* Bell and Bauer 2020:23 (*nomen nudum et novum*) [7]
Type locality: "Kentucky" [USA].
Type specimen: Not located, type specimen figured in manuscript drawing by Rafinesque in 1818, reproduced by Bell and Bauer (2020:f.6).
Comment: Manuscript replacement name for *chlorops*.

Trachemys scripta troostii (Holbrook 1836) **(58)**
Cumberland Slider


James H. Harding / Tennessee



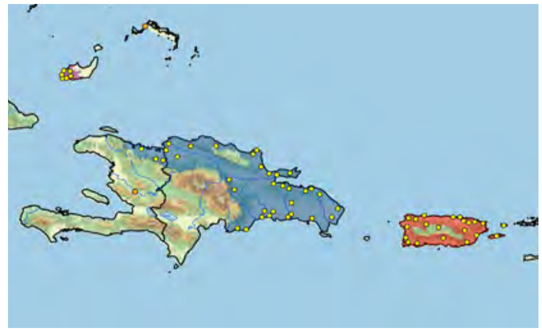
James H. Harding / Tennessee / hatchling, adult


*

(subspecies: *scripta* = red, *elegans* = purple, *troostii* = blue;
overlap = intergrades; orange dots = introduced *elegans*)

Distribution: USA (North Carolina, Tennessee, Virginia)
Introduced: Latvia
Presumed Historic Indigenous Range: 23,305 sq. km
Size (Max SCL): female 21.0 cm (Vetter 2004)
Synonymy:
Emys troostii Holbrook 1836:55
Trachemys troostii, Clemmys troostii, Pseudemys troostii, Chrysemys troostii, Pseudemys scripta troostii, Pseudemys troostii troostii, Chrysemys scripta troostii, Trachemys scripta troostii
Type locality: "Cumberland river" [Tennessee, USA].
Type specimen: ANSP 179, holotype, see Malnate (1971); not ANSP 180 as noted by Carr (1937b).
Emys cumberlandensis Holbrook 1840:55
Type locality: "Tennessee...Cumberland river" [USA].
Type specimen: Not located, originally live, holotype specimen figured (pl.8).

Trachemys stejnegeri (Schmidt 1928) (14:22)
Central Antillean Slider
(includes 3 subspecies)


*

(subspecies: *stejnegeri* = red, *malonei* = purple, *vicina* = blue;
orange dots = possibly introduced)

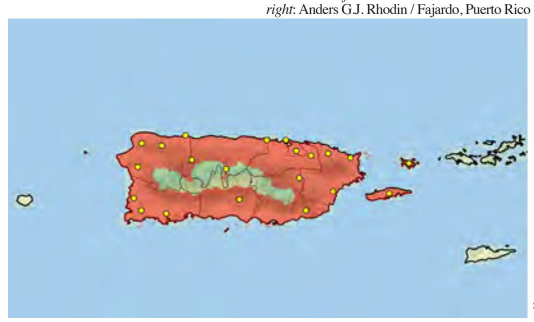
Distribution: Bahamas (Inagua), Dominican Republic, Haiti, Puerto Rico
Introduced: Dominica, Guadeloupe
Presumed Historic Indigenous Range: 38,908 sq. km
Size (Max SCL): male 21.0 cm, female 27.3 cm (see subspp.)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2011)

Trachemys stejnegeri stejnegeri (Schmidt 1928)
Puerto Rican Slider


Anders G.J. Rhodin / Fajardo, Puerto Rico



left: Michael E. Seidel / Puerto Rico
right: Anders G.J. Rhodin / Fajardo, Puerto Rico


*

(subspecies: *stejnegeri* = red)

Distribution: Puerto Rico

Presumed Historic Indigenous Range: 7,816 sq. km
Size (Max SCL): male 21.0 cm, female 26.7 cm (Seidel 1988; Itescu et al. 2014)
Synonymy:
Emys olivacea Gray 1856b:30 (junior homonym, not = *Emys olivacea* Schweigger 1812 [= *Pelomedusa olivacea*])
Clemmys olivacea, Redamia olivacea, Chrysemys olivacea
Type locality: "N. America?"
Type specimen: NHMUK 1947.3.4.10 (formerly 1843.12.25.17), holotype.
Pseudemys stejnegeri Schmidt 1928:147
Pseudemys palustris stejnegeri, Pseudemys stejnegeri stejnegeri, Pseudemys terrapen stejnegeri, Pseudemys decussata stejnegeri, Chrysemys decussata stejnegeri, Chrysemys stejnegeri, Chrysemys terrapen stejnegeri, Trachemys stejnegeri, Trachemys stejnegeri stejnegeri
Type locality: "San Juan, Porto Rico" [Puerto Rico, USA].
Type specimen: USNM 25642, holotype, see Cochran (1961), Seidel (1988), and Reynolds et al. (2007).

Trachemys stejnegeri malonei (Barbour and Carr 1938)
Inagua Slider

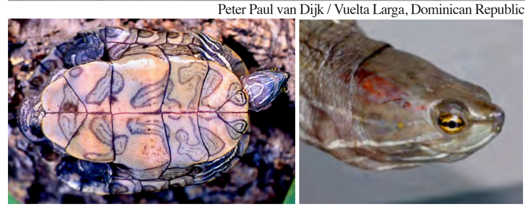

*

(subspecies: *malonei* = purple, *vicina* = blue; orange dot = possibly introduced)

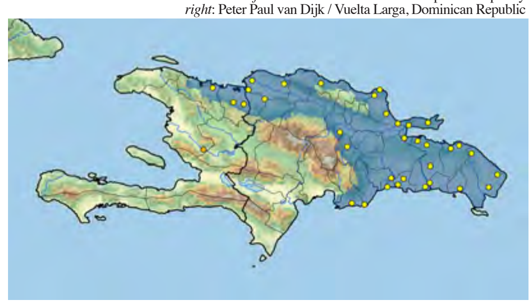
Distribution: Bahamas (Inagua)
Presumed Historic Indigenous Range: 726 sq. km
Size (Max SCL): male 15.4 cm, female 23.8 cm (Barbour and Carr 1938; Rosado, unpubl. data)
Synonymy:
Pseudemys malonei Barbour and Carr 1938:76
Pseudemys palustris malonei, Pseudemys terrapen malonei, Chrysemys malonei, Chrysemys terrapen malonei, Trachemys stejnegeri malonei, Trachemys malonei
Type locality: "ponds near Northwest Point, Great Inagua Island, B.W.I." (British West Indies) [Bahamas].
Type specimen: MCZ 44338, holotype, see Barbour and Loveridge (1946) and Seidel (1988).

Trachemys stejnegeri vicina (Barbour and Carr 1940)
Dominican Slider

Peter Paul van Dijk / Vuelta Larga, Dominican Republic



left: Harald Artner / Dominican Republic / captivity
right: Peter Paul van Dijk / Vuelta Larga, Dominican Republic


*

(subspecies: *vicina* = blue; orange dot = possibly introduced)

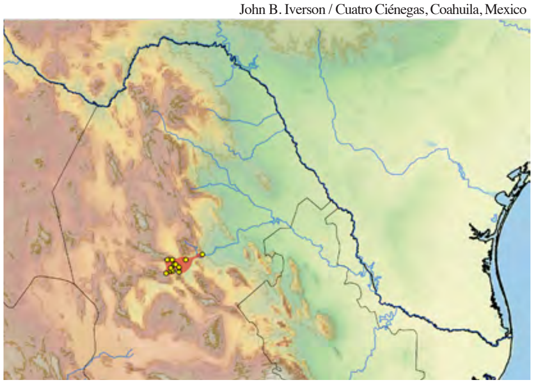
Distribution: Dominican Republic, Haiti
Presumed Historic Indigenous Range: 30,366 sq. km
Size (Max SCL): male 22.2 cm, female 27.3 cm (Seidel and Inchaustegui Miranda 1984; Seidel 1988)
Synonymy:
Pseudemys stejnegeri vicina Barbour and Carr 1940:408
Pseudemys terrapen vicina, Pseudemys decussata vicina, Chrysemys decussata vicina, Chrysemys stejnegeri vicina, Chrysemys terrapen vicina, Trachemys stejnegeri vicina
Type locality: "Sanchez, San Domingo" [Dominican Republic].
Type specimen: FMNH 5977, holotype, see Marx (1958) and Seidel (1988).

Trachemys taylori (Legler 1960) (07:18, 12:17)
Cuatro Cienegas Slider


James R. Buskirk / Cuatro Ciénegas, Coahuila, Mexico



John B. Iverson / Cuatro Ciénegas, Coahuila, Mexico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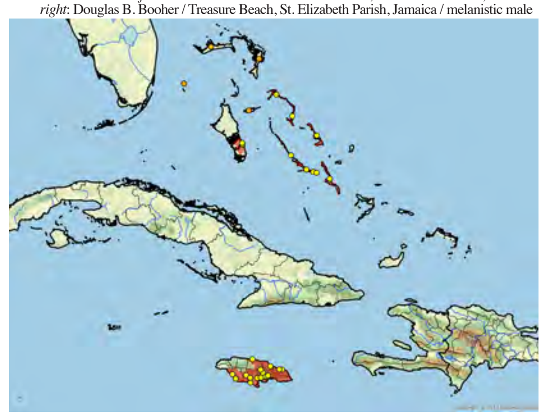
Distribution: Mexico (Coahuila)
Presumed Historic Indigenous Range: 887 sq. km
Size (Max SCL): male 17.9 cm, female 21.8 cm (Legler 1990; Ceballos et al. 2013; Legler and Vogt 2013)
IUCN Red List: Endangered (EN A4e, B1ab(iii,v)+2ab(iii,v)) (van Dijk and Flores-Villela 2007)
Synonymy:
Pseudemys scripta taylori Legler 1960:75
Chrysemys scripta taylori, Chrysemys gaigeae taylori, Chrysemys taylori, Trachemys scripta taylori, Trachemys nebulosa taylori, Trachemys ornata taylori, Trachemys taylori
Type locality: "16 km. S Cuatro Ciénegas, Coahuila, México."
Type specimen: KU 46952, holotype, see Duellman and Berg (1962).

Trachemys terrapen (Bonnaterre 1789) (09:6, 14:22) (**59**)
Jamaican Slider, Bahamian Slider


Kurt A. Buhlmann / CCB / Black River, St. Elizabeth Parish, Jamaica



left: Kurt A. Buhlmann / CCB / Black River, St. Elizabeth Parish, Jamaica
right: Douglas B. Booher / Treasure Beach, St. Elizabeth Parish, Jamaica / melanistic male


*

(orange dots = introduced and hybrids)

Distribution: Bahamas (Cat Island, Eleuthera, Exuma, Long Island, South Andros), Jamaica
Introduced: Bahamas (Grand Bahama, Great Abaco, New Providence, South Bimini [including hybrids with *Trachemys* spp.])
Presumed Historic Indigenous Range: 11,066 sq. km
Size (Max SCL): male 24.3 cm, female 30.0 cm (Tuberville et al. 2005)
IUCN Red List: Vulnerable (VU B1+2c) (TFTSG 1996)
Synonymy:
Testudo terrapen Lacepède 1788:129, synopsis[table] (09:6) (*nomen suppressum*)
Type locality: "aux Antilles, & particulièrement à la Jamaïque" [Jamaica].
Type specimen: Possibly MNHN, not located, see Seidel (1988).
Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).
Testudo terrapen Bonnaterre 1789:30
Pseudemys terrapen, Pseudemys terrapen terrapen, Chrysemys (Trachemys) terrapen, Chrysemys terrapen, Chrysemys terrapen terrapen, Trachemys terrapen, Trachemys terrapen terrapen
Type locality: "La Jamaïque" [Jamaica].
Type specimen: Possibly MNHN, not located, see Seidel (1988).
Testudo palustris Gmelin 1789:1041 (senior homonym, not = *Testudo palustris* Le Conte 1830 [= *Malaclemys terrapin*

terrapin])
Trachemys palustris, Pseudemys palustris, Chrysemys scripta palustris, Pseudemys palustris palustris
Type locality: "Jamaicae aquis stagnantibus" [Jamaica].
Type specimen: Not known or located, see Seidel (1988); no known figure of type specimen, see also Schoepff (1792:xi).
Comment: Description cited as sourced from Browne (1756:465).

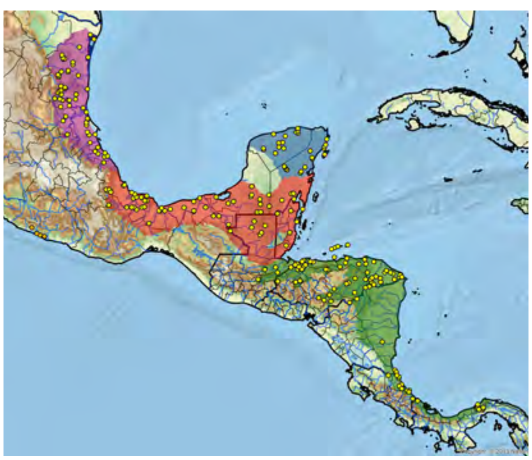
Testudo fasciata Suckow 1798:40 (senior homonym, not = *Testudo fasciata* Daudin 1801 [= *Homopus areolatus*])
Type locality: "Amboina, und besonders in Nordamerika zu Carolina" [in error]. Restricted to "Jamaica" by Seidel (1988:23).
Type specimen: Not known or located, see Seidel (1988).

Testudo rugosa Shaw 1802:28 (*partim, nomen dubium* and junior homonym, not = *Testudo rugosa* Van-Ernest *in* Daudin 1801 [= *Chelonia mydas*])
Emys rugosa, Clemmys rugosa, Chrysemys scripta rugosa, Pseudemys rugosa
Type locality: Not designated. Restricted to "Rio Jobabo drainage in eastern Cuba" by Mittleman (1947:176).
Type specimen: RCSM 990 (formerly LM s/n), figured in Shaw (1802,pl.4) and Barbour and Carr (1940:pl.1).

Emys rugosa livida Gray 1831d:30
Type locality: "America septentrionali?"
Type specimen: Possibly OUM, holotype, apparently lost, not listed by Nowak-Kemp and Fritz (2010).

Pseudemys felis Barbour 1935:205
Pseudemys palustris felis, Pseudemys terrapen felis, Chrysemys decussata felis, Chrysemys felis, Chrysemys terrapen felis, Trachemys terrapen felis, Trachemys felis
Type locality: "Tea Bay, Cat Island, Bahamas."
Type specimen: MCZ 38385, holotype, see Barbour and Carr (1940) and Barbour and Loveridge (1946).

Trachemys venusta (Gray 1856b) (07:18, 10:6, 10:10, 11:6, 12:18, 14:23, 17:26)
Eastern Meso-American Slider
(includes 4 subspecies)


*

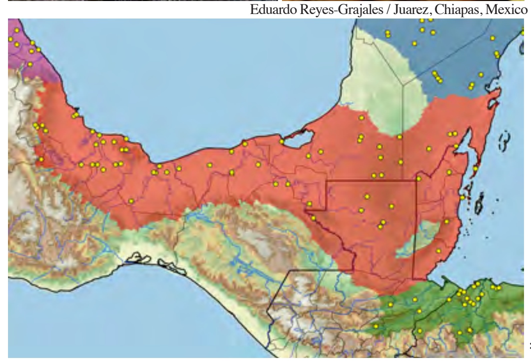
(subspecies: *venusta* = red, *cataspila* = purple, *iversoni* = blue, *uhrigi* = green; orange dots = introduced)

Distribution: Belize, Costa Rica, Guatemala, Honduras, Mexico (Campeche, Chiapas, Oaxaca, Quintana Roo, San Luis Potosi, Tabasco, Tamaulipas, Veracruz, Yucatán), Nicaragua, Panama
Presumed Historic Indigenous Range: 538,098 sq. km
Size (Max SCL): male 35.0 cm, female 44.0 cm (see subspp.)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)

Trachemys venusta venusta (Gray 1856b) (07:18, 10:10, 11:6, 12:18, 14:23, 17:26) (**55**)
Meso-American Slider, *Jicotea*

Vincenzo Ferri / Mexico / captivity

Eduardo Reyes-Grajales / Juarez, Chiapas, Mexico


*

(subspecies: *venusta* = red, *cataspila* = purple, *iversoni* = blue, *uhrigi* = green)

Distribution: Belize, Guatemala, Mexico (Campeche, Chiapas, Oaxaca, Quintana Roo, Tabasco, Tamaulipas, Veracruz)
Presumed Historic Indigenous Range: 206,164 sq. km
Size (Max SCL): male 34.1 cm, female 42.4 cm (Legler 1990; Rodrigues et al. 2018)
Synonymy:

Emys venusta Gray 1856b:24 (12:18)
Callichelys venusta, Pseudemys scripta venusta, Chrysemys scripta venusta, Trachemys scripta venusta, Trachemys ornata venusta, Trachemys venusta, Trachemys venusta venusta
Type locality: "Southern States of America; Honduras." Restricted to "Honduras" by Boulenger (1889:81) and Smith and Smith (1980:495); further restricted to "Belize (British Honduras)" by McCord et al. (2010:40) and to "Belize City, Belize (= British Honduras until 1981)" by Legler and Vogt (2013:266).
Type specimen: NHMUK 1947.3.4.80 (formerly 1845.8.5.26), figured (pl.12A), lectotype, designated by Smith and Smith (1980:495).

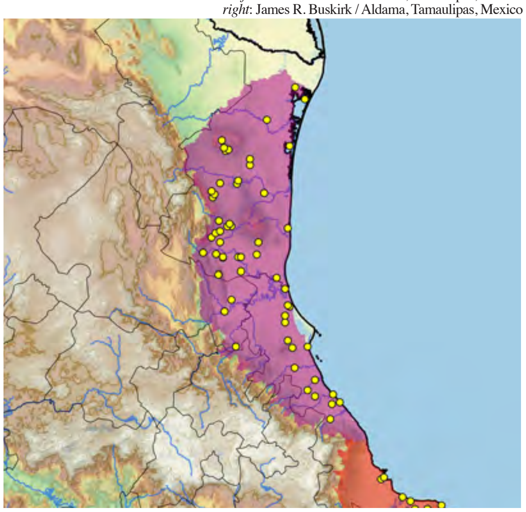
Emys (Clemmys) salvini Günther 1885:4
Emys salvini, Emys salvinii, Pseudemys salvini
Type locality: "Guatemala."
Type specimen: NHMUK 1946.1.22.76 (formerly 1862.2.19.5), holotype, figured (pl.2-3), see Stuart (1963).

Trachemys venusta cataspila (Günther 1885) (07:18, 10:10, 11:6, 17:26)
Huastecan Slider, *Jicotea Huasteca*


James R. Buskirk / Aldama, Tamaulipas, Mexico



left: John B. Iverson / nr. Llerda, Tamaulipas, Mexico
right: James R. Buskirk / Aldama, Tamaulipas, Mexico


*

(subspecies: *venusta* = red, *cataspila* = purple)

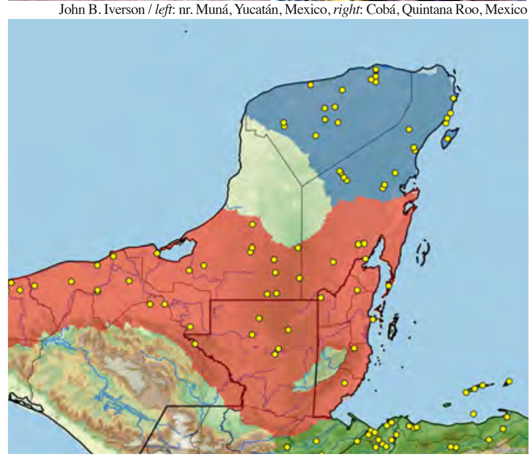
Distribution: Mexico (San Luis Potosi, Tamaulipas, Veracruz)
Presumed Historic Indigenous Range: 95,997 sq. km
Size (Max SCL): male 31.2 cm, female 34.0 cm (Legler 1990; Legler and Vogt 2013)
Synonymy:
Emys ventricosa Gray 1856b:28 (*nomen suppressum*)
Pseudemys ventricosa
Type locality: Not known.
Type specimen: NHMUK 1848.7.28.24, holotype, see Smith and Smith (1980).
Comment: Name suppressed by ICZN (1985b), see Legler et al. (1980).
Emys (Clemmys) cataspila Günther 1885:4 (*nomen conservandum*)
Emys cataspila, Pseudemys cataspila, Chrysemys ornata cataspila, Pseudemys scripta cataspila, Pseudemys ornata cataspila, Chrysemys scripta cataspila, Trachemys scripta cataspila, Trachemys ornata cataspila, Trachemys venusta cataspila
Type locality: "Mexico." Restricted to "Alvarado, Veracruz, Mexico" [in error] by Smith and Taylor (1950a:346, 1950b:32); and to "Tampico, Tamaulipas" [Mexico] by Smith and Smith (1980:486).
Type specimen: NHMUK 1947.3.4.25 (formerly 1851.6.2.4), figured in Gray (1856b:pl.12), lectotype, designated by Legler and Vogt (2013:259).
Comment: Name conserved by ICZN (1985b), see Legler et al. (1980).

Trachemys venusta iversoni McCord, Joseph-Ouni, Hagen, and Blanck 2010 (10:10, 11:6, 17:26)
Yucatan Slider


John B. Iverson / Cobá, Quintana Roo, Mexico



John B. Iverson / *left*: nr. Muná, Yucatán, Mexico, *right*: Cobá, Quintana Roo, Mexico


*

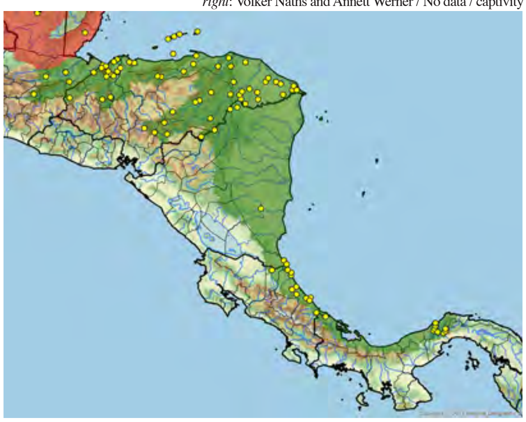
(subspecies: *venusta* = red, *iversoni* = blue, *uhrigi* = green)

Distribution: Mexico (Quintana Roo, Yucatán)
Presumed Historic Indigenous Range: 58,268 sq. km
Size (Max SCL): male 20.4 cm, female 24.3 cm (Legler and Vogt 2013)
Synonymy:
Trachemys venusta iversoni McCord, Joseph-Ouni, Hagen, and Blanck 2010:45
Type locality: "Cenote on the north side of the highway, 13.8 km east of Buctzotz, Yucatán, Mexico."
Type specimen: UF 50478, holotype.

Trachemys venusta uhrigi McCord, Joseph-Ouni, Hagen, and Blanck 2010 (10:10, 11:6, 14:23, 17:26) (**55**)
Uhrig's Slider

Dennis W. Uhrig / nr. Mezapa, Honduras / captivity

left: Dennis W. Uhrig / nr. Mezapa, Honduras / captivity
right: Volker Naths and Annett Werner / No data / captivity



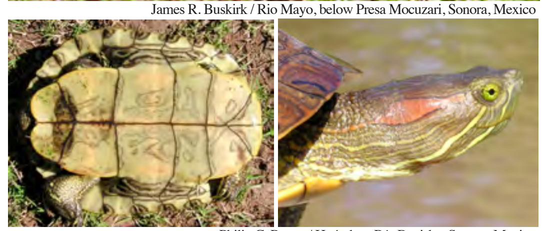
*

(subspecies: *venusta* = red, *uhrigi* = green)

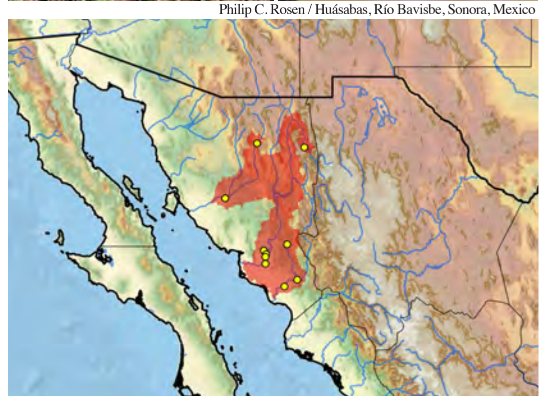
Distribution: Costa Rica, Guatemala, Honduras, Nicaragua, Panama
Presumed Historic Indigenous Range: 177,669 sq. km
Size (Max SCL): male 35.0 cm, female 44.0 cm (Moll 1994)
Synonymy:
Testudo panama Perry 1810:[unpaginated], pl.33 (*nomen oblitum et dubium*) (12:18)
Type locality: "countries of South America, adjoining to the Isthmus of Panama."
Type specimen: Not located, holotype, originally live, specimen figured (pl.33).
Trachemys venusta uhrigi McCord, Joseph-Ouni, Hagen, and Blanck 2010:43
Type locality: "Río Chamelecón drainage 3 km south of San Pedro Sula, northwestern Caribbean coastal Honduras."
Type specimen: UF 157800, holotype.

Trachemys yaquia (Legler and Webb 1970) (07:18)
Yaqui Slider, *Jicotea del Yaqui*

James R. Buskirk / Rio Mayo, below Presa Mocuzari, Sonora, Mexico



Philip C. Rosen / Huásabas, Río Bavisbe, Sonora, Mexico



Distribution: Mexico (Sonora)
Presumed Historic Indigenous Range: 53,085 sq. km
Size (Max SCL): male 26.8 cm, female 30.9 cm (Legler 1990; Ceballos et al. 2013; Legler and Vogt 2013)
IUCN Red List: Vulnerable (VU B1ab(iii)+2ab(iii)) (Frost et al. 2007)
Synonymy:
Pseudemys scripta yaquia Legler and Webb 1970:158
Chrysemys scripta yaquia, Pseudemys ornata yaquia, Trachemys scripta yaquia, Trachemys dorbigni yaquia, Trachemys ornata yaquia, Trachemys yaquia
Type locality: "Río Mayo, Conicarit, Sonora, México (27°14' N, 109°06' W)."
Type specimen: UU 6030, holotype, see Smith and Smith (1980).

EMYDINAE Rafinesque 1815 (17:17)

Emidania Rafinesque 1815:75
Emydidae Bell 1825a:302
Emydinae Cope 1870b:123

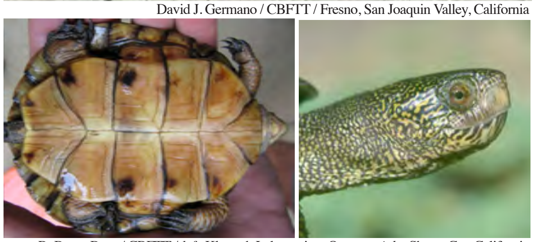
Actinemys Agassiz (1857a (07:22, 09:16, 10:12, 11:7, 14:24, 17:35)

Actinemys Agassiz 1857a:252,444
Type species: *Actinemys marmorata* [= *Emys marmorata* Baird and Girard 1852], by original designation.

Actinemys marmorata (Baird and Girard 1852) (07:22, 10:15, 17:35)

Northern Pacific Pond Turtle, Northwestern Pond Turtle

David J. Germano / CBFTT / Fresno, San Joaquin Valley, California



R. Bruce Bury / CBFTT / *left*: Klamath Lake region, Oregon, *right*: Shasta Co., California

*

(orange dots = probable introduced)

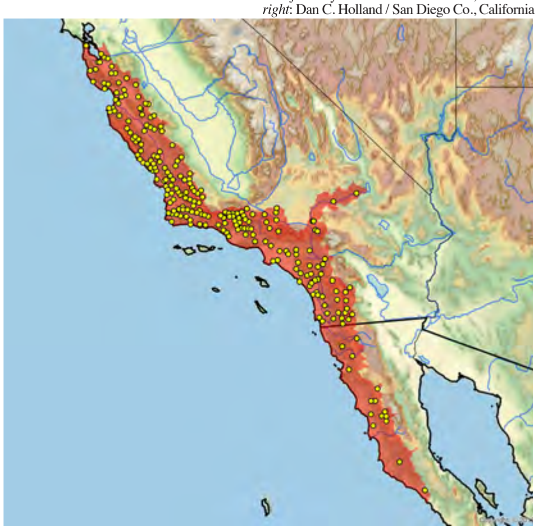
Distribution: Canada (British Columbia), USA (California, Nevada, Oregon, Washington)
Introduced: Australia (New South Wales)
Presumed Historic Indigenous Range: 215,716 sq. km
Size (Max SCL): male 24.1 cm, female 20.0 cm (Lubcke and Wilson 2007; Bury and Germano 2008 CBFTT; Ernst and Lovich 2009)
CBFTT Account: Bury and Germano (2008)
IUCN Red List: Vulnerable (VU A1cd) (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
Synonymy:
Emys marmorata Baird and Girard 1852:177
Actinemys marmorata, Clemmys marmorata, Geoclemmys marmorata, Chelopus marmoratus, Melanemys marmorata, Clemmys marmorata, Clemmys marmorata marmorata, Actinemys marmorata marmorata, Emys marmorata, Emys marmorata marmorata
Type locality: "Puget Sound" [Washington, USA].
Type specimens: USNM 88, 7594–96, 131830 (formerly 7593), syntypes (5), see Cochran (1961) and Reynolds et al. (2007).
Emys nigra Hallowell 1854:91 (senior homonym, not = *Emys nigra* Blyth 1856 [= *Siebenrockiella crassicollis*])
Type locality: "Posa Creek, Lower California" [Kern County, California, USA].
Type specimen: USNM 26, holotype, not figured, apparently lost, see Reynolds et al. (2007).
Comment: Reynolds et al. (2007:14) suggested that this paper was published in 1856, but that was the year that the published numbers in Volume 7 from 1854–55 were bound together and indexed. Hollowell's description was issued in June 1854 in Vol. 7, No. 3.
Clemmys wosnessenskyi Strauch 1862:114
Geoclemmys wosnessenskyi
Type locality: "Rio Sacramento in Californien" [USA].
Type specimen: ZIN 94, holotype, see Strauch (1890).

Actinemys pallida (Seeliger 1945) (07:22, 10:15, 17:35)

Southern Pacific Pond Turtle, Southwestern Pond Turtle, *Tortuga de Charcos*

Robert H. Goodman, Jr. / Camp Pendleton, San Diego Co., California

left: Kelly Herbinson / Ventura Co., California
right: Dan C. Holland / San Diego Co., California



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Distribution: Mexico (Baja California), USA (California)
Presumed Historic Indigenous Range: 87,842 sq. km
Size (Max SCL): male 17.9 cm, female 16.4 cm (Germano and Riedle 2015)
CBFTT Account: Bury and Germano (2008) [as part of *A. marmorata*]
IUCN Red List: Vulnerable (VU A1cd) (TFTSG 1996), as part of *Actinemys marmorata*
TFTSG Provisional Red List: Vulnerable (VU) (2011), as part of *Actinemys marmorata*
Synonymy:
Clemmys marmorata pallida Seeliger 1945:158
Actinemys marmorata pallida, Emys marmorata pallida, Emys pallida, Actinemys pallida
Type locality: "Lower Coyote Creek, near Alamitos, Orange County, California" [USA].
Type specimen: MVZ 6716, holotype, see Crippen (1962) and Rodríguez-Robles (2003).

Clemmys Ritgen 1828

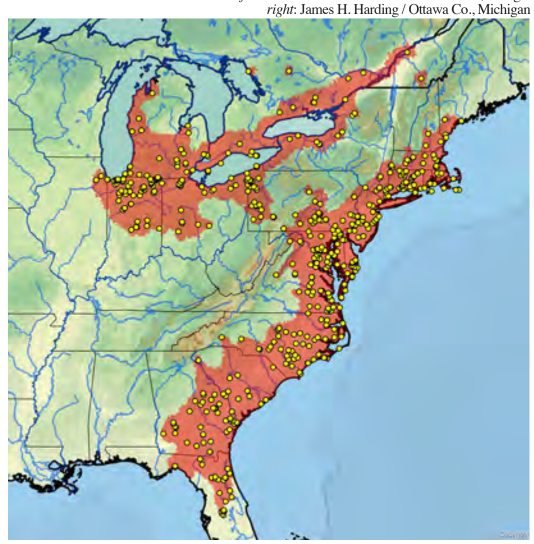
Chelopus Rafinesque 1815:75 (*nomen nudum*)
Clemmys Ritgen 1828:270
Type species: *Clemmys punctata* [= *Testudo punctata* Schoepff 1792 = subjective synonym of *Testudo guttata* Schneider 1792], by subsequent designation by Baur (1892:43).
Chelopus Rafinesque 1832:64
Type species: *Chelopus punctatus* [= *Testudo punctata* Schoepff 1792 = subjective synonym of *Testudo guttata* Schneider 1792], by original monotypy.
Nanemys Agassiz 1857a:252,442
Type species: *Nanemys guttata* [= *Testudo guttata* Schneider 1792], by original monotypy.
Melanemys Shufeldt 1919:157
Type species: *Melanemys guttatus* [= *Testudo guttata* Schneider 1792], by subsequent designation by Dunn (1920:8).

Clemmys guttata (Schneider 1792) (17:29)

Spotted Turtle

Barry Mansell / CRM 3 / Seminole Co., Florida

left: Richard D. Bartlett / CRM 3 / Clinch Co., Georgia
right: James H. Harding / Ottawa Co., Michigan



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Distribution: Canada (Ontario), USA (Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, West Virginia)
Presumed Historic Indigenous Range: 780,123 sq. km
Size (Max SCL): male 12.7 cm, female 12.6 cm (Klemens

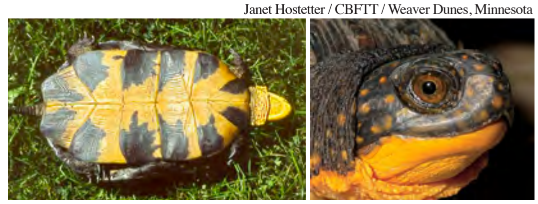
1993; Graham 1995); unsexed 13.6 cm (Taylor 1991)
IUCN Red List: Endangered (EN A2cde+4ce) (van Dijk 2011); Previously: Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II (2013)
Synonymy:
Testudo guttata Schneider 1792:264
Emys guttata, *Geoclemys guttata*, *Nanemys guttata*, *Clemmys guttata*, *Geoclemmys guttata*, *Chelopus guttatus*, *Melanemys guttatus*
Type locality: Not designated. Restricted to "the vicinity of Philadelphia" [Pennsylvania, USA] by Mittleman (1945:171).
Type specimen: Not located, apparently lost, originally in the collection of Bloch in Dresden.
Comment: Description cited as also sourced from Schneider (1789:30) and Seba (1734:pl.80,f.7).
Testudo punctata Schoepff 1792:25 (junior homonym, not = *Testudo punctata* Lacepède 1788 (*nomen suppressum*) = *Testudo punctata* Bonnaterre 1789 [= *Lissemys punctata punctata*])
Emys punctata, *Clemmys punctata*, *Terrapene punctata*, *Chelopus punctatus*
Type locality: "in paludosis Americae septentrionalis... Philadelphiam" [Philadelphia, Pennsylvania, USA].
Type specimen: Not located, type specimen figured (pl.5), labeled *Testudo punctata* Muhlenberg.
Testudo anonyma Schneider *in* Schoepff 1792:25 (*nomen nudum*)
Testudo quarta Hermann *in* Schweigger 1812:434 (*nomen nudum*)
Geoclemmys sebae Gray 1869a:188
Type locality: Not designated. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:91).
Type specimen: NHMUK 1853.11.30.25, possible holotype; erroneously listed by Uetz et al. (2019) as the type of *Testudo guttata* Schneider.

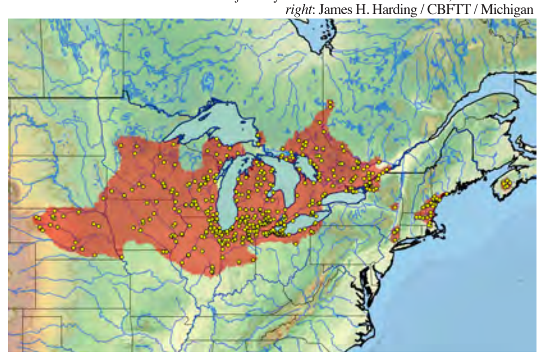
Emydoidea Gray 1870c [07:21, 09:16, 10:12, 11:7, 14:24, 17:36]
(or ***Emys*** Duméril 1805)

Emydoidea Gray 1870c:19
Type species: *Emydoidea blandingii* [= *Cistuda blandingii* Holbrook 1838b], by original monotypy.
Neoemys Lindholm 1929:282 (*nomen novum*)

Emydoidea blandingii (Holbrook 1838b) [17:36] [60]
(or ***Emys blandingii***)
Blanding's Turtle


Janet Hostetter / CBFTT / Weaver Dunes, Minnesota


left: Terry E. Graham / CBFTT / Devens, Massachusetts
right: James H. Harding / CBFTT / Michigan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Distribution: Canada (Nova Scotia, Ontario, Québec), USA (Illinois, Indiana, Iowa, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New York, Ohio, Pennsylvania, South Dakota, Wisconsin)
Presumed Historic Indigenous Range: 1,050,064 sq. km
Size (Max SCL): male 28.4 cm, female 23.2 cm (Blasus et al. 2004; Congdon et al. 2008 CBFTT; Ceballos et al. 2013)
CBFTT Account: Congdon, Graham, Herman, Lang, Pappas, and Brecke (2008)
IUCN Red List: Endangered (EN A2cde+4ce) (van Dijk and Rhodin 2011); Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II (2013)
Synonymy:
Testudo flava Lacepède 1788:135, synopsis[table] [09:6] (*nomen suppressum*)
Type locality: "Amérique..[&]..l'isle de l'Ascension." Restricted to "Amerika" [America = USA] by Wermuth (1956:407).
Type specimen: Possibly MNHN, not located, type specimen figured (pl.opp.135).

Comment: Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961), and by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo flava Bonnaterre 1789:26 (*nomen oblitum*)
Type locality: "Amérique, l'ile de l'Ascension."
Type specimen: Possibly MNHN, not located, type specimen figured in Lacepède (1788:pl.opp.135).

Testudo meleagris Shaw 1793:147 (*nomen suppressum*)
Lutremys meleagris, Emys meleagris
Type locality: "America" [USA].
Type specimen: Not located, type specimen figured (f.144), see Wermuth (1956).
Comment: Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Cistuda blandingii Holbrook 1838b:35 (*nomen conservandum*)
Cistudo blandingii, Emys blandingii, Emydoidea blandingii, Neoemys blandingii
Type locality: "Fox river, a tributary of the Illinois" [Illinois, USA].
Type specimen: ANSP 26123, holotype, listed as *Cistudo blandingii* by Malnate (1971).
Comment: Name conserved by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Emys twentei † Taylor 1943:250
Type locality: "north side of the Cimarron river, 13 miles southwest of Meade, Meade County, Kansas (Loc. No. 7, XI Ranch)" [USA].
Type specimen: KU 6478, holotype, fossil, partial carapace, figured (pl.20), see Vlachos (2018).
Geologic age: Pleistocene, high terrace sands.
Comment: Considered a synonym of *blandingii*, see Preston and McCoy (1971) and Vlachos (2018).

Emys Duméril 1805 [07:21, 09:16, 10:11, 10:12, 11:7, 14:24]

Emydes Brongniart 1805:27 (*nomen suppressum*)
Comment: Name suppressed by ICZN (1995b), see Webb (1993).

Emys Duméril 1805:76 [10:11] (*nomen conservandum*)
Type species: *Emys europaea* Schweigger [= *Testudo europaea* Schneider 1783 = subjective synonym of *Testudo orbicularis* Linnaeus 1758], by subsequent designation by Fitzinger (1843:29).
Comment: Name conserved by ICZN (1995b), see Webb (1993).

Hydrone Rafinesque 1814:66
Type species: *Hydrone orbicularis* [= *Testudo orbicularis* Linnaeus 1758], by subsequent designation by Loveridge and Williams (1957:201).

Emyda Rafinesque 1815:75 (*nomen novum* and senior homonym, not = *Emyda* Gray 1830e [= *Lissemys*])

Lutremys Gray 1844:31
Type species: *Cistudo* (*Lutremys) europaea* [= *Testudo europaea* Schneider 1783 = subjective synonym of *Testudo orbicularis* Linnaeus 1758], by original monotypy.

Emys orbicularis (Linnaeus 1758) [61]

European Pond Turtle
(includes 7 subspecies and several taxonomically unspecified populations of *E. orbicularis* sensu lato)


*

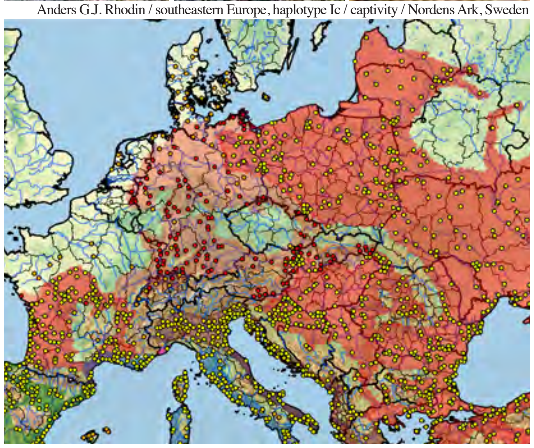
(subspecies: *orbicularis* = red [extirpated = light red], *eiselti* = purple, *galloitalica* = blue, *hellenica* = brown, *ingauna* = pink, *occidentalis* = green, *persica* = tourmaline, taxonomically unspecified populations of *E. orbicularis* sensu lato = gray (Algeria, Tunisia, southern Turkey); overlap = intergrades; orange dots = probable introduced, trade, or questionable; red dots = extirpated)

Distribution: Albania, Algeria, Armenia, Austria, Azerbaijan, Belarus, Belgium (extirpated), Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic (extirpated, reintroduced), France (Continental, Corsica [prehistoric introduction?]), Georgia, Germany, Greece, Hungary, Iran, Italy (Continental, Sardinia [prehistoric introduction]), Kazakhstan, Kosovo, Latvia, Lithuania, Moldova, Montenegro, Morocco, Netherlands (extirpated, reintroduced), North Macedonia, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain (Continental), Switzerland (extirpated, reintroduced), Syria, Tunisia, Turkey, Turkmenistan, Ukraine
Introduced: Denmark, Spain (Balearic Islands)
Presumed Historic Indigenous Range: 4,846,237 sq. km
Size (Max SCL): male 21.0 cm, female 23.2 cm (see subspp.)
IUCN Red List: Near Threatened (NT) (TFTSG 1996); Regional (Europe): Near Threatened (NT) (van Dijk and Sindaco 2004); European Union (EU27): Vulnerable (VU A2bcde) (Cox and Temple 2009)
CITES: Appendix III (Ukraine) (2021)

Emys orbicularis orbicularis (Linnaeus 1758) (09:17, 17:30, 17:31) (**61**)
European Pond Turtle

Uwe Fritz / Dnieper R. Delta, Ukraine

Anders G.J. Rhodin / southeastern Europe, haplotype Ic / captivity / Nordens Ark, Sweden



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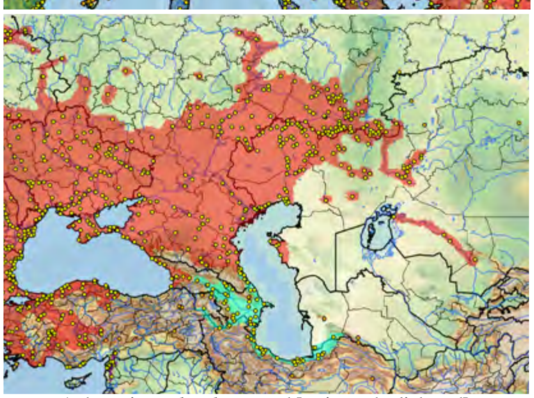

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(subspecies: *orbicularis* = red [extirpated = light red], *eiselti* = purple, *galloitalica* = blue, *hellenica* = brown, *ingauna* = pink, *occidentalis* = green, *persica* = tourmaline, taxonomically unspecified population of *E. orbicularis* sensu lato = gray (southern Turkey); overlap = intergrades; orange dots = probable introduced, trade, or questionable; red dots = extirpated)

Distribution: Austria, Belarus, Belgium (extirpated), Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic (extirpated, reintroduced), France, Georgia, Germany, Greece, Hungary, Italy, Kazakhstan, Kosovo, Latvia, Lithuania, Moldova, Netherlands (extirpated, reintroduced), North Macedonia, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Switzerland (extirpated, reintroduced), Turkey, Ukraine

Introduced: Denmark, Spain (Balearic Islands)

Presumed Historic Indigenous Range: 3,929,538 sq. km

Size (Max SCL): male 21.0 cm, female 23.2 cm (Fritz 2001; Itescu et al. 2014; Joos et al. 2017)

Synonymy:

Testudo orbicularis Linnaeus 1758:198 (*nomen conservandum*)
Hydrone orbicularis, Emys orbicularis, Emys orbicularis orbicularis
Type locality: "meridionalibus Europae." Restricted to "Mecklenburgisch-Pommersche Seenplatte" [Germany] by Fritz (1992:67), and by neotype designation by Fritz (1994:65).
Type specimen: MNM Z4180, neotype, designated by Fritz (1994:65); holotype originally in UUZM, apparently lost, listed by Linné and Thunberg (1780), but not by Thunberg (1828), Lönnberg (1896), Andersson (1900), Holm (1957), or Wallin (2001).
Comment: Description cited as also sourced from Ray (1693:254). Name conserved by ICZN (1995b), see Webb (1993).

Testudo lutaria Linnaeus 1758:198
Emydes lutaria, Hydrone lutaria, Emys lutaria, Clemmys (Clemmys) lutaria, Cistudo lutaria
Type locality: "Italia, Oriente." Restricted to "Mecklenburgisch-Pommersche Seenplatte" [Germany] by Fritz (1992:67).
Type specimen: UUZM, holotype, apparently lost, listed by Thunberg (1828), but not by Lönnberg (1896), Andersson (1900), Holm (1957), or Wallin (2001).
Comment: Description cited as sourced from a specimen described by Linnaeus (1749a:139, n.23); also based on Worm (1655:315), Grew (1681:38,pl.3,f.3), and Ray (1693:259).

Testudo terrestris Garsault 1764:pl.675 (10:13) (*nomen oblitum* and senior homonym, not = *Testudo terrestris* Fermin 1765 [= *Chelus fimbriata*], or *Testudo terrestris* Forskål 1775 (*nomen conservandum*) [= *Testudo (Testudo) graeca terrestris*])
Type locality: Not designated.
Type specimen: Not located, type specimen figured (pl.675).

Testudo europaea Schneider 1783:323
Emys europaea, Terrapene europaea, Cistuda europaea, Cistudo europaea, Cistudo (Lutremys) europaea, Lutremys europaea
Type locality: "meisten Ländern von Europa bis in Preussen" [Germany]. Restricted to "Frankfurt an der Oder" [Germany] by Fritz (1992:67).
Type specimens: Not known or located.

Testudo pulchella Schoepff 1801:113 (senior homonym, not = *Emys pulchella* Schweigger 1812 [= *Glyptemys insculpta*])
Emys pulchella
Type locality: Not known. Restricted to "Mecklenburgisch-Pommersche Seenplatte" by Fritz (1992:67).
Type specimens: Not located, syntypes (2), type specimens figured (pl.26).

Terrapene europea Bell 1825a:308 (*nomen novum*)
Comment: Unjustified emendation or error for *europaea*.

Testudo lutraria Gray 1831d:19 (*nomen novum*)
Emys lutraria
Comment: Unjustified emendation or error for *lutaria*.

Emys turfa † Meyer 1835:67
Cistudo lutaria turfa
Type locality: "Torfmooren bei Enkheim unweit Frankfurt" [Germany].
Type specimens: Possibly SMNS, syntypes, subfossil, carapacial and appendicular elements, not figured, see Kurck (1917).
Geologic age: Holocene, peat bog.

Clemmys schlotheimii † Fitzinger 1835:127 (17:30) (*nomen nudum*)
Type locality: Not designated. Restricted to "Burgtonna" [Thuringia, Germany] by Karl and Paust (2014:156).
Type specimen: MNG 1672, lectotype, fossil, small carapacial fragment, figured in Karl and Paust (2014:pl.4,f.4), designated by Karl and Paust (2014:156).
Geologic age: Pleistocene, Eemian Period.

Trionyx schlotheimii † Fitzinger 1835:128 (17:30) (*nomen nudum*)

Type locality: Not designated. Restricted to "Burgtonna" [Thuringia, Germany] by Karl and Paust (2014:156).
Type specimen: MNG 1673, lectotype, fossil, small carapacial fragment, figured in Karl and Paust (2014:pl.4,f.1,3), designated by Karl and Paust (2014:156).
Geologic age: Pleistocene, Eemian Period.

Emys lutaria borealis † Nilsson 1841:208
Type locality: "Gräfve af Brågarps pastorat...Skåne..[&]..Götha kanal, Östergöthland...vid Nordskogsvägen nära intill Svartjordshålan" [Gräfve in Brågarp Parish...Scania..[&]..Göta Canal, East Götaland...along Nordskogs Road near Svartjordshålan] [Skåne..[&]..Östergötland, Sweden]. Restricted to "1,5 kilometer Ö om Norsholms jernvägsstation" [1.5 km E of Norsholm's railroad station] [Östergötland, Sweden] by Munthe (1895:163), and to "Norsholm i Kimstads socken...Östergötland" [Norsholm in Kimstad parish...Östergötland] [Sweden] by Kurck (1917:42); erroneously restricted to "Schonen, Südschweden" [Skåne, southern Sweden] by Fritz (1992:67).
Type specimens: NRM CU75037, 75039 (formerly R1743–44), syntypes, subfossil, two nearly complete shells and appendicular elements, figured in Dalman (1820:pl.6-7) and Nilsson (1841:pl.3-4), see Kurck (1917) and Sommer et al. (2009).
Geologic age: Holocene, Boreal (Atlantic), gravel sediments, ^{14}C age ca. 4,720–5,190 ybp, calendaric age ca. 5,407–5,941 ybp (ca. 3457–3991 BCE), see Sommer et al. (2009).

Testudo (Emys) canstadiensis † Plieninger 1847:208 (17:31) (*nomen nudum*)
Emys canstadiensis
Type locality: "Württemberg...Cannstadt" [Germany].
Type specimen: Possibly SMNS, holotype, fossil, humerus, figured in Jäger (1861:191), not located.
Geologic age: Pleistocene, Sinterkalk.

Emys pulchra Brandt *in* Gray 1873j:22 (*nomen nudum*)
Type locality: "Europe."
Type specimen: NHMUK 1851.12.9.6, holotype, see Gray (1873j).

Cistudo anhaltina † Giebel 1866a:1
Emys anhaltina
Type locality: "Latdorf...Nord-deutschland" [Germany]. Emended to "Lattorf vid Bernberg a. d. Saale" [Germany] by Kurck (1917:23); and to "Latdorf bei Bernburg an der Saale, Deutschland" [Germany] by Fritz (1995:227).
Type specimen: Possibly MLUH, holotype, subfossil, nearly complete carapace and plastron, figured (pl.1-2), see Kurck (1917).
Geologic age: Holocene, Latdorfer Braunkohle.

Emys lutaria taurica Mehnert 1890:537
Type locality: "Ufer des Dnjepr, einige Meilen von seiner Ausmündung" [Dnieper River estuary, Ukraine].
Type specimens: Possibly MZUS, not located, histological sections figured (pl.20).
Comment: Histological study of embryos and hatchlings of *Emys lutaria* collected in the Taurida Governorate of southern Russia (now Ukraine), not explicitly a description of a new taxon.

Emys europaea sparsa Dürigen 1897:14
Type locality: Not designated. Restricted to "Ungarn" [Hungary] by Fritz (1992:67).
Type specimen: Not designated, described from the literature, type specimen figured in Sturm (1828:pl.3,f.c), same figure as Schoepff (1792:pl.1), see Fritz (1992).

Emys europaea punctata Dürigen 1897:15
Type locality: Not designated. Restricted to "Mecklenburg" [Germany] by Fritz (1992:67).
Type specimen: Not designated, described from the literature, type specimen figured in Sturm (1828:pl.3,f.a-b), see Fritz (1992).

Emys europaea concolor Dürigen 1897:15
Type locality: Not designated. Restricted to "Mark Brandenburg" [Germany] by Fritz (1992:67).
Type specimen: Not designated, described from the literature, type specimen figured in Brandt and Ratzeburg (1829:pl.21), see Fritz (1992).

Emys orbicularis aralensis Nikolsky 1915:24
Type locality: "Lac. Aral" [Kazakhstan].
Type specimen: ZIN 70, lectotype, specimen figured in Nikolsky (1899:pl.3), designated as holotype by Fritz (1992:66).

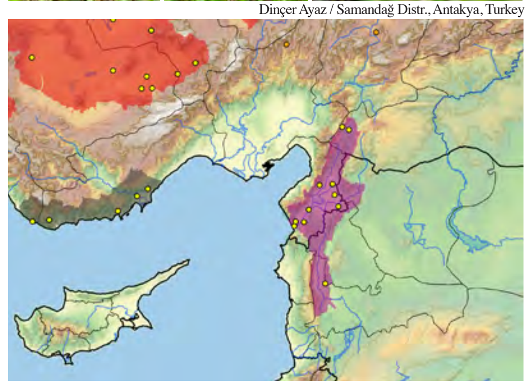
Emys orbicularis luteofusca Fritz 1989:145 (09:17)
Type locality: "See-Ebene westlich von Ereğli, Provinz Konya, Türkei" [Turkey].
Type specimen: SMNS 4615:1, holotype, see Schlüter and Hallermann (1997).

Emys orbicularis colchica Fritz 1994:61 (09:17)
Type locality: "Batumi (Batum)" [Georgia].
Type specimen: ZIN 9110a, holotype.

Emys orbicularis eiselti Fritz, Baran, Budak, and Amthauer 1998
Eiselt's Pond Turtle, Turkish Pond Turtle


Dinçer Ayaz / Samandağ Distr., Antakya, Turkey


Dinçer Ayaz / Samandağ Distr., Antakya, Turkey


*

(subspecies: *orbicularis* = red, *eiselti* = purple, taxonomically unspecified population of *E. orbicularis* sensu lato = gray; orange dots = probable introduced, trade, or questionable)

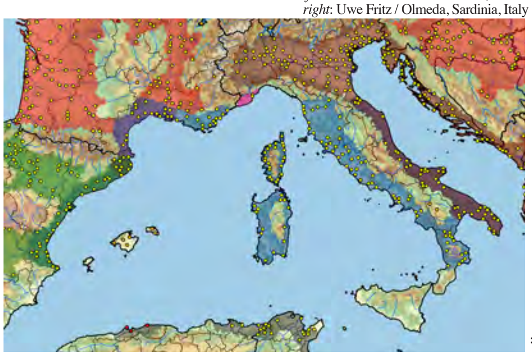
Distribution: Syria, Turkey
Presumed Historic Indigenous Range: 8,042 sq. km
Size (Max SCL): male 12.9 cm, female 13.1 cm (Fritz et al. 1998b; Fritz 2001)
TFTSG Provisional Red List: Critically Endangered (CR) (2021)
Synonymy:

Emys orbicularis eiselti Fritz, Baran, Budak, and Amthauer 1998b:113
Type locality: "14 km NE of Fevzipaşa (about 450 m above sea level), Vilayet Gaziantep" [Turkey].
Type specimen: NMW 18551:1, holotype, see Gemel et al. (2019).

Emys orbicularis galloitalica Fritz 1995 [(10:14) (**61**)]
Franco-Italian Pond Turtle

Uwe Fritz / Plaine des Maures, France

left: Romain Levasseur / Provence, France
right: Uwe Fritz / Olmeda, Sardinia, Italy



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(subspecies: *orbicularis* = red, *galloitalica* = blue, *hellenica* = brown, *ingauna* = pink, *occidentalis* = green, taxonomically unspecified populations of *E. orbicularis* sensu lato = gray (Algeria, Tunisia); overlap = intergrades; orange dots = probable introduced, trade, or questionable; red dots = extirpated)

Distribution: France (Continental, Corsica [prehistoric introduction?]), Italy (Continental, Sardinia [prehistoric introduction]), Spain (Continental)

Introduced: Spain (Balearic Islands) [possibly prehistoric]

Presumed Historic Indigenous Range: 158,796 sq. km

Size (Max SCL): male 15.9 cm, female 16.5 cm (Fritz 1995, 2001; Zuffi et al. 2006, unpubl. data; Joos et al. 2017)

Synonymy:

Emys orbicularis (galloitalica) galloitalica Fritz 1995:217
Emys orbicularis galloitalica
Type locality: "5 km östlich Collobrières, Département Var, Südfrankreich" [France].
Type specimen: MNHN 1993.5804, holotype.

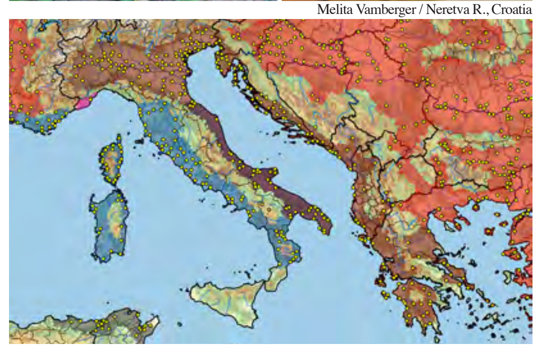
Emys orbicularis (galloitalica) capolongoi Fritz 1995:204 [(10:14)]
Emys orbicularis capolongoi
Type locality: "Olbia (Sardinien)" [Italy].
Type specimen: SMF 59593, holotype.

Emys orbicularis (galloitalica) lanzai Fritz 1995:211 [(10:14)]
Emys orbicularis lanzai
Type locality: "Conca-Mündung bei Fontea, unweit Santa Lucia di Porto-Vecchio (Korsika)" [France].
Type specimen: MZUF 19095, holotype.

Emys orbicularis hellenica Valenciennes *in* Bory de Saint-Vincent 1833 [(12:19, 14:25)]
Hellenic Pond Turtle

Andreas Nöllert / Miranje, Croatia / female

Melita Vamberger / Neretva R., Croatia



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(subspecies: *orbicularis* = red, *galloitalica* = blue, *hellenica* = brown, *ingauna* = pink, taxonomically unspecified population of *E. orbicularis* sensu lato = gray (Tunisia); overlap = intergrades; orange dots = probable introduced, trade, or questionable)

Distribution: Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Montenegro, Slovenia

Presumed Historic Indigenous Range: 193,930 sq. km

Size (Max SCL): male 16.2, female 19.5 cm (Joos et al. 2017)

Synonymy:

Emys hellenica Valenciennes *in* Bory de Saint-Vincent 1833:planches, pl.8 [(14:25)]
Cistuda hellenica, Emys orbicularis hellenica
Type locality: Not designated. Restricted to "plaine de Nisi que baigne le Pamisus au coeur de la Messénie" [Peloponnes, Greece] by Bibron and Bory de Saint-Vincent (1833:61).
Type specimen: MNHN 1943, holotype, see Fritz (1992).

Emys iberica Valenciennes *in* Bory de Saint-Vincent 1833:planches, pl.9 [(14:25)]
Type locality: Not designated. Restricted to "Morée, où l'embouchure de l'Eurotas en est remplie, ainsi que le principal ruisseau de l'île de Tine" [Greece] by Bibron and Bory de Saint-Vincent (1833:61).
Type specimen: Not located, holotype, figured (pl.9).

Emys antiquorum Bory de Saint-Vincent 1835:Atlas, pl.9 [corrigenda] [(14:25)] (*nomen novum et nudum*)
Comment: Unjustified replacement name for *iberica*.

Emys (Emys) hofmanni Fitzinger 1835:123 [(12:19)] (*nomen novum*)
Emys orbicularis hoffmanni, Cistudo hoffmanni
Comment: Unjustified replacement name for *hellenica*.

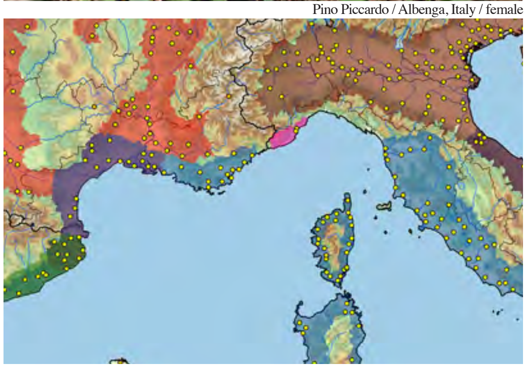
Emys orbicularis atra Werner 1897:15
Type locality: "Dalmatien und Cephallonia" [Croatia and Greece].
Type specimen: Not located, type specimen figured (pl.1,f.2).

Emys europaea maculosa Dürigen 1897:15
Type locality: Not designated. Restricted to "Dalmatien" [Croatia] by Fritz (1992:68).
Type specimen: Not designated.

Emys orbicularis ingauna Jesu, Piombo, Salvidio, Lamagni, Ortale, and Genta 2004 (10:14)

Ligurian Pond Turtle

Pino Piccardo / Albenga, Italy / female



*

(subspecies: *orbicularis* = red, *galloitalica* = blue, *hellenica* = brown, *ingauna* = pink; overlap = intergrades; orange dots = probable introduced, trade, or questionable)

Distribution: Italy (Continental)

Presumed Historic Indigenous Range: 1,701 sq. km

Size (Max SCL): male 13.0 cm, female 15.0 cm (Jesu et al. 2004)

Synonymy:

Emys orbicularis ingauna Jesu, Piombo, Salvidio, Lamagni, Ortale, and Genta 2004:139

Emys (Emys) orbicularis ingauna

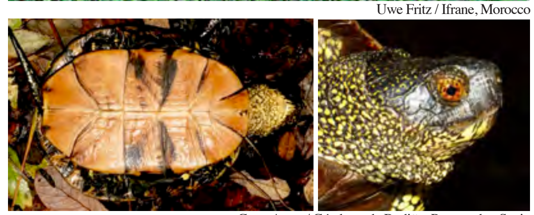
Type locality: "Peagna (Comune di Ceriale), Provincia di Savona (Regione Liguria, Italia)" [Italy].

Type specimen: MSNG 50650, holotype.

Emys orbicularis occidentalis Fritz 1993 (17:32) (**61**)

Western Pond Turtle, Spanish Pond Turtle, Magreb Pond Turtle

Uwe Fritz / Ifrane, Morocco



Cesar Ayres / Gándaras de Budiño, Pontevedra, Spain

*

(subspecies: *orbicularis* = red, *galloitalica* = blue, *occidentalis* = green, taxonomically unspecified populations of *E. orbicularis* sensu lato = gray (Algeria, Tunisia); overlap = intergrades; orange dots = probable introduced, trade, or questionable; red dots = extirpated)

Distribution: Morocco, Portugal, Spain

Presumed Historic Indigenous Range: 448,473 sq. km

Size (Max SCL): male 16.4 cm, female 16.8 cm (Keller et al. 1998; Joos et al. 2017)

Synonymy:

Emys orbicularis occidentalis Fritz 1993:136 (17:32)

Type locality: "Lagune von Medhiya unweit Kenitra, Marokko" [Morocco].

Type specimen: MNHN 1961.0344, holotype.

Emys orbicularis fritzjuergenobsti Fritz 1993:132 (09:18, 17:32)

Type locality: "Castellón de la Plana, Spanien" [Spain].

Type specimen: SMNS 4639:9, holotype, see Schlüter and Hallermann (1997).

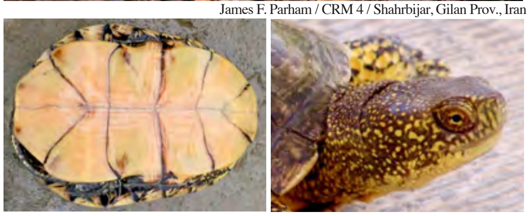
Emys orbicularis hispanica Fritz, Keller, and Budde 1996:132 (09:18)

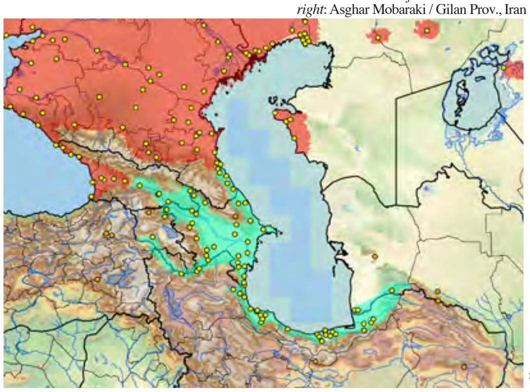
Type locality: "Doñana, Huelva" [Spain].

Type specimen: EBD 29209, holotype.

Emys orbicularis persica Eichwald 1831 (07:23, 07:24, 09:19, 17:33)
Eastern Pond Turtle, Persian Pond Turtle


James F. Parham / CRM 4 / Shahrbijar, Gilan Prov., Iran


left: Luca Luiselli / Iran
right: Asghar Mobaraki / Gilan Prov., Iran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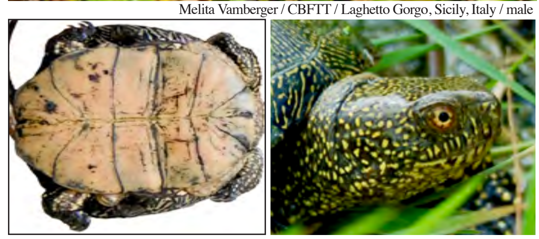
(subspecies: *orbicularis* = red, *persica* = tourmaline; orange dots = probable introduced, trade, or questionable)

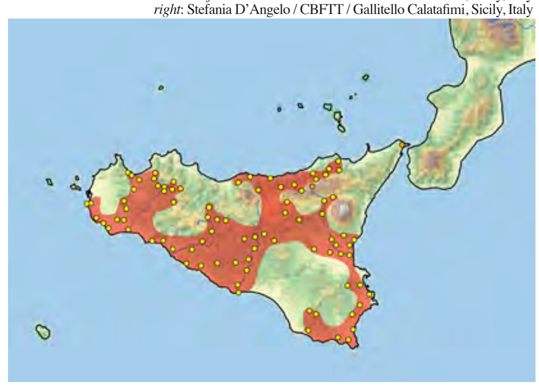
Distribution: Armenia, Azerbaijan, Georgia, Iran (Ardabil, Gilan, Golestan, Mazandaran), Russia (Dagestan), Turkmenistan, Turkey (?)
Introduced: Iran (Alborz, Teheran), Turkmenistan
Presumed Historic Indigenous Range: 143,671 sq. km
Size (Max SCL): male 14.1 cm, female 16.6 cm (Joos et al. 2017)
Synonymy:
Emys europaea persica Eichwald 1831:196 (17:33)
Emys europaea persicae, Emys orbicularis persica
Type locality: "provincia Masanderan" [Mazandaran Province, Caspian Sea, Iran].
Type specimen: Not known or located, not figured.
Emys europaea iberica Eichwald 1831:196 (09:19, 17:33)
Emys europaea ibericae, Emys orbicularis iberica
Type locality: Not designated. Restricted to "in Iberiae convallibus paludosis et fluviis, Cyrum amnem petentibus" [in marshy Iberian valleys and rivers, Kura River creeks] [Georgia and Azerbaijan] by Eichwald (1840:47).
Type specimen: Not known or located, not figured.
Emys orbicularis orientalis Fritz 1994:72
Type locality: "Bandar-e-Anzali (Enzeli), Prov. Gilan, Iran."
Type specimen: NHMUK 1874.11.23.8, holotype.
Emys orbicularis kurae Fritz 1994:78 (09:19)
Type locality: "Bank (Bank Promisl) an der Kura-Mündung, Aserbaidshan" [Azerbaijan].
Type specimen: NMW 14557:1, holotype, see Gemel et al. (2019).

***Emys orbicularis* ssp. indet.** (14:26)
Testudo purgottii † Ceselli 1846:24 (14:26) (*nomen oblitum*)
Testudo purgotii
Type locality: "Viterbo...Viterbesi...acque Caje" [Italy].
Type specimen: Not located, fossil, partial carapace, figured (pl.1).
Geologic age: Late Pleistocene.
Emys major † Portis 1890:16 (14:26) (*nomen dubium*)
Emys maior
Type locality: "Poderaccio sotto Persignano nella Valle Superiore dell'Arno" [Italy].
Type specimen: Possibly IGF, fossil, not figured.
Geologic age: Late Pliocene to Early Pleistocene, Villafranchian.
Emys latens † Portis 1890:16 (14:26) (*nomen dubium*)
Type locality: "Colombajolo presso S. Giovanni" [Italy].
Type specimen: Possibly IGF, fossil, not figured.
Geologic age: Late Pliocene to Early Pleistocene, Villafranchian.
Emys tigris Salvator 1897:280 (*nomen nudum*)
Type locality: "Mercadal" [Menorca, Balearic Islands, Spain].
Type specimen: Not designated.

Emys trinacris Fritz, Fattizzo, Guicking, Tripepi, Pennisi, Lenk, Joger, and Wink 2005 (17:34) (**62**)
Sicilian Pond Turtle, *Testuggine Palustre Siciliana*


Melita Vamberger / CBFTT / Laghetto Gorgo, Sicily, Italy / male


left: Dario Ottonello / CBFTT / Mazara del Vallo, Sicily, Italy
right: Stefania D'Angelo / CBFTT / Gallitello Calatafimi, Sicily, Italy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(orange dots = probable introduced)

Distribution: Italy (Sicily)
Introduced: Italy (mainland), Germany
Presumed Historic Indigenous Range: 11,954 sq. km
Size (Max SCL): male 15.6 cm, female 17.2 cm (Ottonello et al. 2021 CBFTT)
CBFTT Account: Ottonello, D'Angelo, Marrone, Oneto,

Spadola, Zuffi, and Fritz (2021)
IUCN Red List: Data Deficient (DD) (van Dijk 2009)
TFTSG Provisional Red List: Least Concern (LC) (2018)
Synonymy:
Emys trinacris Fritz, Fattizzo, Guicking, Tripepi, Pennisi, Lenk, Joger, and Wink 2005a:364
Emys orbicularis trinacris
Type locality: "Lago Gian Fenaro, below the pass of Pizzo Lamінaria approximately 1400 m above sea level, Monte Nebrodi, Sicily" [Italy]. Emended to "Laghetto Gianferraro...14.497241 E, 37.951625 N; Elevation: 1007 m a.s.l." by Marrone et al. (2016:60).
Type specimen: MZUF 11136, holotype.

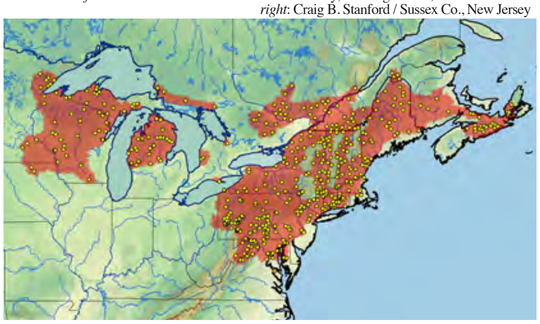
Glyptemys Agassiz 1857a (07:21)

Calemys Agassiz 1857a:252,443
Type species: *Calemys muhlenbergii* [= *Testudo muhlenbergii* Schoepff 1801], by original designation.
Glyptemys Agassiz 1857a:252,443
Type species: *Glyptemys inculpta* [= *Testudo insculpta* Le Conte 1830], by original designation.

Glyptemys insculpta (Le Conte 1830) (63)
Wood Turtle

Anders G.J. Rhodin / Lunenburg, Worcester Co., Massachusettts

left and center: Anders G.J. Rhodin / Shaftsbury, Bennington Co., Vermont / female
right: Craig B. Stanford / Sussex Co., New Jersey



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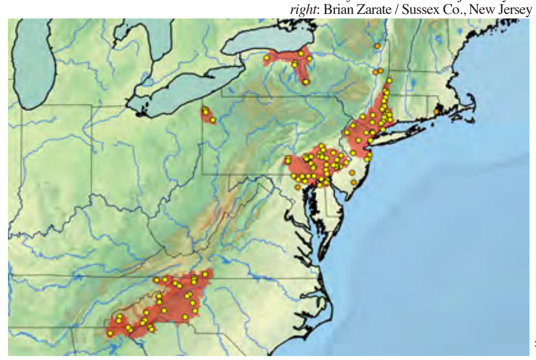
(orange dot = possible introduced)

Distribution: Canada (New Brunswick, Nova Scotia, Ontario, Québec), USA (Connecticut, Delaware, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, Wisconsin)
Presumed Historic Indigenous Range: 797,336 sq. km
Size (Max SCL): male 24.4 cm, female 22.5 cm (Lovich et al. 1990; Brooks et al. 1992)
IUCN Red List: Endangered (EN A2cd+4c) (van Dijk and Harding 2011); Previously: Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II (1992)
Synonymy:
Emys pulchella Schweigger 1812:303 (junior homonym, not = *Testudo pulchella* Schoepff 1801 [= *Emys pulchella*] [= *Emys orbicularis orbicularis*])
Geoclemys pulchella, *Glyptemys pulchella*
Testudo insculpta Le Conte 1830:112
Clemmys (Clemmys) insculpta, *Clemmys insculpta*, *Emys insculpta*, *Glyptemys insculpta*, *Chelopus insculptus*, *Calemys insculpta*
Type locality: "the northern states" [USA]. Restricted to "vicinity of New York City" [New York, USA] by Schmidt (1953:92).
Type specimen: MNHN 9452 (shell) and 6955 (body parts of the same specimen), lectotype, designated by Bour (2003:544).
Emys speciosa Gray 1830e:10 (10:7)
Type locality: "North America?" Restricted to "America Boreali, New Jersey" [USA] by Gray (1831d:26).
Type specimens: OUM 8489–91, syntypes (3), discussed by Nowak-Kemp and Fritz (2010).
Emys inscripta Gray 1831d:26 (*nomen novum*)
Comment: Unjustified emendation or error for *insculpta*.
Emys speciosa levigata Gray 1831d:26
Type locality: "America Boreali, New Jersey" [USA].
Type specimen: OUM 8489, holotype, discussed by Nowak-Kemp and Fritz (2010).

Glyptemys muhlenbergii (Schoepff 1801)
Bog Turtle

Brian Zarate / TCC / Sussex Co., New Jersey

left: Peter Paul van Dijk / Maryland
right: Brian Zarate / Sussex Co., New Jersey



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(orange dots = questionable)

Distribution: USA (Connecticut, Delaware, Georgia, Maryland, Massachusetts, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Virginia)
Presumed Historic Indigenous Range: 84,432 sq. km
Size (Max SCL): male 11.5 cm, female 11.0 cm (Klemens 1993; Ernst and Lovich 2009; M. Knoerr, unpubl. data)
IUCN Red List: Critically Endangered (CR A2cd+4ce) (van Dijk 2011); Previously: Endangered (EN) (TFTSG 1996)
CITES: Appendix I (1992); Previously: Appendix II (1975)
Synonymy:

Testudo muhlenbergii Schoepff 1801:132

Emys muhlenbergii, Emys mühlenbergii, Chersine muhlenbergii, Terrapene muhlenbergii, Clemmys (Clemmys) muhlenbergii, Clemmys muhlenbergii, Geoclemys muhlenbergii, Calemys mühlenbergii, Calemys muhlenbergii, Geoclemmys muhlenbergii, Chelopus muhlenbergii, Melanemys muhlenbergii, Glyptemys muhlenbergii

Type locality: "Pensylvaniae rivulis" [USA]. Restricted to "Lancaster, Pennsylvania" [USA] by Stejneger and Barbour (1917:114).
Type specimen: Not located, type specimen figured (pl.31).

Emys biguttata Say 1825:212 (10:16)

Type locality: "United States." Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:92).
Type specimen: Originally ANSP, apparently lost, not listed by Malnate (1971).

Emys bipunctata Say *in* Gray 1830e:10 (*nomen novum*)

Comment: Unjustified emendation or error for *biguttata*.

Emys fusca LeSueur *in* Gray 1831d:25 (*nomen nudum*)

Type locality: Not indicated. Restricted to "Philadelphie" [Philadelphia, Pennsylvania, USA] by Bonnemains and Bour (1996).
Type specimen: MNHN 1502, see Bonnemains and Bour (1996).

Clemmys nuchalis Dunn 1917:624

Type locality: "side of Yonahlossee Road, about 3 miles from Linville, North Carolina...altitude, 4200 feet" [USA].
Type specimen: AMNH 8430, holotype, see Reynolds et al. (2007).

Terrapene Merrem 1820 (14:27) **(64)**

Didicla Rafinesque 1815:75 (*nomen nudum*)

Terrapene Merrem 1820:27

Type species: *Terrapene clausa* [= *Testudo clausa* Gmelin 1789 = subjective synonym of *Testudo carolina* Linnaeus 1758], by subsequent designation by Bell (1828c:514).

Cistuda Fleming 1822:270

Type species: "Box tortoise", by original designation.

Didicla Rafinesque 1832:64

Type species: *Didicla clausa* [= *Testudo clausa* Gmelin 1789 = subjective synonym of *Testudo carolina* Linnaeus 1758], by original designation.

Cistudo Duméril and Bibron 1835:207 (*nomen novum*) (10:17)

Pyxidemys Fitzinger 1835:123

Type species: *Pyxidemys clausa* [= *Testudo clausa* Gmelin 1789 = subjective synonym of *Testudo carolina* Linnaeus 1758], by subsequent designation by Fitzinger (1843:29).

Emyoides Gray 1844:27

Type species: *Emys (Emyoides) kinosternoides* [= *Emys kinosternoides* Gray 1830e = subjective synonym of *Testudo carolina* Linnaeus 1758], by original monotypy.

Onychotria Gray 1849:17

Type species: *Cistudo (Onychotria) mexicana* Gray 1849, by original monotypy.

Pariemys Cope 1895:757

Type species: *Pariemys bauri* [= *Terrapene bauri* Taylor 1895], by original monotypy.

Toxaspis Cope 1895:757

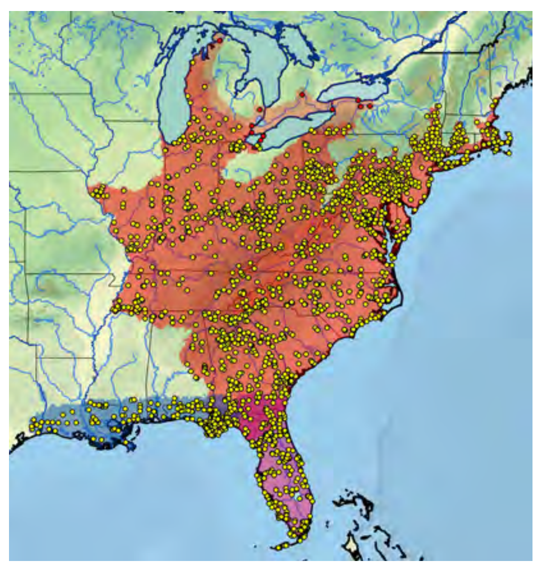
Type species: *Toxaspis major* [= *Cistudo major* Agassiz 1857a], by original monotypy.

Cistudos Herrera 1901:36 (*nomen novum et suppressum*)

Comment: Unjustified replacement name for *Cistudo*. Name suppressed by ICZN (1922).

Terrapene carolina (Linnaeus 1758) (11:8, 14:27, 17:37) **(64)**

American Box Turtle
(includes 3 subspecies)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(subspecies: *carolina* = red [extirpated = light red], *bauri* = purple, *major* = blue, overlap = intergrades, red dots = extirpated)

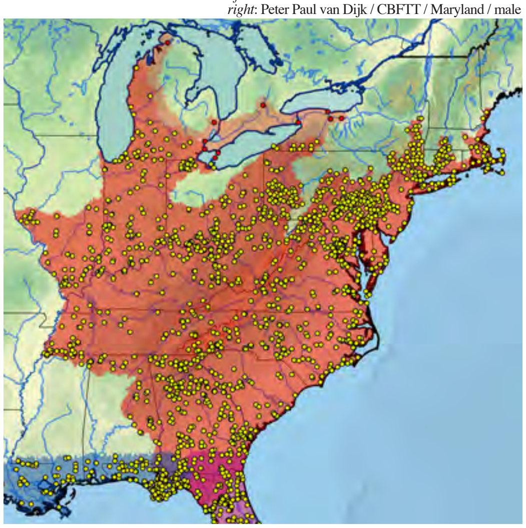
Distribution: Canada (Ontario [extirpated]), USA (Alabama, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Virginia, West Virginia)

Presumed Historic Indigenous Range: 1,587,772 sq. km
Size (Max SCL): male 23.5 cm, female 19.8 cm (see subspp.)
CBFTT Account: Kiester and Willey (2015)
IUCN Red List: Vulnerable (VU A2bcde+4bcde) (van Dijk 2011); Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II, as *Terrapene* spp. (1995)

Terrapene carolina carolina (Linnaeus 1758) [11:8, 14:27, 17:37, 17:38] **[64, 65]**
Eastern Box Turtle, Woodland Box Turtle

Peter Paul van Dijk / CBFTT / Colesville, Montgomery Co., Maryland

left: Michael T. Jones / CBFTT / Massachusetts / male
right: Peter Paul van Dijk / CBFTT / Maryland / male



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(subspecies: *carolina* = red [extirpated = light red], *bauri* = purple, *major* = blue; overlap = intergrades, red dots = extirpated)

Distribution: Canada (Ontario [extirpated]), USA (Alabama, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Virginia, West Virginia)
Presumed Historic Indigenous Range: 1,359,554 sq. km
Size (Max SCL): male 17.4 cm, female 19.8 cm (Cook et al. 1972; Klemens 1993; Kiester and Willey 2015 CBFTT)

Synonymy:
Testudo carolina Linnaeus 1758:198 **[65]** (senior homonym, not = *Testudo carolina* Le Conte 1830 [= *Gopherus polyphemus*])
Terrapene carolina, Testudo carolinina, Terrapene carolinensis, Emys (Cistuda) carolinae, Terrapene carolinae, Cistuda carolina, Cistudo carolina, Cistudo carolinensis, Terrapene carolina carolina
Type locality: "Carolina" [USA]. Restricted to "vicinity of Charleston, South Carolina" [USA] by Schmidt (1953:93).
Type specimen: Specimen figured in Edwards (1751:pl.205), holotype; Uetz et al. (2019) erroneously listed MCZ 184564 as a syntype, but that specimen is a syntype of *Cistudo virginea* Agassiz 1857 (= *Terrapene carolina carolina*).
Comment: Description cited as sourced from Edwards (1751:pl.205).
Testudo carinata Linnaeus 1758:198 **[66]** (*nomen dubium*, senior homonym, not = *Testudo carinata* Thunberg 1810 [= *Geoemyda spengleri*])
Terrapene carinata, Cistudo carinata
Type locality: "Calidis regionibus." Restricted to "vicinity of Charleston, South Carolina" [USA] by Schmidt (1953:93).
Type specimen: Not known or designated, possibly originally UUZM or NRM, apparently lost, not listed by Linné and Thunberg (1780), nor located by Schoepff (1792:xi); UPSZTY 277 (formerly UUZM 277 and MGA 46), listed by Holm (1957) and Wallin (2001) as the possible type of *T. carinata* Linnaeus 1758, is not the type—it is instead the unpublished type of *T. carinata* Thunberg 1810 (*nomen nudum*) and synonym of *Testudo spengleri* Gmelin 1789 (= *Geoemyda spengleri*).
Comment: Description not based on any cited references or designated specimens.
Testudo brevicaudata Lacepède 1788:169, synopsis[table] [09:6] (*nomen suppressum*)
Testudo brevi-caudata, Testudo brevicauda
Type locality: "Caroline" [USA].
Type specimen: Possibly MNHN, not located.
Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).
Testudo incarcerata Bonnaterre 1789:29
Type locality: "Philadelphie...L'Amérique septentrionale" [Pennsylvania, USA].
Type specimen: Possibly MNHN, not located.
Testudo incarceratostriata Bonnaterre 1789:29
Type locality: "L'Amérique septentrionale." Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:93).
Testudo incarcerato-striata
Type specimen: Possibly MNHN, not located.
Testudo clausa Gmelin 1789:1042
Emydes clausa, Emys clausa, Didicla clausa, Terrapene clausa, Cistudo clausa, Cinosternon clausum, Emys (Pyxidemys) clausa, Pyxidemys clausa, Cinosternum clausum
Type locality: "America septentrionali." Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:94).
Type specimen: Not located, type specimen figured in Bloch (1786:pl.1).
Comment: Description cited as sourced from Bloch (1786:131).
Testudo virgulata Latreille *in* Sonnini and Latreille 1801:100
Emys virgulata, Terrapene virgulata
Type locality: "les grands bois de la Caroline" [USA]. Restricted to "Charleston, South Carolina" [USA] by Schmidt (1953:94).
Type specimen: Possibly MNHN, apparently lost, type specimen figured (pl.opp.100,f.1).
Emys schneideri Schweigger 1812:317
Emys (Pyxidemys) schneideri
Type locality: Not known. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:94).
Type specimens: Originally MNHN and MZUS, syntypes (2), not located.
Monoclida kentukensis Rafinesque 1822:5 (*nomen suppressum*)

Monoclida kentuckensis
Type locality: "United States...Kentucky" [USA]
Type specimen: Not known or located.
Comment: Name suppressed by ICZN (1984) as published in a rejected and invalid work, see Smith et al. (1980a).

Didicla erythrops Rafinesque 1822:5 (*nomen nudum*)
Didicula erythrope
Type locality: "United States" [USA]
Type specimen: Not known or located.

Terrapene maculata Bell 1825a:309
Terrapene carolina maculata
Type locality: Not known. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:94).
Type specimen: OUM 8503, holotype, discussed by Nowak-Kemp and Fritz (2010).

Terrapene nebulosa Bell 1825a:310
Terrapene carolina nebulosa
Type locality: Not known. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:94).
Type specimen: OUM 8506, holotype, discussed by Nowak-Kemp and Fritz (2010).

Testudo irregulata Daudin *in* Gray 1830e:7 [10:7] (*nomen novum*)
Comment: Unjustified emendation of *virgulata*.

Emys (Cistuda) carolinae fusca Gray 1830e:7 [10:7]
Emys carolinae fusca, Cistuda carolinae fusca
Type locality: "North America."
Type specimen: Possibly OUM, not located.

Emys kinosternoides Gray 1830e:12 [10:7]
Emys (Emyoides) kinosternoides, Terrapene kinosternoides
Type locality: Not known. Restricted to "vicinity of Philadelphia" [Pennsylvania, USA] by Schmidt (1953:94).
Type specimen: Originally RCSM, holotype, not located.

Emys dubia Schweigger *in* Gray 1831d:18 [10:7] (*nomen nudum*)

Emys cinosternoides Duméril and Bibron 1835:303 (*nomen novum*)
Cistudo carolina cinosternoides, Cistudo cinosternoides, Terrapene cinosternoides
Comment: Unjustified emendation of *kinosternoides*.

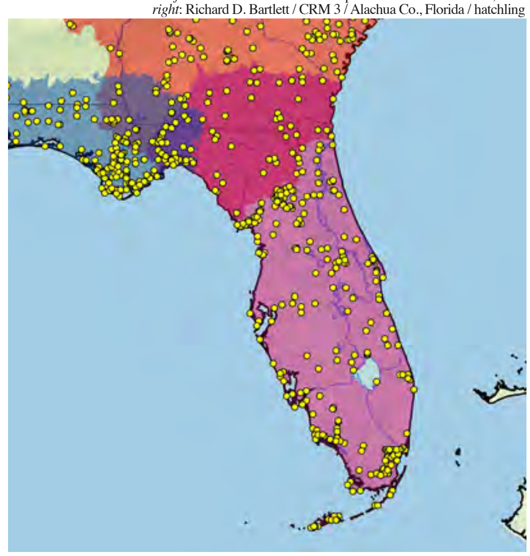
Cistudo pickeringi Holbrook *in* Duméril 1855:199 (*nomen nudum*)

Cistudo virginea Agassiz 1857a:260,445
Type locality: "New England, and westward as far as Michigan, and southward as far as the Carolinas" [USA]. Restricted to "vicinity of Cambridge, Massachusetts" [USA] by Schmidt (1953:94) (but invalid restriction); restricted instead to "Springfield, Massachusetts" [USA] by Smith and Smith (1980:553).
Type specimens: MCZ 1526–35, 1537–40, 1542–50, 1552, 1554, 1555(1), 1555(2), 1556 (two), 1557, 184563–66, syntypes (34), listed by Barbour and Loveridge (1929), Ernst and McBreen (1991) and MCZ Online database; the restriction of the type locality by Smith and Smith (1980) limits the selection of a potential lectotype to the series 1546, 1548–50, and 1545–46, collected at that locality.

Terrapene carolina bauri Taylor 1895 [11:8, 14:27, 17:37] **[64]**
(or *Terrapene bauri*)
Florida Box Turtle

Michael T. Jones / CBFTT / peninsular Florida


left: Michael T. Jones / CBFTT / peninsular Florida / female, male
right: Richard D. Bartlett / CRM 3 / Alachua Co., Florida / hatchling



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(subspecies: *carolina* = red, *bauri* = purple, *major* = blue, overlap = intergrades)

Distribution: USA (Florida)
Presumed Historic Indigenous Range: 146,860 sq. km
Size (Max SCL): male 19.0 cm, female 15.3 cm (Dodd 1997; Jackson and Brechtel 2006; Kiester and Willey 2015 CBFTT)
Synonymy:

Terrapene bauri Taylor 1895:576
Pariemys bauri, Cistudo bauri, Terrapene carolina bauri
Type locality: "Florida" [USA]. Restricted to "Orlando, Florida" [USA] by Schmidt (1953:94).
Type specimen: USNM 8352, holotype, see Cochran (1961) and Reynolds et al. (2007); Uetz et al. (2019) erroneously list MCZ 1508 as syntype, but that specimen is a syntype of *Terrapene carolina major*.

Terrapene formosa † Hay 1916a:57
Type locality: "Ocala, Florida" [USA].
Type specimen: USNM 8825 (formerly FGS 2973), holotype, fossil, posterior carapace, figured (pl.4, f.3), see Vlachos (2018).
Geologic age: Late Pleistocene, Ocala limestone.

Comment: Considered a synonym of *carolina* (or *bauri*) by Auffenberg (1958) and Vlachos (2018).

Terrapene innoxia † Hay 1916a:61

Type locality: "Vero, St. Lucie County, Florida" [USA].

Type specimen: USNM 8824 (formerly FGS 7080), holotype, fossil, complete carapace, figured (pl.6,f.1-4), see Vlachos (2018).

Geologic age: Pleistocene.

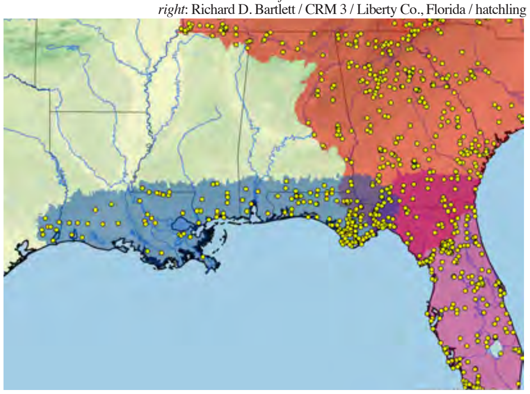
Comment: Considered a synonym of *carolina* (or *bauri*) by Auffenberg (1958) and Vlachos (2018).

Terrapene carolina major (Agassiz 1857a) (11:8, 14:27, 17:37) **(64)**

Gulf Coast Box Turtle

Richard D. Bartlett / CRM 3 / Liberty Co., Florida

left: Michael T. Jones / CBFTT / Florida / male
right: Richard D. Bartlett / CRM 3 / Liberty Co., Florida / hatchling



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(subspecies: *carolina* = red, *bauri* = purple, *major* = blue, overlap = intergrades)

Distribution: USA (Alabama, Florida, Georgia, Louisiana, Mississippi, Texas)

Presumed Historic Indigenous Range: 148,968 sq. km

Size (Max SCL): male 23.5 cm, female 18.9 cm (Jackson and Brechtel 2006; Kiester and Willey 2015 CBFTT)

Synonymy:

Cistudo major Agassiz 1857a:445

Cistudo carolina major, Terrapene major, Toxaspis major, Terrapene carolina major

Type locality: "Mobile..[&]..Florida. Restricted to "Mobile" [Alabama, USA] by Schmidt (1953:94).

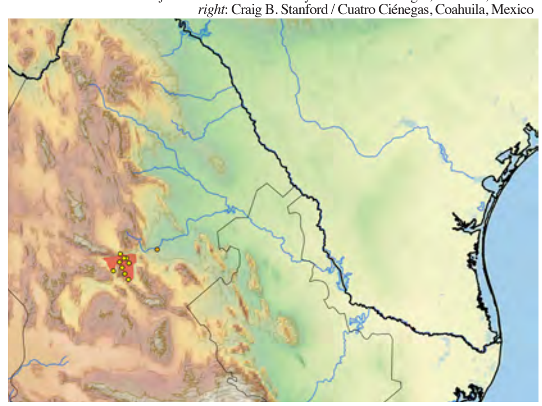
Type specimens: MCZ 1505–10, syntypes (6), listed by Barbour and Loveridge (1929) and Ernst and McBreen (1991), but 1505–08 identified as = *Terrapene carolina bauri* (Rosado, pers. comm. *in* Ernst and McBreen 1991).

Terrapene coahuila Schmidt and Owens 1944 (14:27) **(64)**

Coahuilan Box Turtle, *Tortuga de Cuatro Ciénegas*

Gamaliel Castañeda Gaytán / Cuatro Ciénegas, Coahuila, Mexico

left: Gamaliel Castañeda Gaytán / Cuatro Ciénegas, Coahuila, Mexico
right: Craig B. Stanford / Cuatro Ciénegas, Coahuila, Mexico



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(orange dot = uncertain)

Distribution: Mexico (Coahuila)

Presumed Historic Indigenous Range: 840 sq. km

Size (Max SCL): male 23.0 cm, female 19.9 cm (Howeth and Brown 2011 CBFTT)

CBFTT Account: Howeth and Brown (2011)

IUCN Red List: Endangered (EN A2c+4c, B1ab(i,ii,iii,iv,v)+2b(i,ii,iii,iv,v)) (van Dijk et al. 2007); Previously: Endangered (EN) (TFTSG 1996)

TFTSG Provisional Red List: Critically Endangered (CR) (2020)

CITES: Appendix I (1975)

Synonymy:

Terrapene coahuila Schmidt and Owens 1944:101

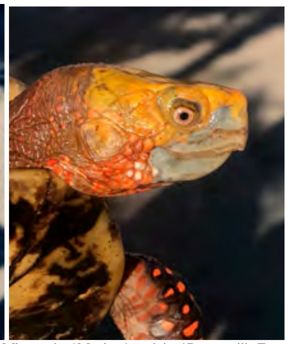
Terrapene ornata coahuila, Terrapene coahuilae

Type locality: "Cuatro Cienegas, Coahuila" [Mexico].

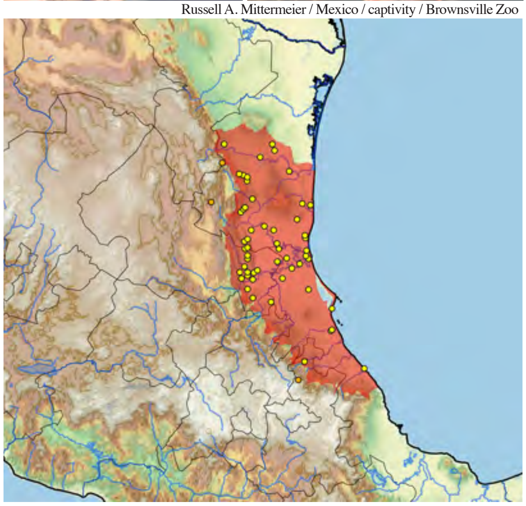
Type specimen: FMNH 41234, holotype, see (Marx 1958); FMNH 55656, a paratype, erroneously listed as holotype by Milstead (1969).

Terrapene mexicana (Gray 1849) (07:25, 14:27, 17:37) **(64)**
(or *Terrapene carolina mexicana*)
(or *Terrapene mexicana mexicana*)
Mexican Box Turtle

Collette Adams / CBFTT / Mexico



Russell A. Mittermeier / Mexico / captivity / Brownsville Zoo



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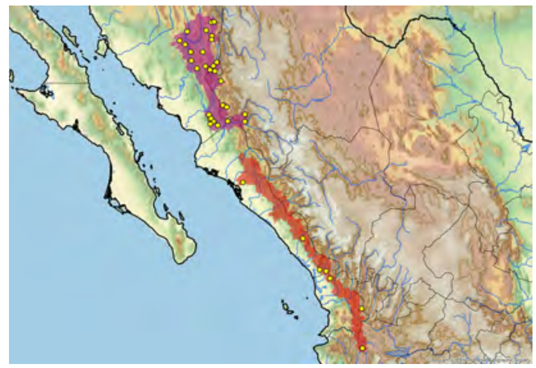
(orange dots = probable trade)

Distribution: Mexico (Nuevo León, Puebla, San Luis Potosi, Tamaulipas, Veracruz)
Presumed Historic Indigenous Range: 76,324 sq. km
Size (Max SCL): male 15.7 cm, female 19.5 cm (Müller 1936; Dodd 2001; Legler and Vogt 2013)
CBFTT Account: Kiester and Willey (2015), as part of *Terrapene carolina*
IUCN Red List: Vulnerable (VU A2bcde+4bcde) (van Dijk 2011), as part of *Terrapene carolina*; Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II, as *Terrapene* spp. (1995)
Synonymy:
Cistudo (Onychotria) mexicana Gray 1849:17
Onychotria mexicana, Cistudo mexicana, Cistudo carolina mexicana, Chelopus mexicanus, Terrapene mexicana, Terrapene mexicana mexicana, Terrapene carolina mexicana
Type locality: "Mexico." Restricted to "Tampico, Tamaulipas" [Mexico] by Müller (1936:112).
Type specimens: NHMUK 1947.3.4.4, 1947.3.5.48 (formerly 1848.7.28.29–30) syntypes (2), see Milstead (1969) and Ernst and McBreen (1991); NHMUK 1947.3.4.3 listed as a syntype by Milstead (1969) and Ernst and McBreen (1991).
Terrapene goldmani Stejneger 1933:119
Type locality: "Chijol or Chijoles, southeastern corner of San Luis Potosi, Mexico."
Type specimen: USNM 46251, holotype, see Cochran (1961) and Reynolds et al. (2007).

Terrapene nelsoni Stejneger 1925 (14:27) **(64)**
Spotted Box Turtle, Sierra Box Turtle, *Caja de Manchas*, *Tortuga de Mochomera*
(includes 2 subspecies)



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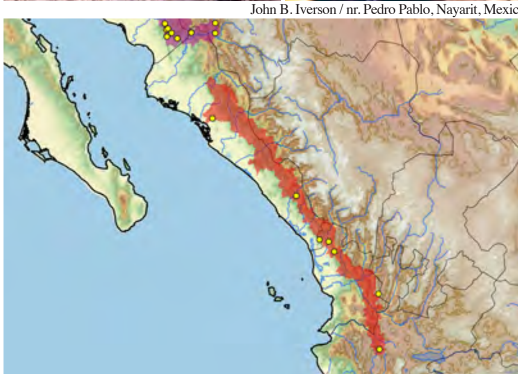
(subspecies: *nelsoni* = red, *klauberi* = purple)

Distribution: Mexico (Chihuahua, Jalisco, Nayarit, Sinaloa, Sonora)
Presumed Historic Indigenous Range: 59,666 sq. km
Size (Max SCL): male 15.9 cm, female 14.9 cm (see subspp.)
CBFTT Account: Buskirk and Ponce-Campos (2011)
IUCN Red List: Data Deficient (DD) (TFTSG 1996)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)
CITES: Appendix II, as *Terrapene* spp. (1995)

Terrapene nelsoni nelsoni Stejneger 1925
Southern Spotted Box Turtle, Southern Sierra Box Turtle

John B. Iverson / CBFTT / Nayarit, Mexico

John B. Iverson / nr. Pedro Pablo, Nayarit, Mexico



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(subspecies: *nelsoni* = red, *klauberi* = purple)

Distribution: Mexico (Jalisco, Nayarit, Sinaloa)

Presumed Historic Indigenous Range: 29,962 sq. km

Size (Max SCL): male 14.7 cm, female 14.5 cm (Buskirk and Ponce-Campos 2011 CBFTT; Legler and Vogt 2013)

Synonymy:

Terrapene nelsoni Stejneger 1925:463

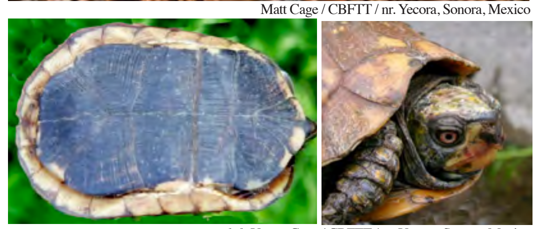
Terrapene nelsoni nelsoni

Type locality: "Pedro Pablo, Tepic, Mexico; 2500 feet altitude."

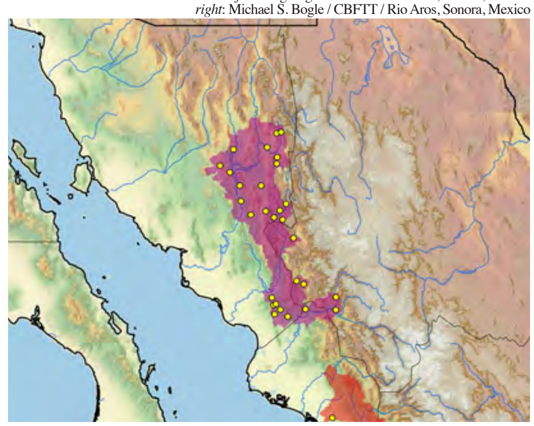
Type specimen: USNM 46252, holotype, see Cochran (1961), Reynolds et al. (2007), and Legler and Vogt (2013).

Terrapene nelsoni klauberi Bogert 1943
Northern Spotted Box Turtle, Northern Sierra Box Turtle

Matt Cage / CBFTT / nr. Yecora, Sonora, Mexico



left: Young Cage / CBFTT / nr. Yecora, Sonora, Mexico
right: Michael S. Bogle / CBFTT / Rio Aros, Sonora, Mexico



*

(subspecies: *nelsoni* = red, *klauberi* = purple)

Distribution: Mexico (Chihuahua, Sinaloa, Sonora)

Presumed Historic Indigenous Range: 29,704 sq. km

Size (Max SCL): male 15.9 cm, female 14.9 cm (Bogert and Oliver 1945; Buskirk and Ponce-Campos 2011 CBFTT; Legler and Vogt 2013)

Synonymy:

Terrapene klauberi Bogert 1943:2

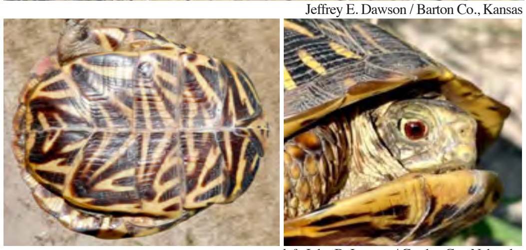
Terrapene nelsoni klauberi

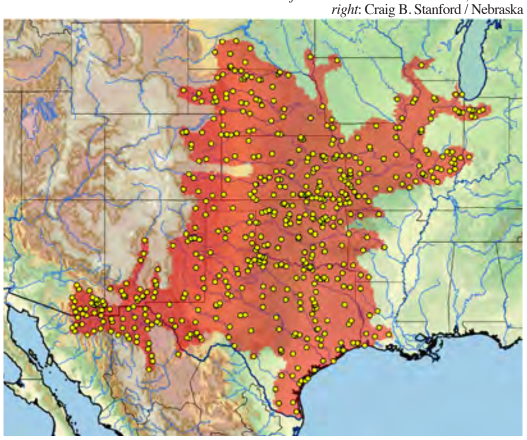
Type locality: "Rancho Guirocoba, approximately eighteen miles southeast of Alamos, Sonora, Mexico."

Type specimen: AMNH 63751, holotype.

Terrapene ornata (Agassiz 1857a) [12:20, 14:27] **[64]**
Ornate Box Turtle, Western Box Turtle


Jeffrey E. Dawson / Barton Co., Kansas


left: John B. Iverson / Garden Co., Nebraska
right: Craig B. Stanford / Nebraska

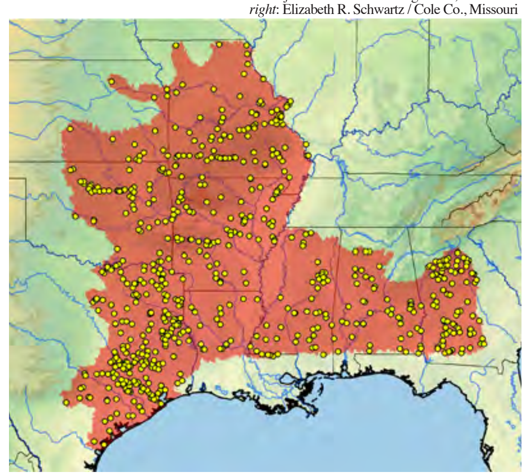

*

Distribution: Mexico (Chihuahua, Sonora), USA (Arizona, Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Louisiana, Missouri, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, Wisconsin, Wyoming)
Presumed Historic Indigenous Range: 1,899,334 sq. km
Size (Max SCL): male 15.7 cm, female 17.0 cm (Ernst and Lovich 2009; Legler and Vogt 2013)
IUCN Red List: Near Threatened (NT) (van Dijk and Hammerson 2011); Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II, as *Terrapene* spp. (1995)
Synonymy:
Cistudo ornata Agassiz 1857a:392,445
Terrapene ornata, Terrapene ornata ornata, Terrapene carolina ornata
Type locality: "Upper Missouri...and...Iowa" [USA]. Restricted to "Council Bluffs, Pottawatomie County, Iowa, USA" [in error] by Smith and Taylor (1950a:358, 1950b:36); to "junction of the Platte and Missouri River" [Nebraska, USA] [in error] by Schmidt (1953:95); and to "Burlington, Des Moines County, Iowa" [USA] by Smith and Smith (1980:587).
Type specimen: MCZ 1536, lectotype, designated by Smith and Smith (1980:587).
Terrapene ornata cimarronensis Cragin 1894:37
Type locality: "Red beds country of the Cimarron Basin" [Kansas, USA].
Type specimens: Not known or located.
Terrapene longinsulae † Hay 1908c:166 [12:20]
Terrapene ornata longinsulae
Type locality: "Long Island, Phillips County, Kansas" [USA].
Type specimen: USNM 5983, holotype, fossil, an almost complete shell, skull, and associated appendicular elements, figured (pl.26) and Joyce et al. (2012:f.3–4), see Milstead (1967), Joyce et al. (2012), and Vlachos (2018).
Geologic age: Upper Miocene to possibly Pleistocene.
Terrapene whitneyi † Hay 1916b:8
Type locality: "Austin, Texas" [USA].
Type specimen: USNM 8617, holotype, fossil, a complete shell, figured (pl.1,f.4-5,pl.2,f.1), see Milstead (1967) and Vlachos (2018).
Geologic age: Pleistocene.
Terrapene ornata luteola Smith and Ramsey 1952:45 **[64]**
Type locality: "17 miles south of Van Horn, Culberson County, Texas" [USA].
Type specimen: TCU 1280, holotype.

Terrapene triunguis (Agassiz 1857a) [11:8, 14:27, 17:37] **[64]**
(or *Terrapene carolina triunguis*)
(or *Terrapene mexicana triunguis*)
Three-toed Box Turtle


Michael T. Jones / CBFTT / Missouri


left: John B. Iverson / Logan Co., Oklahoma
right: Elizabeth R. Schwartz / Cole Co., Missouri


*

Distribution: USA (Alabama, Arkansas, Georgia, Illinois, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, Texas)
Presumed Historic Indigenous Range: 991,270 sq. km
Size (Max SCL): male 14.8 cm, female 15.6 cm (Schwartz and

Kiester, unpubl. data) [max 17.9 cm (Dodd 2001, citing Conant and Collins 1991)]

CBFTT Account: Kiester and Willey (2015), as part of *Terrapene carolina*

IUCN Red List: Vulnerable (VU A2bcde+4bcde) (van Dijk 2011), as part of *Terrapene carolina*; Previously: Near Threatened (NT) (TFTSG 1996)

CITES: Appendix II, as *Terrapene* spp. (1995)

Synonymy:

Cistudo triunguis Agassiz 1857a:279,445

Cistudo carolina triunguis, Terrapene triunguis, Onychotria triunguis, Terrapene carolina triunguis, Terrapene mexicana triunguis

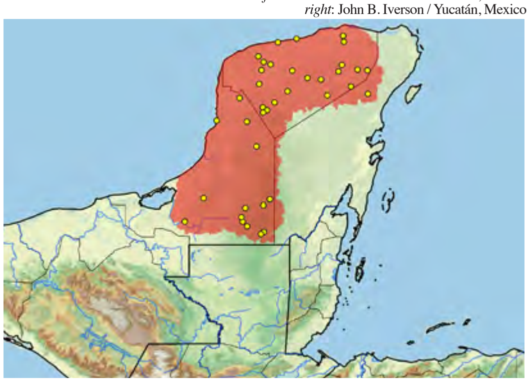
Type locality: "Louisiana...Mississippi...New Orleans...Osage River... Georgia" [USA]. Restricted to "New Orleans, Louisiana" [USA] by Schmidt (1953:94).

Type specimens: MCZ 1519 (8 specimens), 1522–25, USNM 22, 7545–46, 86871–72 (formerly MCZ 1519), 131838, 213736, syntypes (19), discussed by Barbour and Loveridge (1929), Cochran (1961), Ernst and McBreen (1991) and Reynolds et al. (2007).

Terrapene yucatana (Boulenger 1895b) (07:25, 14:27, 17:37) **(64)**
(or *Terrapene carolina yucatana*)
(or *Terrapene mexicana yucatana*)
Yucatan Box Turtle

Michael T. Jones / CBFTT / Yucatán, Mexico

left: Michael T. Jones / CBFTT / Yucatán, Mexico
right: John B. Iverson / Yucatán, Mexico



*

Distribution: Mexico (Campeche, Quintana Roo, Yucatán)

Presumed Historic Indigenous Range: 82,769 sq. km

Size (Max SCL): male 16.1 cm, female 16.0 cm (Buskirk 1993; Ceballos et al. 2013; Jones and Willey, unpubl. data)

CBFTT Account: Kiester and Willey (2015), as part of *Terrapene carolina*

IUCN Red List: Vulnerable (VU A2bcde+4bcde) (van Dijk 2011), as part of *Terrapene carolina*; Previously: Near Threatened (NT) (TFTSG 1996)

CITES: Appendix II, as *Terrapene* spp. (1995)

Synonymy:

Cistudo yucatana Boulenger 1895b:330

Terrapene yucatana, Terrapene mexicana yucatana, Terrapene carolina yucatana

Type locality: "Mexico...North Yucatan." Restricted to "Chichen Itzá, Yucatán, Mexico" by Smith and Taylor (1950a:351, 1950b:35).

Type specimens: NHMUK 1947.3.5.45–47 (formerly 1894.3.23.2–4), syntypes (3).

PLATYSTERNIDAE Gray 1869a (07:26)

Platysternidae Gray 1869a:208

Platysternidae Species Richness

Platysternon Gray 1831c

Platysternon Gray 1831c:106

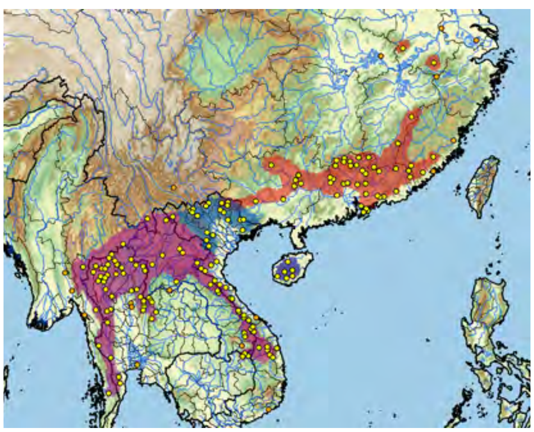
Type species: *Platysternon megacephalum* Gray 1831c, by original monotypy.

Platysternum Agassiz 1846:297 (*nomen novum*)

Platysternon megacephalum Gray 1831c (17:39)

Big-headed Turtle

(includes 3 subspecies)



*

(subspecies: *megacephalum* = red, *peguense* = purple, *shiui* = blue; overlap = intergrades; orange dots = probable trade)

Distribution: Cambodia, China (Anhui, Fujian, Guangdong, Guangxi, Hainan, Hong Kong, Hunan, Jiangxi, Yunnan, Zhejian), Laos, Myanmar, Thailand, Vietnam

Presumed Historic Indigenous Range: 761,321 sq. km

Size (Max SCL): male 25.5 cm, female 21.0 cm (see subspp.)

IUCN Red List: Critically Endangered (CR A2cd) (Fong et al. 2021); Previously: Endangered (EN A1d+2d) (ATTWG 2000); Data Deficient (DD) (TFTSG 1996)

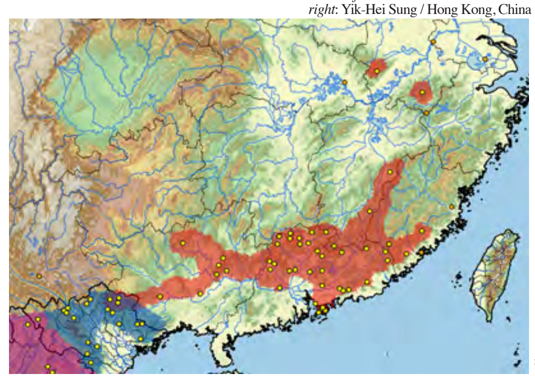
CITES: Appendix I, as Platysternidae spp. (2013); Previously: Appendix II (2003)

Platysternon megacephalum megacephalum Gray 1831c (07:27, 17:39)

Chinese Big-headed Turtle

Yik-Hei Sung / Hong Kong, China

left: Torsten Blanck / China / trade
right: Yik-Hei Sung / Hong Kong, China



*

(subspecies: *megacephalum* = red, *peguense* = purple, *shiui* = blue; overlap = intergrades; orange dots = probable trade)

Distribution: China (Anhui, Fujian, Guangdong, Guangxi, Hong Kong, Hunan, Jiangxi, Zhejian), Vietnam

Presumed Historic Indigenous Range: 251,166 sq. km

Size (Max SCL): male 20.1 cm, female 15.3 cm (Ernst et al. 2006b; Itescu et al. 2014; Sung et al. 2014)

Synonymy:

Platysternon megacephalum Gray 1831c:107

Emys megacephala, Platysternon megacephalus, Platysternon megacephalum megacephalum

Type locality: "Chinâ." Restricted to "S. China" by Boulenger (1889:48).

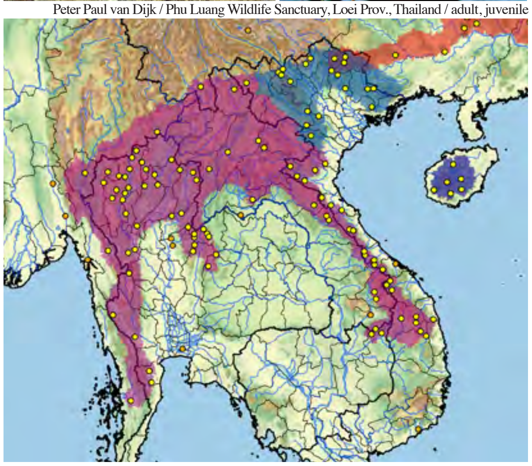
Type specimen: NHMUK 1946.9.7.42, holotype.

Platysternon megacephalum peguense Gray 1870c (17:39)
Burmese Big-headed Turtle


Peter Paul van Dijk / CRM 2 / TCF / CCB / Phu Luang Wildlife Sanctuary, Loei Prov., Thailand



Peter Paul van Dijk / Phu Luang Wildlife Sanctuary, Loei Prov., Thailand / adult, juvenile


*

(subspecies: *megacephalum* = red, *peguense* = purple, *shiui* = blue; overlap = intergrades; orange dots = probable trade)

Distribution: Cambodia, China (Hainan, Yunnan), Laos, Myanmar, Thailand, Vietnam

Presumed Historic Indigenous Range: 440,405 sq. km

Size (Max SCL): male 25.5 cm, female 21.0 cm (Pipatsawasdikul et al. 2010; Chan-ard et al. 2012)

Synonymy:

Platysternon peguense Gray 1870c:70
Platysternon megacephalum peguense
Type locality: "Pegu" [Myanmar].
Type specimens: NHMUK 1946.1.22.21–22 (formerly 1868.6.6.2–3), syntypes (2).

Platysternon megacephalum vogeli Wermuth 1969:374
Type locality: "Provinz Chiang Mai, Nordwest-Thailand."
Type specimen: SMNS 4573, holotype, see Schlüter and Hallermann (1997).

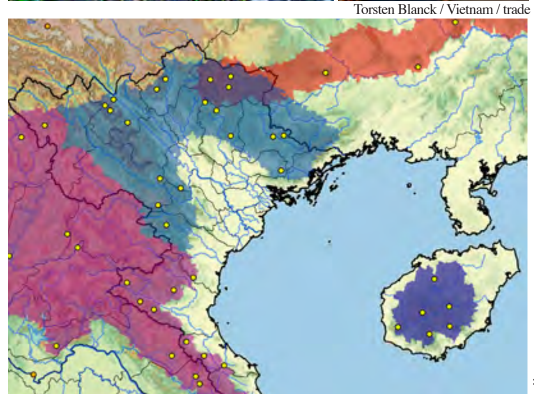
Platysternon megacephalum tristernalis Schleich and Gruber 1984:68 (17:39)
Type locality: "zwischen Mung Lun und Simao, Ostufer des Mekongflusses, südliches Yünnan (VR China)." [Menglun, Lancang Jiang, Yunnan].
Type specimen: ZSM 317/1980 (not ZSM 319/1980/1 as cited originally), holotype, discussed by Franzen and Glaw (2007).

Platysternon megacephalum shiui Ernst and McCord 1987 (17:39)
Vietnamese Big-headed Turtle


Torsten Blanck / Vietnam / trade



Torsten Blanck / Vietnam / trade


*

(subspecies: *megacephalum* = red, *peguense* = purple, *shiui* = blue; overlap = intergrades; orange dots = probable trade)

Distribution: China (Guangxi, Hainan), Laos (?), Vietnam

Presumed Historic Indigenous Range: 95,036 sq. km

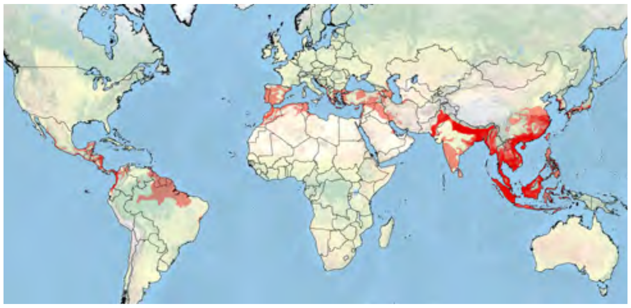
Size (Max SCL): male 15.1 cm, female 10.7 cm (Ernst and McCord 1987)

Synonymy:

Platysternon megacephalum shiui Ernst and McCord 1987:626
Type locality: "vicinity of Langson, Langson Province, Vietnam (26°50' N, 106°45' E)." GPS coordinates in error, corrected to (21°50' N, 106°45' E) by TTWG (2017:82).
Type specimen: USNM 266160, holotype, see Reynolds et al. (2007).

GEOEMYDIDAE Theobald 1868a (07:29, 09:20, 12:21)

Geoemydidae Theobald 1868a:vi
Batagurina Gray 1869a:185
Bataguridae Gray 1870c:17
(includes 3 subfamilies)
BATAGURINAE
GEOEMYDINAE
RHINOCLEMMYDINAE



Geoemydidae Species Richness

BATAGURINAE Gray 1869a

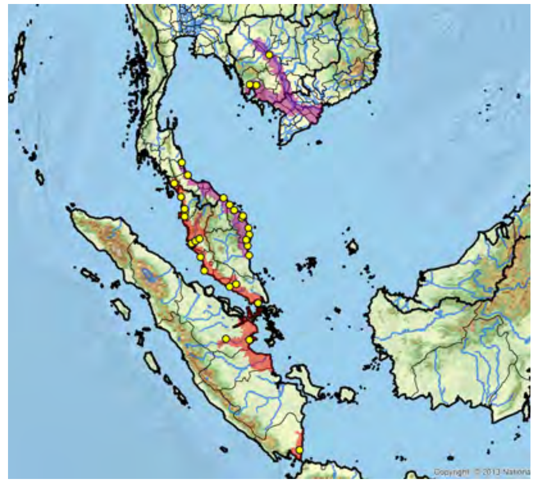
Batagurina Gray 1869a:185
Bataguridae Gray 1870c:17
Batagurinae McDowell 1964:239

Batagur Gray 1856b (07:30, 08:9)

Tetraonyx Gray 1830e:19 (10:7) (junior homonym, not = *Tetraonyx* Latreille 1809 [= Coleoptera])
Type species: *Trionyx (Tetraonyx) cuvieri* Gray 1830e [= subjective synonym of *Emys baska* Gray 1830d], by original monotypy.
Tetronyx Lesson 1832:pl.7 (*nomen novum et oblitum*)
Type species: *Tetronyx longicollis* [= *Tetraonyx longicollis* Lesson 1831b = subjective synonym of *Emys baska* Gray 1830d], by original monotypy.
Batagur Gray 1856b:35
Type species: *Batagur baska* [= *Emys baska* Gray 1830d], by subsequent designation by Smith (1931:134).
Kachuga Gray 1856b:35
Type species: *Batagur (Kachuga) lineata* [= *Emys kachuga* Gray 1831a], by tautonymy. Not *Kachuga trilineata* Gray 1869a [= subjective synonym of *Emys trivittata* Duméril and Bibron 1835], by subsequent erroneous designation by Smith (1931:124).
Batagurella Gray 1869a:200
Type species: *Kachuga (Batagurella) peguensis* Gray 1869a [= subjective synonym of *Emys trivittata* Duméril and Bibron 1835], by original monotypy.
Dongoka Gray 1869a:202
Type species: *Dongoka hardwickii* [= *Kachuga (Dongoka) hardwickii* Gray 1869a = subjective synonym of *Emys dhongoka* Gray 1832b], by subsequent designation by Lindholm (1929:278).
Dhongoka Gray 1870c:57 (*nomen novum*)
Type species: *Dhongoka hardwickii* [= *Kachuga (Dongoka) hardwickii* Gray 1869a = subjective synonym of *Emys dhongoka* Gray 1832b], by subsequent monotypy.
Callagur Gray 1870c:53
Type species: *Callagur picta* [= *Batagur picta* Gray 1862b = subjective synonym of *Emys borneoensis* Schlegel and Müller 1845], by original monotypy.
Cantorella Gray 1870c:58
Type species: *Cantorella affinis* [= *Tetraonyx affinis* Cantor 1847], by original monotypy.
Dhougoka Gray 1873j:52 (*nomen novum*)
Cachuga Lydekker 1889:123 (*nomen novum*)

Batagur affinis (Cantor 1847) (08:9)

Southern River Terrapin
(includes 2 subspecies)

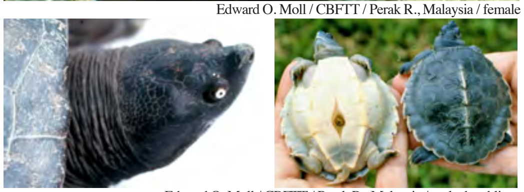


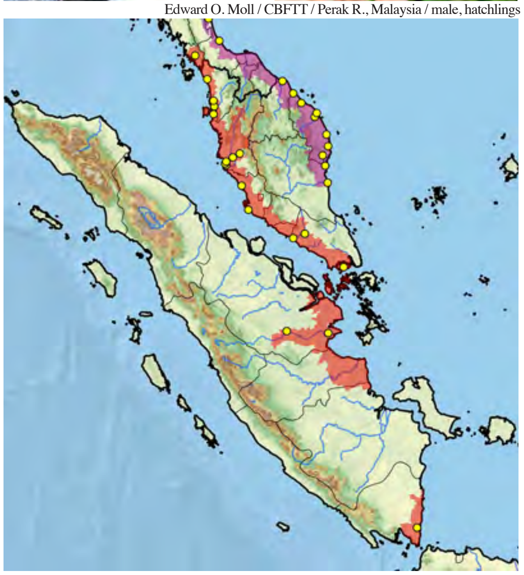
(subspecies: *affinis* = red, *edwardmolli* = purple)

Distribution: Cambodia, Indonesia (Sumatra), Malaysia (West), Singapore (extirpated, reintroduced), Thailand, Vietnam (extirpated)
Presumed Historic Indigenous Range: 141,001 sq. km
Size (Max SCL): male 50.2 cm, female 62.5 cm (see subspp.)
CBFTT Account: Moll, Platt, Chan, Horne, Platt, Praschag, Chen, and van Dijk (2015)
IUCN Red List: Critically Endangered (CR A2bcd+4bcd) (Horne et al. 2019); Previously: Critically Endangered (CR) (Horne et al. 2016); Critically Endangered (CR), as part of *Batagur baska* (ATTWG 2000)
CITES: Appendix I, as formerly part of *B. baska* (1975)

Batagur affinis affinis (Cantor 1847) (08:9, 09:21)
Western Malay River Terrapin


Edward O. Moll / CBFTT / Perak R., Malaysia / female


Edward O. Moll / CBFTT / Perak R., Malaysia / male, hatchlings


*

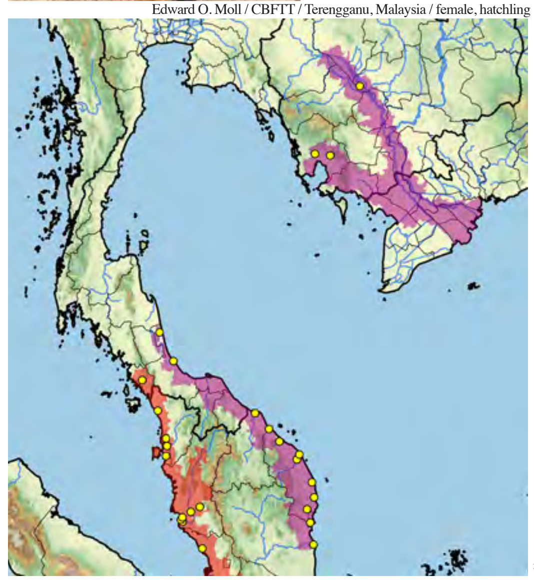
(subspecies: *affinis* = red, *edwardmolli* = purple)

Distribution: Indonesia (Sumatra), Malaysia (West), Singapore (extirpated, reintroduced), Thailand
Presumed Historic Indigenous Range: 68,241 sq. km
Size (Max SCL): male 50.2 cm, female 54.6 cm (Moll et al. 2015 CBFTT)
Synonymy:
Tetraonyx affinis Cantor 1847:6
Batagur affinis, Kachuga affinis, Kachuga (Dongoka) affinis, Cantorella affinis, Batagur affinis affinis
Type locality: "sea off Pinang…along the sea-shore of Pinang..[&].. estuaries and rivers on the Peninsula" [Malaysia (West)].
Type specimen: NHMUK 1947.3.4.31 (formerly 1860.3.19.1450), lectotype, designated by Praschag et al. (2008:66); genotyped by Praschag et al. (2008).
Batagur siebenrocki † Jaekel 1911:76
Type locality: "Pithecanthropus-schichten...Java...Trinil" [Indonesia].
Type specimen: ZMB (MNB 199) (formerly Jaekel 1026), holotype, fossil, nearly complete carapace and plastron, figured (pl.14,f.1a-1b), apparently lost or destroyed during World War II (Karl 1987); ZMB (MB R3), neotype, fossil, shell, designated by Karl (1987:38).
Geologic age: Pleistocene, Trinil Beds.

Batagur affinis edwardmolli Praschag, Holloway, Georges, Päckert, Hundsdörfer, and Fritz 2009 (09:21)
Eastern Malay River Terrapin


Eng Heng Chan / CBFTT / TCC / Setiu R., Terengganu, Malaysia / male in breeding color


Edward O. Moll / CBFTT / Terengganu, Malaysia / female, hatchling


*

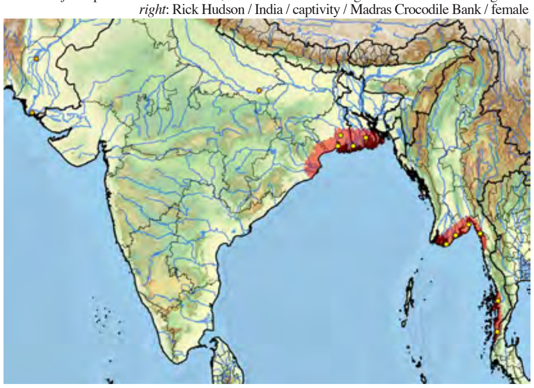
(subspecies: *affinis* = red, *edwardmolli* = purple)

Distribution: Cambodia, Malaysia (West), Thailand (extirpated), Vietnam (extirpated)
Presumed Historic Indigenous Range: 72,760 sq. km
Size (Max SCL): male 49.6 cm, female 62.5 cm (Moll et al. 2015 CBFTT; Chen, unpubl. data)
Synonymy:
Batagur affinis edwardmolli Praschag, Holloway, Georges, Päckert, Hundsdörfer, and Fritz 2009a:64 (09:21)
Type locality: "Sre Ambel River system, Koh Kong Province, Cambodia."
Type specimen: NMW 38903, holotype, see Gemel et al. (2019).

Batagur baska (Gray 1830d) (07:31, 08:9) **(67)**
Northern River Terrapin

Peter Praschag / Satkhira Distr., Sundarbans Bangladesh / male in breeding color


left: Rupali Ghosh / TCC 2011, 2018 / Sundarbans Bangladesh / male in breeding color
right: Rick Hudson / India / captivity / Madras Crocodile Bank / female



*

(orange dots = uncertain or trade)

Distribution: Bangladesh, India (Odisha, West Bengal), Myanmar, Pakistan (?); Thailand (extirpated?)

Presumed Historic Indigenous Range: 107,265 sq. km

Size (Max SCL): male 49.0 cm, female 60.9 cm (Moll et al. 2009 CBFTT; Platt et al. 2019b)

CBFTT Account: Moll, Platt, Platt, Praschag, and van Dijk (2009)

IUCN Red List: Critically Endangered (CR A2acd+4cd; C1+2a(i)) (Praschag and Singh 2019); Previously: Critically Endangered (CR) (ATTWG 2000); Endangered (EN) (TFTSG 1996)

CITES: Appendix I (1975)

Synonymy:

Emys baska Gray 1830d:pl.75
Testudo baska, Emys batagur baska, Tetronyx baska, Batagur (Batagur) baska, Batagur baska, Tetraonyx baska, Tetraonyx basca, Batagur baska baska
Type locality: "India."
Type specimen: NHMUK s/n, holotype, apparently lost, specimen figured (pl.75), see Bour (2009c).

Emys batagur Gray 1830e:9 (10:7)
Clemmys (Clemmys) batagur, Tetraonyx batagur, Batagur batagur, Batagur batagur batagur
Type locality: Not designated. Restricted to "India" by Gray (1831d:24).
Type specimen: NHMUK, holotype, apparently lost.

Trionyx (Tetraonyx) cuvieri Gray 1830e:19 (10:7)
Trionyx cuvierii
Type locality: Not designated. Restricted to "l'Irrawady, fleuve du royaume de Pégu" [Myanmar] by Temminck and Schlegel (1834:43).
Type specimen: MNHN, holotype, not located.

Tetraonyx longicollis Lesson 1831b:297
Clemmys longicollis, Tetronyx longicollis
Type locality: "le fleuve de l'Irravaddy au Pégou" [Myanmar].
Type specimen: MNHN 7967, holotype, discussed by Bour (2009c).

Emys tetraonyx Temminck and Schlegel 1834:43 (10:18) (*nomen novum*)
Comment: Unjustified replacement name for *longicollis*.

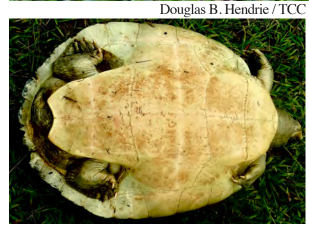
Tetraonyx lessonii Duméril and Bibron 1835:338 (*nomen novum*)
Hydraspis (Tetronyx) lessonii
Comment: Unjustified replacement name for *longicollis*.

Batagur baska ranongensis Nutaphand 1979:181 (07:31)
Batagur ranongensis, Batagur batagur ranongensis
Type locality: "mouth of rivers in Ranong Province" [Thailand].
Type specimen: Not located, type specimen figured (f.75-76).

Tetronyx unicolor Bibron *in* Bour 2009b:31 (*nomen nudum*)

Batagur borneoensis (Schlegel and Müller 1845) (07:30)
Painted Terrapin

Douglas B. Hendrie / TCC / Perak, Malaysia / male in breeding color




left: Gerald Kuchling / Setiu R., Malaysia / female
right: Joko Guntoro / Aceh, Sumatra, Indonesia / female

Distribution: Brunei, Indonesia (Kalimantan, Sumatra), Malaysia (East, West), Thailand

Presumed Historic Indigenous Range: 233,763 sq. km

Size (Max SCL): male 45.0 cm, female 76.0 cm (de Rooij 1915; Bonin et al. 2006; Ernst et al. 2006b; Itescu et al. 2014)

IUCN Red List: Critically Endangered (CR A2cd) (Shepherd et al. 2021); Previously: Critically Endangered (CR A1bcd) (ATTWG 2000); Critically Endangered (CR) (TFTSG 1996)

CITES: Appendix II (1997); Zero quota for wild specimens for commercial purposes (2013)

Synonymy:

Emys borneoensis Schlegel and Müller 1845:30

Clemmys borneoensis, Callagur borneoensis, Batagur borneoensis

Type locality: "Borneo" [East Malaysia or Kalimantan, Indonesia].

Type specimens: RMNH 3296, 6210, syntypes (2), discussed by Hoogmoed et al. (2010); RMNH 6210 listed as "holotype" by Uetz et al. (2019).

Batagur picta Gray 1862b:204

Callagur picta, Tetraonyx pictus, Callagur pictus

Type locality: "Borneo, Sarawak" [East Malaysia].

Type specimen: NHMUK 1947.3.4.19 (formerly 1856.9.19.21), holotype.

Clemmys grayi Strauch 1865:88 (*nomen novum*)

Comment: Unjustified replacement name for *picta*.

Kachuga major Gray 1873c:300

Type locality: "India?" Emended to "India" by Gray (1873j:51).

Type specimen: NHMUK 1947.3.4.20 (formerly 1863.10.8.11), holotype.

Batagur borneensis Hubrecht 1881:47 (*nomen novum*)

Callagur borneensis

Comment: Unjustified emendation or error for *borneoensis*.

Kachuga brookei Bartlett 1895a:29

Type locality: "Borneo" [East Malaysia or Kalimantan, Indonesia].

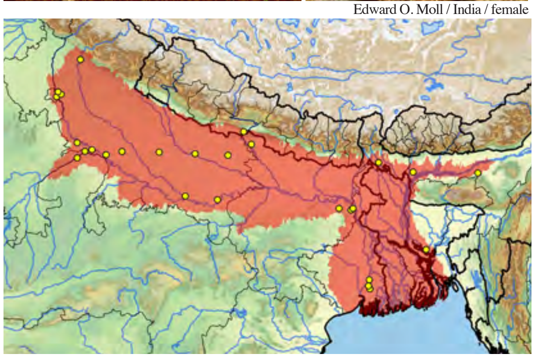
Type specimen: Possibly SMK, holotype, originally live.

Batagur dhongoka (Gray 1832b) (07:30)

Three-striped Roofed Turtle

Indraneil Das / Bihar, India

Edward O. Moll / India / female



Distribution: Bangladesh, India (Assam, Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh, West Bengal), Nepal

Presumed Historic Indigenous Range: 521,478 sq. km

Size (Max SCL): male 26.0 cm, female 48.0 cm (Shrestha 1997; Ceballos et al. 2013)

IUCN Red List: Critically Endangered (CR A2cd+4cd) (Das et al. 2019); Previously: Endangered (EN) (ATTWG 2000); Near Threatened (NT) (TFTSG 1996)

CITES: Appendix II (2003)

Synonymy:

Emys dhongoka Gray 1832b:pl.60

Batagur (Kachuga) dhongoka, Batagur dhongoka, Batagur dhougoka, Clemmys dhongoka, Kachuga dhongoka

Type locality: "India." Restricted to "N. India" by Smith (1931:130).

Type specimen: NHMUK, holotype, apparently lost, specimen figured (pl.60).

Emys duvaucelii Duméril and Bibron 1835:334

Batagur duvaucelii, Emys duvancellii

Type locality: "Bengale" [Bangladesh or India].

Type specimen: MNHN 7987, holotype.

Kachuga (Dongoka) hardwickii Gray 1869a:202

Kachuga hardwickii, Dhongoka hardwickii, Dhougoka hardwickii

Type locality: "Nepal."

Type specimen: NHMUK 1947.3.4.59, holotype.

Batagur durandi † Lydekker 1885:192

Type locality: "Siwalik Hills" [Punjab, India].

Type specimen: NHM(P) 39841, holotype, fossil, nearly whole shell, figured (pl.24,f.2), see Lydekker (1889).

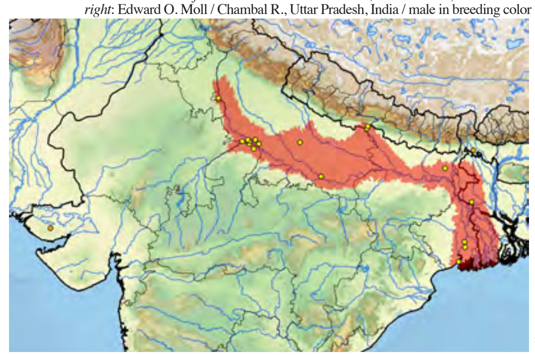
Geologic age: Late Pliocene (Pinjor) to Early Pleistocene (Tatrot).

Batagur kachuga (Gray 1831a) (07:30) **(67)**

Red-crowned Roofed Turtle

Saurav Gawan / Chambal R., Uttar Pradesh, India / male in breeding color

left: Edward O. Moll / Yamuna R., Uttar Pradesh, India / female
right: Edward O. Moll / Chambal R., Uttar Pradesh, India / male in breeding color



*

(orange dots = probable trade)

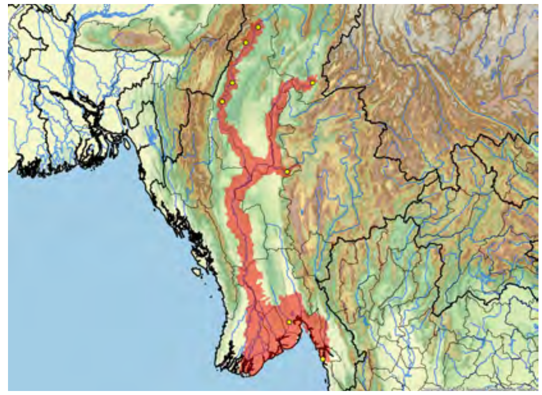
Distribution: Bangladesh, India (Bihar, Madhya Pradesh, Punjab, Uttar Pradesh, West Bengal), Nepal
Presumed Historic Indigenous Range: 273,724 sq. km
Size (Max SCL): male 29.0 cm, female 56.0 cm (Praschag et al. 2019 IUCN)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Praschag et al. 2019); Previously: Critically Endangered (CR) (ATTWG 2000); Endangered (EN) (TFTSG 1996)
CITES: Appendix II (2003)
Synonymy:
Emys lineata Gray 1830e:9 (10:7) (*nomen oblitum*)
Clemmys (Clemmys) lineata, Batagur (Kachuga) lineata, Batagur lineatus, Kachuga lineata
Type locality: "India."
Type specimen: NHMUK, holotype, apparently lost.
Emys kachuga Gray 1831a:pl.74
Batagur kachuga, Kachuga kachuga
Type locality: "India." Restricted to "N. India" by Smith (1931:131).
Type specimen: NHMUK s/n, holotype, apparently lost, specimen figured (pl.74).
Batagur ellioti Gray 1862b:264
Batagur elliotti, Clemmys ellioti
Type locality: "Southern India, River Kistna" [Krishna River, Andhra Pradesh, India] [in error].
Type specimen: NHMUK 1947.3.4.68 (formerly 1855.12.17.15), holotype.
Kachuga fusca Gray 1870c:56 (*partim*)
Batagur fusca
Type locality: "India."
Type specimens: NHMUK 1947.3.4.30, 1947.3.4.60 (formerly 1845.1.12.416, 1867.9.28.2), syntypes (2).
Batagur bakeri † Lydekker 1885:190
Type locality: "Siwalik Hills" [Punjab, India].
Type specimen: NHM(P) 39835a, holotype, fossil, nearly whole shell, figured (pl.23,f.2-2a), see Lydekker (1889).
Geologic age: Late Pliocene (Pinjor) to Early Pleistocene (Tatrot).

Batagur trivittata (Duméril and Bibron 1835) (07:30)
Myanmar Roofed Turtle, Burmese Roofed Turtle


Rick Hudson / CRM 5 / TCC / Myanmar / captivity / Yadanabon Zoo / male in breeding color



left: Brian D. Horne / Myanmar / captivity / male
right: Gerald Kuchling / Myanmar / captivity / female



Distribution: Myanmar
Presumed Historic Indigenous Range: 107,814 sq. km
Size (Max SCL): male 46.0 cm, female 62.0 cm (Smith 1931; Platt et al. 2019c)
IUCN Red List: Critically Endangered (CR A2bcd; B1ab(i,ii,iii) + 2ab(i,ii,iii); D) (Platt et al. 2019); Previously: Endangered (EN) (ATTWG 2000); Endangered (EN) (TFTSG 1996)
CITES: Appendix II (2003); Zero quota for wild specimens for commercial purposes (2013)
Synonymy:
Emys trivittata Duméril and Bibron 1835:331
Batagur trivittata, Kachuga trivittata
Type locality: "Bengale." [India or Bangladesh] [in error].
Type specimens: MNHN 7889, 7892, syntypes (2).
Kachuga (Batagurella) peguensis Gray 1869a:200
Kachuga peguensis
Type locality: "India." Restricted to "Pegu" [Myanmar] by Gray (1873j:50).
Type specimen: NHMUK 1947.3.4.86 (formerly 1868.5.11.10), holotype.
Kachuga trilineata Gray 1869a:200
Kachuga (Kachuga) trilineata
Type locality: "India." Restricted to "Pegu" [Myanmar] by Boulenger (1889:56).
Type specimen: NHMUK 1947.3.4.85 (formerly 1867.9.28.4), holotype.
Kachuga fusca Gray 1870c:56 (*partim*)
Batagur fusca
Type locality: "India."
Type specimens: NHMUK 1947.3.4.30, 1947.3.4.60 (formerly 1845.1.12.416, 1867.9.28.2), syntypes (2).
Batagur iravadica Anderson 1879:736
Batagur iravadicus, Clemmys iravadica
Type locality: "Pegu..[&]..Bhamô in Upper Burma..[&].. throughout the Irawady" [Myanmar].
Type specimens: ZSI 743, syntype (1), others apparently lost, see Das et al. (1998) and Kundu et al. (2018a).

Geoclemys Gray 1856b

Geoclemys Gray 1856b:17

Type species: *Geoclemys hamiltonii* [= *Emys hamiltonii* Gray 1830e], by subsequent designation by Stejneger (1907:496).

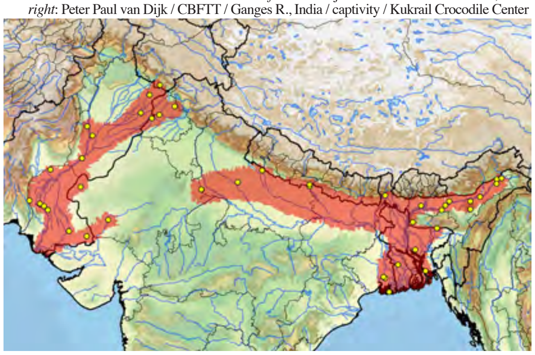
Geoclemmys Cope 1865:186 (*nomen novum*)

Geoclemys hamiltonii (Gray 1830e) (10:7)

Spotted Pond Turtle, Black Pond Turtle

Indraneil Das / CBFTT / Kaziranga National Park, Assam, India

left: Chittaranjan Baruah / CBFTT / Assam, India
right: Peter Paul van Dijk / CBFTT / Ganges R., India / captivity / Kukrail Crocodile Center



*

Distribution: Bangladesh, India (Assam, Bihar, Jammu, Meghalaya, Punjab, Rajasthan, Uttar Pradesh, West Bengal), Nepal, Pakistan

Presumed Historic Indigenous Range: 699,435 sq. km

Size (Max SCL): male 39.2 cm, female 40.5 cm (Rashid and Swingland 1997; Das and Bhupathy 2010 CBFTT; Baruah et al. 2012)

CBFTT Account: Das and Bhupathy (2010)

IUCN Red List: Endangered (EN A2cd+4cd) (Praschag et al. 2019); Previously: Vulnerable (VU) (ATTWG 2000); Near Threatened (NT) (TFTSG 1996)

CITES: Appendix I (1975)

Synonymy:

Emys hamiltonii Gray 1830e:9 (10:7)

Clemmys (Clemmys) hamiltonii, *Clemmys hamiltonii*, *Geoclemys hamiltonii*, *Damonia hamiltonii*, *Geoclemmys hamiltonii*, *Geoclemys hamoltoni*

Type locality: "India."

Type specimens: OUM 8477, NHMUK 1947.3.4.41, syntypes (2), 1947.3.4.41 listed as "holotype" by King and Burke (1989:35) and Uetz et al. (2019), discussed by Nowak-Kemp and Fritz (2010).

Emys guttata Gray 1831b:pl.76

Type locality: "India."

Type specimen: NHMUK, possibly 1947.3.4.41, type specimen figured (pl.76), see Smith (1931).

Emys piquotii Lesson 1831a:120

Type locality: "le Gange" [India].

Type specimen: Possibly MNHN 1235, holotype.

Emys picquotii Lesson *in* Duméril and Bibron 1835:316 (*nomen novum*)

Comment: Unjustified emendation of *piquotii*.

Emys hamiltonoides † Falconer and Cautley *in* Lydekker 1880:21 (*nomen nudum*)

Damonia hamiltonoides

Type locality: "Siwalik Hills" [Punjab, India].

Type specimen: Not known, fossil, shell.

Geologic age: Late Pliocene (Pinjor) to Early Pleistocene (Tatrot).

Melanochelys pictus Murray 1884b:107

Type locality: "in the Sind "Doro," in the Kushmore Talooka, Upper Sind" [Pakistan].

Type specimen: UKZM s/n, holotype, not located.

Clemmys palaeindica † Lydekker 1885:178

Damonia palaeindica

Type locality: "Siwalik Hills" [Punjab, India].

Type specimens: NHM(P) 39838, 39840, syntypes, fossil, two nearly complete shells, figured (pl.21 f.1,1a,1b,3,3a), see Lydekker (1889).

Geologic age: Late Pliocene (Pinjor) to Early Pleistocene (Tatrot).

Geoclemys sivalensis † Tewari and Badam 1969:555

Type locality: "Upper Siwaliks...1 km south-east of Quranwalla...6 km northeast of Chandigarh Lake...Panjore, India." [Haryana, India].

Type specimen: PUM A/665, holotype, fossil, partial anterior carapace, figured (f.2).

Geologic age: Lower Pleistocene, Pinjore Stage.

Hardella Gray 1870c

Hardella Gray 1870c:58

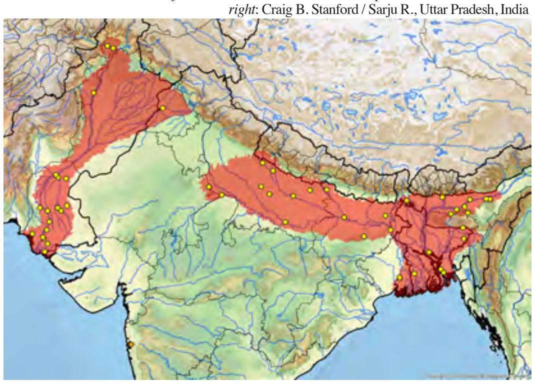
Type species: *Hardella thurjii* [= *Emys thurjii* Gray 1831d], by subsequent designation as *Hardella thurgi* by Günther (1871:70).

Hardella thurjii (Gray 1831d) (07:40)

Crowned River Turtle, Brahminy River Turtle

Indraneil Das / CBFTT / National Chambal Sanctuary, Madhya Pradesh, India

left: James F. Parham / CBFTT / Khairpur, Sind Province, Pakistan
right: Craig B. Stanford / Sarju R., Uttar Pradesh, India



*

(orange dot = probable trade)

Distribution: Bangladesh, India (Assam, Bihar, Madhya Pradesh, Meghalaya, Punjab, Uttar Pradesh, West Bengal), Nepal, Pakistan

Presumed Historic Indigenous Range: 820,772 sq. km

Size (Max SCL): male 20.5 cm, female 65.3 cm (Rashid and Swingland 1997; Das and Bhupathy 2009a CBFTT; Baruah et al. 2012)

CBFTT Account: Das and Bhupathy (2009a)

IUCN Red List: Endangered (EN A2bcd+4bcd) (Ahmed et al. 2021); Previously: Vulnerable (VU A1cd+2cd) (ATTWG 2000); Near Threatened (NT) (TFTSG 1996)

CITES: Appendix II (2013)

Synonymy:

Emys thuryi Gray 1830e:8 (10:7) (*nomen oblitum*)
Type locality: "Bengal" [Bangladesh or India].
Type specimens: OUM 8433–34, syntypes (2), discussed by Nowak-Kemp and Fritz (2010).

Emys thurjii Gray 1831d:22 (*nomen novum*)
Testudo thurjii, Hardella thurjii, Hardella thurjii thurjii
Type locality: "India." Restricted to "Ganges and Brahmaputra systems" [India] as *Hardella thurgii* by McDowell (1964:255).
Type specimens: OUM 8433–34, syntypes (2) by default, discussed by Nowak-Kemp and Fritz (2010).
Comment: Unjustified emendation of *thuryi*.

Emys thuji Gray 1831e:pl.73 (*nomen novum*)
Comment: Unjustified emendation or error for *thurjii*.

Emys flavonigra Lesson 1831a:120
Type locality: "le Gange" [India].
Type specimen: Possibly MNHN, not located.

Clemmys (Clemmys) thurgii Fitzinger 1835:123 (*nomen novum*)
Clemmys thurgii, Testudo thurgii, Emys thurgii, Emys thurgi, Batagur thurgii, Hardella thurgii, Batagur (Hardella) thurgii
Comment: Unjustified emendation or error for *thurjii*.

Kachuga oldhami Gray 1869a:200
Kachuga (Kachuga) oldhami
Type locality: "India." Restricted to "Bengal" [Bangladesh or India] by Boulenger (1889:66).
Type specimen: NHMUK 1947.3.4.73 (formerly 1856.5.6.112), holotype.

Hardella indi Gray 1870c:58 (07:40)
Hardella thurjii indi
Type locality: "Indus River" [Pakistan].
Type specimen: NHMUK 1947.3.4.74 (formerly 1869.8.28.1), holotype.

Batagur falconeri † Lydekker 1885:187
Hardella falconeri
Type locality: "Siwalik Hills" [Punjab, India].
Type specimen: NHM(P) 39835, holotype, fossil, shell, figured (pl.23,f.1-1a,pl.24,f.4), see Lydekker (1889).
Geologic age: Late Pliocene (Pinjor) to Early Pleistocene (Tatrot).

Batagur cautleyi † Lydekker 1885:194
Type locality: "Siwalik Hills" [Punjab, India].
Type specimen: NHM(P) 39834, holotype, fossil, shell, figured (pl.24,f.1-1a), see Lydekker (1889).
Geologic age: Late Pliocene (Pinjor) to Early Pleistocene (Tatrot).

Clemmys watsoni † Lydekker 1886:541
Type locality: "Siwaliks of Perim Island, Gulf of Cambay, India" [Gujarat, India].
Type specimen: NHM(P) R.748, holotype, fossil, shell, figured (pl.15), see Lydekker (1889).
Geologic age: Late Pliocene to Early Pleistocene.

Geoemyda pilgrimi † Prasad and Satsangi 1967:536
Type locality: "Tatrot beds east of Chakrana (31°32' : 76°41') in the Bilaspur District of Himachal Pradesh" [India].
Type specimen: GSI 18091, holotype, fossil, shell, figured by Das (1994:f.1-2), discussed by Das (1994).
Geologic age: Late Pliocene (Pinjor) to Early Pleistocene (Tatrot).

Malayemys Lindholm 1931 (17:46)

Damonia Gray 1869a:193 (junior homonym, not = *Damonia* Robineau-Desvoidy 1847 [= Diptera])

Type species: *Damonia macrocephala* [= *Geoclemmys macrocephala* Gray 1859], by subsequent designation by Stejneger (1907:496).

Malayemys Lindholm 1931:30 (*nomen novum*)

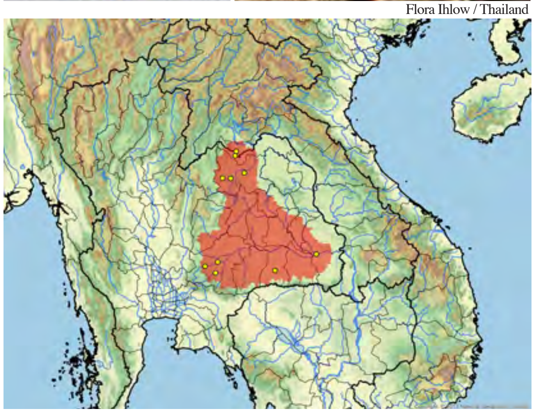
Type species: *Malayemys macrocephala* [= *Geoclemmys macrocephala* Gray 1859], in accordance with ICZN Article 67.8, not *Malayemys subtrijuga* [= *Emys subtrijuga* Schlegel and Müller 1845], as by original designation by Lindholm (1931:30).

Malayemys khoratensis Ihlow, Vamberger, Flecks, Hartmann, Cota, Makchai, Meewattana, Dawson, Kheng, Rödder, and Fritz 2016 (17:46, 17:47)

Khorat Snail-eating Turtle

Flora Ihlow / Sikhio, Thailand

Flora Ihlow / Thailand



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Distribution: Laos, Thailand

Presumed Historic Indigenous Range: 96,093 sq. km

Size (Max SCL): male 15.5 cm, female 20.6 cm (Sumontha et al. 2016; Ihlow et al. 2016); Max CCL: male 17.6 cm, female 21.0 cm (Ihlow et al. 2016)

IUCN Red List: Least Concern (LC) (Cota 2021)

Synonymy:

Malayemys khoratensis Ihlow, Vamberger, Flecks, Hartmann, Cota, Makchai, Meewattana, Dawson, Kheng, Rödder, and Fritz 2016:16 (17:46, 17:47)

Type locality: "Udon Thani, Udon Thani Province, Thailand (17.36555°N, 102.81427°E)."

Type specimen: THNHM 25816, holotype; genotyped by Ihlow et al. (2016); Uetz et al. (2019) erroneously listed THNHM 25609, the holotype of *Malayemys isan*.

Malayemys isan Sumontha, Brophy, Kunya, Wiboonatthapol, and Pauwels 2016:2 (17:46, 17:47)

Type locality: "Ban Na Klang (17°14'48.728"N, 102°12'32.479"E), Na Klang Sub-district, Na Klang District, Nong Bua Lamphu Province, northeastern Thailand."

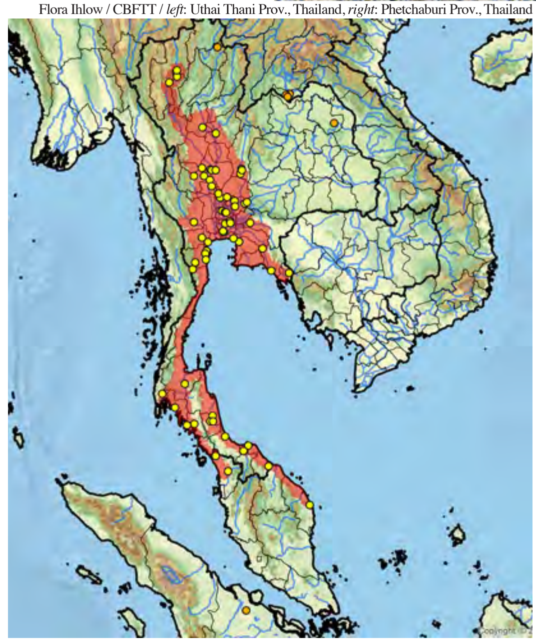
Type specimen: THNHM 25609, holotype.

Malayemys macrocephala (Gray 1859) (07:43, 17:46)

Malayan Snail-eating Turtle, Rice-field Terrapin

Flora Ihlow / CBFTT / Tap Than, Thailand

Flora Ihlow / CBFTT / *left*: Uthai Thani Prov., Thailand, *right*: Phetchaburi Prov., Thailand



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(orange dots = possible trade or introduced)

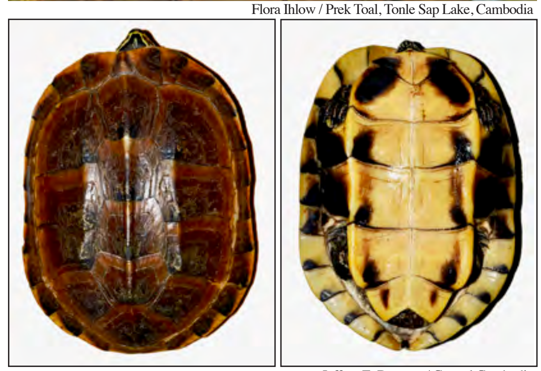
Distribution: Malaysia (West), Myanmar (?), Thailand

Possibly Introduced or Native: Indonesia (Sumatra) (prehistoric or historic?)

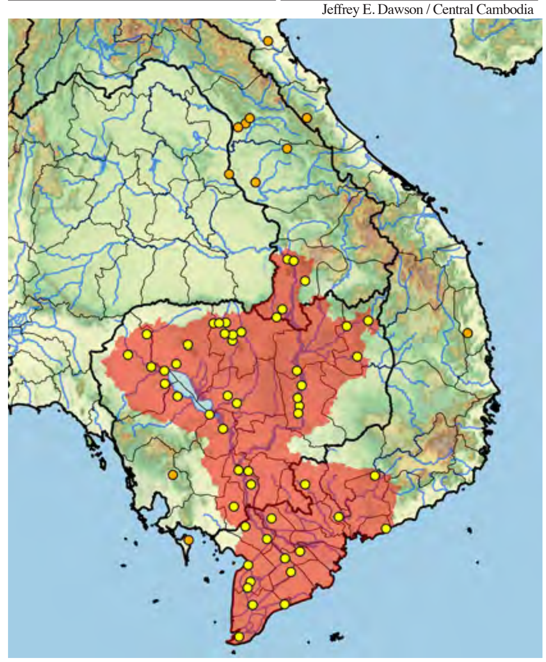
Presumed Historic Indigenous Range: 179,553 sq. km
Size (Max SCL): male 15.6 cm, female 22.0 cm (Dawson et al. 2018 CBFTT); Max CCL: male 17.8 cm, female 22.5 cm (Ihlow et al. 2016)
CBFTT Account: Dawson, Ihlow, Ettmar, van Dijk, and Thirakhupt (2018)
IUCN Red List: Least Concern (LC) (Cota 2021); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996), as part of *Malayemys subtrijuga*
CITES: Appendix II (2005)
Synonymy:
Geoclemmys macrocephala Gray 1859:479
Clemmys macrocephala, *Emys macrocephala*, *Damonia macrocephala*, *Geoclemys macrocephala*, *Malayemys macrocephala*
Type locality: "Siam" [Thailand]. Restricted to "Thanyaburi, Pathum Thani Province, Thailand (Chao Phraya River Basin; approx. 50 km NNE of Bangkok; 14.017 N, 100.733 E)" by Brophy (2004:75).
Type specimen: NHMUK 1947.3.4.52 (formerly 1859.7.8.4), lectotype, designated by Brophy (2004:75).
Emys megacephala Gray 1870c:44 (*nomen nudum*, junior homonym, not = *Emys megacephala* Holbrook 1836 [= *Graptemys geographica*], nor = *Emys megacephalus* Gray 1844 [= *Malaclemys terrapin terrapin*])
Damonia megacephala

Malayemys subtrijuga (Schlegel and Müller 1845) (17:46)
Mekong Snail-eating Turtle

Flora Ihlow / Prek Toal, Tonle Sap Lake, Cambodia



Jeffrey E. Dawson / Central Cambodia



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(native population = red, possibly introduced population = gray; orange dots = possibly native or introduced or trade or misidentified)

Distribution: Cambodia, Indonesia (Java), Laos, Vietnam
Possibly Introduced or Native: Indonesia (Java) (prehistoric or historic?)
Presumed Historic Indigenous Range: 180,894 sq. km
Size (Max SCL): male 19.9 cm, female 23.7 cm (Platt et al. 2008; Dawson et al. 2020 CBFTT)
CBFTT Account: Dawson, Ihlow, and Platt (2020)
IUCN Red List: Near Threatened (NT A2d) (Horne et al. 2021); Previously: Vulnerable (VU A1d+2d) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II (2005)
Synonymy:
Emys subtrijuga Schlegel and Müller 1845:30 (17:46)
Damonia subtrijuga, Geoclemys subtrijuga, Malayemys subtrijuga
Type locality: "Java" [Indonesia]. Possibly introduced, but perhaps native (17:46).
Type specimen: RMNH 6082, lectotype, designated by Brophy (2004:74), see also Hubrecht (1881) and Hoogmoed et al. (2010); NHMUK 1947.3.4.53 (formerly 1848.10.31.16) erroneously listed as "holotype" by Iverson (1992:138).
Cistudo gibbosa Bleeker 1857b:239 (*nomen nudum*)
Type locality: "Batavia...Java" [Indonesia]. Restricted to "Borneo" by Gray (1873j:39).
Type specimen: NHMUK 1863.12.4.38, holotype, see Gray (1873j).
Emys nuchalis Blyth 1863:82
Bellia nuchalis
Type locality: "Java?" [Indonesia].
Type specimens: ZSI 824–26, syntypes (3), see Das et al. (1998) and Kundu et al. (2018a).
Damonia crassiceps Gray 1870c:43 (17:48)
Type locality: "China."
Type specimen: Specimen figured in Hardwicke (1835:f.19-21), holotype, by original designation.
Damonia oblonga Gray 1871c:367
Type locality: "Batavia" [Java, Indonesia].
Type specimen: NHMUK 1947.3.5.30 (formerly 1871.4.10.2 or 1871.10.12.2), holotype, see Gray (1873j).

Morenia Gray 1870c

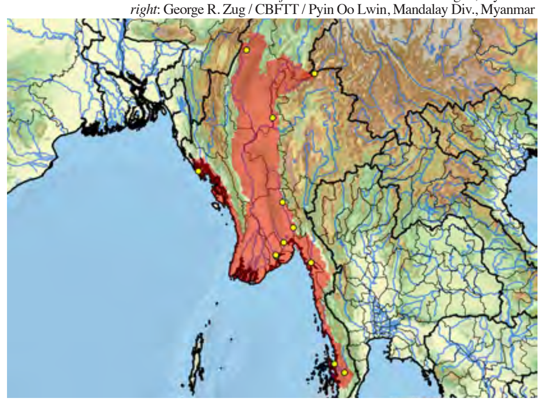
Morenia Gray 1870c:62
Type species: *Morenia berdmorei* [= *Emys berdmorei* Blyth 1859 = subjective synonym of *Emys ocellata* Duméril and Bibron 1835], by subsequent designation by Lindholm (1929:279).

Morenia ocellata (Duméril and Bibron 1835)

Burmese Eyed Turtle

Indraneil Das / CBFTT / Yangon, Myanmar

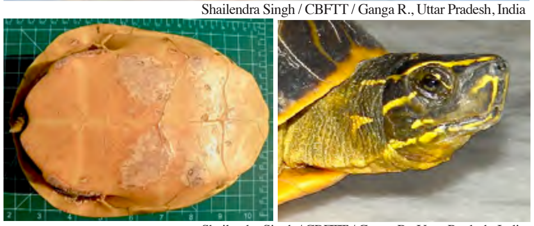
left: Indraneil Das / CBFTT / Yangon, Myanmar
right: George R. Zug / CBFTT / Pyin Oo Lwin, Mandalay Div., Myanmar



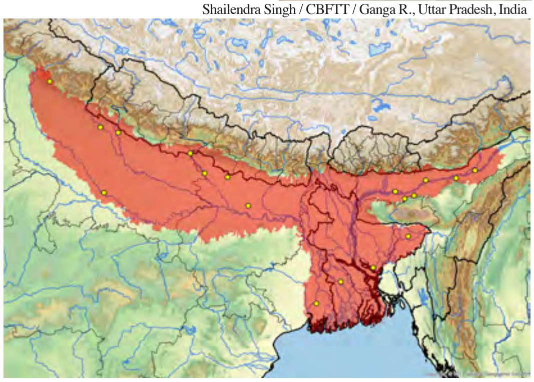
Distribution: China (?) (Yunnan), Myanmar
Presumed Historic Indigenous Range: 264,672 sq. km
Size (Max SCL): male 15.0 cm, female 23.9 cm (Das 2010 CBFTT)
CBFTT Account: Das (2010)
IUCN Red List: Endangered (EN A2cd+4cd) (Praschag et al. 2021); Previously: Vulnerable (VU A1cd+2cd) (ATTWG 2000); Near Threatened (NT) (TFTSG 1996)
CITES: Appendix I (1975)
Synonymy:
Emys ocellata Duméril and Bibron 1835:329
Batagur (Kachuga) ocellata, Batagur ocellata, Clemmys ocellata, Morenia ocellata
Type locality: "Bengale" [India or Bangladesh] [in error]. Restricted to "Irrawaddy (Ayeyarwady) river delta, Myanmar" by lectotype designation by Bour (2009b:41).
Type specimen: MNHN 9167, lectotype, designated by Bour (2009b:41), also erroneously listed as MNHN 6167.
Emys berdmorei Blyth 1859:281
Emys berdmorii, Batagur berdmorii, Batagur berdmorei, Kachuga berdmorei, Kachuga berdmoorei, Kachuga (Dongoka) berdmoorei, Morenia berdmorei
Type locality: "Arakan or Tenasserim" [Myanmar].
Type specimens: ZSI, syntypes (3), apparently lost, not listed by Das et al. (1998) or Kundu et al. (2018a).

Morenia petersi Anderson 1879
Indian Eyed Turtle

Shailendra Singh / CBFTT / Ganga R., Uttar Pradesh, India



Shailendra Singh / CBFTT / Ganga R., Uttar Pradesh, India



Distribution: Bangladesh, India (Assam, Bihar, Uttarakhand, Uttar Pradesh, West Bengal), Nepal
Presumed Historic Indigenous Range: 480,868 sq. km
Size (Max SCL): male 19.4 cm, female 26.0 cm (Rashid and Swingland 1997; Das and Sengupta 2010 CBFTT; Baruah et al. 2012)
CBFTT Account: Das and Sengupta (2010)
IUCN Red List: Endangered (EN A2cd+4cd) (Ahmed and Singh 2021); Previously: Vulnerable (VU A1cd+2d) (ATTWG 2000); Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II (2013)
Synonymy:
Batagur (Morenia) petersi Anderson 1879:761
Batagur petersi, *Morenia petersi*
Type locality: "Huzurapur in the Jessore District..[&]..Furreedpore..[&]..Dacca" [Uttar Pradesh, India..[&]..Bangladesh].
Type specimen: ZMB 8865, lectotype, designated "holotype" by Fritz et al. (1994:164); ZSI 155–56, paralectotypes (2), see also Das et al. (1998) and Das (2009), who recorded these specimens as "syntypes," also recorded as syntypes but not located by Kundu et al. (2018a).

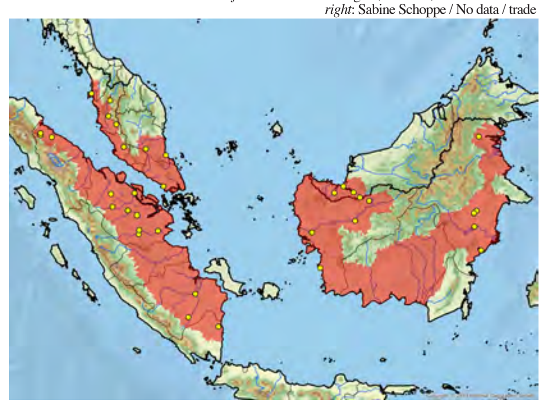
Orlitia Gray 1873b

Orlitia Gray 1873b:156
Type species: *Orlitia borneensis* Gray 1873b, by original monotypy.
Heteroclemmys Peters 1875:622
Type species: *Clemmys (Heteroclemmys) gibbera* Peters 1875 [= subjective synonym of *Orlitia borneensis* Gray 1873b], by original monotypy.
Brookeia Bartlett 1896:113
Type species: *Brookeia baileyi* [= *Hardella baileyi* Bartlett 1895b = subjective synonym of *Orlitia borneensis* Gray 1873b], by original monotypy.
Adelochelys Baur 1896:319
Type species: *Adelochelys crassa* Baur 1896 [= subjective synonym of *Orlitia borneensis* Gray 1873b], by original monotypy.
Liemys Boulenger 1897a:468
Type species: *Liemys inornata* Boulenger 1897a [= subjective synonym of *Orlitia borneensis* Gray 1873b], by original monotypy.

Orlitia borneensis Gray 1873b (12:27)
Malaysian Giant Turtle

Jérôme Maran / Kalimantan, Indonesia [Borneo]

left: Joko Guntoro / Langkat, Sumatra, Indonesia / female
right: Sabine Schoppe / No data / trade



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Distribution: Indonesia (Kalimantan, Sumatra), Malaysia (East, West)
Presumed Historic Indigenous Range: 627,451 sq. km
Size (Max SCL): 80.0 cm (Ernst et al. 2006b)
IUCN Red List: Critically Endangered (CR A2acd) (Horne et al. 2020); Previously: Endangered (EN A1d+2d) (ATTWG 2000), Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II (2003); Zero quota for wild specimens for commercial purposes (2013)

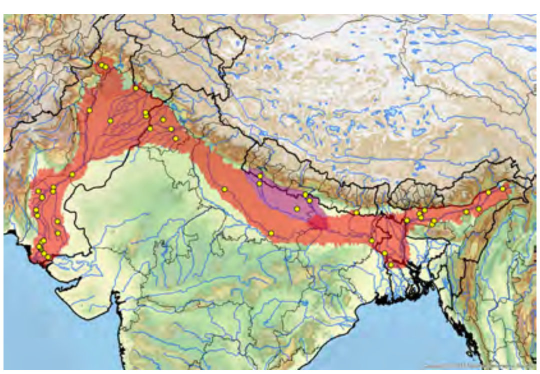
Synonymy:
Cistudo borneensis Bleeker 1857a:473 (*nomen nudum*)
Cistudo borneënsis
Type locality: "Sintang aan de Kapoeas...Borneo" [Sintang, Kapuas River, Kalimantan, Indonesia].
Type specimen: Not known or located.
Orlitia borneensis Gray 1873b:157
Bellia borneensis
Type locality: "Borneo" [Kalimantan, Indonesia].
Type specimen: NHMUK 1947.3.4.9 (formerly 1863.12.4.37), holotype.
Clemmys (Heteroclemmys) gibbera Peters 1875:622
Clemmys gibbera, Heteroclemmys gibbera
Type locality: "Pulo Matjan (Borneo)" [Kalimantan, Indonesia].
Type specimen: ZMB 5022, holotype, see Fritz et al. (1994).
Hardella baileyi Bartlett 1895b:83
Brookeia baileyi
Type locality: "Batang Lupar" [Sarawak, East Malaysia].
Type specimen: Possibly SMK, holotype, originally live.
Adelochelys crassa Baur 1896:319
Type locality: Not known.
Type specimen: ZSM 3049/0, holotype, see Franzen and Glaw (2007).
Liemys inornata Boulenger 1897a:469
Type locality: "Lobuk Antu district, Borneo" [Sarawak, East Malaysia].
Type specimens: NHMUK 1947.3.4.28–29 (both formerly 1897.3.4.8), syntypes (2).
Batagur signatus † Jaekel 1911:77
Type locality: "Pithecanthropus-schichten...Java...Trinil" [Indonesia].
Type specimen: ZMB (MB R5), lectotype, fossil, nuchal, figured (pl.15,f.6), designated as "holotype" by Karl (1987:37).
Geologic age: Pleistocene, Trinil Beds.

Pangshura Gray 1856b (07:48)

Pangshura Gray 1856b:36
Type species: *Kachuga (Pangshura) tecta* [= *Emys tectum* Gray 1830b], by subsequent designation by Lindholm (1929:278).
Cuchoa Gray 1870c:61
Type species: *Cuchoa tentoria* [= *Emys tentoria* Gray 1834a], by subsequent designation by Lindholm (1929:278).
Jerdonella Gray 1870c:61
Type species: *Jerdonella sylhetensis* [= *Pangshura sylhetensis* Jerdon 1870], by original monotypy.
Emia Gray 1870c:61
Type species: *Emia smithii* [= *Batagur smithii* Gray 1863g], by original monotypy.

Pangshura smithii (Gray 1863g)

Brown Roofed Turtle
(includes 2 subspecies)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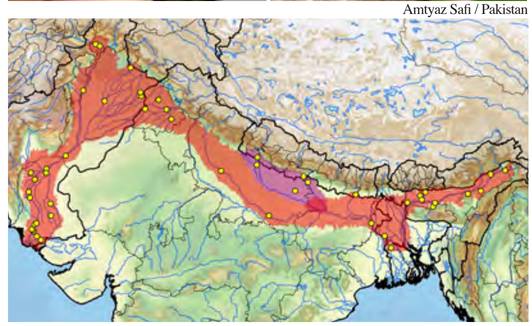
(subspecies: *smithii* = red, *pallidipes* = purple; overlap = intergrades)
Distribution: Bangladesh, India (Assam, Bihar, Punjab, Uttar Pradesh), Nepal, Pakistan
Presumed Historic Indigenous Range: 730,322 sq. km
Size (Max SCL): male 12.8 cm, female 24.0 cm (see subspp.)
IUCN Red List: Near Threatened (NT A4d) (Ahmed et al. 2021); Previously: Near Threatened (NT) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2018)
CITES: Appendix II, as *Pangshura* spp. (2003)

Pangshura smithii smithii (Gray 1863g)

Brown Roofed Turtle

Hermann Schleich / Koshi R., Nepal


Amtyaz Safi / Pakistan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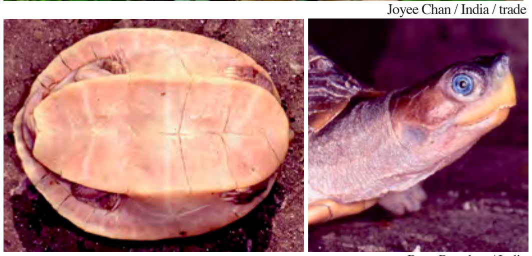
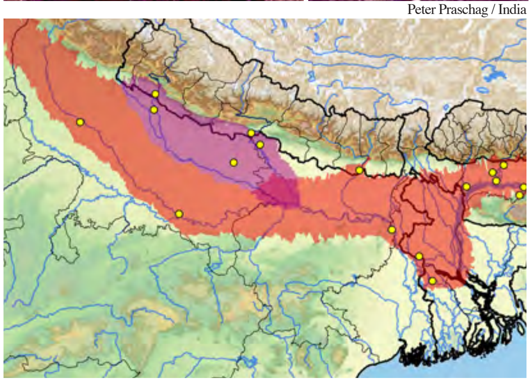
(subspecies: *smithii* = red, *pallidipes* = purple; overlap = intergrades)
Distribution: Bangladesh, India (Assam, Bihar, Punjab, Uttar Pradesh), Nepal, Pakistan
Presumed Historic Indigenous Range: 663,466 sq. km
Size (Max SCL): male 12.8 cm, female 24.0 cm (Rashid and Swingland 1997; Ernst et al. 2006b; Itescu et al. 2014; Baruah et al. 2016)
Synonymy:
Batagur smithii Gray 1863g:253
Pangshura smithii, Clemmys smithii, Emia smithii, Kachuga smithii, Kachuga smithii smithii, Pangshura smithii smithii
Type locality: "North-western India: Punjab; River Chenab" [Punjab, India, or Pakistan].
Type specimens: NHMUK 1947.3.4.69–70 (formerly 1863.2.21.87, 1863.6.5.3)., syntypes (2).

Pangshura smithii pallidipes (Moll 1987)
Pale-footed Roofed Turtle

Joyce Chan / India / trade



Peter Praschag / India



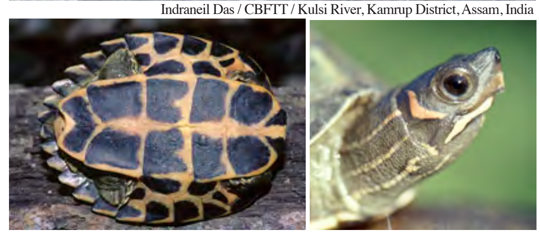
*

(subspecies: *smithii* = red, *pallidipes* = purple; overlap = intergrades)

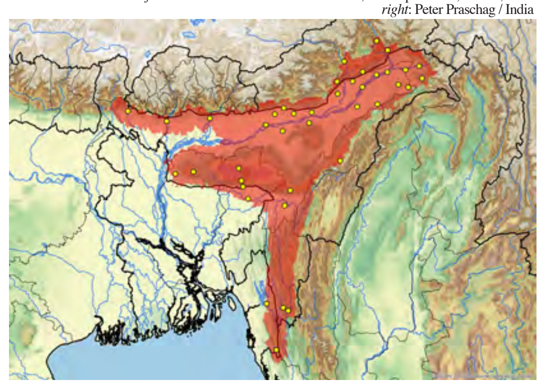
Distribution: India (Bihar, Uttar Pradesh), Nepal
Presumed Historic Indigenous Range: 76,230 sq. km
Size (Max SCL): male 10.8 cm, female 22.3 cm (Baruah et al. 2016)
Synonymy:
Kachuga smithii pallidipes Moll 1987:8
Pangshura smithii pallidipes
Type locality: "Gandak River, Bherihari Wildlife Sanctuary, Bettiah (West Champaran) District, Bihar" [India].
Type specimen: FMNH 224177, holotype.

Pangshura sylhetensis Jerdon 1870
Assam Roofed Turtle, Sylhet Roofed Turtle

Indraneil Das / CBFTT / Kulsi River, Kamrup District, Assam, India



left: Indraneil Das / CBFTT / Kulsi River, Kamrup District, Assam, India
right: Peter Praschag / India



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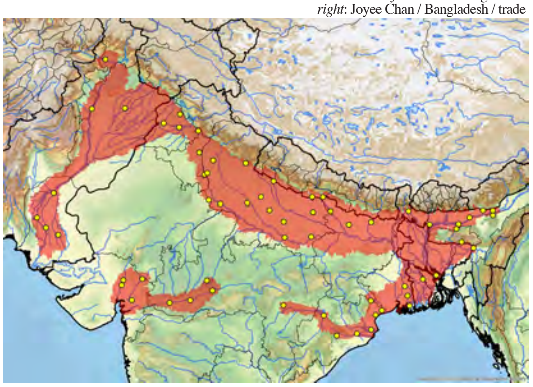
Distribution: Bangladesh, Bhutan (?), India (Arunachal Pradesh, Assam, Meghalaya, Mizoram, Nagaland), Myanmar (?)
Presumed Historic Indigenous Range: 157,944 sq. km
Size (Max SCL): male 9.8 cm, female 21.0 cm (Das et al. 2010 CBFTT; Baruah et al. 2012, 2016)
CBFTT Account: Das, Sengupta, and Praschag (2010)
IUCN Red List: Critically Endangered (A2cd+4cd) (Praschag et al. 2021); Previously: Endangered (EN B1+2c) (ATTWG 2000); Data Deficient (DD) (TFTSG 1996)
CITES: Appendix II, as *Pangshura* spp. (2003)
Synonymy:
Pangshura sylhetensis Jerdon 1870:69
Jerdonella sylhetensis, Kachuga sylhetensis
Type locality: "the stream that runs from the Terria Ghat at the foot of the Khasi Hills" [originally India; now Bangladesh]. Emended to "Sylhet, a stream at the foot of the Khasi Hills" [originally Assam, India; now Sylhet, Bangladesh] by Boulenger (1889:58).
Type specimens: NHMUK 1947.3.4.22, 1947.3.4.62–63 (formerly 1870.11.29.51–52), syntypes (3), see Das (2009).

Pangshura tecta (Gray 1830b)
Indian Roofed Turtle

Peter Praschag / India

left: Peter Praschag / India
right: Joyee Chan / Bangladesh / trade



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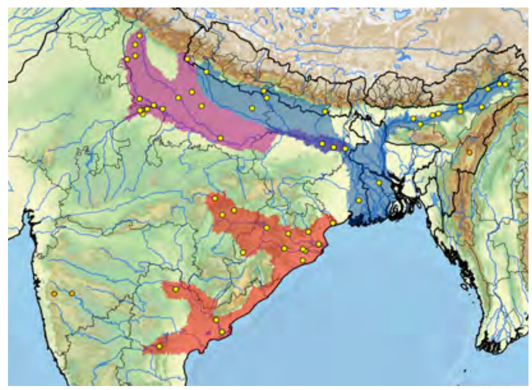
Distribution: Bangladesh, India (Arunachal Pradesh, Assam, Bihar, Gujarat, Haryana, Madhya Pradesh, Meghalaya, Odisha, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand, West Bengal), Nepal, Pakistan
Presumed Historic Indigenous Range: 972,649 sq. km
Size (Max SCL): male 27.6 cm, female 33.9 cm (Agarwal et al. 1986)
IUCN Red List: Vulnerable (VU A4d) (Ahmed et al. 2021);
Previously: Least Concern (LC) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix I (1975)
Synonymy:
Emys tectum Gray 1830b:pl.72
Emys tecta, Clemmys (Clemmys) tecta, Clemmys tecta, Batagur (Pangshura) tecta, Batagur tecta, Clemmys tectum, Pangshura tecta, Pangshura tectum, Kachuga tectum, Kachuga (Pangshura) tecta, Kachuga tectum tectum, Kachuga tecta, Kachuga tecta tecta
Type locality: "India."
Type specimens: OUM 8430–31, syntypes (2), discussed by Nowak-Kemp and Fritz (2010).
Testudo dura Hamilton *in* Gray 1831d:23 (*nomen nudum*)
Testudo katuya Hamilton *in* Gray 1831d:23 (*nomen nudum*)
Testudo pangshure Hamilton *in* Gray 1831d:23 (*nomen nudum*)
Testudo pangshura
Testudo khagraskata Hamilton *in* Gray 1831d:23 (*nomen nudum*)
Emys trigibbosa Lesson 1831a:121
Type locality: "le Gange" [India].
Type specimen: Possibly MNHN, holotype, not located.
Emys namadicus † Theobald 1860:295 (*nomen nudum*)
Emys nomadicus, Emys namadica
Type locality: "near Moar Domur...Nerbudda Valley" [Madhya Pradesh, India].
Type specimen: fossil, not located.
Geologic age: Tertiary.
Pangshura dura Gray 1869a:205
Type locality: Not designated.
Type specimen: NHMUK s/n, holotype, not located.
Pangshura ventricosa Gray 1870c:60
Type locality: "India." Restricted to "Assam" [India] by Boulenger (1889:59).
Type specimen: NHMUK 1947.3.4.71 (formerly 1870.11.29.55), holotype.

Pangshura tentoria (Gray 1834a)
Indian Tent Turtle
(includes 3 subspecies)



*

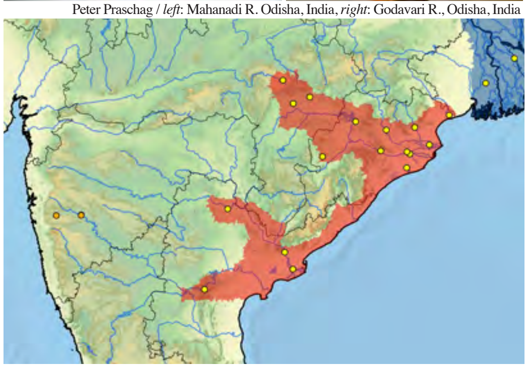
(subspecies: *tentoria* = red, *circumdata* = purple, *flaviventer* = blue; overlap = intergrades; orange dots = probable trade or questionable, including erroneously restricted *tentoria* type locality)

Distribution: Bangladesh, India (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Maharashtra, Odisha, Rajasthan, Telangana, Uttar Pradesh, Uttarakhand, West Bengal), Nepal
Presumed Historic Indigenous Range: 640,611 sq. km
Size (Max SCL): male 17.9 cm, female 27.1 cm (see subspp.)
IUCN Red List: Least Concern (LC) (Choudhury et al. 2021);
Previously: Least Concern (LC) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II, as *Pangshura* spp. (2003)

Pangshura tentoria tentoria (Gray 1834a) (07:49)
Indian Tent Turtle

Peter Paul van Dijk / India / captivity / Madras Crocodile Bank Trust

Peter Praschag / *left*: Mahanadi R. Odisha, India, *right*: Godavari R., Odisha, India



*

(subspecies: *tentoria* = red, *flaviventer* = blue; orange dots = probable trade or questionable, including erroneously restricted *tentoria* type locality)

Distribution: India (Andhra Pradesh, Chhattisgarh, Maharashtra, Odisha)

Presumed Historic Indigenous Range: 224,094 sq. km

Size (Max SCL): male 14.9 cm, female 22.8 cm (Baruah et al. 2016)

Synonymy:

Emys tentoria Gray 1834a:54

Batagur (Pangshura) tentoria, Batagur tentoria, Clemmys tentoria, Pangshura tentoria, Pangshura tentori, Cuchoa tentoria, Kachuga tectum tentoria, Kachuga tecta tentoria, Kachuga tentoria tentoria, Pangshura tentoria tentoria

Type locality: "Indiae Orientalis regione Dukhun" [India]. Emended to "Deccan" [India] by Boulenger (1889:59); and restricted to "Dhond, Poona Dist." [= Daund, Pune District, Maharashtra, India; in error] by Smith (1931:128).

Type specimen: NHMUK 1947.3.4.72, holotype.

Pangshura tentorium Gray 1869a:205 (*nomen novum*)

Comment: Unjustified emendation or error for *tentoria*.

Emys (Pangshura) tectum intermedia Blanford 1870:339

Kachuga intermedia, Kachuga tectum intermedia

Type locality: "Chappa and Korba in Bilάspúr, on the Hasdo River, a tributary of the upper Mahanaddi...above Sambhalpúr" [Chhattisgarh, India].

Type specimens: ZSI 122–23, syntypes (2), see Das et al. (1998), not located by Kundu et al. (2018a).

Pangshura leithii Gray 1870c:60

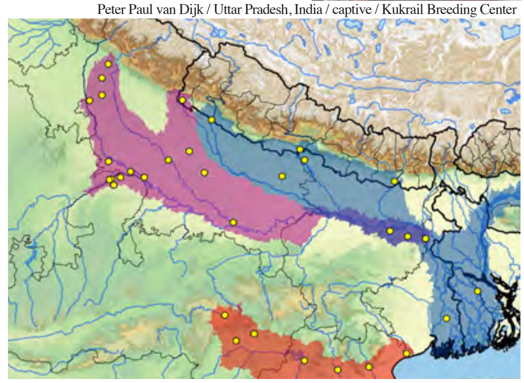
Type locality: "River Poonah" [Maharashtra, India; in error, trade?].

Type specimen: NHMUK 1947.3.4.61, holotype.

Pangshura tentoria circumdata (Mertens 1969)
Pink-ringed Tent Turtle

Nikhil Whitaker / Uttar Pradesh, India / juvenile

Peter Paul van Dijk / Uttar Pradesh, India / captive / Kukrail Breeding Center



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(subspecies: *tentoria* = red, *circumdata* = purple, *flaviventer* = blue; overlap = intergrades)

Distribution: India (Bihar, Rajasthan, Uttar Pradesh, Uttarakhand), Nepal

Presumed Historic Indigenous Range: 184,576 sq. km

Size (Max SCL): male 8.8 cm, female 27.1 cm (Rai et al. 2002)

Synonymy:

Kachuga tecta circumdata Mertens 1969a:24

Kachuga tentoria circumdata, Pangshura tentoria circumdata

Type locality: "Meerut, Indien" [Uttar Pradesh, India].

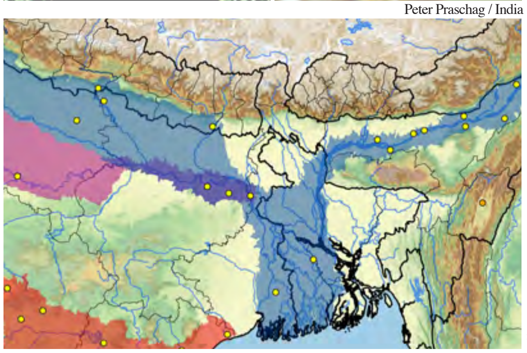
Type specimen: SMF 52793, holotype, see Das (2009).

Pangshura tentoria flaviventer Günther 1864 (07:49)
Yellow-bellied Tent Turtle


Hermann Schleich / Koshi R., Nepal



Peter Praschag / India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(subspecies: *tentoria* = red, *circumdata* = purple, *flaviventer* = blue; overlap = intergrades; orange dot = probable trade or questionable)

Distribution: Bangladesh, India (Assam, Bihar, Uttar Pradesh, West Bengal), Nepal

Presumed Historic Indigenous Range: 251,232 sq. km

Size (Max SCL): male 17.9 cm, female 20.4 cm (Baruah et al. 2012)

Synonymy:

Pangshura flaviventer Günther 1864:35

Kachuga tecta flaviventer, Pangshura flaviventus, Kachuga tentoria flaviventer, Pangshura tentoria flaviventer

Type locality: "Bengal" [India]. Emended to "India" by Boulenger (1889:59).

Type specimen: NHMUK 1947.3.4.82, holotype, see Das (2009).

Cuchoa flaviventris Gray 1870c:61 (*nomen novum*)

Comment: Unjustified emendation or error for *flaviventer*.

Siebenrockiella Lindholm 1929

Bellia Gray 1869a:197 (junior homonym, not = *Bellia* Milne-Edwards 1848 [= Crustacea] or *Bellia* Bate 1851 [= Crustacea] or *Bellia* Tutt 1902 [= Lepidoptera])

Type species: *Bellia crassicollis* [= *Emys crassicollis* Gray 1830e], by original monotypy.

Siebenrockiella Lindholm 1929:280 (*nomen novum*)

Type species: *Siebenrockiella crassicollis* [= *Emys crassicollis* Gray 1830e], by original designation.

Panyaenemys Diesmos, Parham, Stuart, and Brown 2005:38

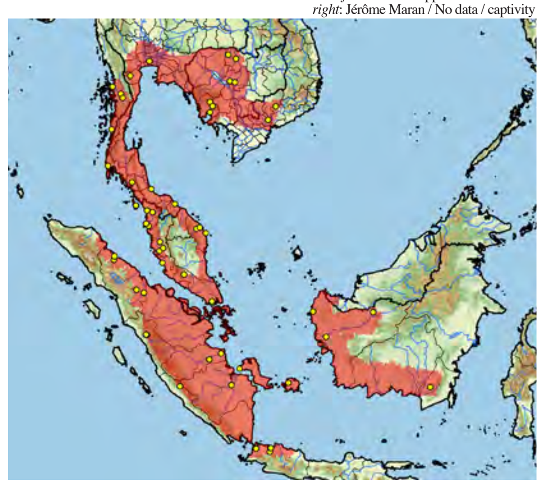
Type species: *Siebenrockiella (Panyaenemys) leytensis* [= *Heosemys leytensis* Taylor 1920], by original designation.

Siebenrockiella crassicollis (Gray 1830e) (10:7)
Black Marsh Turtle


Edward O. Moll / Malaysia



left: Sabine Schoppe / No data / trade
right: Jérôme Maran / No data / captivity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Distribution: Cambodia, Indonesia (Java, Kalimantan, Sumatra), Laos, Malaysia (East [?], West), Myanmar, Singapore, Thailand, Vietnam

Presumed Historic Indigenous Range: 922,749 sq. km

Size (Max SCL): male 20.3 cm, female 20.0 cm (Le 2007; Itescu et al. 2014)

IUCN Red List: Endangered (EN A2cd) (Horne et al. 2021);
Previously: Vulnerable (VU A1cd+2cd) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)

CITES: Appendix II (2003)

Synonymy:

Emys crassicollis Gray 1830e:8 (10:7)

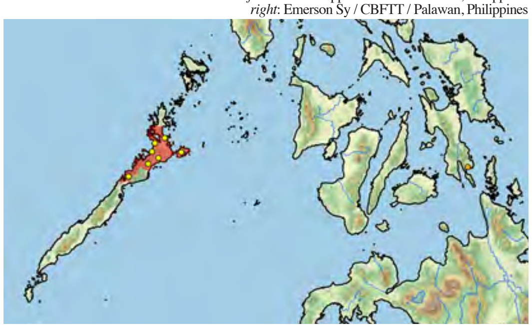
Clemmys (Clemmys) crassicollis, Clemmys crassicollis, Bellia crassicollis, Orlitia crassicollis, Siebenrockiella crassicollis
Type locality: "Sumatra" [Indonesia].
Type specimens: OUM 8479–81, syntypes (3), see Nowak-Kemp and Fritz (2010); NHMUK 1947.3.5.36, erroneously listed as "holotype" by King and Burke (1989) and Iverson (1992), is not a type.
Emys nigra Blyth 1856:713 (junior homonym, not = *Emys nigra* Hallowell 1854 [= *Emys* or *Actinemys marmorata*])
Type locality: "valley of the Tenasserim" [Myanmar].
Type specimens: Possibly ZSI, syntypes, apparently lost, not listed by Das et al. (1998) or Kundu et al. (2018a).
Emys crassilabris Gray *in* Theobald 1876:10 (*nomen novum*)
Bellia crassilabris
Comment: Unjustified emendation or error for *crassicollis*.
Pangshura cochinchinensis Tirant 1884:159
Kachuga cochinchinensis
Type locality: "Cochinchine" [Vietnam].
Type specimens: Not known or located.

Siebenrockiella leytensis (Taylor 1920) (07:50)
Palawan Forest Turtle, Philippine Forest Turtle


Rafe M. Brown / TCC / CBFTT / Palawan, Philippines



left: Sabine Schoppe / CBFTT / Palawan, Philippines
right: Emerson Sy / CBFTT / Palawan, Philippines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(orange dot = erroneous type locality)

Distribution: Philippines (Palawan [not Leyte])
Presumed Historic Indigenous Range: 4,231 sq. km
Size (Max SCL): male 29.9 cm, female 21.2 cm (Diesmos et al. 2012 CBFTT)
CBFTT Account: Diesmos, Buskirk, Schoppe, Diesmos, Sy, and Brown (2012)
IUCN Red List: Critically Endangered (CR A4abcd) (Schoppe et al. 2021); Previously: Critically Endangered (CR A2d, B1+2c) (ATTWG 2000); Endangered (EN) (TFTSG 1996)
CITES: Appendix II (2003)
Synonymy:
Heosemys leytensis Taylor 1920:131
Geoemyda leytensis, Siebenrockiella leytensis, Siebenrockiella (Panyaenemys) leytensis
Type locality: "Cabalian, southern Leyte, P. I." [Philippines] [in error]. Restricted to "northern Palawan in the Province of Palawan, Philippines" by Diesmos et al. (2012:3).
Type specimen: CAS 60930, neotype, designated by Buskirk (1989:226).

Geoemydinae Theobald 1868a (12:21)

Geoemydidae Theobald 1868a:vi
Geoemydina Gray 1869a:184
Geoemydinae Gaffney and Meylan 1988:207

Cuora Gray 1856a (07:32, 12:22, 17:40)

Cuora Gray 1856a:198
Type species: *Cuora amboinensis* [= *Testudo amboinensis* Riche *in* Daudin 1801], by subsequent designation by Stejneger (1907:503).
Cistoclemmys Gray 1863e:175
Type species: *Cistoclemmys flavomarginata* Gray 1863e, by original monotypy.
Pyxidea Gray 1863e:175
Type species: *Pyxidea mouhotii* [= *Cyclemys mouhotii* Gray 1862a], by original monotypy.
Pyxiclemmys Gray 1863e:176
Type species: *Cuora (Pyxiclemmys) trifasciata* [= *Sternothaerus trifasciatus* Bell 1825a], by original monotypy.

Cuora amboinensis (Riche *in* Daudin 1801) (12:23, 17:41)
Southeast Asian Box Turtle
(includes 4 subspecies)


*
(subspecies: *amboinensis* = red, *couro* = purple, *kamaroma* = blue, *lineata* = green, overlap = intergrades [Palawan, Sulu]; orange dot = probable trade)

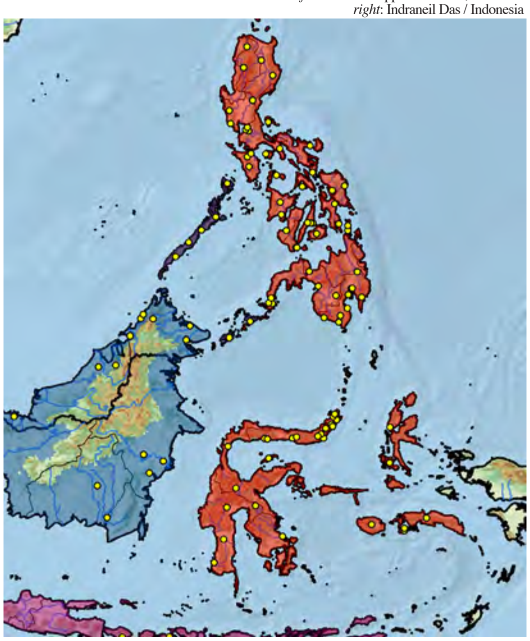
Distribution: Bangladesh, Bhutan, Brunei, Cambodia, India (Arunachal Pradesh, Assam, Nagaland, Nicobar Islands), Indonesia (Java, Kalimantan, Lesser Sundas, Moluccas, Sulawesi, Sumatra, Timor), Laos, Malaysia (East, West), Myanmar, Philippines (Bohol, Cebu, Leyte, Luzon, Mindanao, Mindoro, Negros, Palawan, Panay, Samar, Sulu Archipelago), Singapore, Thailand, Timor-Leste, Vietnam
Presumed Historic Indigenous Range: 2,656,603 sq. km
Size (Max SCL): male 23.3 cm, female 25.0 cm (see subspp.)

CBFTT Account: Schoppe and Das (2011)
IUCN Red List: Endangered (EN A2d) (Cota et al. 2020); Previously: Vulnerable (VU A1d+2d) (ATTWG 2000), Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II, as *Cuora* spp. (2000)

Cuora amboinensis amboinensis (Riche *in* Daudin 1801) (12:23)
East Indian Box Turtle


Sabine Schoppe / CBFTT / Sulawesi, Indonesia


left: Sabine Schoppe / Sulawesi, Indonesia
right: Indraneil Das / Indonesia

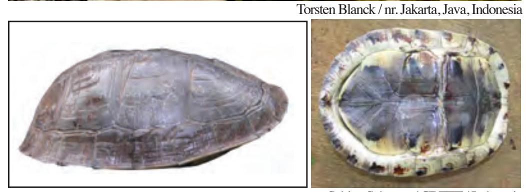

*

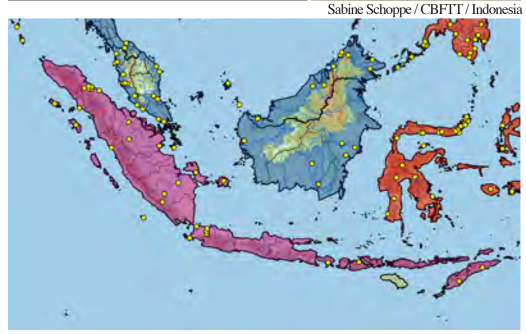
(subspecies: *amboinensis* = red, *couro* = purple, *kamaroma* = blue; overlap = intergrades [Palawan, Sulu])

Distribution: Indonesia (Moluccas, Sulawesi), Philippines (Bohol, Cebu, Leyte, Luzon, Mindanao, Mindoro, Negros, Palawan, Panay, Samar)
Presumed Historic Indigenous Range: 550,287 sq. km
Size (Max SCL): male 17.7 cm, female 20.0 cm (Schoppe 2009; Schoppe and Das 2011 CBFTT)
Synonymy:
Testudo melanocephala Van-Ernest *in* Daudin 1801:128 (*nomen oblitum*)
Emys melanocephala, Clemmys (Clemmys) melanocephala
Type locality: "une des îles Moluques ou Philippines" [Moluccas, Indonesia, or Philippines]. Restricted to "Batavia [= Djakarta, Java] und die Molukken oder die Philippinen" by Rummler and Fritz (1991:38), and to "Moluccas" [Indonesia] by Fritz and Havaš (2007:214).
Type specimen: Possibly MNHN, not known, apparently lost (Bour, pers. comm.).
Testudo amboinensis Riche *in* Daudin 1801:309
Emys amboinensis, Terrapene amboinensis, Kinosternon amboinense, Cistuda amboinensis, Cuora amboinensis, Cistudo amboinensis, Cyclemys amboinensis, Cuora amboinensis amboinensis
Type locality: "Amboine" [Ambon, Moluccas, Indonesia].
Type specimen: Not known, lost at sea en route to MNHN (Bour, pers. comm. *in* Rummler and Fritz 1991).
Emys melanogaster Bleeker *in* Gray 1864a:12 (*nomen nudum*)
Type locality: "Batchian and Boero" [Bacan and Buru, Moluccas, Indonesia]. Restricted to "Borneo" [in error] by Gray (1873j:21).
Type specimen: NHMUK 1863.12.4.121, holotype, see Gray (1873j).
Emys hypselonotus Bleeker *in* Gray 1864a:12 (*nomen nudum*)
Emys hypsilonotus
Type locality: "Batchian and Boero" [Bacan and Buru, Moluccas, Indonesia]. Restricted to "Borneo" [in error] by Gray (1873j:22).
Type specimen: NHMUK 1863.12.4.139, holotype, see Gray (1873j).
Emys gastrotaenia Bleeker *in* Gray 1873j:21 (*nomen nudum*)
Type locality: "Borneo." Locality likely in error, probably "Batchian and Boero" [Bacan and Buru, Moluccas, Indonesia].
Type specimen: NHMUK 1863.12.4.48, holotype, see Gray (1873j).

Cuora amboinensis couro (Lechenault *in* Schweigger 1812)
Indonesian Box Turtle


Torsten Blanck / nr. Jakarta, Java, Indonesia


Sabine Schoppe / CBFTT / Indonesia


*

(subspecies: *amboinensis* = red, *couro* = purple, *kamaroma* = blue; overlap = intergrades [Palawan, Sulu])

Distribution: Indonesia (Java, Lesser Sundas, Sumatra, Timor), Timor-Leste
Presumed Historic Indigenous Range: 689,190 sq. km
Size (Max SCL): male 21.3 cm, female 21.8 cm (Schoppe 2009; Schoppe and Das 2011 CBFTT)

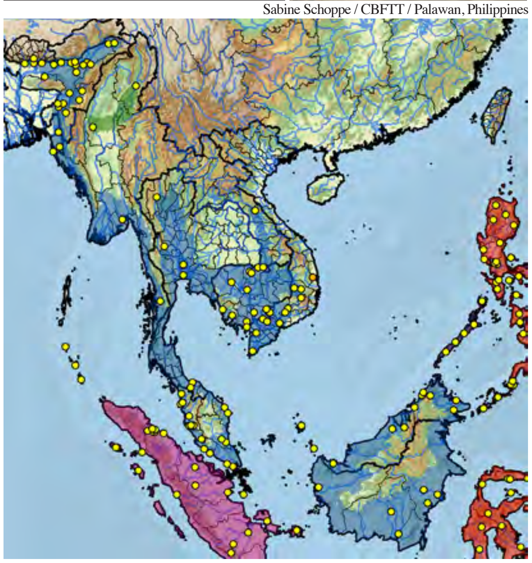
Synonymy:
Emys couro Lechenault *in* Schweigger 1812:315
Terrapene couro, Cuora amboinensis couro
Type locality: "Java" [Indonesia].
Type specimen: MNHN 7931, holotype, see Rummler and Fritz (1991) and Ceríaco and Bour (2012).
Terrapene bicolor Bell 1826:485
Type locality: "Americâ septentrionali" [in error].
Type specimens: OUM, syntypes (2), one originally live, apparently lost, not located by Nowak-Kemp and Fritz (2010), type specimen figured (pl.16).
Emys (Cistuda) amboinensis leveriana Gray 1830e:7 (10:7)
Cistuda amboinensis leveriana
Type locality: "Java and Penang" [Indonesia and West Malaysia].
Type specimens: NHMUK, holotype, not located.

Cuora amboinensis kamaroma Rummler and Fritz 1991 (12:23)
Malayan Box Turtle


Indraneil Das / East Malaysia (Borneo)



Sabine Schoppe / CBFTT / Palawan, Philippines

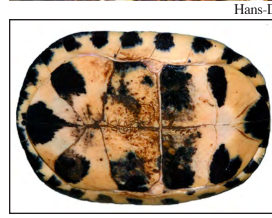

*

(subspecies: *amboinensis* = red, *couro* = purple, *kamaroma* = blue, *lineata* = green, overlap = intergrades [Palawan, Sulu]; orange dot = probable trade)

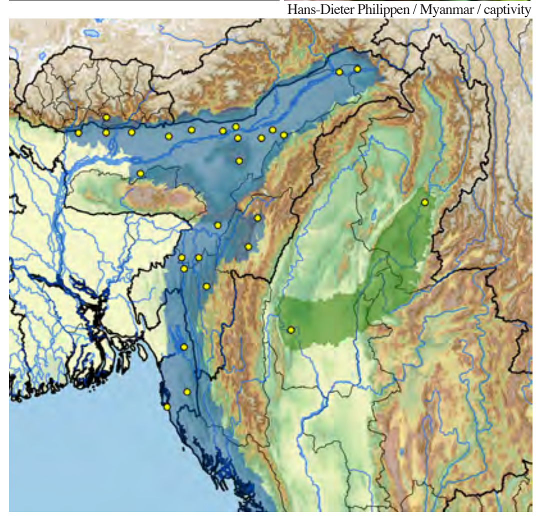
Distribution: Bangladesh, Bhutan, Brunei, Cambodia, India (Arunachal Pradesh, Assam, Nagaland, Nicobar Islands), Indonesia (Kalimantan), Malaysia (East, West), Laos, Myanmar, Philippines (Palawan [?], Sulu Archipelago [?]), Singapore, Thailand, Vietnam
Presumed Historic Indigenous Range: 1,391,572 sq. km
Size (Max SCL): male 23.3 cm, female 25.0 cm (Schoppe 2009; Schoppe and Das 2011 CBFTT; Baruah et al. 2012)
Synonymy:
Cuora amboinensis kamaroma Rummler and Fritz 1991:39
Type locality: "circa 50 km nördlich von Bangkok, Thailand."
Type specimen: ZMH R-277, holotype, see Hallermann (1998).

Cuora amboinensis lineata McCord and Philippen 1998
Burmese Box Turtle


Hans-Dieter Philippen / CBFTT / Myanmar / captivity



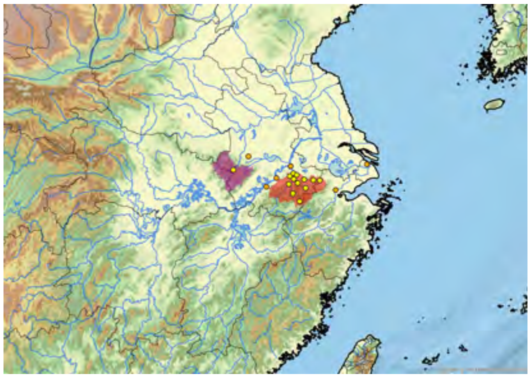
Hans-Dieter Philippen / Myanmar / captivity


*

(subspecies: *kamaroma* = blue, *lineata* = green)

Distribution: Myanmar
Presumed Historic Indigenous Range: 43,788 sq. km
Size (Max SCL): male 20.7 cm, female 23.0 cm (McCord and Philippen 1998; Schoppe and Das 2011 CBFTT)
Synonymy:
Cuora amboinensis lineata McCord and Philippen 1998:54
Type locality: "Myitkyina, Kachin Province, Myanmar (Burma)."
Type specimen: USNM 122189, holotype, see Reynolds et al. (2007).

Cuora aurocapitata Luo and Zong 1988 (12:22, 17:42)
Yellow-headed Box Turtle
(includes 2 subspecies)



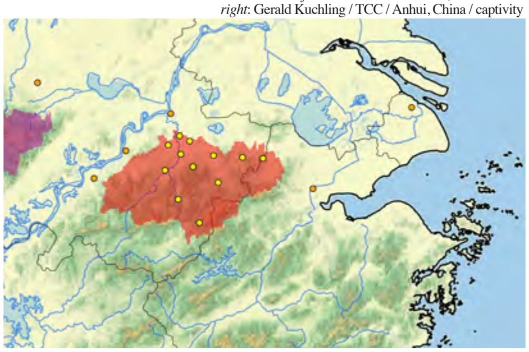
(subspecies: *aurocapitata* = red, *dabieshani* = purple; orange dots = probable trade)

Distribution: China (Anhui, Henan, Hubei, Zhejiang)
Presumed Historic Indigenous Range: 29,679 sq. km
Size (Max SCL): male 13.5 cm, female 19.5 cm (see subspp.)
IUCN Red List: Critically Endangered (CR A1d+2d) (ATTWG 2000); Previously: Data Deficient (DD) (TFTSG 1996)
TFTSG Provisional Red List: Critically Endangered (CR) (2011)
CITES: Appendix II, as *Cuora* spp. (2000); Zero quota for wild specimens for commercial purposes (2013)

Cuora aurocapitata aurocapitata Luo and Zong 1988 (12:22, 17:42)
Eastern Yellow-headed Box Turtle

Torsten Blanck / Jing Co., Anhui, China

left: John B. Iverson / Anhui, China / trade
right: Gerald Kuchling / TCC / Anhui, China / captivity

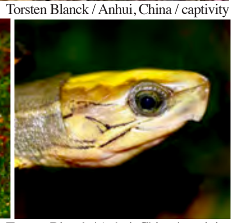


(subspecies: *aurocapitata* = red, *dabieshani* = purple; orange dots = probable trade)

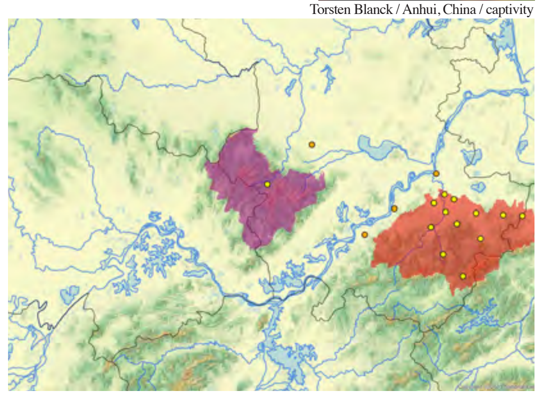
Distribution: China (Anhui, Zhejiang)
Presumed Historic Indigenous Range: 17,640 sq. km
Size (Max SCL): male 12.5 cm, female 16.0 cm (Blanck et al. 2017)
Synonymy:
Cuora aurocapitata Luo and Zong 1988:13
Cuora pani aurocapitata, Pyxiclemmys aurocapitata, Pyxiclemmys pani aurocapitata, Cuora aurocapitata aurocapitata
Type locality: "Nanling County, Anhui" [China].
Type specimen: SNHM 87012, holotype.

Cuora aurocapitata dabieshani Blanck, Protiva, Zhou, Li, Crow, and Tiedemann 2017 (17:42)
Western Yellow-headed Box Turtle

Torsten Blanck / Anhui, China / captivity



Torsten Blanck / Anhui, China / captivity



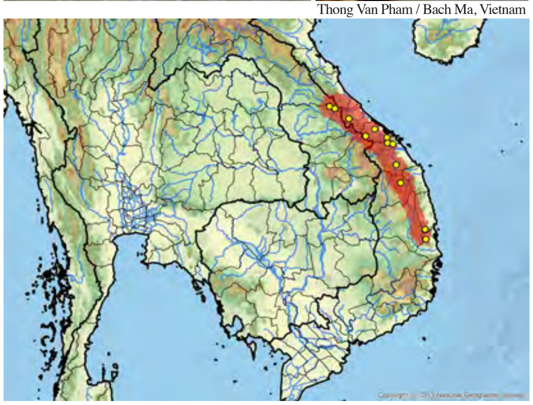
(subspecies: *aurocapitata* = red, *dabieshani* = purple; orange dots = probable trade)

Distribution: China (Anhui, Henan, Hubei)
Presumed Historic Indigenous Range: 12,039 sq. km
Size (Max SCL): male 13.5 cm, female 19.5 cm (Blanck et al. 2017)
Synonymy:
Cuora aurocapitata dabieshani Blanck, Protiva, Zhou, Li, Crow, and Tiedemann 2017:382
Type locality: "Anhui province, China."
Type specimen: NMW 32987:2, holotype, see Gemel et al. (2019).
Comment: The type specimen, donated by Weissinger, noted by Gemel et al. (2019) to originally have been obtained from an animal importer in Austria.

Cuora bourreti Obst and Reimann 1994 (07:35, 09:22, 12:22) **(68)**
Bourret's Box Turtle

Torsten Blanck / TCC / Vietnam

Thong Van Pham / Bach Ma, Vietnam



Distribution: Laos, Vietnam
Presumed Historic Indigenous Range: 37,727 sq. km
Size (Max SCL): male 19.4 cm, female 20.8 cm (Hagen, unpubl. data)
IUCN Red List: Critically Endangered (CR A2bd+4bd) (McCormack and Stuart 2020): Previously: Critically Endangered (CR A2bd+4bd) (McCormack and Stuart 2016), Critically Endangered (CR), as part of *Cuora galbinifrons* (ATTWG 2000)
CITES: Appendix I (2019); Previously: Appendix II, as *Cuora* spp. (2000)
Synonymy:
Cuora galbinifrons serrata Iverson and McCord 1992b:434 (07:33) (*partim*, hybrid)
Type locality: "100 km east of Tungfang at Tainhfien in central Hainan Island, China."
Type specimen: UF 81791, holotype.
Cuora galbinifrons bourreti Obst and Reimann 1994:135
Cistoclemmys galbinifrons bourreti, *Cuora bourreti*, *Cistoclemmys bourreti*
Type locality: "Linh-Cam (heute Ha-Tinh), in Mittel-Vietnam." Emended to "Bach Ma, Thua Thien Hue Province, Central Vietnam" by Fritz et al. (2002:71).
Type specimen: MNHN 1948.37 (formerly VNUH T.60), holotype, see also Bour (2005a); possibly lost according to Uetz et al. (2019).

Cuora cyclornata Blanck, McCord, and Le 2006a (07:36, 09:23, 12:22, 17:40, 17:42)
Vietnamese Three-striped Box Turtle
(includes 3 subspecies)

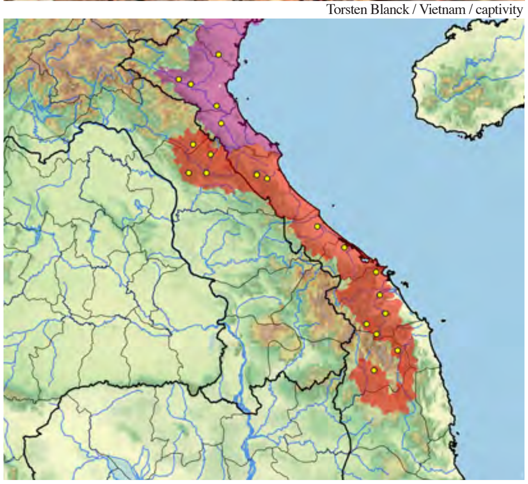
*
(subspecies: *cyclornata* = red, *annamitica* = purple, *meieri* = blue; orange dots = trade)

Distribution: China (Guangxi), Laos, Vietnam
Presumed Historic Indigenous Range: 124,545 sq. km
Size (Max SCL): male 26.0 cm, female 35.0 cm (see subspp.)
IUCN Red List: Critically Endangered (CR A1d+2d) (ATTWG 2000), as part of *Cuora trifasciata*; Previously: Endangered (EN) (TFTSG 1996), as part of *C. trifasciata*.
TFTSG Provisional Red List: Critically Endangered (CR) (2016)
CITES: Appendix II, as *Cuora* spp. (2000)

Cuora cyclornata cyclornata Blanck, McCord, and Le 2006a (07:36, 09:23, 12:22, 17:40, 17:42)

Southern Vietnamese Three-striped Box Turtle

Torsten Blanck / Vietnam / captivity



*

(subspecies: *cyclornata* = red, *annamitica* = purple)

Distribution: Laos, Vietnam

Presumed Historic Indigenous Range: 42,187 sq. km

Size (Max SCL): male 26.0 cm, female 35.0 cm (Blanck et al. 2017)

Synonymy:

Cuora cyclornata cyclornata Blanck, McCord, and Le 2006a:58 (07:36, 09:23, 12:22)

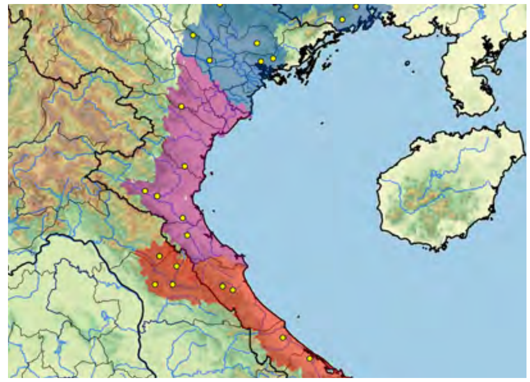
Type locality: "Phong Nha Ke Bang Nat. Res., Quang Binh Province, central Vietnam."

Type specimen: ZFMK 71348, holotype; genotyped by Blanck et al. (2006a) and Tiedemann et al. (2014).

Cuora cyclornata annamitica Blanck, Protiva, Zhou, Li, Crow, and Tiedemann 2017 (17:42)

Central Vietnamese Three-striped Box Turtle

Torsten Blanck / Vietnam / captivity



*

(subspecies: *cyclornata* = red, *annamitica* = purple, *meieri* = blue)

Distribution: Vietnam

Presumed Historic Indigenous Range: 30,501 sq. km

Size (Max SCL): male 26.0 cm, female 35.0 cm (Blanck et al. 2017)

Synonymy:

Cuora cyclornata annamitica Blanck, Protiva, Zhou, Li, Crow, and Tiedemann 2017:378

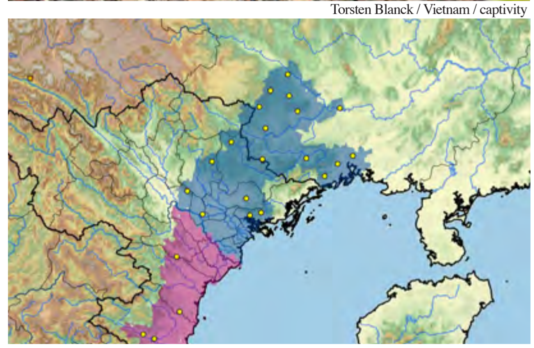
Type locality: "Vietnam, Nghe An Province, Tan Ky district, near Ky Son Village."

Type specimen: VUM R.Em.04, holotype.

Cuora cyclornata meieri Blanck, McCord, and Le 2006a (07:36, 09:23, 12:22, 17:40, 17:42)

Northern Vietnamese Three-striped Box Turtle

Torsten Blanck / Vietnam / captivity



*

(subspecies: *annamitica* = purple, *meieri* = blue; orange dot = trade)

Distribution: China (Guangxi), Vietnam

Presumed Historic Indigenous Range: 51,857 sq. km

Size (Max SCL): male 24.0 cm, female 30.0 cm (Blanck et al. 2017)

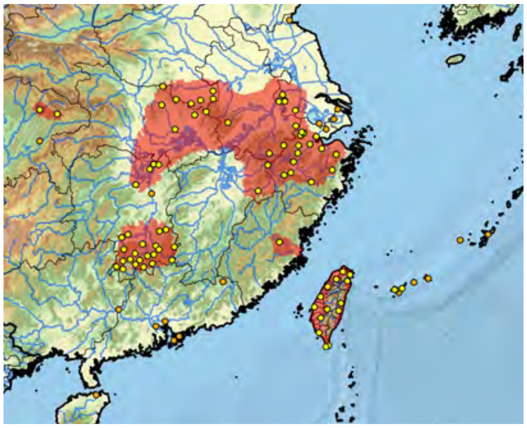
Synonymy:

Cuora cyclornata meieri Blanck, McCord, and Le 2006a:73 (07:36, 09:23, 12:22)

Type locality: "Tam Dao, Provinz Vinh Phuc, Nord-Vietnam."

Type specimen: MHNT CHE 1992-11, holotype; genotyped by Blanck et al. (2006a).

Cuora flavomarginata (Gray 1863e) (08:21, 11:9, 12:22, 17:43)
Yellow-margined Box Turtle
(includes 2 subspecies)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(subspecies: *flavomarginata* = red, *evelynae* = purple (Ryukyus); orange dots = introduced or trade)

Distribution: China (Anhui, Fujian, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Sichuan, Zhejiang), Japan (Ryukyu Archipelago), Taiwan

Presumed Historic Indigenous Range: 383,782 sq. km

Size (Max SCL): male 18.9 cm, female 19.0 cm (see subspp.)

CBFTT Account: Ota, Yasukawa, Fu, and Chen (2009)

IUCN Red List: Endangered (EN A1cd+2cd) (ATTWG 2000); Previously: Vulnerable (VU) (TFTSG 1996)

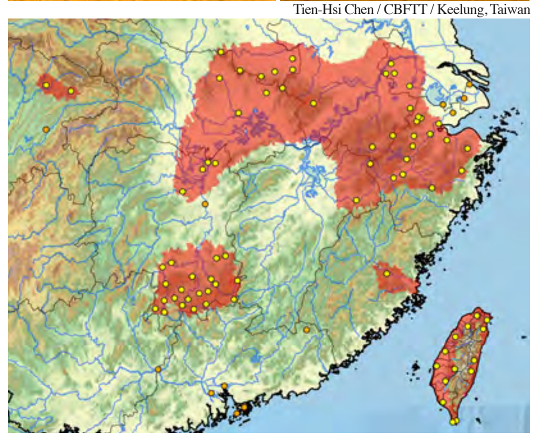
TFTSG Provisional Red List: Critically Endangered (CR) (2011)

CITES: Appendix II, as *Cuora* spp. (2000); Zero quota for wild specimens for commercial purposes (2013)

Cuora flavomarginata flavomarginata (Gray 1863e)
Yellow-margined Box Turtle

Tien-Hsi Chen / CBFTT / Nantou, Taiwan

Tien-Hsi Chen / CBFTT / Keelung, Taiwan


*

(subspecies: *flavomarginata* = red; orange dots = introduced or trade)

Distribution: China (Anhui, Fujian, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Zhejiang), Taiwan

Presumed Historic Indigenous Range: 383,114 sq. km

Size (Max SCL): male 18.9 cm, female 19.0 cm (McCord and Iverson 1991; Ota et al. 2009 CBFTT)

Synonymy:

Cistoclemmys flavomarginata Gray 1863e:175

Cuora flavomarginata, Terrapene flavomarginata, Cyclemys flavomarginata, Cyclemys flavomarginata flavomarginata, Cuora flavomarginata flavomarginata, Geoemyda flavomarginata, Cistoclemmys flavomarginatus, Cistoclemmys flavomarginata flavomarginata

Type locality: "China; Formosa...district of Tamsuy, N.W. Formosa" [Taiwan]. Restricted to "Tamsui, Formosa" [Taiwan] by Stejneger (1907:503).

Type specimens: NHMUK 1947.3.5.50, 1947.3.5.68 (formerly 1863.2.23.8), syntypes (2).

Cyclemys flavomarginata sinensis Hsü 1930:3 (07:34, 08:21)

Cuora flavomarginata sinensis, Cistoclemmys flavomarginata sinensis

Type locality: "Künshan Island, Tungting Lake, Central China." [Junshan Dao, Dongting Lake, Hunan, China].

Type specimens: MBLSSC 1174–75, syntypes (2).

Terrapene culturalia † Yeh 1961:59

Emydoidea culturalia

Type locality: "Dawenkou, Taian, Shantung" [Shandong, China].

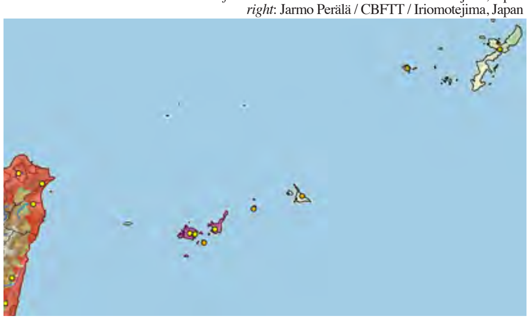
Type specimen: IVPP V.2520, holotype, subfossil, nearly whole shell, figured (f.1,pl.1).

Geologic age: Holocene, Neolithic, Lung-shan Period (Ying Dynasty), subfossil.

Cuora flavomarginata evelynae Ernst and Lovich 1990 (08:21, 11:9)
Ryukyu Yellow-margined Box Turtle

Iriomote Wildlife Conservation Center / CBFTT / Iriomotejima, Japan

left: Yuichirou Yasukawa / CBFTT / Iriomotejima, Japan
right: Jarmo Perälä / CBFTT / Iriomotejima, Japan



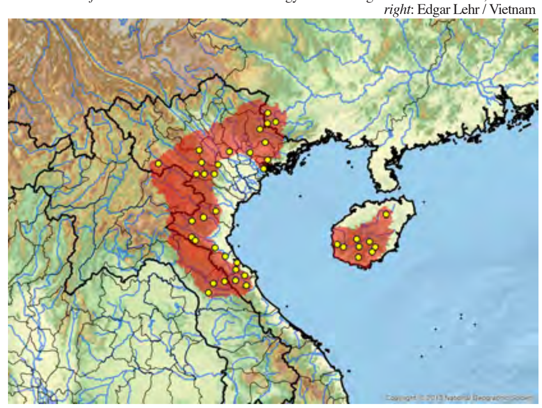
(subspecies: *flavomarginata* = red, *evelynae* = purple; orange dots = introduced or trade)

Distribution: Japan (Ryukyu Archipelago)
Presumed Historic Indigenous Range: 668 sq. km
Size (Max SCL): male 15.9 cm, female 17.0 cm (Ernst and Lovich 1990; Itescu et al. 2014)
Synonymy:
Cuora evelynae Ernst and Lovich 1990:31
Cuora flavomarginata evelynae, *Cistoclemmys flavomarginata evelynae*
Type locality: "Ishigaki Shima, Ryukyu Islands, Japan."
Type specimen: CAS 26113, holotype.

Cuora galbinifrons Bourret 1940 (07:35, 09:22, 12:22, 12:24) (**68**)
Indochinese Box Turtle

Douglas B. Hendrie / TCF / TCC / Vietnam

left: Archive of the Museum of Zoology Senckenberg Dresden / Tam Dao, Vietnam
right: Edgar Lehr / Vietnam

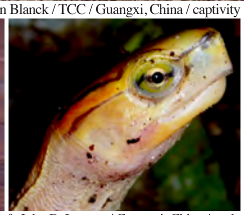


Distribution: China (Guangxi, Hainan), Laos, Vietnam
Presumed Historic Indigenous Range: 127,569 sq. km
Size (Max SCL): male 18.6 cm, female 20.4 cm (Itescu et al. 2014; Iverson, unpubl. data)
IUCN Red List: Critically Endangered (CR A2bd+4bd) (Li et al. 2020); Previously: Critically Endangered (CR A2bd+4bd) (McCormack et al. 2016), Critically Endangered (CR) (ATTWG 2000), Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II, as *Cuora* spp. (2000); Zero quota for wild specimens for commercial purposes (2013)
Synonymy:
Cuora galbinifrons Bourret 1940:11
Cistoclemmys galbinifrons, *Cuora galbinifrons galbinifrons*, *Cistoclemmys galbinifrons galbinifrons*
Type locality: "Tam-Dao..[&]..Bach-Ma (Annam)..[&]..Linh-Cam (Ha-Tinh, Nord Annam)" [Tonkin..[&]..Annam..[&]..Ha-Tinh] [Vietnam]. Restricted to "Tam-Dao, Nord-Vietnam" by Obst and Reimann (1994:135).
Type specimen: MNHN 1948.36 (formerly VNUH T.54), lectotype, designated by Obst and Reimann (1994:135), see also Bour (2005a); Uetz et al. (2019) erroneously listed MNHN 1948.36 and 1948.37 as syntypes.
Cyclemus flavomarginata hainanensis Li 1958:234
Cuora hainanensis, *Cyclemys flavomarginata hainanensis*, *Cistoclemmys hainanensis*, *Cuora flavomarginata hainanensis*, *Cistoclemmys flavomarginata hainanensis*, *Cuora galbinifrons hainanensis*, *Cyclemys flavomarginatus hainanensis*, *Cistoclemmys galbinifrons hainanensis*

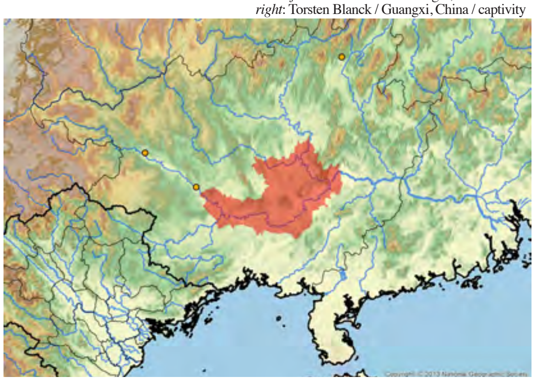
Type locality: "Dali village, Mt. Diaoluo, Linshui County, Hainan Island, China" [in Chinese].
Type specimen: FU 200, holotype, CIB 64III6110 (formerly SBRI), allotype, see Koshikawa (1982).
Cuora galbinifrons serrata Iverson and McCord 1992b:434 (07:33) (*partim*, hybrid)
Type locality: "100 km east of Tungfang at Tainhfien in central Hainan Island, China."
Type specimen: UF 81791, holotype.

Cuora mccordi **Ernst 1988** (12:22)
McCord's Box Turtle

Torsten Blanck / TCC / Guangxi, China / captivity



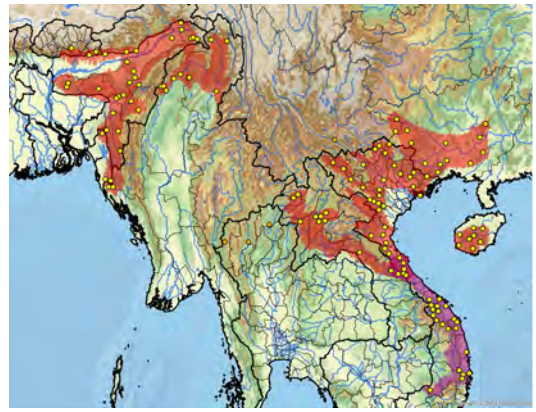
left: John B. Iverson / Guangxi, China / trade
right: Torsten Blanck / Guangxi, China / captivity



(red = possible range; orange dots = trade)

Distribution: China (Guangxi)
Presumed Historic Indigenous Range: 25,056 sq. km
Size (Max SCL): male 18.4 cm, female 22.5 cm (Ceballos et al. 2013; Blanck, unpubl. data)
IUCN Red List: Critically Endangered (CR A1d+2d) (ATTWG 2000); Previously: Data Deficient (DD) (TFTSG 1996)
TFTSG Provisional Red List: Critically Endangered (CR) (2011)
CITES: Appendix II, as *Cuora* spp. (2000); Zero quota for wild specimens for commercial purposes (2013)
Synonymy:
Cuora mccordi Ernst 1988:466
Cistoclemmys mccordi
Type locality: "highland near Paise, Guangxi Province, China (23º54'N, 106º37'E)" [in error]. Restricted to "Yunnan Province, west of Paise, Guangxi Province, China" by McCord and Iverson (1991:414).
Type specimen: USNM 281850, holotype, see Reynolds et al. (2007).

Cuora mouhotii **(Gray 1862a)** (07:32, 12:22)
Keeled Box Turtle
(includes 2 subspecies)



*

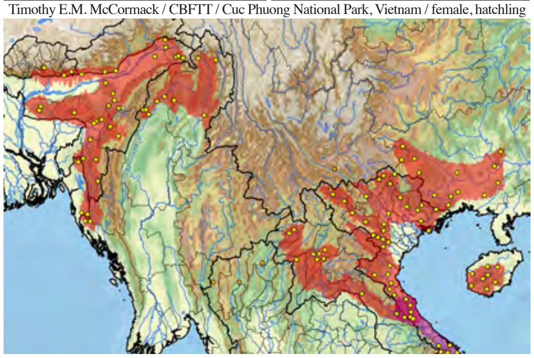
(subspecies: *mouhotii* = red, *obsti* = purple; overlap = intergrades, orange dots = probable trade)

Distribution: Bangladesh, Bhutan, China (Guangxi, Hainan, Yunnan), India (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland), Laos, Myanmar, Thailand (?), Vietnam
Presumed Historic Indigenous Range: 535,830 sq. km
Size (Max SCL): male 25.7 cm, female 23.7 cm (see subspp.)
CBFTT Account: Das, McCormack, van Dijk, Hoang, and Struijk (2016)
IUCN Red List: Endangered (EN A2cd) (Ahmed et al. 2020); Previously: Endangered (EN A1d+2d) (ATTWG 2000), Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II, as *Cuora* spp. (2000); Zero quota for wild specimens for commercial purposes (2013)

Cuora mouhotii mouhotii (Gray 1862a)
Northern Keeled Box Turtle

Indraneil Das / CBFTT / China / captivity

Timothy E.M. McCormack / CBFTT / Cuc Phuong National Park, Vietnam / female, hatchling



*

(subspecies: *mouhotii* = red, *obsti* = purple; overlap = intergrades, orange dots = probable trade)

Distribution: Bangladesh, Bhutan, China (Guangxi, Hainan, Yunnan), India (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland), Laos, Myanmar, Thailand (?), Vietnam

Presumed Historic Indigenous Range: 478,522 sq. km

Size (Max SCL): male 25.7 cm, female 23.7 cm (Das et al. 2016 CBFTT; Blanck, unpubl. data)

Synonymy:

Cyclemys mouhotii Gray 1862a:157

Pyxidea mouhotii, *Cyclemys mohouti*, *Pyxidea mouboti*, *Emys mouhotii*, *Geoemyda mouhotii*, *Pyxidea mouhotii mouhotii*, *Cuora mouhotii*, *Cuora mouhotii mouhotii*

Type locality: "Lao Mountains, in Siam." Restricted to "Luang Prabang, Laos (19º54' N, 102º8' O)" by lectotype designation by Fritz et al. (1998:40).

Type specimen: NHMUK 1947.3.4.27, lectotype, designated by Fritz et al. (1998a:40), discussed by Das (2009); Uetz et al. (2019) erroneously listed NHMUK 1947.3.4.27, 1947.3.4.48–49, and 1947.3.4.64–67 as syntypes.

Cuora galbinifrons serrata Iverson and McCord 1992b:434 (07:33) (*partim*, hybrid)

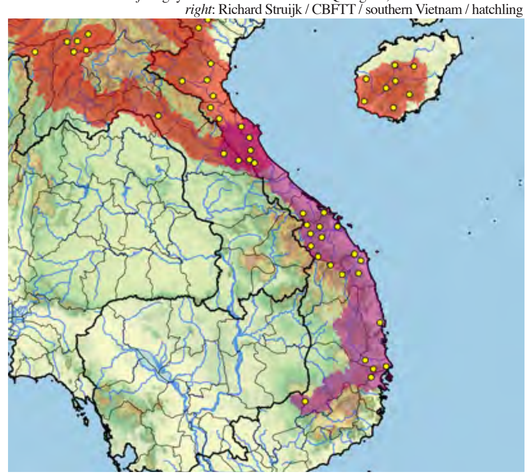
Type locality: "100 km east of Tungfang at Tainhfien in central Hainan Island, China."

Type specimen: UF 81791, holotype.

Cuora mouhotii obsti (Fritz, Andreas, and Lehr 1998a)
Southern Keeled Box Turtle

Torsten Blanck / Phu Yen Prov., Vietnam / male

left: Nguyen Thanh Luan / CBFTT / Quang Tri, Vietnam / trade / female
right: Richard Struijk / CBFTT / southern Vietnam / hatchling



*

(subspecies: *mouhotii* = red, *obsti* = purple; overlap = intergrades)

Distribution: Laos, Vietnam

Presumed Historic Indigenous Range: 69,077 sq. km

Size (Max SCL): male 18.0 cm, female 16.0 cm (Fritz et al. 1998a)

Synonymy:

Pyxidea mouhotii obsti Fritz, Andreas, and Lehr 1998a:35

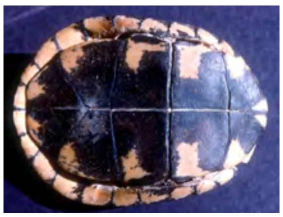
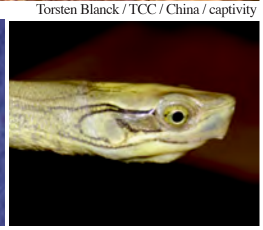
Cuora mouhotii obsti

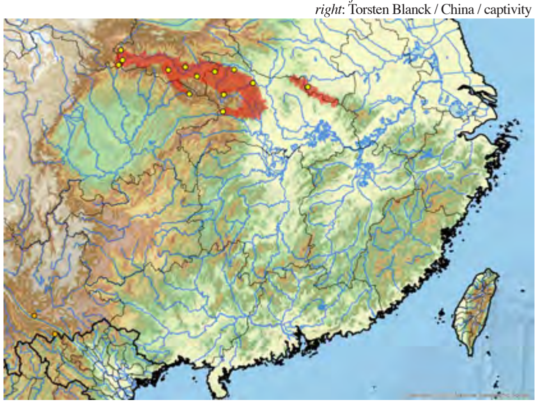
Type locality: "Umgebung von Phú Lôc, Annam (Vietnam), 16º16' N, 107º56' O)."

Type specimen: MTD 31458, holotype.

Cuora pani Song 1984 (12:22)
Pan's Box Turtle


Torsten Blanck / TCC / China / captivity



left: John B. Iverson / China / trade
right: Torsten Blanck / China / captivity


(orange dots = trade)

Distribution: China (Henan, Hubei, Shaanxi, Sichuan)
Presumed Historic Indigenous Range: 62,658 sq. km
Size (Max SCL): male 14.5 cm, female 19.5 cm (Song 1984; Ernst and McCord 1987; Blanck, unpubl. data)
IUCN Red List: Critically Endangered (CR A1d+2d) (ATTWG 2000); Previously: Data Deficient (DD) (TFTSG 1996)
TFTSG Provisional Red List: Critically Endangered (CR) (2011)
CITES: Appendix II, as *Cuora* spp. (2000); Zero quota for wild specimens for commercial purposes (2013)
Synonymy:
Cuora pani Song 1984:330
Cuora pani pani, *Pyxiclemmys pani pani*
Type locality: "Xujiaba (alt. 420 m) of Pingli County in Shaanxi Province" [China].
Type specimen: SIZ 80170, holotype.
Cuora chriskarannarum Ernst and McCord 1987:624
Type locality: "Ta Lau Shan, Yunnan Province, China (23°30' N, 102°25' E)."
Type specimen: USNM 266162, holotype, see Reynolds et al. (2007).

Cuora picturata Lehr, Fritz, and Obst 1998 (07:35, 09:22, 12:22) **(68)**
Southern Vietnam Box Turtle

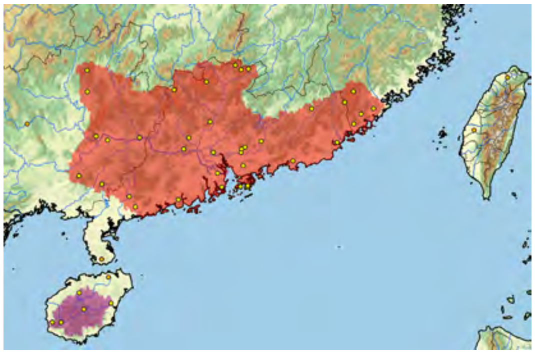

Edgar Lehr / Vietnam / trade



Edgar Lehr / Vietnam / trade

Distribution: Vietnam
Presumed Historic Indigenous Range: 3,541 sq. km
Size (Max SCL): male 18.9 cm, female 19.2 cm (Itescu et al. 2014; Blanck, unpubl. data)
IUCN Red List: Critically Endangered (CR A2bd+4bd) (McCormack et al. 2020); Previously: Critically Endangered (CR A2bd+4bd) (McCormack et al. 2016), Critically Endangered (CR), as part of *Cuora galbinifrons* (ATTWG 2000)
CITES: Appendix I (2019); Previously: Appendix II, as *Cuora* spp. (2000)
Synonymy:
Cuora galbinifrons picturata Lehr, Fritz, and Obst 1998:7
Cistoclemmys galbinifrons picturata, *Cuora picturata*, *Cistoclemmys picturata*
Type locality: "südliches Annam (Vietnam)."
Type specimen: MTD 34565, holotype.

Cuora trifasciata (Bell 1825a) (07:36, 09:23, 12:22, 17:40, 17:42)
Chinese Three-striped Box Turtle, Golden Coin Turtle
(includes 2 subspecies)

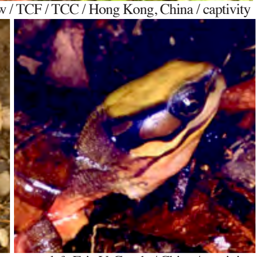

*

(subspecies: *trifasciata* = red, *luteocephala* = purple; orange dots = trade)

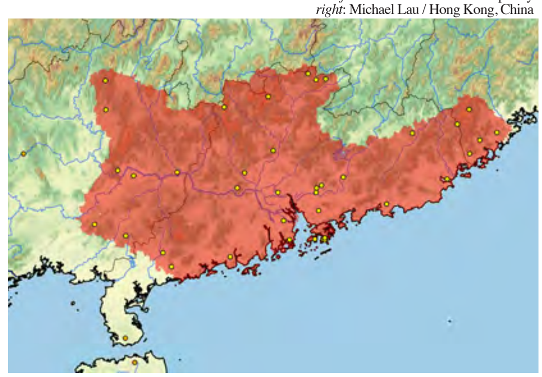
Distribution: China (Fujian, Guangdong, Guangxi, Hainan, Hong Kong, Macau)
Presumed Historic Indigenous Range: 241,670 sq. km
Size (Max SCL): male 23.0 cm, female 26.0 cm (see subspp.)
IUCN Red List: Critically Endangered (CR A2d) (Fong et al. 2020); Previously: Critically Endangered (CR A1d+2d) (ATTWG 2000), Endangered (EN) (TFTSG 1996)
CITES: Appendix II, as *Cuora* spp. (2000); Zero quota for wild specimens for commercial purposes (2013)

Cuora trifasciata trifasciata (Bell 1825a) (07:36, 09:23, 12:22, 17:40, 17:42)
Chinese Three-striped Box Turtle

Paul Crow / TCF / TCC / Hong Kong, China / captivity



left: Eric V. Goode / China / captivity
right: Michael Lau / Hong Kong, China


*

(subspecies: *trifasciata* = red, *luteocephala* = purple; orange dots = trade)

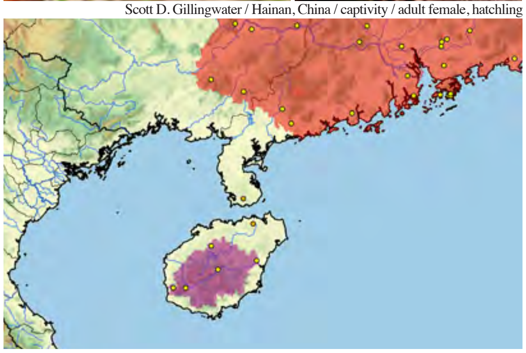
Distribution: China (Fujian, Guangdong, Guangxi, Hong Kong, Macau)
Presumed Historic Indigenous Range: 225,935 sq. km
Size (Max SCL): male 21.0 cm, female 23.0 cm (Blanck et al. 2017)
Synonymy:
Sternothaerus trifasciatus Bell 1825a:305
Emys (Cistuda) trifasciata, Emys trifasciata, Cistuda trifasciata, Cistudo trifasciata, Cuora trifasciata, Pyxidemys trifasciata, Terrapene trifasciata, Cyclemys trifasciata, Cuora (Pyxiclemmys) trifasciata, Pyxiclemmys trifasciata, Cuora trifasciata trifasciata
Type locality: Not known. Restricted to "Luofo Shan Mountains, Guangdong, China" by Blanck et al. (2006a:40).
Type specimen: OUM 8557, holotype, discussed by Blanck et al. (2006a) and Nowak-Kemp and Fritz (2010); genotyped by Blanck et al. (2006a) and Tiedemann et al. (2014).
Mauremys iversoni Pritchard and McCord 1991:140 (07:33) (*partim*, hybrid)
Type locality: "People's Republic of China: Fujian Province: vicinity of Nanping (26°38' N, 118°10' E)."
Type specimen: UF 71865, holotype.
Clemmys guangxiensis Qin 1992:60 (14:29) (*partim*, hybrid)
Type locality: "Nanning, Guangxi" [China].
Type specimen: SNHM 88701, holotype.

Cuora trifasciata luteocephala Blanck, Protiva, Zhou, Li, Crow, and Tiedemann 2017 (17:42)

Hainan Three-striped Box Turtle

Torsten Blanck / Hainan, China / captivity

Scott D. Gillingwater / Hainan, China / captivity / adult female, hatchling



*

(subspecies: *trifasciata* = red, *luteocephala* = purple; orange dots = trade)

Distribution: China (Hainan)

Presumed Historic Indigenous Range: 15,734 sq. km

Size (Max SCL): male 23.0 cm, female 26.0 cm (Blanck et al. 2017)

Synonymy:

Sacalia pseudocellata Iverson and McCord 1992a:426 (07:33) (*partim*, hybrid)

Type locality: “between Tungfang [19º03' N, 108º56' E] and Kancheng [18º51' N, 108º37' E; ca. 48 km from Tungfang], western Hainan Island, China.”

Type specimen: UF 81505, holotype.

Ocadia philippeni McCord and Iverson 1992:13 (07:33) (*partim*, hybrid)

Type locality: “near Kancheng [18º51'N, 108º37'E; = 48 km from Tungfang (19º03'N, 108º56'E)], western Hainan Island, China.” [in error?].

Type specimen: UF 80766, holotype.

Cuora trifasciata luteocephala Blanck, Protiva, Zhou, Li, Crow, and Tiedemann 2017:379

Type locality: “China, Hainan Province, Dan County, 300m elevation.”

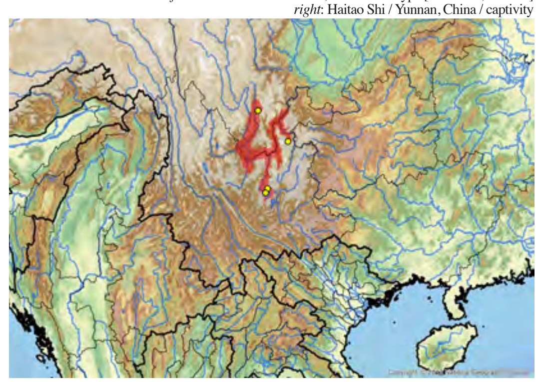
Type specimen: CIB 64III5279, holotype.

Cuora yunnanensis (Boulenger 1906) (07:37, 12:22)

Yunnan Box Turtle

Zhou Ting, William P. McCord, Torsten Blanck / TCC / Yunnan, China / captivity

left: John B. Iverson / Yunnan, China / holotype [NHMUK, London]
right: Haitao Shi / Yunnan, China / captivity



(red = possible range; dots = possible native or trade)

Distribution: China (Sichuan, Yunnan)

Presumed Historic Indigenous Range: 31,947 sq. km

Size (Max SCL): male 15.2 cm, female 19.0 cm (Blanck et al. 2006b; Blanck, unpubl. data)

IUCN Red List: Critically Endangered (CR B2ab(ii,iii,v),D) (van Dijk et al. 2010); Previously: Extinct (EX) (ATTWG 2000), Data Deficient (DD) (TFTSG 1996)

CITES: Appendix II, as *Cuora* spp. (2000); Zero quota for wild specimens for commercial purposes (2013)

Synonymy:

Cyclemys yunnanensis Boulenger 1906a:567

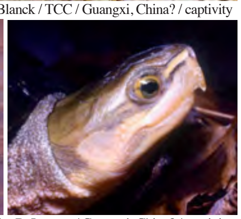
Cuora yunnanensis, *Pyxiclemmys yunnanensis*

Type locality: “Yunnan fu..[&].. Tongchuan fu” [Kunming Shi.. [&].. Dongchuan Shi, Yunnan, China]; restricted to “vicinity of Zhongping (Huize) City (26°42'N, 103°30'E) in Huize County, northeastern Yunnan Province, China (= Tongchuan Fu)” by Blanck et al. (2006b:31).

Type specimen: NHMUK 1946.1.22.97 (formerly 1905.5.30.34), lectotype, designated by Blanck (2005:11).

Cuora zhoui Zhao *in* Zhao, Zhou, and Ye 1990 (12:22)
Zhou's Box Turtle

Torsten Blanck / TCC / Guangxi, China? / captivity



John B. Iverson / Guangxi, China? / captivity

(red = possible range; yellow dot = possible native; orange dots = trade)

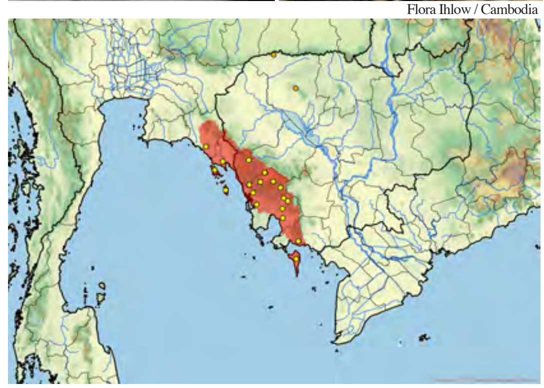
Distribution: China (Guangxi?, Yunnan?), Vietnam
Presumed Historic Indigenous Range: 12,983 sq. km
Size (Max SCL): male 17.0, female 22.3 cm (Blanck, unpubl. data)
IUCN Red List: Critically Endangered (CR A1d+2d) (ATTWG 2000); Previously: Data Deficient (DD) (TFTSG 1996)
TFTSG Provisional Red List: Critically Endangered (CR) (2011)
CITES: Appendix II, as *Cuora* spp. (2000); Zero quota for wild specimens for commercial purposes (2013)
Synonymy:
Cuora zhoui Zhao *in* Zhao, Zhou, and Ye 1990:213
Pyxiclemmys zhoui
Type locality: "market at Nanning, Guangxi Zhuang Autonomous Region" [China]. [trade]
Type specimen: NTM(P) 9001, holotype; genotyped by Tiedemann et al. (2014).
Cuora pallidicephala McCord and Iverson 1991:414
Type locality: "Wuting [= Wuding: 25°26'N, 102°21'W] or Yuanmow [25°41'N, 101°54'W], Yunnan Province, China." [trade?]
Type specimen: UF 77230, holotype.

Cyclemys Bell 1834 (07:38, 08:6, 09:24)
Cyclemys Bell 1834:17
Type species: *Cyclemys orbiculata* Bell 1834 [= subjective synonym of *Emys dentata* Gray 1831d], by original designation.
Cyclemis Tirant 1884:156 (*nomen novum*)

Cyclemys atripons Iverson and McCord 1997b (17:44)
Western Black-bridged Leaf Turtle

Flora Ihlow / Trat, Cambodia

Flora Ihlow / Cambodia



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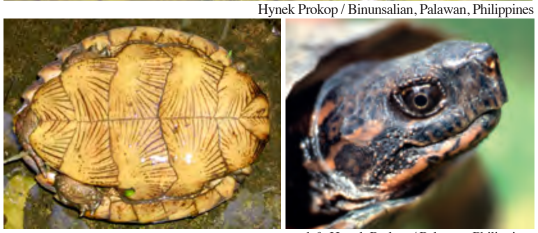
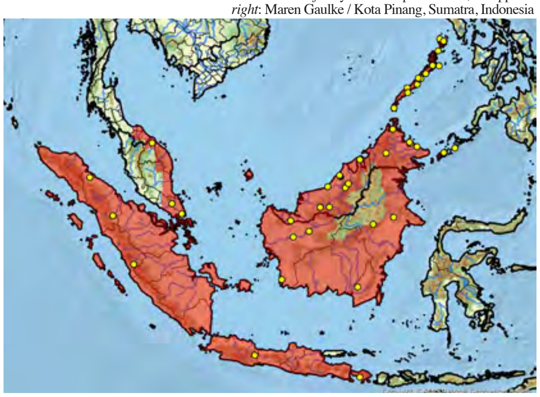
(orange dots = uncertain identification or possible hybrids)

Distribution: Cambodia, Thailand, Vietnam
Presumed Historic Indigenous Range: 22,167 sq. km
Size (Max SCL): male 19.5 cm, female 23.6 cm (Fritz et al. 2008b; Iverson, unpubl. data)
IUCN Red List: Endangered (EN A2cd+4cd) (Timmins et al. 2021)
CITES: Appendix II, as *Cyclemys* spp. (2013)
Synonymy:
Cyclemys atripons Iverson and McCord 1997b:632
Cyclemys atripons atripons, *Cyclemys pulchristriata atripons*
Type locality: "Thailand, Krat [= Trat], Kao [= Mt.] Kuap (= Khao Kuap)."
Type specimen: USNM 81865, holotype, see Reynolds et al. (2007); genotyped by Stuart and Fritz (2008).

Cyclemys dentata (Gray 1831d) (08:7)
Asian Leaf Turtle


Hynek Prokop / Binunsalian, Palawan, Philippines


left: Hynek Prokop / Palawan, Philippines
right: Maren Gaulke / Kota Pinang, Sumatra, Indonesia



Distribution: Brunei, Indonesia (Bali, Java, Kalimantan, Sumatra), Malaysia (East, West), Philippines (Palawan, Sulu Archipelago), Singapore, Thailand
Presumed Historic Indigenous Range: 1,345,504 sq. km
Size (Max SCL): male 19.6, female 21.0 cm (Fritz et al. 2008b; Iverson, unpubl. data)
IUCN Red List: Near Threatened (NT A3cd) (As-singkily et al. 2021); Previously: Near Threatened (NT) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II, as *Cyclemys* spp. (2013)
Synonymy:
Emys hasseltii Boie *in* Fitzinger 1826:45 (*nomen nudum*)
Clemmys (Clemmys) hasseltii
Type locality: "Asia, Insula Java" [Indonesia].
Type specimen: Not known or located.
Emys dhor Gray 1830e:8 (10:7) (*nomen oblitum*)
Cyclemys dhor
Type locality: "India." Restricted to "Bengal..[and]..Java" by Gray (1831d:20); and to "Java" [Indonesia] by Fritz et al. (1997:188).
Type specimen: NHMUK 1946.1.22.62 (formerly 1828.5.12.1), lectotype, designated by Fritz et al. (1997:194), discussed by Nowak-Kemp and Fritz (2010); genotyped by Stuart and Fritz (2008); Uetz et al. (2019) erroneously listed NHMUK 1946.1.22.62 and 1946.1.22.63 as syntypes.
Emys dentata Gray 1831d:errata:btw.78-79 (*nomen novum*)
Cistudo (Cyclemys) dentata, *Cistudo dentata*, *Cyclemys dentata*, *Cyclemys dentata dentata*
Type locality: "Bengal..[and]..Java." Restricted to "Java" [Indonesia] by Smith (1931:80) and by Fritz et al. (1997:188).
Type specimen: NHMUK 1946.1.22.62 (formerly 1828.5.12.1), lectotype, designated by Fritz et al. (1997:194), discussed by Nowak-Kemp and Fritz (2010); genotyped by Stuart and Fritz (2008).
Comment: Unjustified replacement name for *dhor*.
Cyclemys orbiculata Bell 1834:17
Emys orbiculata, Emys (Cyclemys) orbiculata, Cistudo orbiculata
Type locality: "Indiâ." Restricted to "Java" [Indonesia] by Fritz et al. (1997:188).
Type specimens: OUM 8512–13, 8867, syntypes (3); NHMUK 1946.1.22.62 erroneously designated neotype by Fritz et al. (1997:188), discussed by Nowak-Kemp and Fritz (2010); OUM 8512–13 genotyped by Stuart and Fritz (2008).
Cistudo diardii Duméril and Bibron 1835:227 (*nomen novum*)
Emys diardii
Type locality: "Bengale et l'ile de Java."
Type specimens: MNHN 9104–08, syntypes (5).
Comment: Unjustified replacement name for *dhor*.
Cyclemys ovata Gray 1863e:178
Type locality: "Sarawak" [East Malaysia].
Type specimen: NHMUK 1863.6.21.1, holotype; genotyped by Stuart and Fritz (2008).
Cyclemys bellii Gray 1863e:179
Type locality: Not known.
Type specimen: OUM 8513, holotype, discussed by Nowak-Kemp and Fritz (2010); OUM 8867 erroneously listed as holotype by Das (2005); OUM 8513 genotyped by Stuart and Fritz (2008).

Cyclemys enigmatica Fritz, Guicking, Auer, Sommer, Wink, and Hundsdörfer 2008 (08:6)
Enigmatic Leaf Turtle


Maren Gaulke / Rantau Prapat, Sumatra, Indonesia

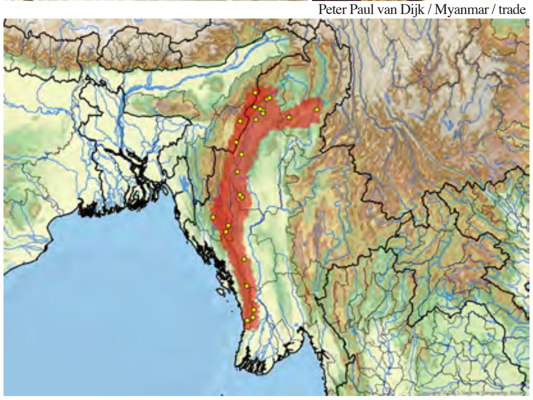

Maren Gaulke / Rantau Prapat, Sumatra, Indonesia

Distribution: Malaysia (East, West), Singapore, Indonesia (Java, Kalimantan, Sumatra), Thailand
Presumed Historic Indigenous Range: 887,316 sq. km
Size (Max SCL): female 23.5 cm (Fritz et al. 2008b)
IUCN Red List: Near Threatened (NT A3cd) (As-singkily et al. 2021)
CITES: Appendix II, as *Cyclemys* spp. (2013)
Synonymy:
Cyclemys enigmatica Fritz, Guicking, Auer, Sommer, Wink, and Hundsdörfer 2008b:381
Type locality: "Padang, Sumatra" [Indonesia].
Type specimen: NMW 9811, holotype, see Gemel et al. (2019).

Cyclemys fusca Fritz, Guicking, Auer, Sommer, Wink, and Hundsdörfer 2008 (08:6)
Myanmar Brown Leaf Turtle

Peter Paul van Dijk / Myanmar / trade

Peter Paul van Dijk / Myanmar / trade



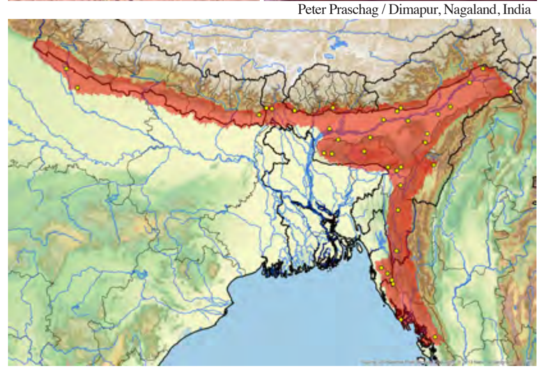
*

Distribution: India (Nagaland, Manipur), Myanmar
Presumed Historic Indigenous Range: 120,600 sq. km
Size (Max SCL): male 22.5 cm, female 26.9 cm (Iverson, unpubl. data)
IUCN Red List: Least Concern (LC) (Platt et al. 2021)
CITES: Appendix II, as *Cyclemys* spp. (2013)
Synonymy:
Cyclemys fusca Fritz, Guicking, Auer, Sommer, Wink, and Hundsdörfer 2008b:383
Type locality: "Kachin State, Myanmar."
Type specimen: MTD 42578, holotype.

Cyclemys gemeli Fritz, Guicking, Auer, Sommer, Wink, and Hundsdörfer 2008 (08:6)
Assam Leaf Turtle

Peter Praschag / Dimapur, Nagaland, India

Peter Praschag / Dimapur, Nagaland, India



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Distribution: Bangladesh, Bhutan, India (Arunachal Pradesh, Assam, Bihar, Manipur, Meghalaya, Mizoram, Nagaland, Uttar Pradesh), Myanmar, Nepal
Presumed Historic Indigenous Range: 260,395 sq. km
Size (Max SCL): male 19.0 cm, female 23.2 cm (Praschag et al. 2009b; Baruah et al. 2012)
IUCN Red List: Near Threatened (NT A4c) (Praschag and Ahmed 2021)
CITES: Appendix II, as *Cyclemys* spp. (2013)
Synonymy:
Cyclemys gemeli Fritz, Guicking, Auer, Sommer, Wink, and Hundsdörfer 2008b:384
Type locality: "street from Tezpur to Arunachal Pradesh, 5 km to border of Arunachal Pradesh, Jia Bhoroli River Region, Assam, India."
Type specimen: NMW 37153, holotype, see Gemel et al. (2019); genotyped by Fritz et al. (2008b).

Cyclemys oldhamii Gray 1863e (08:8, 17:44)
Southeast Asian Leaf Turtle


Thomas Ziegler / NW of Ky Thuong, Vietnam


Peter Praschag / No data / captive


*

(orange dots = probable trade or questionable)

Distribution: Cambodia, Laos, Myanmar, Thailand, Vietnam
Presumed Historic Indigenous Range: 531,083 sq. km
Size (Max SCL): male 24.1 cm, female 26.0 cm (Fritz et al. 2008b; Seateun et al. 2019)
IUCN Red List: Endangered (EN A2cd+4cd) (Timmins et al. 2021)
CITES: Appendix II, as *Cyclemys* spp. (2013)
Synonymy:

Cyclemys oldhamii Gray 1863e:178
Cyclemis oldhami
Type locality: “Mergui..[&]..Siam.” Restricted to “Mergui” [Myanmar] by Smith (1931:81) and by Fritz et al. (1997:196).
Type specimen: NHMUK 1947.3.5.63 (formerly 1856.5.6.1), lectotype, designated by Fritz et al. (1997:201); genotyped by Stuart and Fritz (2008).

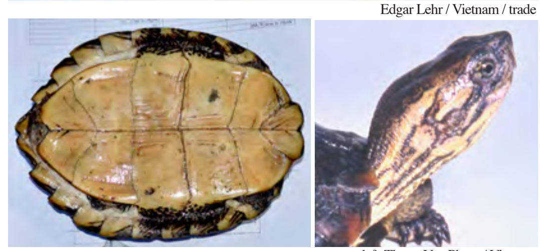
Cyclemys dhor shanensis Annandale 1918:67
Cyclemys shanensis, Cyclemys shanensis shanensis
Type locality: “Fort Stedman on the Inlé Lake, altitude 3,000 feet..[&].. He-Ho plain 800 feet higher” [Myanmar].
Type specimen: ZSI 18594, lectotype, designated by Fritz et al. (1997:202); ZSI 18593–94 listed as syntypes by Das et al. (1998) and Kundu et al. (2018a).

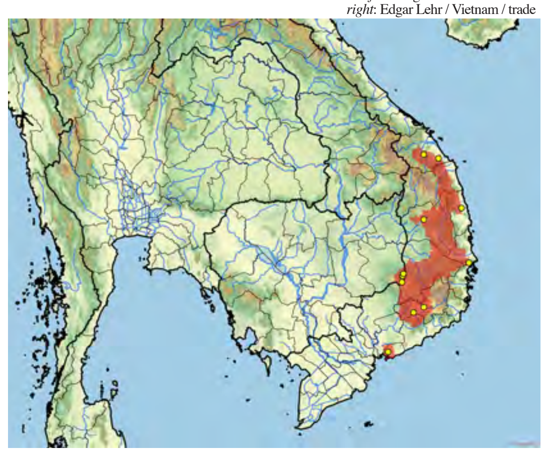
Geoemyda tcheponensis Bourret 1939:7
Cyclemys tcheponensis, Cyclemys dentata tcheponensis, Cyclemys shanensis tcheponensis
Type locality: “Haute Sé-Bang-Hien, (centre de la Chaîne annamitique)” [Laos].
Type specimen: VNUH T.43, holotype, apparently lost, discussed by Fritz et al. (1997).

Cyclemys tiannanensis Kou 1989:193
Type locality: “Nanliang, Mengla County, Xishuangbanna of Yunnan Province, alt. 620 m” [China]. Probable market specimen according to Fritz et al. (1997:209).
Type specimen: YU RT8311002, holotype.

Cyclemys pulchristriata Fritz, Gaulke, and Lehr 1997 (17:45)
Eastern Black-bridged Leaf Turtle


Edgar Lehr / Vietnam / trade


left: Thong Van Pham / Vietnam
right: Edgar Lehr / Vietnam / trade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Distribution: Cambodia, Vietnam
Presumed Historic Indigenous Range: 42,634 sq. km
Size (Max SCL): male 17. 5 cm, female 22.7 cm (Fritz et al. 2008b)
IUCN Red List: Endangered (EN A2cd+4cd) (Timmins et al. 2021)
CITES: Appendix II, as *Cyclemys* spp. (2013)
Synonymy:

Cyclemys pulchristriata Fritz, Gaulke, and Lehr 1997:203
Cyclemys atripons pulchristriata
Type locality: “Phuc-Son, Annam” [Vietnam].
Type specimen: NMW 29525:4, holotype, see Gemel et al. (2019); genotyped by Stuart and Fritz (2008).

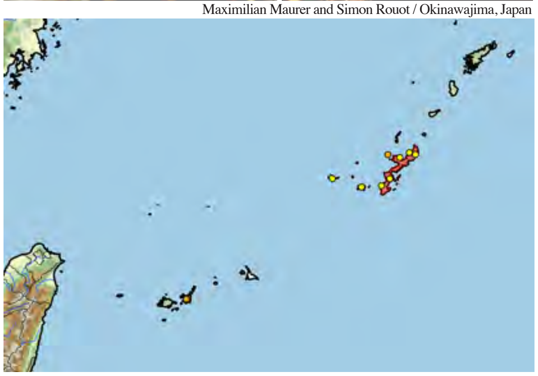
Geoemyda Gray 1834b (07:39)

Geoemyda Gray 1834b:100 (*nomen conservandum*)
Type species: *Geoemyda spengleri* [= *Testudo spengleri* Gmelin 1789], by original designation.
Comment: Name conserved by ICZN (1985a), see Smith et al. (1980c).
Geoemys Bonaparte 1836:6 (*nomen novum*)
Geomyda Blyth 1856:714 (*nomen novum*)
Nicoria Gray 1856b:17
Type species: *Nicoria spengleri* [= *Testudo spengleri* Gmelin 1789], by original monotypy.

Geoemyda japonica Fan 1931
Ryukyu Black-breasted Leaf Turtle

Maximilian Maurer and Simon Rouot / Okinawajima, Japan

Maximilian Maurer and Simon Rouot / Okinawajima, Japan



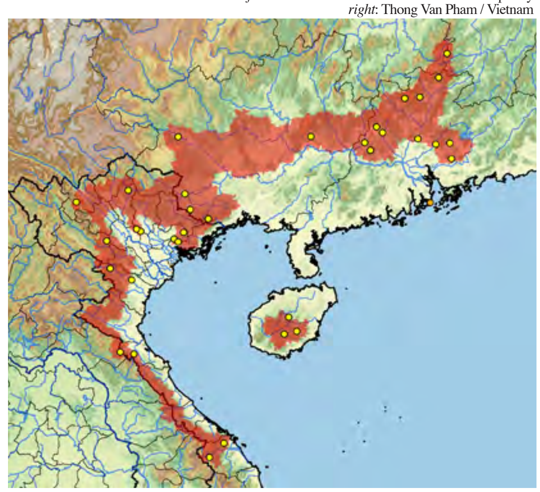
(orange dots = introduced)

Distribution: Japan (Ryukyu Archipelago)
Presumed Historic Indigenous Range: 1,613 sq. km
Size (Max SCL): male 15.1 cm, female 17.0 cm (Vetter and van Dijk 2006; Itescu et al. 2014; Ota, unpubl. data)
CBFTT Account: Yasukawa and Ota (2008)
IUCN Red List: Endangered (EN A1ce, B1+2c) (ATTWG 2000); Previously: Endangered (EN) (TFTSG 1996)
CITES: Appendix II (2013)
Synonymy:
Geoemyda spengleri japonica Fan 1931:148
Geoemyda japonica, Geoemyda japonicus
Type locality: "Japan and other Pacific Islands." Restricted to "Nawa (?Naha), Okinawajima Is., Japan" by Yasukawa et al. (1992:149).
Type specimen: USNM 34053, holotype, listed by Yasukawa et al. (1992), but not listed by Cochran (1961), Reynolds et al. (2007), or Uetz et al. (2019).

Geoemyda spengleri (Gmelin 1789) (09:25)
Black-breasted Leaf Turtle

Flora Ihlow / Tam Dao National Park, Vietnam

left: Nobuhiro Kawazoe / CBFTT / No data / captivity
right: Thong Van Pham / Vietnam



*

(orange dot = probable trade)

Distribution: China (Guangdong, Guangxi, Hainan, Hunan [?], Jiangxi, Macau [?]), Laos, Vietnam
Presumed Historic Indigenous Range: 219,203 sq. km
Size (Max SCL): male 10.9 cm, female 12.8 cm (Fan 1931; Pham et al. 2018, unpubl. data)
CBFTT Account: Yasukawa and Ota (2010)
IUCN Red List: Endangered (EN A2cd+4cd) (Fong et al. 2020); Previously: Endangered (EN A1cd+2cd) (ATTWG 2000), Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II (2013); Previously: Appendix III (China) (2005)
Synonymy:
Testudo spengleri Gmelin 1789:1043 (*nomen conservandum*)
Emys spengleri, Geoemyda spengleri, Clemmys (Clemmys) spengleri, Clemmys spengleri, Nicoria spengleri, Geoemyda spengleri spengleri
Type locality: Not designated. Originally indicated as "vermuthlich... Ostindien" by Walbaum (1785:129); translated to "probably...the East Indies" by Pope (1935:36).
Type specimen: Possibly MNUL s/n, destroyed in World War II; type specimen figured in Walbaum (1785:pl.3).
Comment: Description cited as sourced from Walbaum (1785:122,pl. III). Name conserved by ICZN (1985a), see Smith et al. (1980c).

Testudo serrata Shaw 1802:51 (junior homonym, not = *Testudo serrata* Daudin 1801 [= *Trachemys scripta scripta*])
Type locality: Not designated.
Type specimen: RCSM s/n (formerly LM s/n), holotype, see Gray (1831d), apparently lost, possibly destroyed during World War II, type specimen figured (pl.9,left).

Testudo tricarinata Bory de Saint-Vincent 1804:308 (66) (junior homonym, not = *Testudo tricarinata* Retzius *in* Schoepff 1792 [= *Kinosternon scorpioides scorpioides*])
Type locality: "Bourbon...mare d'Arzule" [Réunion] [introduced].
Type specimen: Not located, type specimen figured (pl.37,f.1).

Testudo carinata Thunberg 1810:6 (66) (*nomen novum et nudum,* junior homonym, not = *Testudo carinata* Linnaeus 1758 [= *Terrapene carolina carolina*])
Type locality: Not designated.
Type specimen: UPSZTY 277 (formerly UUZM 277 and MGA 46), holotype, listed by Thunberg (1810, 1828), Holm (1957), and Wallin (2001), is a *Geoemyda spengleri* and not the type of *T. carinata* Linnaeus 1758.
Comment: Probable unjustified replacement name for *Testudo tricarinata* Bory de Saint-Vincent.

Geoemyda spengleri sinensis Fan 1931:146
Type locality: "Loshiang and Kutchen" [Luoxiang and Guchen, Guangxi, China].
Type specimens: SYS 1202, 8001–68, syntypes (69), possibly lost; RMNH 5887, listed as paratype by Hoogmoed et al. (2010); Uetz et al. (2019) erroneously listed no types as designated.

Heosemys Stejneger 1902

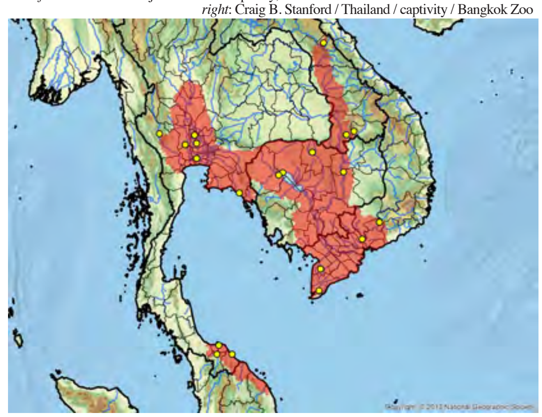
Heosemys Stejneger 1902:238
Type species: *Heosemys spinosa* [= *Emys spinosa* Gray 1831d], by original designation.

Hieremys Smith 1916:50
Type species: *Hieremys annandalii* [= *Cyclemys annandalii* Boulenger 1903a], by original monotypy.

Heosemys annandalii (Boulenger 1903a) (07:41)
Yellow-headed Temple Turtle


Sitha Som / TL / Tonle Sap, Cambodia


left: Peter Paul van Dijk / Thailand / captivity, Samut Prakan Crocodile Farm and Zoo / male
right: Craig B. Stanford / Thailand / captivity / Bangkok Zoo



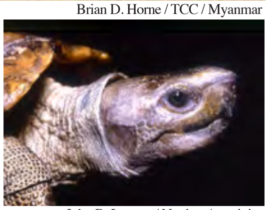
Distribution: Cambodia, Laos, Malaysia (West), Thailand, Vietnam
Presumed Historic Indigenous Range: 311,205 sq. km
Size (Max SCL): male 50.0 cm, female 42.0 cm (Cox et al. 1998; Platt et al. 2008; Ceballos et al. 2013)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Cota et al. 2021); Previously: Endangered (EN A1cd+2d) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II (2003); Zero quota for wild specimens for commercial purposes (2013)
Synonymy:

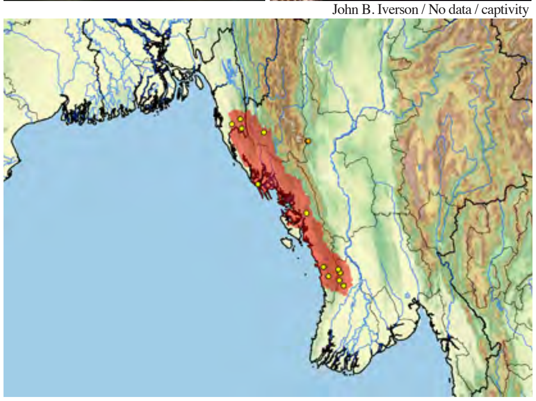
Cyclemys annandalii Boulenger 1903a:142 (07:41)
Hieremys annandalii, *Heosemys annandalii*
Type locality: "Kampong Jalor" [= Yala, Yala Prov., Thailand].
Type specimens: NHMUK 1946.1.22.67–68, 1947.3.5.62 (formerly 1903.4.13.2–4), syntypes (3).

Hieremys annandalei Smith 1916:50 (*nomen novum*)
Cyclemys annandalei
Comment: Unjustified emendation of *annandalii*.

Heosemys depressa (Anderson 1875)
Arakan Forest Turtle


Brian D. Horne / TCC / Myanmar



John B. Iverson / No data / captivity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(orange dot = probable trade)

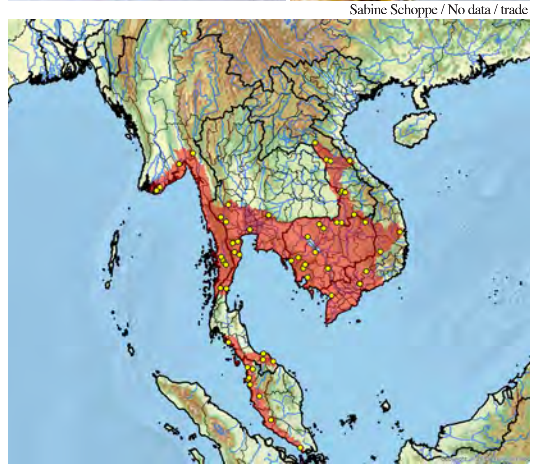
Distribution: Bangladesh, Myanmar
Presumed Historic Indigenous Range: 37,361 sq. km
Size (Max SCL): male 29.6 cm, female 25.9 cm (Platt et al. 2010; Ceballos et al. 2013)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Platt et al. 2020); Previously: Critically Endangered (CR A2cd, B1+2c) (ATTWG 2000), Critically Endangered (CR) (TFTSG 1996)
CITES: Appendix II (2003); Zero quota for wild specimens for commercial purposes (2013)
Synonymy:
Geoemyda depressa Anderson 1875:284
Geoëmyda depressa, Heosemys depressa
Type locality: "Arakan" [Myanmar]. Restricted to "hilly region in the neighbourhood of Akyab in Arracan" [Myanmar] by Anderson (1879:722).
Type specimens: ZSI 751, syntype, a skull, other syntypes apparently lost, including specimen figured in Anderson (1879:pl.55-56), see Iverson and McCord (1997a), Das et al. (1998), and Kundu et al. (2018a); NHMUK 1887.3.30.1 may be a syntype (Iverson 1992); ZMB 8869, recorded as "holotype" by Fritz et al. (1994:165), is not a type, see Iverson and McCord (1997a).
Geomyda arakana Theobald 1876:vii
Geoemyda arakana
Type locality: "Akyab" [Myanmar].
Type specimen: NHMUK 1947.3.4.28, 1947.3.5.69 (formerly 1888.6.18.1, 1890.1.28.9) (separate parts of same specimen), holotype, see Iverson and McCord (1997a).

Heosemys grandis (Gray 1860d)
Giant Asian Pond Turtle


Jérôme Maran / Vietnam



Sabine Schoppe / No data / trade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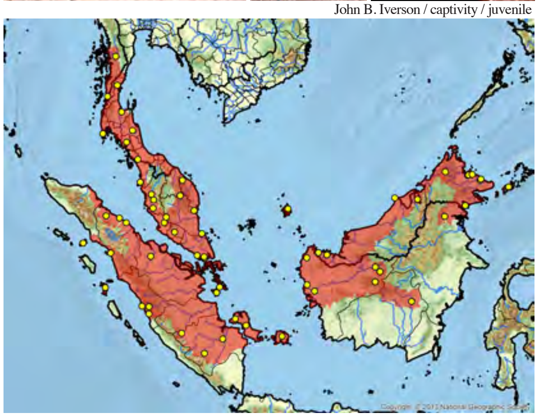
(orange dot = trade)

Distribution: Cambodia, Laos, Malaysia (West), Myanmar, Thailand, Vietnam
Presumed Historic Indigenous Range: 568,942 sq. km
Size (Max SCL): male 48.0 cm, female 34.6 cm (Bonin et al. 2006; Iverson and McCord 2006; Le 2007)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Cota et al. 2021); Previously: Vulnerable (VU A1d+2cd) (ATTWG 2000); Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II (2003)
Synonymy:
Emys siamensis Gray *in* Günther 1860:114 *(nomen nudum)*
Geoemyda grandis Gray 1860d:218
Geomyda grandis, Clemmys grandis, Heosemys grandis
Type locality: "Cambojia" [Cambodia].
Type specimens: NHMUK 1947.3.4.7 and 1947.3.4.55–56 (formerly 1860.8.28.1–2 and 1861.6.1.7), syntypes (3); Uetz et al. (2019) erroneously listed NHMUK 1867.12.30.66 as a possible syntype.

Heosemys spinosa (Bell *in* Gray 1830a) (12:25)
Spiny Turtle

Peter Paul van Dijk / Perlis State Park, Perlis, Malaysia / adult

John B. Iverson / captivity / juvenile



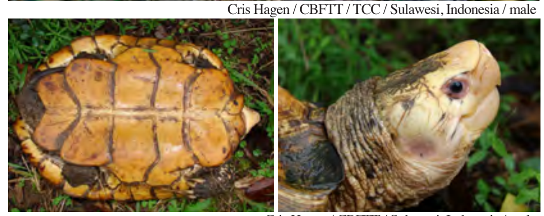
Distribution: Brunei, Indonesia (Sumatra, Kalimantan), Malaysia (East, West), Myanmar, Philippines (Sulu Archipelago [Tawi-Tawi]), Singapore, Thailand
Presumed Historic Indigenous Range: 797,654 sq. km
Size (Max SCL): male 27.5 cm (Goetz 2007)
IUCN Red List: Endangered (EN A2cd) (Cota et al. 2021);
Previously: Endangered (EN A1bcd) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II (2003)
Synonymy:
Emys spinosae Bell in Gray 1830a:pl.77 (*nomen oblitum*)
Type locality: "Penang" [West Malaysia].
Type specimens: OUM 8517, NHMUK 1862.8.28.1, syntypes (2), discussed by Bourret (1941c) and Nowak-Kemp and Fritz (2010).
Emys spinosa Gray 1830e:8 (*nomen novum*)
Geoemyda spinosa, Geomyda spinosa, Clemmys (Clemmys) spinosa, Clemmys spinosa, Heosemys spinosa
Type locality: "Penang" [West Malaysia].
Type specimens: OUM 8517, NHMUK 1862.8.28.1, syntypes (2) by default, discussed by Bourret (1941c) and Nowak-Kemp and Fritz (2010).
Comment: Unjustified emendation of *spinosae*.

Leucocephalon McCord, Iverson, Spinks, and Shaffer 2000

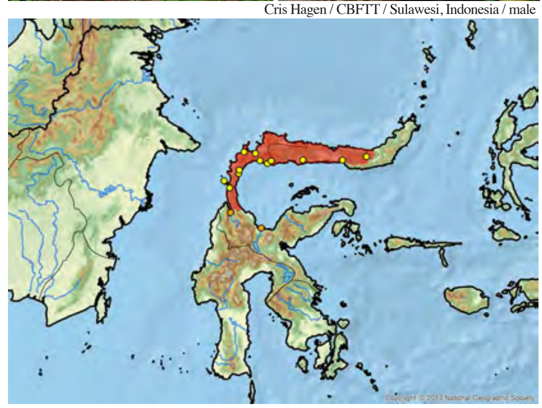
Leucocephalon McCord, Iverson, Spinks, and Shaffer 2000:21
Type species: *Leucocephalon yuwonoi* McCord, Iverson, and Boeadi 1995, by original designation.

Leucocephalon yuwonoi (McCord, Iverson, and Boeadi 1995) (07:42)
Sulawesi Forest Turtle

Cris Hagen / CBFTT / TCC / Sulawesi, Indonesia / male



Cris Hagen / CBFTT / Sulawesi, Indonesia / male



(orange dots = trade)
Distribution: Indonesia (Sulawesi)
Presumed Historic Indigenous Range: 30,841 sq. km
Size (Max SCL): male 27.8 cm, female 24.0 cm (Ives et al. 2008; Hagen et al. 2009 CBFTT)
CBFTT Account: Hagen, Platt, and Innis (2009)
IUCN Red List: Critically Endangered (CR A2bcd) (Stanford and Hamidy 2021); Previously: Critically Endangered (CR A1cd+2cd, C1) (ATTWG 2000); Data Deficient (DD) (TFTSG 1996)
CITES: Appendix II (2003)
Synonymy:
Geoemyda yuwonoi McCord, Iverson, and Boeadi 1995:311
Heosemys yuwonoi, Leucocephalon yuwonoi
Type locality: "near Gorontalo [0°33' N, 123°05' E] on the Minahassa Peninsula, northern Sulawesi [Celebes], Indonesia."
Type specimen: MZB 10295, holotype; MZB 10296, UF 97333–5, paratypes (4); MZB specimens (2) possibly lost (McCord, pers. comm. to Iverson).

Mauremys **Gray 1869b** (07:44, 09:26)

Mauremys Gray 1869b:500

Type species: *Mauremys fuliginosa* [= *Emys fuliginosus* Gray 1860c = subjective synonym of *Emys leprosa* Schoepff *in* Schweigger 1812], by subsequent designation by Lindholm (1929:281).

Ocadia Gray 1870c:35

Type species: *Ocadia sinensis* [= *Emys sinensis* Gray 1834a], by original monotypy.

Emmenia Gray 1870c:38

Type species: *Emmenia grayi* [= *Emys grayi* Günther 1869 = subjective synonym of *Mauremys caspica siebenrocki* Wischuf and Fritz *in* Fritz and Wischuf 1997 = subjective synonym of *Testudo caspica* Gmelin 1774], by original monotypy.

Eryma Gray 1870c:44 (junior homonym, not = *Eryma* Meyer 1840 [= Crustacea †] or *Eryma* Albers 1854 [= Gastropoda] or *Eryma* Förster 1868 [= Hymenoptera])

Type species: *Eryma laticeps* [= *Emys laticeps* Gray 1854a = subjective synonym of *Emys leprosa* Schoepff *in* Schweigger 1812], by original monotypy.

Cathaiemys Lindholm 1931:29

Type species: *Cathaiemys mutica* [= *Emys mutica* Cantor 1842b], by original designation.

Pseudocadia Lindholm 1931:30

Type species: *Pseudocadia anyangensis* [= *Testudo anyangensis* † Ping 1930], by original designation.

Chinemys Smith 1931:116

Type species: *Chinemys reevesi* [= *Emys reevesii* Gray 1831d)], by original monotypy.

Annamemys Bourret 1940:15

Type species: *Annamemys merkleni* Bourret 1940 [= subjective synonym of *Cyclemys annamensis* Siebenrock 1903a], by original monotypy.

Mauremys annamensis **(Siebenrock 1903a)** (07:44, 14:29, 17:49) **(69)**

Vietnamese Pond Turtle, Annam Pond Turtle

Jeffrey E. Dawson / CBFTT / Vietnam / captivity

Jeffrey E. Dawson / CBFTT / Vietnam / captivity

*

Distribution: Vietnam

Presumed Historic Indigenous Range: 16,209 sq. km

Size (Max SCL): male 23.2 cm, female 28.5 cm (McCormack et al. 2014 CBFTT)

CBFTT Account: McCormack, Dawson, Hendrie, Ewert, Iverson, Hatcher, and Goode (2014)

IUCN Red List: Critically Endangered (CR A2bcd+4bcd; B2ab(i,ii,iii,iv,v); D) (McCormack et al. 2020); Previously: Critically Endangered (CR A1d+2d) (ATTWG 2000), Least Concern (LC) [Not Listed] (TFTSG 1996)

CITES: Appendix I (2019); Previously: Appendix II (2003)

Synonymy:

Cyclemys annamensis Siebenrock 1903a:341

Cuora (Cyclemys) annamensis, *Cuora annamensis*, *Annamemys annamensis*, *Mauremys annamensis*, *Cathaiemys annamensis*

Type locality: "Annam (Phuc-Son)" [= Phuoc Son, Quang Nam, Vietnam (15°33'00"N; 108°04'00"E; see Le et al. 2004].

Type specimen: NMW 23394, holotype, see Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Gemel et al. (2019).

Annamemys merkleni Bourret 1940:15

Type locality: "Annam...Fai-Fo" [= Hoi An, Quang Nam, Vietnam].

Type specimen: CAS-SU 9142 (formerly VNUH Y.20), lectotype, designated by Savage (1953:471).

Clemmys guangxiensis Qin 1992:60 (14:29) (*partim*, hybrid)

Mauremys guangxiensis

Type locality: "Nanning, Guangxi" [China]. [in error? trade?]

Type specimen: SNHM 88701, holotype.

Ocadia glyphistoma McCord and Iverson 1994:53 (07:33) (*partim*, hybrid)

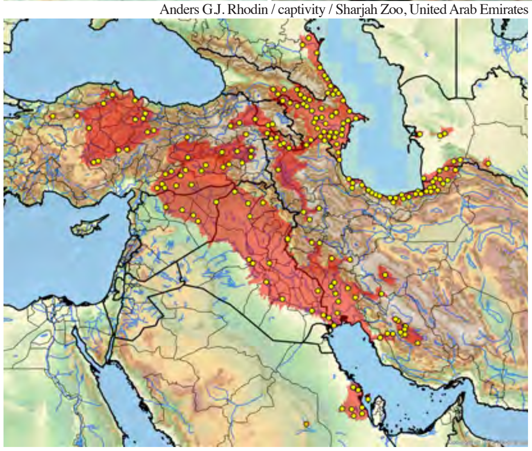
Type locality: "near the Vietnam border southwest of Nanning, Guangxi Province, China." [in error?]

Type specimen: UF 84818, holotype.

Mauremys caspica (Gmelin 1774) (09:27, 12:26, 17:50)
Caspian Turtle, Caspian Terrapin


Asghar Mobaraki / Maharloo Lake, Shiraz, Fars, Iran


Anders G.J. Rhodin / captivity / Sharjah Zoo, United Arab Emirates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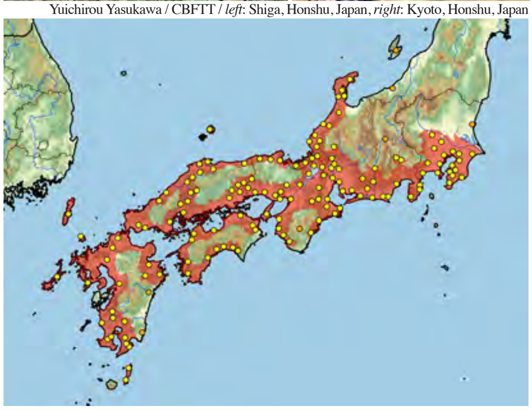
Distribution: Armenia, Azerbaijan, Bahrain, Georgia, Iran (Ardabil, Bushehr, Chahar Mahal Va Bakhtiari, East Azarbaijan, Fars, Gilan, Golestan, Ilam, Isfahan, Kermanshah, Khuzestan, Kordestan, Lorestan, Mazandaran, West Azarbaijan), Iraq, Russia (Dagestan), Saudi Arabia (Eastern), Syria, Turkey, Turkmenistan
Presumed Historic Indigenous Range: 848,053 sq. km
Size (Max SCL): male 23.0 cm, female 25.0 cm (Fritz and Wischuf 1997; Yazarloo et al. 2017)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Testudo caspica Gmelin 1774:59,pl.X
Emys caspica, Clemmys caspica, Clemmys (Clemmys) caspica, Terrapene caspica, Clemmys caspica caspica, Mauremys caspica, Mauremys caspica caspica
Type locality: "Schamachie...bei Bach Pusahat" [= Pirsagat (39º53'N, 49º25'E), Shemakha, Azerbaijan]. Emended to "Hircaniae aquis dulcibus" by Gmelin (1789:1042); and to "les bords de la mer Caspienne...dans les eaux douces de l'Hircanie" [Azerbaijan] by Daudin (1801:124).
Type specimen: Not located, specimen figured (pl.10-11), lectotype, designated by Fritz and Wischuf (1997:237).

Testudo ecaudata Daudin 1801:125 (*nomen novum* and senior homonym, not = *Testudo ecaudata* Pallas 1814 [= *Testudo (Testudo) graeca buxtoni*])
Type locality: "les bords de la mer Caspienne...dans les eaux douces de l'Hircanie" [Azerbaijan].
Type specimen: Not located, specimen figured in Gmelin (1774:pl.10-11), by default, lectotype, designated by Fritz and Wischuf (1997:237).
Comment: Unjustified replacement name for *caspica*.
Emys caspia Rüppell *in* Gray 1830e:9 (*nomen novum*)
Testudo caspia, Clemmys caspia, Clemmys caspia caspia
Type locality: "Caspian Sea."
Comment: Unjustified emendation or error for *caspica*.
Emys grayi Günther 1869:504 (junior homonym, not = *Emys grayi* Bocourt 1868 [= *Trachemys grayi grayi*])
Emmenia grayi
Type locality: "Bussora" [= Basrah (30º30'N, 47º50'E), Iraq].
Type specimen: NHMUK 1947.4.3.47 (formerly 1869.8.28.4), holotype, see Fritz and Wischuf (1997).
Mauremys caspica siebenrocki Wischuf *in* Maran 1996:17 (*nomen nudum*)
Mauremys caspica schiras Wischuf *in* Maran 1996:17 (*nomen nudum*)
Mauremys caspica ventrimaculata Wischuf and Fritz 1996:114
Type locality: "Tang-e Karam (Tang-i-Kerim), 70 Meilen östlich von Schiraz, Iran (29º 03' N, 53º 38' E)."
Type specimen: NHMUK 1874.11.23.4, holotype.
Mauremys caspica siebenrocki Wischuf and Fritz *in* Fritz and Wischuf 1997:240
Type locality: "Kerbela, Irak" [Iraq].
Type specimen: MTD 27101, holotype.

Mauremys japonica (Temminck and Schlegel 1838) (10:18, 14:30) **(70)**
Japanese Pond Turtle


Hiromi Tada / Tokyo, Honshu, Japan


Yuichirou Yasukawa / CBFTT / *left*: Shiga, Honshu, Japan, *right*: Kyoto, Honshu, Japan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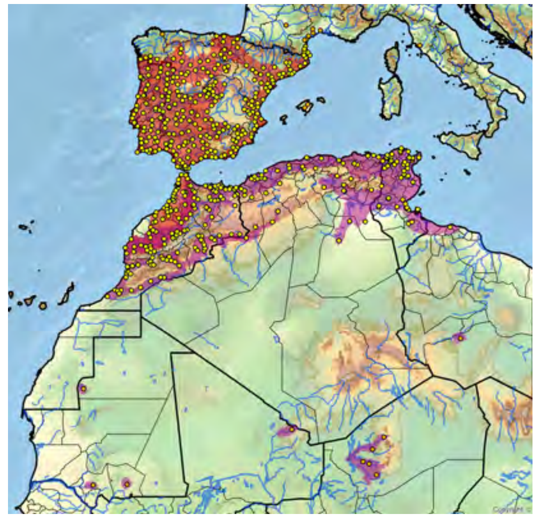
(orange dots = probable introduced or trade or uncertain)

Distribution: Japan (Honshu, Kyoshu, Shikoku)
Presumed Historic Indigenous Range: 124,321 sq. km
Size (Max SCL): male 17.4 cm, female 20.9 cm (Iverson and McCord 1994; Ceballos et al. 2013; Itescu et al. 2014)
CBFTT Account: Yasukawa, Yabe, and Ota (2008)
IUCN Red List: Near Threatened (NT) (ATTWG 2000); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II (2013)
Synonymy:
Emys palustris var. *Japon* Temminck and Schlegel 1834:pls.8-9 (14:30) (invalid vernacular name)
Emys vulgaris var. *japonaise* Temminck and Schlegel 1834:54 (14:30) (invalid vernacular name)
Emys vulgaris japonica Temminck and Schlegel 1838:139 (10:18, 14:30)
Emys japonica, Emys caspica japonica, Clemmys japonica, Mauremys japonica, Ocadia japonica
Type locality: "Japon" [Japan].
Type specimens: RMNH 3331–34, 6142, syntypes (6), discussed by Hoogmoed et al. (2010); MNHN 1954 listed as a syntype by King and Burke (1989), Iverson (1992), and Uetz et al. (2019).
Testudo margaritifera Schlegel *in* Gray 1856b:11 (*nomen nudum*)

Mauremys leprosa (Schoepff *in* Schweigger 1812) (17:51)
Mediterranean Pond Turtle, Spanish Terrapin, Mediterranean Stripe-necked Terrapin
(includes 2 subspecies)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(subspecies: *leprosa* = red, *saharica* = purple, overlap = intergrades; orange dots = possibly prehistorically introduced or traded or questionable localities)

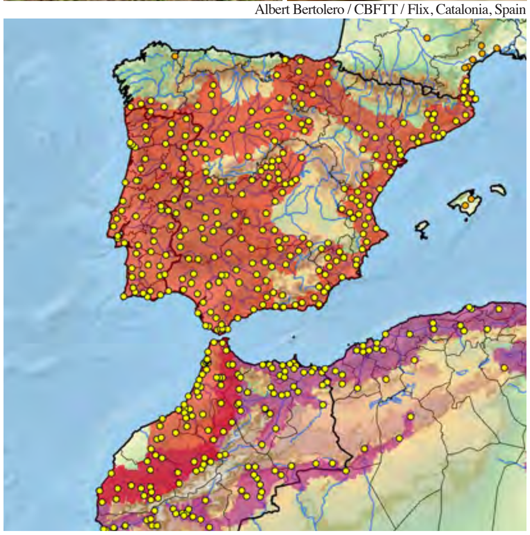
Distribution: Algeria, France, Libya, Mauritania (prehistoric introduction?), Mali (prehistoric introduction?), Morocco, Niger (prehistoric introduction?), Portugal, Spain (Continental), Tunisia
Introduced: France, Italy, Spain (Balearic Islands)
Presumed Historic Indigenous Range: 998,214 sq. km
Size (Max SCL): male 21.0 cm, female 24.0 cm (see subspp.)
CBFTT Account: Bertolero and Busack (2017)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996); Regional (Europe): Vulnerable (VU A2ac+3c) (van Dijk et al. 2004; Cox and Temple 2009)
TFTSG Provisional Red List: Vulnerable (VU) (2011)

Mauremys leprosa leprosa (Schoepff *in* Schweigger 1812) (07:4

Mediterranean Pond Turtle, Mediterranean Stripe-necked Terrapin

Albert Bertolero / CBFTT / Flix, Catalonia, Spain

Albert Bertolero / CBFTT / Flix, Catalonia, Spain



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(subspecies: *leprosa* = red, *saharica* = purple, overlap = intergrades; orange dots = possibly introduced)

Distribution: France, Morocco, Portugal, Spain (Continental)

Presumed Historic Indigenous Range: 499,590 sq. km

Size (Max SCL): male 21.0 cm, female 24.0 cm (Bertolero and Busack 2017 CBFTT)

Synonymy:

Emys leprosa Schoepff *in* Schweigger 1812:298

Clemmys (Clemmys) leprosa, Clemmys leprosa, Emys caspica leprosa, Clemmys caspica leprosa, Mauremys caspica leprosa, Mauremys leprosa, Mauremys leprosa leprosa

Type locality: Not known. Restricted to "Südspanien" [Spain] by Mertens and Müller (1928:22).

Type specimen: MNHN 1934, holotype, see Bour and Maran (1999) and Ceríaco and Bour (2012); not MNHN 7936, listed as "holotype" (Bour, pers. comm. *in* Iverson 1992).

Emys lutescens Schweigger 1812:302

Clemmys (Clemmys) lutescens, Clemmys lutescens

Type locality: Not known. Restricted to "southern Spain" by Fritz and Havaš (2007:230).

Type specimen: MNHN s/n, holotype, apparently lost, see Bour and Maran (1999).

Emys marmorea Spix 1824:13

Clemmys marmorea

Type locality: "Brasil" [Brazil; in error]. Restricted to "environs de Gibraltar" by Temminck and Schlegel (1834:53), and to "southern Spain" by Fritz and Havaš (2007:230).

Type specimen: ZSM, holotype or syntypes, not known, apparently lost, type specimen figured (pl.10), not listed by Hoogmoed and Gruber (1983) or Franzen and Glaw (2007).

Clemmys sigriz Michahelles 1829:1296

Terrapene sigriz, Emys sigriz, Clemmys caspica sigriz

Type locality: "paludibus Hispaniae meridionalis" [marshes of southern Spain].

Type specimens: Not known or located, syntypes, originally live, see Bour and Maran (1999).

Emys vulgaris Gray 1830e:9 (10:7)

Type locality: "South of Europe. Spain."

Type specimens: Specimen figured in Gray (1831d:pl.4,top), lectotype, designated by Fritz and Wischuf (1997:249); original syntypes (20+) in OUM, NHMUK, and RMNH, discussed by Fritz and Wischuf (1997), Hoogmoed et al. (2010), and Nowak-Kemp and Fritz (2010); NHMUK 1988.79, erroneously listed as "holotype" by Bour and Maran (1999), also discussed by Fritz and Wischuf (1997).

Emys sigritzii Michahelles *in* Gray 1831d:24 (*nomen novum*)

Comment: Unjustified emendation of *sigriz*.

Emys laticeps Gray 1854a:134

Clemmys laticeps, Eryma laticeps

Type locality: "West Africa, River Gambia" [Gambia]; possibly in error. Emended to "Tétouan, Morocco" by Fritz and Havaš (2007:230) without explanation.

Type specimens: NHMUK 1947.3.4.43–44, 1947.3.4.46, 1947.3.5.38–39 (formerly 1848.8.22.6–9, 1848.8.22.[s/n]), syntypes (5), see Bour and Maran (1999).

Emys fuliginosus Gray 1860c:232

Emys fuliginosa, Clemmys fuliginosa, Mauremys fuliginosa

Type locality: "Egypt?...North Africa?" Emended to "southern Spain" by Fritz and Havaš (2007:230) without explanation.

Type specimen: NHMUK 1947.3.4.45, holotype, see Bour and Maran (1999).

Mauremys laniaria Gray 1869b:499

Emys (Mauremys) laniaria, Emys lamaria

Type locality: Not known. Restricted to "southern Spain" by Fritz and Havaš (2007:230).

Type specimens: NHMUK 1946.1.22.52–53 (formerly 1869.12.21.3–4), syntypes (2), listed by Bour and Maran (1999).

Emys flavipes Gray 1869c:643

Type locality: Not known. Restricted to "southern Spain" by Fritz and Havaš (2007:230).

Type specimens: NHMUK 1946.1.22.31, 1946.1.22.43, and s/n (formerly 1859.5.11.2, 1861.10.1.4, 1870.12.22.7), syntypes (3), see Bour and Maran (1999).

Emys fraseri Gray 1869c:643 (*partim, nomen dubium*)

Type locality: "North Africa." Restricted to "Lake Tetzara, Algiers" [Algeria] by Gray (1873a:146).

Type specimens: NHMUK 1946.1.22.33–34 (formerly 1846.11.4.21–22), syntypes (2), see Bour and Maran (1999).

Emys marginata Gray 1873j:36 (*nomen nudum*)

Type locality: "W. Africa."

Type specimen: NHMUK, holotype, not located.

Mauremys leprosa atlantica Schleich 1996a:32 (07:45)

Type locality: "Larache, Nord-Marokko" [Morocco].

Type specimen: ZSM 35/1996, holotype, see Franzen and Glaw (2007).

Mauremys leprosa erhardi Schleich 1996a:36 (07:45)

Type locality: "NNE Taza, N 35º 25' 32.8, W 02º 52' 11.5, Nordost Marokko" [Morocco].

Type specimen: ZSM 13/1996, holotype, see Franzen and Glaw (2007).

Mauremys leprosa marokkensis Schleich 1996a:40 (07:45)

Type locality: "ca. 2 km NE Tahanaoute / Kreuzung S 501, wenige km vor Aguelmouss; S-Marrakech, N 31º 24' 54.0, W 7º 49' 44.4, Zentral-Morokko" [Morocco].

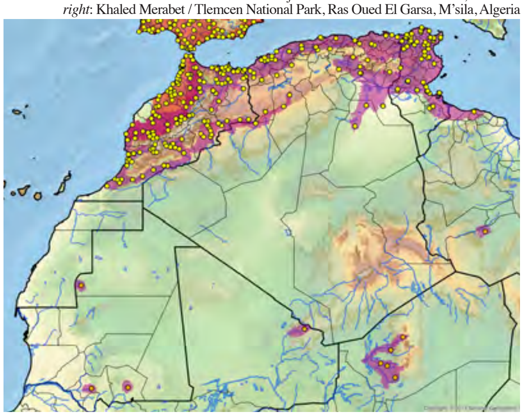
Type specimen: ZSM 79/1994, holotype, see Franzen and Glaw (2007).

Mauremys leprosa wernerkaestlei Schleich 1996a:44 (07:45)
Type locality: "Wasserlauf im Schnittpunkt von Oued Serou, Oued Oum de Oumbia. Oued Oum er Rbia, S-Khenifra, N 32° 44' 55.1, W 5° 41' 10.7, ca. 90 m NN, Zentral-Morokko" [Morocco].
Type specimen: ZSM 81/1994, holotype, see Franzen and Glaw (2007).

Mauremys leprosa saharica Schleich 1996 (07:45)
Saharan Pond Turtle

Andreas Nöllert / CBFTT / Bou-Jerif, Morocco

left: Andreas Nöllert / Oued Noun, Morocco
right: Khaled Merabet / Tlemcen National Park, Ras Oued El Garsa, M'sila, Algeria



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(subspecies: *leprosa* = red, *saharica* = purple, overlap = intergrades; orange dots = possibly prehistorically introduced or traded or questionable localities)

Distribution: Algeria, Libya, Mauritania (prehistoric introduction?), Mali (prehistoric introduction?), Morocco, Niger (prehistoric introduction?), Tunisia
Presumed Historic Indigenous Range: 561,161 sq. km
Size (Max SCL): male 17.5 cm, female 22.0 cm (Bertolero and Busack 2017 CBFTT)
Synonymy:
Emys fraseri Gray 1869c:643 (*partim*, *nomen dubium*)
Type locality: "North Africa." Restricted to "Lake Tetzara, Algiers" [Algeria] by Gray (1873a:146).
Type specimens: NHMUK 1946.1.22.33–34 (formerly 1846.11.4.21–22), syntypes (2), see Bour and Maran (1999).
Mauremys leprosa saharica Schleich 1996a:45 (07:45)
Type locality: "Fort Bou Jerif, Goulmime, Südwest-Marokko" [Morocco].
Type specimen: ZSM 200/1993, holotype, see Franzen and Glaw (2007).
Mauremys leprosa zizi Schleich 1996a:48 (07:45)
Type locality: "Oued Ziz, Meski bis Erfoud, Süd-Marokko" [Morocco].
Type specimen: ZSM 15/1996, holotype, see Franzen and Glaw (2007).
Mauremys leprosa vanmeerhaeghei Bour and Maran 1999:42 (07:45)
Type locality: "Mare amont dans l'oasis de Sidi El Mehdaoui (29°30 N, 8°00 W)...Province de Tata (ca. 30 km de Tata), Maroc...affluent de...l'oued Draa" [Morocco].
Type specimen: MNHN 1996.8204, holotype.

Mauremys mutica (Cantor 1842b) (17:49) **(69)**
Yellow Pond Turtle
(includes 2 subspecies)

*

(subspecies: *mutica* = red; *kami* = purple [Ryukyus]; orange dots = trade or questionable)

Distribution: China (Anhui, Fujian, Guangdong, Guangxi, Hainan, Hubei, Jiangsu, Zhejiang), Japan (Ryukyu Archipelago), Taiwan, Vietnam
Introduced: Japan (mainland)
Presumed Historic Indigenous Range: 413,389 sq. km
Size (Max SCL): male 19.6 cm, female 19.5 cm (see subspp.)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Fong et al. 2021); Previously: Endangered (EN A1cd+2cd) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II (2003)

Mauremys mutica mutica (Cantor 1842b)
Yellow Pond Turtle

Tien-Hsi Chen / Taiwan


Peter Paul van Dijk / Hainan, China / trade

*

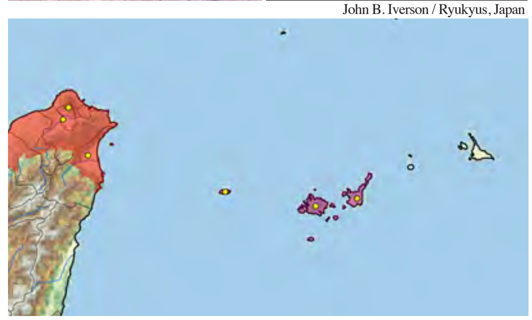
(subspecies: *mutica* = red; orange dots = trade or questionable)

Distribution: China (Anhui, Fujian, Guangdong, Guangxi, Hainan, Hubei, Jiangsu, Zhejiang), Taiwan, Vietnam
Presumed Historic Indigenous Range: 412,684 sq. km
Size (Max SCL): male 19.6 cm, female 19.5 cm (Yasukawa et al. 1996; Ceballos et al. 2013)
Synonymy:
Emys muticus Cantor 1842b:482
Emys mutica, Clemmys mutica, Damonia mutica, Geoclemys mutica, Cathaiemys mutica, Mauremys mutica, Mauremys mutica mutica, Cathaiemys mutica mutica
Type locality: “Chusan...Island” [Zhoushan Island, Zhejiang, China]. Cited as “Canton” [in error] by many authors, corrected by Iverson and McCord (1989:23).
Type specimen: NHMUK 1947.3.5.34, holotype.
Clemmys schmackeri Boettger 1894:129
Type locality: “China, wahrscheinlich Hainan.”
Type specimen: SMF 7584, holotype, see Mertens (1967b).
Annamemys grochovskiae Dao 1957:1214
Mauremys grochovskiae
Type locality: In Russian [“forest near Vinh-Linh, Quang Tri Province, central Vietnam”].
Type specimen: Not located, type specimen figured (f.a-d).
Mauremys iversoni Pritchard and McCord 1991:140 (07:33) (*partim*, hybrid)
Type locality: “People’s Republic of China: Fujian Province: vicinity of Nanping (26°38' N, 118°10' E).”
Type specimen: UF 71865, holotype.
Clemmys guangxiensis Qin 1992:60 (14:29) (*partim*, hybrid)
Mauremys guangxiensis
Type locality: “Nanning, Guangxi” [China].
Type specimen: SNHM 88701, holotype.
Mauremys pritchardi McCord 1998:555 (07:33) (*partim*, hybrid)
Type locality: “Lashio, Myanmar (97°14' E, 22°56' N).”
Type specimen: UF 105422, holotype.

Mauremys mutica kami Yasukawa, Ota, and Iverson 1996
Ryukyu Yellow Pond Turtle

John B. Iverson / Ryukyus, Japan


John B. Iverson / Ryukyus, Japan



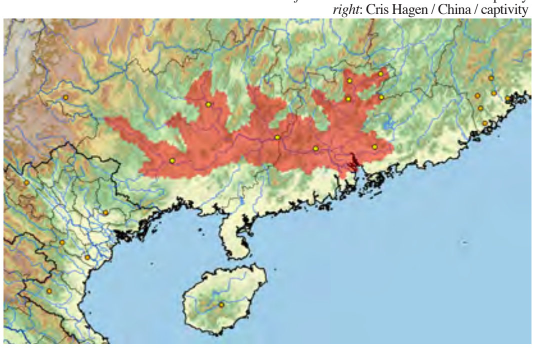
(subspecies: *mutica* = red; *kami* = purple)

Distribution: Japan (Ryukyu Archipelago)
Presumed Historic Indigenous Range: 705 sq. km
Size (Max SCL): male 18.9 cm, female 17.6 cm (Yasukawa et al. 1996)
Synonymy:
Mauremys mutica kami Yasukawa, Ota, and Iverson 1996:311
Cathaiemys mutica kami
Type locality: “Okawa, Ishigakijima Is., the Yaeyama Group, Ryukyu Archipelago, Japan.”
Type specimen: KUZ 19541, holotype.

Mauremys nigricans (Gray 1834a)
Chinese Red-necked Turtle, Red-necked Pond Turtle

Ben Anders / CBFTT / China / trade

left: Ben Anders / CBFTT / China / captivity
right: Cris Hagen / China / captivity



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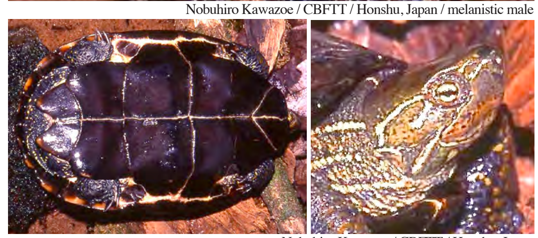
Distribution: China (Fujian [?], Guangdong, Guangxi, Hainan [?]), Vietnam (?)
Presumed Historic Indigenous Range: 133,188 sq. km
Size (Max SCL): male 19.7 cm, female 29.8 cm (Fang 1934; Iverson and McCord 1989; Anders and Iverson 2012 CBFTT; Ceballos et al. 2013)
CBFTT Account: Anders and Iverson (2012)
IUCN Red List: Endangered (EN A1d+2d) (ATTWG 2000); Previously: Data Deficient (DD) (TFTSG 1996)
TFTSG Provisional Red List: Critically Endangered (CR) (2011)
CITES: Appendix II (2013); Previously: Appendix III (China) (2005)
Synonymy:
Emys nigricans Gray 1834a:53
Emys nigracans, Clemmys nigricans, Damonia nigricans, Chinemys nigricans, Mauremys nigricans
Type locality: "Chinâ prope Canton" [Gangzhou, Guangdong].
Type specimen: NHMUK 1947.3.5.35, holotype.
Geoclemys kwangtungensis Pope 1934:1
Clemmys kuangtungensis, Chinemys kwangtungensis
Type locality: "Lofaoshan, Kwangtung, 300–400 m. altitude" [Mt. Luofu, Guangdong, China].
Type specimen: ZMB 34955, holotype, see Fritz et al. (1994).
Geoclemys palaeannamitica † Bourret 1941a:10
Geoclemmys palaeannamitica, Chinemys palaeannamitica
Type locality: "la grotte de Dong-Giao, appelée 'Thung Gianh' ... à moins de 1 km de la voie ferrée, vers le N.W., au S.W. de la station de Dong-Giao, tout près de la frontière entre Annam et Tonkin" [Vietnam].
Type specimen: MNHN 1948.42 (formerly VNUH T.88), holotype, subfossil, partial skull, figured, see Bour (1980b).
Geologic age: Holocene, Neolithic.

Mauremys reevesii (Gray 1831d) (07:46, 17:52) **(71)**
Reeves' Turtle, Chinese Three-keeled Pond Turtle

Nobuhiro Kawazoe / CBFTT / Honshu, Japan / melanistic male



Nobuhiro Kawazoe / CBFTT / Honshu, Japan

*

*

(native populations = red, presumed introduced populations = gray; orange dots = presumed introduced and trade)

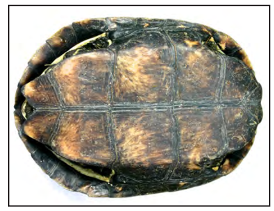
Distribution: China (Anhui, Fujian, Gansu, Guangdong, Guizhou, Henan, Hong Kong, Hubei, Hunan, Jiangsu, Jiangxi, Macau, Shangdong, Shanxi, Shaanxi, Sichuan, Zhejiang), Japan (prehistoric introduction), North Korea, South Korea, Taiwan (prehistoric introduction)
Introduced: Indonesia (Timor), Palau, Philippines, Timor-Leste
Presumed Historic Indigenous Range: 772,373 sq. km (native range); 907,262 sq. km (native plus prehistoric introduced range)

Size (Max SCL): male 23.6 cm, female 30.0 cm (Lovich et al. 2011 CBFTT; Iverson, unpubl. data)
CBFTT Account: Lovich, Yasukawa, and Ota (2011)
IUCN Red List: Endangered (EN A2bcd+4bcd) (van Dijk 2011); Previously: Endangered (EN) (ATTWG 2000), Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix III (China) (2005)
Synonymy:
Emys reevesii Gray 1831d:73
Clemmys (Clemmys) reevesii, Clemmys reevesii, Geoclemys reevesii, Geoclemmys reevesii, Damonia reevesii, Geoclemys reevesii reevesii, Chinemys reevesi, Chinemys reevesii, Mauremys reevesii
Type locality: "China."
Type specimens: NHMUK 1947.3.5.31–32, syntypes (2).
Emys vulgaris picta Schlegel 1844:127
Type locality: "Japan."
Type specimens: RMNH 3330A–B, MNHN 1954, syntypes (3), discussed by Hoogmoed et al. (2010).
Emys japonica Duméril and Bibron *in* Duméril and Duméril 1851:8 (*nomen novum*)
Type locality: "Japon" [Japan].
Type specimens: RMNH 3330A–B, MNHN 1954, syntypes (3), by default, discussed by Hoogmoed et al. (2010), not MNHN 4096.
Comment: Unjustified replacement name for *picta*.
Damonia unicolor Gray 1873e:78
Clemmys unicolor, Damonia reevesii unicolor, Geoclemys reevesii unicolor
Type locality: "China...Shanghai."
Type specimens: NHMUK 1946.1.22.46–47 and 1947.3.4.11 (formerly 1873.6.21.4, 1876.6.12.1–2), syntypes (3).
Geoclemys grangeri Schmidt 1925:1
Geoclemys reevesii grangeri, Chinemys grangeri
Type locality: "Yenchingkao, Wanhsien, Szechwan, 1500 feet altitude" [Yanjinggou, Sichuan, China].
Type specimen: AMNH 23481, holotype.
Geoclemys paracaretta Chang 1929:1
Geoclemys papacaretta
Type locality: "Fuchow" [Fuzhou Shi, Fujian, China].
Type specimen: MBLSSC 134, holotype.
Chinemys megalocephala Fang 1934:158
Mauremys megalocephala, Chinemys megacephala
Type locality: "hill-sides of the vicinity of Nanking city" [Nanjing Shi, Jiangsu, China].
Type specimen: Possibly MMNHN, holotype, originally live, figured (f.6).
Chinemys macrocephala Bourret 1941c:140 (*nomen invalidum*)
Comment: Unjustified replacement name for *megalocephala*.
Chinemys pani † Tao 1985:45
Type locality: "Tsochen, Tsai-liao-chi, Tainan, Taiwan."
Type specimen: Private collection of Chang-Wu Pan, Tainan, Taiwan, holotype, fossil, nearly whole shell, figured (f.2-4); NTUM R0001, cast of the holotype.
Geologic age: Pleistocene, Chi-Ting.
Mauremys pritchardi McCord 1998:555 (07:33) (*partim*, hybrid)
Type locality: "Lashio, Myanmar (97°14' E, 22°56' N)."
Type specimen: UF 105422, holotype.

Mauremys rivulata (Valenciennes *in* Bory de Saint-Vincent 1833) (14:25, 17:50, 17:53)

Western Caspian Turtle, Balkan Terrapin

Apostolis Trichas / CBFTT / Crete, Greece



left: Georgia Mantziou / CBFTT / Almyros River, Irakleio, Crete, Greece
right: Apostolis Trichas / CBFTT / Crete, Greece

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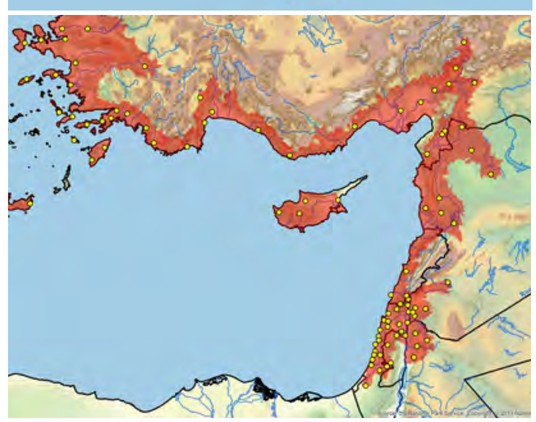

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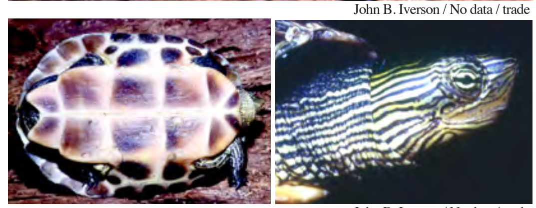
(orange dots = uncertain or introduced)

Distribution: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Greece, Israel, Jordan, Lebanon, Montenegro, North Macedonia, Palestine (West Bank), Syria, Turkey
Introduced: Latvia
Presumed Historic Indigenous Range: 325,904 sq. km
Size (Max SCL): male 21.5 cm, female 24.4 cm (Ayaz and Budak 2008; Mantziou and Rifai 2014 CBFTT)
CBFTT Account: Mantziou and Rifai (2014)
IUCN Red List: Global: Not Evaluated (NE); Regional (Europe): Least Concern (LC) (van Dijk et al. 2004; Cox and Temple 2009)

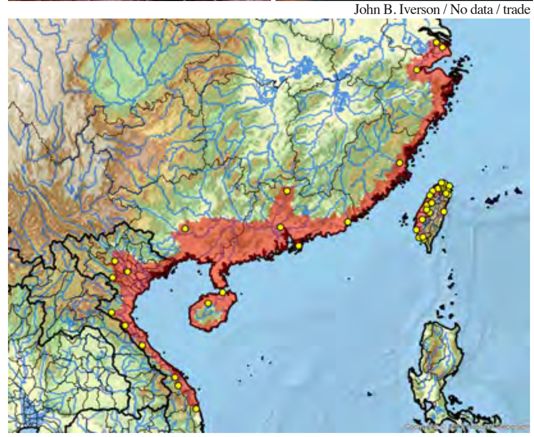
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Emys pannonica Michahelles *in* Bonaparte 1831:87 (*nomen nudum*)
Emys rivulata Valenciennes *in* Bory de Saint-Vincent 1833:planches,pl.9 (14:25) (senior homonym, not = *Emys rivulata* Gray 1844 [= *Pseudemys rubriventris*])
Clemmys caspica rivulata, Mauremys caspica rivulata, Mauremys rivulata, Mauremys rivulata rivulata, Emmenia rivulata
Type locality: Not designated. Restricted to "Morée...Modon" [Greece] by Bory de Saint-Vincent (1836:110), and emended to "Umgebung von Modon, Morea, Griechenland" [Greece] by Mertens and Müller (1928:22).
Type specimen: MNHN 1930, holotype, see Fritz and Wischuf (1997).
Emys tristrami Gray 1869a:190
Emys tristram, Mauremys rivulata tristrami
Type locality: "Holy Land" [Israel or Jordan]. Restricted to "Jabook River" [Zarqa River, Jordan] by Gray (1873j:35); and to "Yarmuk River" [Israel or Jordan] by Boulenger (1889:104).
Type specimen: NHMUK 1947.3.5.37 (formerly 1864.8.23.156), holotype, see Fritz and Wischuf (1997).
Emys caspica arabica Gray 1870c:36
Emys arabica
Type locality: "Arabia Petraea?" Restricted to "Mt. Carmel" [Israel] by Gray (1873j:34).
Type specimen: NHMUK 1946.1.22.48 (formerly 1864.8.25.51), holotype, see Fritz and Wischuf (1997).
Emys pannonica Gray 1870c:36
Type locality: "Xantos" [Xanthos, Greece].
Type specimen: NHMUK 1946.1.22.37, lectotype, designated by Fritz and Wischuf (1997:244).
Clemmys caspica orientalis Bedriaga 1881:335
Type locality: "Umgebung von Athen und von Nauplia, ferner auf den Inseln Milo, Mykonos, Syra, Tinos, Siphnos und Seriphos" [Greece].
Type specimens: Bedriaga private collection, syntypes (2), apparently lost, see Fritz and Wischuf (1997).
Clemmys caspica obsoleta Schreiber 1912:946
Type locality: "südlichen Dalmatien...Bocche di Cattaro..[&].. Halbinsel Sabbioncello..[&]..Menge" [Croatia]. Restricted to "Bocche di Cattaro, Süd-Dalmatien" [Croatia] by Wermuth and Mertens (1961:60).
Type specimens: Schreiber private collection, syntypes, apparently lost, see Fritz and Wischuf (1997).
Clemmys caspica cretica Mertens 1946:115
Mauremys caspica cretica, Mauremys rivulata cretica
Type locality: "Rapaniana, Kreta" [Crete, Greece].
Type specimen: SMF 36396, holotype, see Mertens (1967b) and Fritz and Wischuf (1997).

Mauremys sinensis (Gray 1834a) (07:44)
Chinese Stripe-necked Turtle

John B. Iverson / No data / trade



John B. Iverson / No data / trade



Distribution: China (Fujian, Guangdong, Guangxi, Hainan, Zhejiang), Taiwan, Vietnam
Introduced: South Korea, USA (Florida)
Presumed Historic Indigenous Range: 383,781 sq. km
Size (Max SCL): male 20.0 cm, female 27.1 cm (McCord and Iverson 1994)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Li et al. 2021); Previously: Endangered (EN A1cd) (ATTWG 2000); Near Threatened (NT) (TFTSG 1996)
CITES: Appendix III (China) (2005)
Synonymy:
Emys sinensis Gray 1834a:53
Graptemys sinensis, Clemmys sinensis, Ocadia sinensis, Ocadia sinensis sinensis, Mauremys sinensis
Type locality: "Chinâ." Restricted to "China; Canton" [Gangzhou, Guangdong] by Gray (1856b:21).
Type specimen: NHMUK 1947.3.5.26, holotype.
Emys bennettii Gray 1844:21
Clemmys bennettii
Type locality: "North America?" [in error]. Restricted to "China?" by Gray (1856b:22).
Type specimens: NHMUK 1947.3.4.24 and 1947.3.5.27 (formerly 1854.5.4.10, 1854.5.4.19), syntypes (2).
Testudo anyangensis † Ping 1930:217
Ocadia anyangensis, Pseudocadia anyangensis, Mauremys anyangensis
Type locality: "ancient ruins in Annyang Hsien, Honan Province" [Anyang Shi, Henan, China].
Type specimen: Probably NZMC s/n, holotype, not located, subfossil, whole shell, figured (f.1-3).

Geologic age: Holocene, Neolithic.

Ocadia sinensis changwui † Tao 1988:233

Type locality: "Penghu Channel in the Taiwan Strait" [Taiwan].

Type specimen: Private collection of Chang-Wu Pan, Tainan, Taiwan, holotype, fossil, partial carapace fragment, figured (f.1-2); NTUM F0076, cast of the holotype.

Geologic age: Late Pleistocene.

Ocadia philippeni McCord and Iverson 1992:13 (07:33) (*partim*, hybrid)

Type locality: "near Kancheng [18º51'N, 108º37'E; = 48 km from Tungfang (19º03'N, 108º56'E)], western Hainan Island, China." [in error?].

Type specimen: UF 80766, holotype.

Ocadia glyphistoma McCord and Iverson 1994:53 (07:33) (*partim*, hybrid)

Type locality: "near the Vietnam border southwest of Nanning, Guangxi Province, China." [in error?]

Type specimen: UF 84818, holotype.

Melanochelys Gray 1869a

Melanochelys Gray 1869a:187

Type species: *Melanochelys trijuga* [= *Emys trijuga* Schweigger 1812], by original monotypy.

Chaibassia Theobald 1876:6

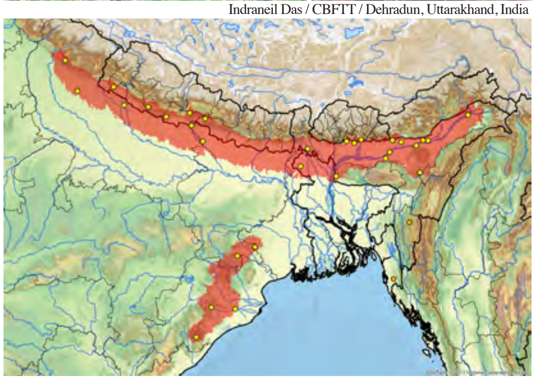
Type species: *Geomyda* (*Chaibassia*) *tricarinata* [= *Geomyda tricarinata* Blyth 1856], by original monotypy.

Melanochelys tricarinata (Blyth 1856)

Tricarinate Hill Turtle, Three-keeled Land Turtle

Indraneil Das / CBFTT / Dehradun, Uttarakhand, India

Indraneil Das / CBFTT / Dehradun, Uttarakhand, India



*

(orange dots = possible trade or uncertain)

Distribution: Bangladesh, Bhutan, India (Arunachal Pradesh, Assam, Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, West Bengal), Nepal

Presumed Historic Indigenous Range: 289,170 sq. km

Size (Max SCL): male 19.6 cm, female 18.5 cm (Baruah et al. 2012; Ceballos et al. 2013)

CBFTT Account: Das (2009)

IUCN Red List: (Endangered A4cd) (Horne et al. 2020); Previously: Vulnerable (VU B1+2c) (ATTWG 2000), Vulnerable (VU) (TFTSG 1996)

CITES: Appendix I (1975)

Synonymy:

Geomyda tricarinata Blyth 1856:714

Geomyda (Chaibassia) tricarinata, Geoemyda tricarinata, Chaibassia tricarinata, Nicoria tricarinata, Melanochleys tricarinata

Type locality: "Central India (Chaibása)." Restricted to "Chybassa, in the District of Singhbhum, Chota Nagpur, Bengal" [Jharkhand, India] by Anderson (1879:717).

Type specimen: ZSI 816, holotype, see Das et al. (1998), Das (2009), and Kundu et al. (2018a).

Geoemyda carinata Blyth *in* Jerdon 1870:69 (*nomen novum*)

Comment: Unjustified replacement name for *tricarinata*.

Chaibassia theobaldi Anderson 1879:718

Type locality: "Bishnath Plain, near Tezpur, in Assam, close to the Brahmaputra" [Assam, India].

Type specimens: ZSI 188–89, syntypes (2), see Das et al. (1998), 189 not located by Kundu et al. (2018a).

Nicoria tricarinata sivalensis † Lydekker 1889:100

Nicoria sivalensis

Type locality: "Siwalik Hills" [Punjab, India].

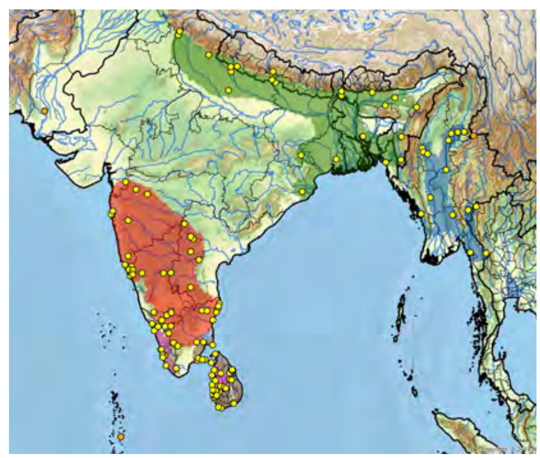
Type specimen: NHM(P) 39839, holotype, fossil, shell, figured (f.21).

Geologic age: Late Pliocene (Pinjor) to Early Pleistocene (Tatrot).

Melanochelys trijuga (Schweigger 1812)

Indian Black Turtle

(includes 6 subspecies)



*

(subspecies: *trijuga* = red, *coronata* = purple, *edeniana* = blue, *indopeninsularis* = green, *parkeri* = pink, *thermalis* = brown; orange dots = introduced or trade)

Distribution: Bangladesh, India (Andhra Pradesh, Assam, Bihar, Gujarat, Karnataka, Kerala, Maharashtra, Meghalaya, Mizoram, Tamil Nadu, Uttar Pradesh, West Bengal), Myanmar, Nepal, Sri Lanka, Thailand

Introduced: British Indian Ocean Territory (Chagos Archipelago), Maldives

Presumed Historic Indigenous Range: 1,399,374 sq. km

Size (Max SCL): male 38.3 cm, female 26.2 cm (see subspp.)

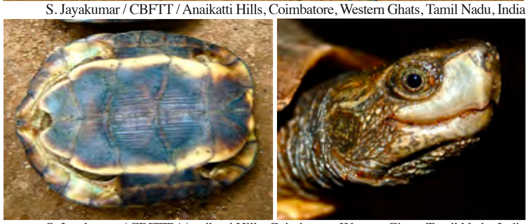
CBFTT Account: Das and Bhupathy (2009b)

IUCN Red List: Least Concern (LC) (Ahmed et al. 2020); Previously: Near Threatened (NT) (ATTWG 2000), Data Deficient (DD) (TFTSG 1996)

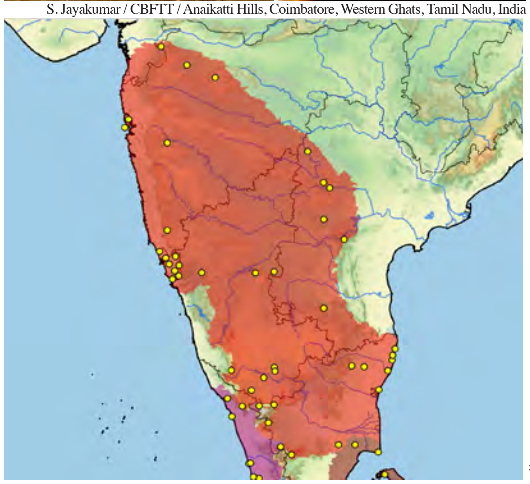
CITES: Appendix II (2013)

Melanochelys trijuga trijuga (Schweigger 1812)
Indian Black Turtle

S. Jayakumar / CBFTT / Anaikatti Hills, Coimbatore, Western Ghats, Tamil Nadu, India



S. Jayakumar / CBFTT / Anaikatti Hills, Coimbatore, Western Ghats, Tamil Nadu, India



*

(subspecies: *trijuga* = red, *coronata* = purple, *thermalis* = brown)

Distribution: India (Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Tamil Nadu)

Presumed Historic Indigenous Range: 558,925 sq. km

Size (Max SCL): No data located; Max CCL: male 25.0 cm, female 22.0 cm (Mukherjee et al. 2006; Das and Bhupathy 2009b CBFTT)

Synonymy:

Emys trijuga Schweigger 1812:310 [(72)]

Clemmys (Clemmys) trijuga, Clemmys trijuga, Melanochelys trijuga, Nicoria trijuga, Geoemyda trijuga, Geoemyda trijuga trijuga, Melanochelys trijuga trijuga

Type locality: "insula Java" [Indonesia].

Type specimen: MNHN, holotype, apparently lost, see Das (2009); specimen figured by Oppel *in* Bour and Schmidtler (2014:f.9,pl.A,B), identified as a *Malayemys subtrijuga*.

Emys herrmanni Schweigger 1812:311 [(72)]

Emys hermanni, Clemmys (Clemmys) hermanni

Type locality: Not known. Restricted to "India" by Gray (1873j:30).

Type specimens: Possibly in MZUS, syntype specimen figured by Duvernoy (1838:pl.5), reproduced by Bour and Schmidtler (2014:f.9,C).

Emys belangeri Lesson 1831b:291 [(72)]

Type locality: "Bengale..[&]..Carnate" [India]. Restricted to "Bengal" [India] by Smith (1931:97).

Type specimen: Possibly MNHN, holotype, not located, specimen figured (pl.1), reproduced by Bour and Schmidtler (2014:f.9,D).

Emys trijuga maderaspatana Anderson 1879:729

Type locality: "Madras" [Chennai, Tamil Nadu, India].

Type specimens: ZSI 831, 1008–9, syntypes (3), see Das et al. (1998) and Kundu et al. (2018a), listed as *Emys trijuga madraspatana*.

Geoemyda trijuga plumbea Annandale 1915a:192

Type locality: "Coorg on the east side of the Western Ghats considerably east and a little south of the Madras district" [Karnataka, India].

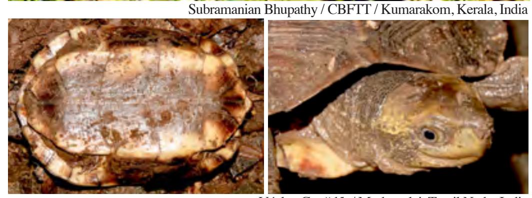
Type specimens: ZSI 17712, 17715, syntypes (2), see Das et al. (1998); 17715 not located by Kundu et al. (2018a).

Emys trijuga madraspatana Das, Dattagupta, and Gayen 1998:126 (*nomen invalidum*)

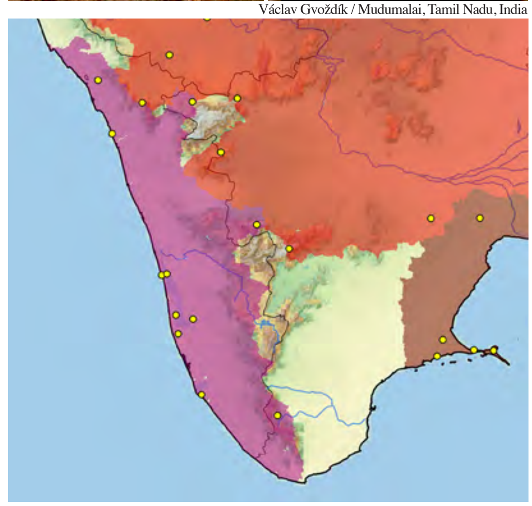
Comment: Unjustified emendation or error for *maderaspatana*.

Melanochelys trijuga coronata (Anderson 1879)
Cochin Black Turtle

Subramanian Bhupathy / CBFTT / Kumarakom, Kerala, India



Václav Gvoždík / Mudumalai, Tamil Nadu, India



*

(subspecies: *trijuga* = red, *coronata* = purple, *thermalis* = brown)

Distribution: India (Kerala, Tamil Nadu)

Presumed Historic Indigenous Range: 32,715 sq. km

Size (Max SCL): No data located; Max CCL: male 26.0 cm, female 23.0 cm (Mukherjee et al. 2006; Das and Bhupathy 2009b CBFTT)

Synonymy:

Emys trijuga coronata Anderson 1879:729

Nicoria trijuga coronata, Geoemyda trijuga coronata, Melanochelys trijuga coronata

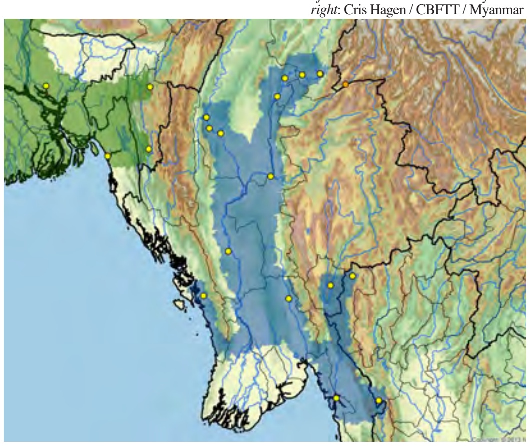
Type locality: "Southern India...Travancore" [Kerala, India].

Type specimen: ZSI 1012, holotype, see Das et al. (1998), Das (2009), and Kundu et al. (2018a).

Melanochelys trijuga edeniana Theobald 1876 (07:47)
Burmese Black Turtle

Rick Hudson / Myanmar / captivity / Yadanabon Zoo

left: Indraneil Das / CBFTT / Myanmar
right: Cris Hagen / CBFTT / Myanmar



*

(subspecies: *edeniana* = blue, *indopeninsularis* = green; orange dot = probable trade)

Distribution: Myanmar, Thailand
Presumed Historic Indigenous Range: 179,397 sq. km
Size (Max SCL): 28.0 cm (Das and Bhupathy 2009b CBFTT)
Synonymy:

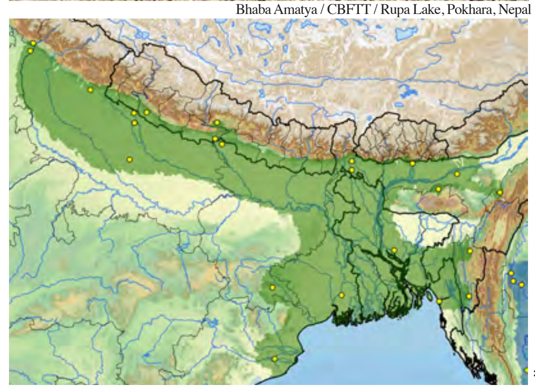
Melanochelys edeniana Theobald 1876:12
Nicoria trijuga edeniana, Geoemyda trijuga edeniana, Melanochelys trijuga edeniana, Emys trijuga edeniana, Melanochelys edeniana edeniana
Type locality: "Arakan, Pegu, and Tenasserim..[&]..near Tounghu" [Myanmar].
Type specimens: ZSI 830, 1010–11, 1018, 1097, 1369, 1371, syntypes (7), see Das et al. (1998) and Kundu et al. (2018a).

Emys trijuga burmana Anderson 1879:723
Type locality: "Bhamô..[&]..Moulmein..[&]..Khyouk-Phyoo in Arracan" [Myanmar]. Restricted to "Bhamo, Burma" [Myanmar] by Smith (1931:98).
Type specimens: ZSI 830, syntype (1), others apparently lost, see Das et al. (1998) and Kundu et al. (2018a).

Geoemyda trijuga wiroti Reimann *in* Nutaphand 1979:177
Melanochelys trijuga wiroti, Melanochelys edeniana wiroti
Type locality: "Thai-Burmese border area (Tak and Mae Hong Son Provinces)" [Thailand].
Type specimen: Not located, possibly in ZFMK, type specimen figured (f.66-67).

Melanochelys trijuga indopeninsularis (Annandale 1913)
Bengal Black Turtle

Bhaba Amatya / CBFTT / Rupa Lake, Pokhara, Nepal



*

(subspecies: *edeniana* = blue, *indopeninsularis* = green)

Distribution: Bangladesh, India (Assam, Bihar, Jharkhand, Meghalaya, Mizoram, Uttar Pradesh, West Bengal), Nepal
Presumed Historic Indigenous Range: 556,684 sq. km
Size (Max SCL): male 34.2 cm, female 26.2 cm (Farkas and Csorba 1999; Das and Bhupathy 2009b CBFTT)
Synonymy:

Bellia sivalensis † Theobald 1877:44 (*nomen dubium*)
Clemmys sivalensis
Type locality: "Siwaliks in the Punjab...half a mile south of Jaba (a village 6 miles south-west from Jhand)" [Himachal Pradesh, India].
Type specimen: ZSI E.88, holotype, fossil, partial shell, figured in Lydekker (1885:pl.20,f.1,1a,1b); NHM(P) R.1514, cast of the holotype, see Lydekker (1889).
Geologic age: Late Pliocene to Early Pleistocene.

Clemmys hydaspica † Lydekker 1885:172 (*nomen dubium*)
Type locality: "Siwaliks of the Jhelam district in the Punjab" [Uttarakhand, India].
Type specimen: ZSI E.93, holotype, fossil, nearly whole shell, figured (pl.20,f.4,4a).
Geologic age: Late Pliocene to Early Pleistocene.

Clemmys theobaldi † Lydekker 1885:173 (*nomen dubium*)
Bellia theobaldi, Mauremys theobaldi
Type locality: "Siwaliks of Jhand in the Punjab" [Himachal Pradesh, India].
Type specimen: ZSI E.89, holotype, fossil, partial shell, figured (pl.20,f.2,2a,2b); NHM(P) R.1515, cast of the holotype, see Lydekker (1889).
Geologic age: Late Pliocene to Early Pleistocene.

Clemmys punjabiensis † Lydekker 1885:175 (*nomen dubium*)
Type locality: "Siwaliks of the Punjab" [Punjab, India].
Type specimen: ZSI E.92, holotype, fossil, partial shell, figured (pl.20,f.3,3a,3b), see Lydekker (1889).
Geologic age: Late Pliocene to Early Pleistocene.

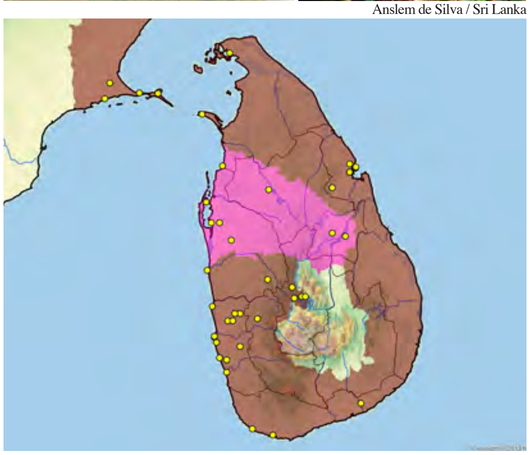
Geoemyda indopeninsularis Annandale 1913:71
Geoemyda trijuga indopeninsularis, Melanochelys trijuga indopeninsularis, Melanochelys edeniana indopeninsularis
Type locality: "Singhbhum district of Chota Nagpur..[&]..Dharwar district in...Bombay Presidency...at Devikop, 26 miles south of... Dharwar" [India]. Restricted to "Singhbhum District, Chota

Nagpur" [Jharkhand, India] by Smith (1931:99).
Type specimens: ZSI 17098, 17100, syntypes (2), see Das et al. (1998), Das (2009), and Kundu et al. (2018a).

Melanochelys trijuga parkeri Deraniyagala 1939 (17:54)
Parker's Black Turtle

Indraneil Das / CBFTT / Sri Lanka

Anslem de Silva / Sri Lanka



*

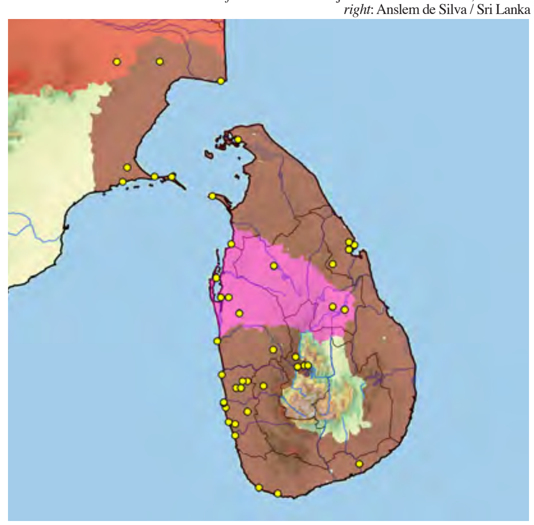
(subspecies: *parkeri* = pink, *thermalis* = brown)

Distribution: Sri Lanka
Presumed Historic Indigenous Range: 13,494 sq. km
Size (Max SCL): 38.3 cm (Deraniyagala 1939; Das and Bhupathy 2009b CBFTT)
Synonymy:
Melanochelys trijuga parkeri Deraniyagala 1939:269
Geoemyda trijuga parkeri
Type locality: "Polonnaruva, N.-C.P., ...Ceylon" [Sri Lanka].
Type specimen: NHMUK 1947.3.6.14 (formerly 1937.10.3.1), holotype.
Melanochelys trijuga sinhaleyus † Deraniyagala 1953:4
Type locality: "near Ratnapura...Ceylon" [Sri Lanka].
Type specimens: RNM F80, F93, syntypes, fossil, carapacial bones, nuchal figured (f.2).
Geologic age: Late Pleistocene, Ratnapura Beds.

Melanochelys trijuga thermalis (Lesson 1830)
Sri Lanka Black Turtle

Peter Paul van Dijk / CBFTT / nr. Bentota, Sri Lanka

left: Peter Paul van Dijk / CBFTT / nr. Bentota, Sri Lanka
right: Anslem de Silva / Sri Lanka



*

(subspecies: *trijuga* = red, *parkeri* = pink, *thermalis* = brown)

Distribution: India (Tamil Nadu), Sri Lanka
Presumed Historic Indigenous Range: 58,159 sq. km
Size (Max SCL): 22.9 cm (Das and Bhupathy 2009b CBFTT)
Synonymy:
Emys thermalis Lesson 1830:86
Clemmys thermalis, Nicoria trijuga thermalis, Geoemyda trijuga thermalis, Melanochelys trijuga thermalis
Type locality: "eaux thermales de Cannia, près Trinquemalé à Ceylan," [Sri Lanka].
Type specimen: ZSI, not located, apparently lost; holotype specimen figured (f.29), see Das (2009) and Bour and Schmidtler (2014).
Emys sebae Gray 1831d:75
Geoclemys sebae, Melanochelys sebae, Emys trijuga sebae
Type locality: Not designated. Restricted to "Ceylon" [Sri Lanka] by Gray (1844:19).
Type specimen: Specimen figured in Seba (1734:pl.79,f.1-2), holotype, by original designation.
Emys seba Gray 1844:19 (*nomen novum*)
Geoclemys seba, Geoclemmys seba
Comment: Unjustified emendation or error for *Emys sebae* Gray 1831d.

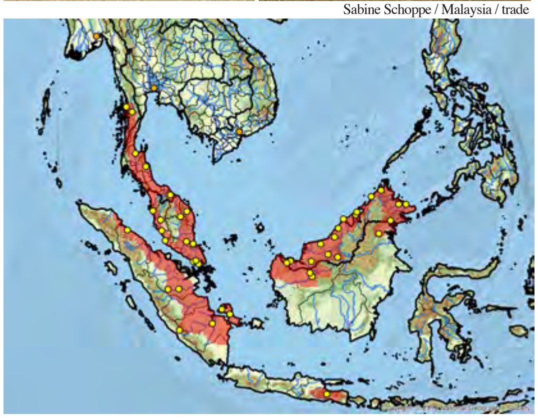
Notochelys Gray 1863e

Notochelys Gray 1863e:177 (senior homonym, not = *Notochelys* Owen 1882 [= Testudines: Protostegidae †])
Type species: *Notochelys platynota* [= *Emys platynota* Gray 1834a], by original monotypy.

Notochelys platynota (Gray 1834a)
Malayan Flat-shelled Turtle

Sabine Schoppe / Malaysia / trade

Sabine Schoppe / Malaysia / trade



(orange dots = probable trade or misidentified)

Distribution: Brunei, Indonesia (Java, Kalimantan, Sumatra), Malaysia (East, West), Myanmar, Singapore, Thailand
Presumed Historic Indigenous Range: 617,991 sq. km
Size (Max SCL): male 28.2 cm, female 33.0 cm (Brophy and Ernst 2004)
IUCN Red List: Vulnerable (VU A2cd) (Kusrini et al. 2021); Previously: Vulnerable (VU A1cd+2cd) (ATTWG 2000); Data Deficient (DD) (TFTSG 1996)
CITES: Appendix II (2005)
Synonymy:
Emys platynota Gray 1834a:54
Emys platynotha, *Cyclemys platynota*, *Notochelys platynota*
Type locality: "Indiâ Orientali." Restricted to "Sumatra" [Indonesia] by Gray (1835:pl.57).
Type specimen: NHMUK 1947.3.4.6, holotype.
Cistudo bankanensis Bleeker *in* Gray 1864a:12
Type locality: "Banka Island" [Sumatra, Indonesia].
Type specimen: NHMUK 1946.1.22.64 (formerly 1863.12.4.120), see Gray (1873j).
Cyclemys giebelii Hubrecht 1881:45
Type locality: "Borneo" [Kalimantan, Indonesia].
Type specimens: RMNH 3348, syntype (1), others apparently lost, discussed by Hoogmoed et al. (2010).

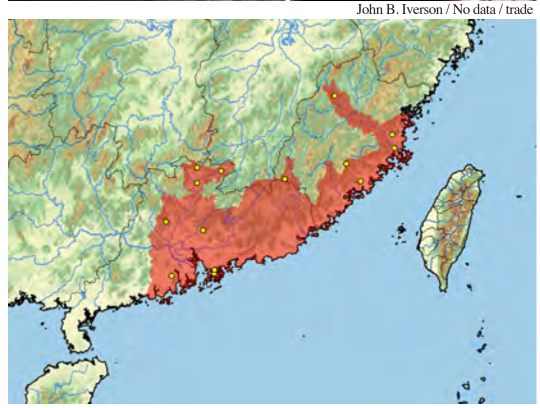
Sacalia Gray 1870c

Sacalia Gray 1870c:35
Type species: *Sacalia bealii* [= *Emys bealii* Gray 1834a = *Cistuda bealei* Gray 1831d], by original monotypy.

Sacalia bealei (Gray 1831d)
Beale's Eyed Turtle

John B. Iverson / No data / trade

John B. Iverson / No data / trade



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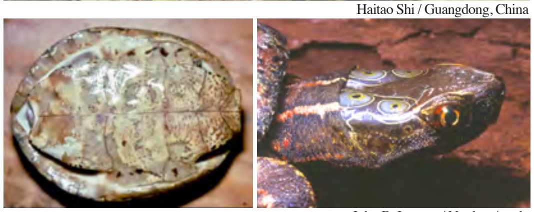
Distribution: China (Fujian, Guangdong, Hong Kong, Jiangxi)
Presumed Historic Indigenous Range: 160,992 sq. km
Size (Max SCL): male 14.1 cm, female 15.6 cm (Pope 1935; Iverson and McCord 1992; Lin et al. 2018b)
IUCN Red List: Endangered (EN A1d+2d) (ATTWG 2000); Previously: Vulnerable (VU) (TFTSG 1996)
TFTSG Provisional Red List: Critically Endangered (CR) (2011)
CITES: Appendix II (2013); Previously: Appendix III (China) (2005)
Synonymy:
Cistuda bealei Gray 1831d:71
Emys (Pyxidemys) bealei, *Emys bealei*, *Clemmys bealei*,

Cistudo bealei, Sacalia bealei, Mauremys bealei, Sacalia bealei bealei
Type locality: "China."
Type specimens: NHMUK 1947.3.4.33, 1947.3.4.42, syntypes (2).
Emys bealii Gray 1834a:54 (*nomen novum*)
Clemmys bealii, Sacalia bealii, Cistudo bealii, Clemmys bealii bealii
Comment: Unjustified emendation or error for *bealei*.

Sacalia quadriocellata (Siebenrock 1903a) (08:24) (**73**)
Four-eyed Turtle


Haitao Shi / Guangdong, China


John B. Iverson / No data / trade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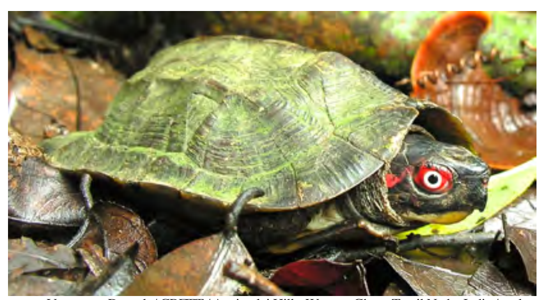
(orange dot = probable trade)

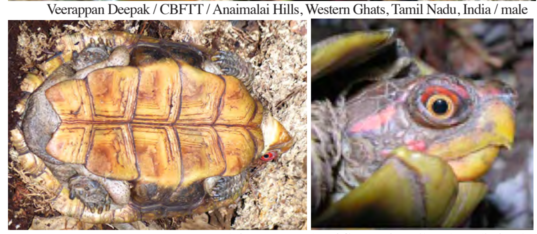
Distribution: China (Guangdong, Guangxi, Hainan), Laos, Vietnam
Presumed Historic Indigenous Range: 281,077 sq. km
Size (Max SCL): male 14.3 cm, female 15.2 cm (Iverson and McCord 1992; de Bruin and Artner 1999; Ceballos et al. 2013)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Fong et al. 2021); Previously: Endangered (EN A1d+2d) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II (2013); Previously: Appendix III (China) (2005)
Synonymy:
Clemmys bealii quadriocellata Siebenrock 1903a:336 (senior homonym, not = *Clemmys bealii quadriocellata* Li 1958)
Clemmys quadriocellata, Clemmys quadriocellata, Clemmys bealei quadriocellata, Sacalia quadriocellata, Sacalia bealei quadriocellata, Sacalia quadriocellata quadriocellata
Type locality: "Annam" [Vietnam]. Restricted to "Annam, Phuc-Son" [= Phuoc Son, Quang Nam, Vietnam (15°33'00"N; 108°04'00"E; see Le et al. 2004] by Siebenrock (1909a:482).
Type specimen: NMW 23393, holotype, see Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Gemel et al. (2019).
Clemmys bealii quadriocellata Li 1958:235 (junior homonym, not = *Clemmys bealii quadriocellata* Siebenrock 1903a)
Type locality: "small stream of Dali village of Mt. Diaoluo, Lingshui Co., Hainan Island, China" [in Chinese].
Type specimen: Not located, holotype specimen figured (f.2).
Clemmys beali insulensis Adler 1962:135 (*nomen novum*) (08:24) (**73**)
Clemmys bealii insulensis, Sacalia insulensis
Comment: Justified replacement name for *Clemmys bealii quadriocellata* Li 1958.
Sacalia pseudocellata Iverson and McCord 1992a:426 (07:33) (*partim*, hybrid)
Type locality: "between Tungfang [19°03'N, 108°56'E] and Kancheng [18°51'N, 108°37'E; ca. 48 km from Tungfang], western Hainan Island, China." [in error?]
Type specimen: UF 81505, holotype.
Sacalia quadriocellata insularis Artner 2003:xviii (*nomen invalidum*)
Comment: Unjustified emendation or error for *insulensis*.

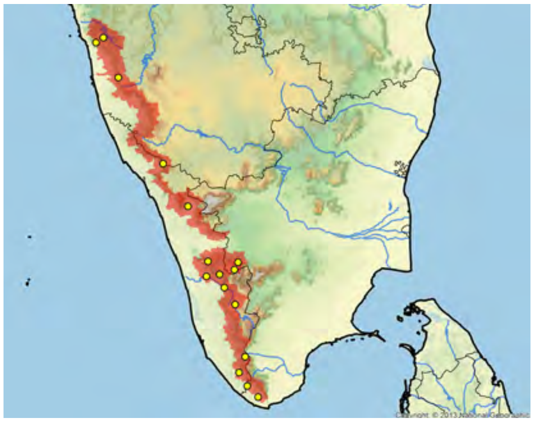
Vijayachelys Praschag, Schmidt, Fritzsch, Müller, Gemel, and Fritz 2006 (07:51)

Vijayachelys Praschag, Schmidt, Fritzsch, Müller, Gemel, and Fritz 2006:156
Type species: *Vijayachelys silvatica* [= *Geoemyda silvatica* Henderson 1912], by original designation.

Vijayachelys silvatica (Henderson 1912)
Cochin Forest Cane Turtle


Veerappan Deepak / CBFTT / Anaimalai Hills, Western Ghats, Tamil Nadu, India / male


left: Peter Praschag / CBFTT / Tamil Nadu, India / male
right: Veerappan Deepak / CBFTT / Anaimalai Hills, Tamil Nadu, India / female



Distribution: India (Karnataka, Kerala, Tamil Nadu)
Presumed Historic Indigenous Range: 25,179 sq. km
Size (Max SCL): male 13.4 cm, female 17.0 cm (Whitaker and Vijaya 2009; Deepak et al. 2014 CBFTT)
CBFTT Account: Deepak, Praschag, and Vasudevan (2014)
IUCN Red List: Endangered (EN C1) (Choudhury and Praschag 2021); Previously: Endangered (EN B1+2c) (ATTWG 2000); Endangered (EN) (TFTSG 1996)
CITES: Appendix II (2013)
Synonymy:
Geoemyda silvatica Henderson 1912:217
Heosemys silvatica, Vijayachelys silvatica
Type locality: "South India...near Kavalai in the Cochin State Forests... an elevation of about 1500 feet" [Kerala, India].
Type specimen: ZSI 17117, holotype, see Das et al. (1998) and Das (2009), specimen not located by Kundu et al. (2018a).

Rhinoclemmydinae Gray 1873j [12:21]

Rhinoclemmyina Gray 1873j:27
Rhinoclemminae Le and McCord 2008:763
Rhinoclemmydinae Turtle Taxonomy Working Group 2012:274

Rhinoclemmys Fitzinger 1835 [09:20, 12:21, 14:31]

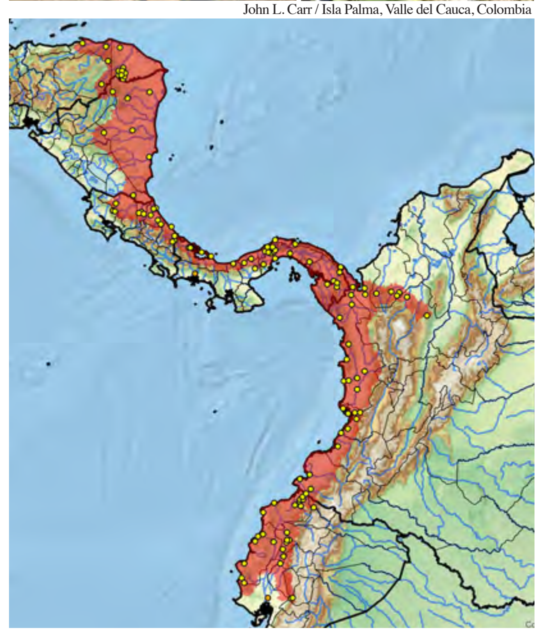
Chemelys Rafinesque 1815:75 (*nomen nudum*)
Chemelys Rafinesque 1832:64 (*nomen suppressum*)
Type species: *Chemelys verrucosa* [= *Testudo verrucosa* Suckow 1798 = subjective synonym of *Testudo punctularia* Daudin 1801], by original monotypy.
Comment: Name suppressed by ICZN (1985a), see Smith et al. (1980c).
Rhinoclemmys Fitzinger 1835:115 (*nomen conservandum*)
Type species: *Geoemyda (Rhinoclemmys) dorsata* [= *Testudo dorsata* Schoepff 1801 = subjective synonym of *Testudo punctularia* Daudin 1801], by subsequent designation as *Emys dorsata* sensu Schweigger 1812 by Lindholm (1929:283). Genus established as *Clemmys (Rhinoclemmys)* without a type species.
Comment: Name conserved by ICZN (1985a), see Smith et al. (1980c).
Rhinoclemys Gray 1863c:182 (*nomen novum*)
Callopsis Gray 1863c:183
Type species: *Rhinoclemys (Callopsis) annulata* [= *Geoclemmys annulata* Gray 1860b], by original monotypy.

Rhinoclemmys annulata (Gray 1860b)

Brown Wood Turtle, *Montañero*

John L. Carr / Isla Palma, Valle del Cauca, Colombia

John L. Carr / Isla Palma, Valle del Cauca, Colombia



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(orange dots = probable trade)

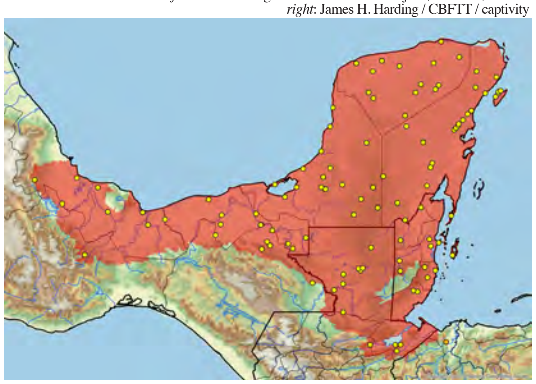
Distribution: Colombia (Antioquia, Cauca, Chocó, Córdoba, Nariño, Valle del Cauca), Costa Rica, Ecuador, Honduras, Nicaragua, Panama
Presumed Historic Indigenous Range: 310,269 sq. km
Size (Max SCL): male 20.2 cm, female 22.6 cm (Ernst 1978; Giraldo et al. 2012)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)
Synonymy:
Geoclemmys annulata Gray 1860b:231
Clemmys annulata, Rhinoclemys annulata, Rhinoclemys (Callopsis) annulata, Chelopus annulatus, Rhinoclemmys annulata, Nicoria annulata, Geoemyda annulata, Callopsis annulata
Type locality: "Esmeraldas, ...western coast of Ecuador."
Type specimens: NHMUK 1946.1.22.56, 1947.3.5.58–59 (formerly (formerly 1860.4.22.23–25), syntypes (3).
Chelopus gabbii Cope 1875:153 [6]
Emys gabbii, Nicoria gabbii, Geoemyda gabbii, Rhinoclemmys gabbii

Type locality: "Costa Rica." Restricted to "Sipurio, Costa Rica" by Dunn (1930:32).
Type specimen: USNM 45905, holotype, see Cochran (1961) and Reynolds et al. (2007).
Testudo mercatoria Vaillant 1911:47 (*nomen nudum*)
Type locality: "Amérique centrale."
Type specimen: Not known or located.

Rhinoclemmys areolata (Duméril and Bibron *in* Duméril and Duméril 1851)
Furrowed Wood Turtle, *Mojina*

John B. Iverson / CBFTT / nr. Paamul, Quintana Roo, Mexico

left: Richard C. Vogt / CBFTT / Lerdo de Tejada, Veracruz, Mexico
right: James H. Harding / CBFTT / captivity



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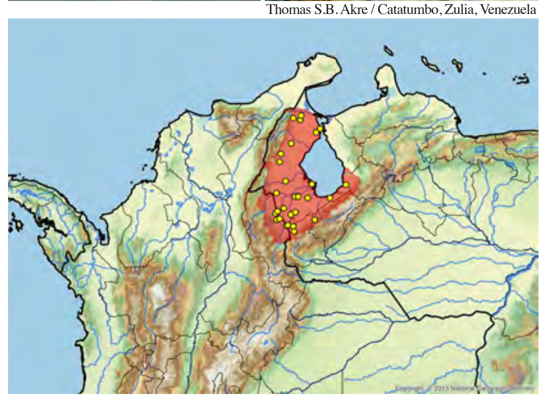
(orange dot = probable trade)

Distribution: Belize, Guatemala, Honduras (?), Mexico (Campeche, Chiapas, Quintana Roo, Tabasco, Veracruz, Yucatán)
Presumed Historic Indigenous Range: 288,385 sq. km
Size (Max SCL): male 20.6, female 20.7 cm (Ernst 1980a; Vogt et al. 2009 CBFTT)
CBFTT Account: Vogt, Platt, and Rainwater (2009)
IUCN Red List: Near Threatened (NT) (van Dijk et al. 2007);
Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
Synonymy:
Emys areolata Duméril and Bibron *in* Duméril and Duméril 1851:10
Malaclemmys concentrica areolata, Clemmys areolata, Malaclemys concentrica areolata, Chelopus areolatus, Nicoria punctularia areolata, Geoemyda punctularia areolata, Geoemyda areolata, Rhinoclemmys areolata, Callopsis areolata
Type locality: "Province du Petén (Amér. centr.)." Restricted to "La Libertad, El Petén, Guatemala" by Smith and Taylor (1950a:318; 1950b:30); and to "Flores...El Petén, La Libertad...Guatemala" by Dunn and Stuart (1951:60).
Type specimen: MNHN 9424, holotype, see Ernst (1978) and Bour (2007b); MNHN 8310, listed as "type" by Stuart (1963), is not a type.

Rhinoclemmys diademata (Mertens 1954)
Maracaibo Wood Turtle, *Galapago Negro*

Carlos A. Galvis-Rizo / Colombia / captivity

Thomas S.B. Akre / Catatumbo, Zulia, Venezuela

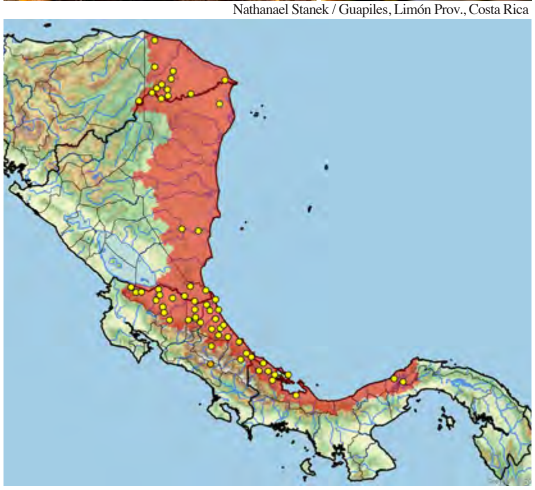


Distribution: Colombia (Norte de Santander), Venezuela (Mérida, Táchira, Trujillo, Zulia)
Presumed Historic Indigenous Range: 44,327 sq. km
Size (Max SCL): male 18.7 cm, female 28.5 cm (Pritchard and Trebbau 1984; Rivas et al. 2007)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
Synonymy:
Geoemyda punctularia diademata Mertens 1954:4
Callopsis punctularia diademata, Rhinoclemmys punctularia diademata, Rhinoclemmys diademata
Type locality: "Maracay, Venezuela." Considered in error by Pritchard (1979:182); and considered in error for "Maracaibo" [Venezuela] by Pritchard and Trebbau (1984:172).
Type specimen: SMF 48141, holotype, see Mertens (1967b).

Rhinoclemmys funerea (Cope 1875) [(6)]
Black Wood Turtle

Manuel Merchán Fornelino / Costa Rica

Nathanael Stanek / Guapiles, Limón Prov., Costa Rica



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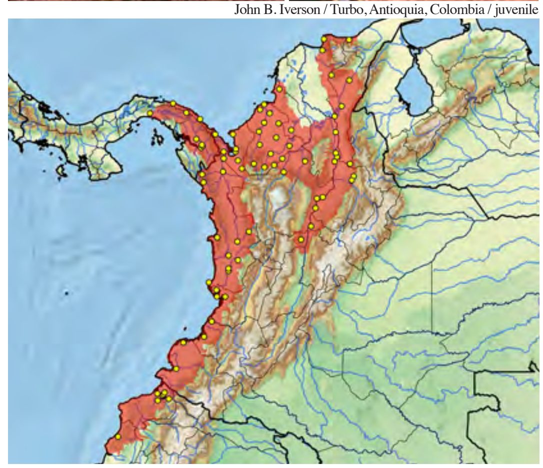
(orange dot = possible trade)

Distribution: Costa Rica, Honduras, Nicaragua, Panama
Presumed Historic Indigenous Range: 103,734 sq. km
Size (Max SCL): male 32.5 cm, female 35.5 cm (Ernst 1980b; Acuña-Mesén and Moll, unpubl. data)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
Synonymy:
Chelopus funereus Cope 1875:154 [(6)]
Emys funerea, Geoemyda funerea, Geoemyda punctularia funerea, Rhinoclemmys funerea, Callopsis funerea
Type locality: “Costa Rica...Limon.” [Puerto Limon]
Type specimens: USNM 45900–01, 46134–35, syntypes (4), see Cochran (1961) and Reynolds et al. (2007); Uetz et al. (2019) erroneously listed USNM 45000.
Geoemyda costaricensis Kanberg 1930:162
Type locality: “Costa Rica.”
Type specimen: ZMB 36496, holotype, previously listed as not known (Peters, pers. comm. *in* Ernst 1978, 1980b), identified by Fritz et al. (1994).

Rhinoclemmys melanosterna (Gray 1861b) [(14:31)]
Colombian Wood Turtle, *Palmera*

Uwe Fritz / El Silencio, Antioquia, Colombia

John B. Iverson / Turbo, Antioquia, Colombia / juvenile



*

Distribution: Colombia (Antioquia, Atlántico, Bolívar, Boyacá, Caldas, Cauca, Cesar, Chocó, Córdoba, Cundinamarca, La Guajira, Magdalena, Nariño, Santander, Sucre, Valle del Cauca), Ecuador, Panama
Presumed Historic Indigenous Range: 225,817 sq. km
Size (Max SCL): male 27.3 cm, female 30.4 cm (Páez and Bock, unpubl. data)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)
Synonymy:
Geoclemmys melanosterna Gray 1861b:205
Clemmys melanosterna, Rhinoclemmys melanosterna, Rhinoclemys melanosterna, Nicoria punctularia melanosternum, Geoemyda punctularia melanosternum, Geoemyda punctularia melanosterna, Callopsis punctularia melanosterna, Rhinoclemmys punctularia melanosterna
Type locality: “Gulf of Darien: Cherunha” [Colombia]. Restricted to “River Buonaventura..[and]..Chirambira, Gulf of Darien” [Colombia] by Boulenger (1889:124); to “Chirambira bei Buenaventura, Columbien” [Colombia] by Mertens and Wermuth (1955: 352), and to “Punta Chirambira en el Delta del Río San Juan...al norte de Buenaventura en la Costa del Pacífico, Chocó” [Colombia] by Medem (1958:21).
Type specimens: NHMUK 1947.3.4.8, 1947.3.5.51 (formerly 1861.11.22.3), syntypes (2).

Rhinoclemmys nasuta (Boulenger 1902a)
Large-nosed Wood Turtle, *Sabaletera*

José Vicente Rueda-Almonacid / CBFTT / Isla Palma, Valle del Cauca, Colombia

left: José Vicente Rueda-Almonacid / CBFTT / Isla Palma, Valle del Cauca, Colombia
right: Alan Giraldo / CBFTT / Isla Palma, Valle del Cauca, Colombia

*

Distribution: Colombia (Cauca, Chocó, Nariño, Valle del Cauca), Ecuador
Presumed Historic Indigenous Range: 84,784 sq. km
Size (Max SCL): male 19.6 cm, female 22.8 cm (Carr and Giraldo 2009 CBFTT)
CBFTT Account: Carr and Giraldo (2009)
IUCN Red List: Near Threatened (NT) (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2010)
Synonymy:
Nicoria nasuta Boulenger 1902a:53
Geoemyda nasuta, Geoemyda punctularia nasuta, Callopsis punctularia nasuta, Rhinoclemmys punctularia nasuta, Callopsis nasuta, Rhinoclemmys nasuta
Type locality: "North-western Ecuador...Bulún, 160 feet, and from the Rio Durango, 350 feet." Emended to "San Francisco de Pulún, Río Bogota" [Colombia] by Carr and Almendariz (1990:92).
Type specimens: NHMUK 1947.3.5.54–57 (formerly 1902.5.27.10–12, 1902.5.27.18), syntypes (4).

Rhinoclemmys pulcherrima (Gray 1856b)
Painted Wood Turtle, Sabanera, Casco Rojo
(includes 4 subspecies)

*

(subspecies: *pulcherrima* = red, *incisa* = purple, *manni* = blue, *rogerbarbouri* = green)
Distribution: Costa Rica, El Salvador, Guatemala, Honduras, Mexico (Chiapas, Colima, Guerrero, Jalisco, Nayarit, Oaxaca, Sinaloa, Sonora), Nicaragua
Presumed Historic Indigenous Range: 259,172 sq. km
Size (Max SCL): male 18.1 cm, female 20.7 cm (see subspp.)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

Rhinoclemmys pulcherrima pulcherrima (Gray 1856b)
Guerrero Wood Turtle

John L. Carr / Guerrero, Mexico / captivity

John L. Carr / Guerrero, Mexico / captivity

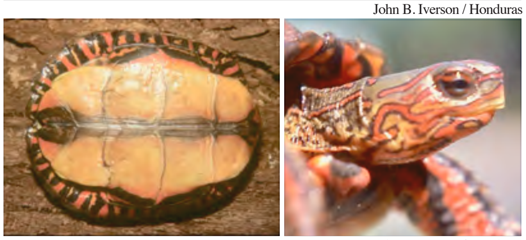
*

(subspecies: *pulcherrima* = red, *incisa* = purple)
Distribution: Mexico (Guerrero, Oaxaca)
Presumed Historic Indigenous Range: 27,986 sq. km

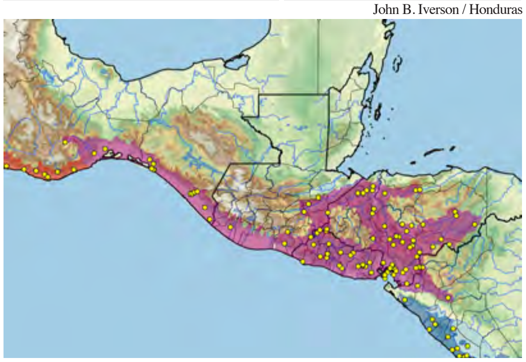
Size (Max SCL): male 16.0 cm, female 16.6 cm (Ernst 1978)
Synonymy:
Emys pulcherrimus Gray 1856b:25
Clemmys pulcherrima, Callichelys pulcherrima, Emys pulcherrima, Rhinoclemmys pulcherrima, Chelopus pulcherrima, Pseudemys pulcherrima, Chelopus pulcherrimus, Nicoria punctularia pulcherrima, Geoemyda punctularia pulcherrima, Geoemyda pulcherrima pulcherrima, Rhinoclemmys pulcherrima pulcherrima, Callopsis pulcherrima pulcherrima
Type locality: "Mexico." Restricted to "Presidio de Mazatlán, Sinaloa, Mexico" by Smith and Taylor (1950a:343, 1950b:30); and to "vicinity of San Marcos, Guerrero, Mexico" by Ernst (1978:125).
Type specimen: NHMUK 1947.3.5.52 (formerly 1851.8.25.24), holotype.

Rhinoclemmys pulcherrima incisa (Bocourt 1868)
Incised Wood Turtle

John B. Iverson / Honduras



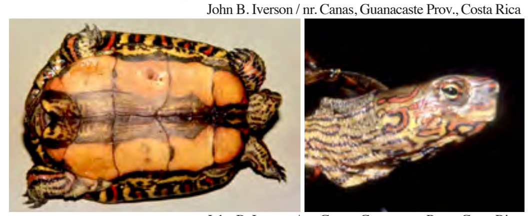
John B. Iverson / Honduras



*
(subspecies: *pulcherrima* = red, *incisa* = purple, *manni* = blue)
Distribution: El Salvador, Guatemala, Honduras, Nicaragua, Mexico (Chiapas, Oaxaca)
Presumed Historic Indigenous Range: 119,519 sq. km
Size (Max SCL): male 18.1 cm, female 20.6 cm (Ernst 1978; Legler and Vogt 2013)
Synonymy:
Emys incisa Bocourt 1868:121
Chelopus incisa, Chelopus incisus, Glyptemys incisa, Nicoria punctularia incisa, Clemmys incisa, Chrysemys incisa, Geoemyda punctularia incisa, Rhinoclemmys incisa, Geoemyda pulcherrima incisa, Rhinoclemmys pulcherrima incisa, Callopsis pulcherrima incisa
Type locality: "l'Union, un des ports du Salvador" [El Salvador]. Restricted to "la Union, un des ports du Salvador sur le Pacifique; elle a été trouvée sur la montagne de Conchavoua" [El Salvador] by Duméril and Bocourt (1870:12).
Type specimen: MNHN 9131, holotype, see Ernst (1978) and Bour (2007b); MNHN 6217, listed as "type" by Stuart (1963), is not a type.
Rhinoclemmys frontalis Gray 1873a:144
Type locality: "Tropical America."
Type specimen: NHMUK 1947.3.5.53 (formerly 1865.3.31.4), holotype.
Rhinoclemmys bocourti Gray 1873f:111
Type locality: "Central America."
Type specimen: Possibly MNHN, holotype, apparently lost, specimen figured in Duméril and Bocourt (1870:pl.7,f.1,1a,1b).

Rhinoclemmys pulcherrima manni (Dunn 1930)
Central American Wood Turtle

John B. Iverson / nr. Canas, Guanacaste Prov., Costa Rica



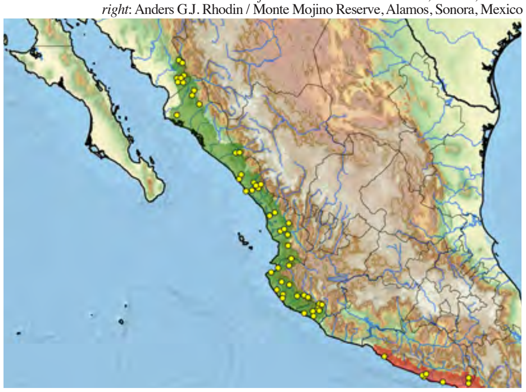
John B. Iverson / nr. Canas, Guanacaste Prov., Costa Rica

*
(subspecies: *incisa* = purple, *manni* = blue)
Distribution: Costa Rica, Nicaragua
Presumed Historic Indigenous Range: 28,989 sq. km
Size (Max SCL): male 16.6 cm, female 20.7 cm (Merchan Fornelino 2003)
Synonymy:
Geoemyda manni Dunn 1930:33
Geoemyda pulcherrima manni, Geoemyda punctularia manni, Callopsis pulcherrima manni, Rhinoclemmys pulcherrima manni
Type locality: "San Jose, Costa Rica."
Type specimen: MCZ 29097, holotype.

Rhinoclemmys pulcherrima rogerbarbouri (Ernst 1978)
Western Mexican Wood Turtle

John B. Iverson / nr. Colima, Colima, Mexico

left: John B. Iverson / nr. Colima, Colima, Mexico
right: Anders G.J. Rhodin / Monte Mojino Reserve, Alamos, Sonora, Mexico



*

(subspecies: *pulcherrima* = red, *rogerbarbouri* = green)

Distribution: Mexico (Colima, Jalisco, Nayarit, Sinaloa, Sonora)
Presumed Historic Indigenous Range: 82,678 sq. km
Size (Max SCL): male 17.6 cm, female 20.2 cm (Ernst 1978)
Synonymy:
Callopsis pulcherrima rogerbarbouri Ernst 1978:127
Rhinoclemmys pulcherrima rogerbarbouri
Type locality: "Guirocoba, Sonora, Mexico."
Type specimen: AMNH 63760, holotype.

Rhinoclemmys punctularia (Daudin 1801) (08:12, 09:28)
Spot-legged Turtle
(includes 2 subspecies)

*

(subspecies: *punctularia* = red, *flammigera* = purple; orange dots = probable introduced)

Distribution: Brazil (Amapá, Amazonas, Bahia, Espirito Santo, Maranhão, Pará, Piauí, Roraima, Tocantins), French Guiana, Guyana, Suriname, Trinidad and Tobago, Venezuela (Amazonas, Bolívar, Delta Amacuro, Monagas)
Introduced: Brazil (Rio de Janeiro)
Presumed Historic Indigenous Range: 2,201,321 sq. km
Size (Max SCL): male 20.1 cm, female 24.8 cm (see subspp.)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2011)

Rhinoclemmys punctularia punctularia (Daudin 1801) (08:12, 09:28) (**74**)
Eastern Spot-legged Turtle, *Perema, Aperema*

Jérôme Maran / French Guiana

John L. Carr / Brazil

*

(subspecies: *punctularia* = red, *flammigera* = purple)

Distribution: Brazil (Amapá, Amazonas, Espirito Santo, Maranhão, Pará, Piauí, Roraima, Tocantins), French Guiana, Guyana, Suriname, Trinidad and Tobago, Venezuela (Bolívar, Delta Amacuro, Monagas)
Introduced: Brazil (Rio de Janeiro)
Presumed Historic Indigenous Range: 2,163,814 sq. km
Size (Max SCL): male 20.1 cm, female 24.8 cm (Ernst 1978; Pritchard and Trebbau 1984; Wariss et al. 2012)
Synonymy:
Testudo amboinensis Linnaeus 1754:50 (unavailable name)
Type locality: "India."
Type specimen: NRM 31491 (formerly MAF 89), type; erroneously included in composite syntype series of *Testudo geometrica* Linnaeus

1758; NRM 1 (formerly MDG s/n), not the type, erroneously interpreted as the type by Andersson (1900), identified as = *Hydraspis gibba* (= *Mesoclemmys gibba*) by Andersson (1900), see also Wallin (1977) and Bour (2005d)

Comment: Unavailable pre-1758 binomial name. Description cited as also sourced from Seba (1734:126,pl.79,f.1–2) (= *Melanochelys trijuga*).

Testudo scabra Linnaeus 1758:198 (*nomen oblitum* and senior homonym, not = *Testudo scabra* Retzius *in* Schoepff 1792 [= *Pelomedusa galeata*], nor = *Testudo scabra* Latreille *in* Sonnini and Latreille 1801 [= *Lissemys punctata punctata*]) (08:12)

Emys scabra, *Rhinoclemmys scabra* , *Rhinoclemys scabra*

Type locality: "Indiis" [West Indies]. Restricted to "India orientali, Carolina" [in error] by Linnaeus (1766:351); and to "Cayenne, French Guiana" by Rhodin and Carr (2009:11).

Type specimen: UPSZTY 129 (formerly UUZM 129), holotype, identified and described by Rhodin and Carr (2009).

Comment: Description did not cite any sourced references.

Testudo verrucosa Walbaum 1782:116 (*nomen novum* and unavailable name)

Comment: Unjustified replacement name for *Testudo scabra* Linnaeus, see Rhodin and Carr (2009). Unavailable name from a non-binomial work, see Wermuth (1956).

Testudo verrucosa Suckow 1798:40 (junior homonym, not = *Testudo (ferox) verrucosa* Schoepff 1795 [= *Apalone ferox*])

Chemelys verrucosa

Type locality: Not known.

Type specimen: Not known or located.

Testudo punctularia Daudin 1801:249("349") (*nomen conservandum*)

Emys punctularia, *Chersine punctularia*, *Clemmys (Clemmys) punctularia*, *Clemmys punctularia*, *Chelopus punctularius*, *Nicoria punctularia*, *Geoemyda punctularia*, *Geoemyda punctularia punctularia*, *Rhinoclemmys punctularia*, *Rhinoclemmys punctularia punctularia*, *Callopsis punctularia punctularia*

Type locality: "Amérique méridionale...sur-tout...la Guiane..[&].. Cayenne" [French Guiana].

Type specimen: MNHN 9130, holotype, see Fretey et al. (1977) and Bour (2007b).

Comment: Name conserved by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Testudo dorsata Schoepff 1801:136 (*nomen novum et suppressum*)

Emys dorsata, *Clemmys dorsata*

Type locality: Not known.

Type specimen: Possibly ZMUS, not located, type specimen apparently figured on unpublished plate cited by Schoepff (1801:pl.34).

Comment: Unjustified replacement name for *Testudo scabra* Linnaeus. Description cited as sourced from Hermann (pers. comm.), whose own description of *Testudo dorsata* was published posthumously (Hermann 1804:219). Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Testudo alacacca Stedman *in* Schweigger 1812:429 (*nomen nudum)*

Type locality: "Surinam."

Type specimen: Not known or located.

Emys dorsualis Spix 1824:11

Emys dorsalis

Type locality: "juxta flumen Solimoens" [Amazonas, Brazil].

Type specimen: ZSM 2424/0, lectotype, designated by Hoogmoed and Gruber (1983:350), see Franzen and Glaw (2007).

Rhinoclemys bellii Gray 1863c:183

Rhinoclemmys bellii, *Rhinoclemmys scabra bellii*

Type locality: "Tropical America."

Type specimen: OUM 8510, holotype, see Nowak-Kemp and Fritz (2010).

Geoclemys callocephalus Gray 1863h:254

Clemmys callocephala, *Geoclemmys callocephala*, *Geoclemmys callocephalus*, *Rhinoclemmys callocephala*, *Rhinoclemys callocephala*

Type locality: Not known. Restricted to "S. America" by Boulenger (1889:124).

Type specimen: NHMUK 1947.3.5.50 (formerly 1853.11.30.3), holotype.

Rhinoclemmys lunata Gray 1873a:144

Geoemyda punctularia lunata, *Callopsis punctularia lunata*, *Rhinoclemys lunata*, *Rhinoclemmys punctularia lunata*

Type locality: Not designated. Restricted to "Dutch Guiana" [Suriname] by Boulenger (1889:124).

Type specimens: NHMUK 1946.1.22.69–70 (formerly 1866.8.14.227), syntypes (2).

Rhinoclemmys ventricosa Gray 1873a:145

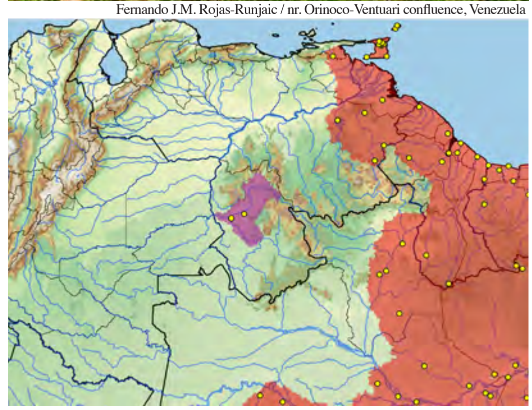
Rhinoclemys ventricosa

Type locality: "Tropical America." Restricted to "Dutch Guiana" [Suriname] by Boulenger (1889:124).

Type specimen: NHMUK 1947.3.5.49 (formerly 1867.4.2.156), holotype.

Rhinoclemmys punctularia flammigera Paolillo 1985 (08:25, 09:28)
Upper Orinoco Spot-legged Turtle

Fernando J.M. Rojas-Runjaic / nr. Orinoco-Ventuari confluence, Venezuela



*

(subspecies: *punctularia* = red, *flammigera* = purple)

Distribution: Venezuela (Amazonas)

Presumed Historic Indigenous Range: 37,507 sq. km

Size (Max SCL): male 19.3 cm, female 22.5 cm (Pritchard and Trebbau 1984; Paolillo 1985)

Synonymy:

Rhinoclemmys punctularia flammigera Paolillo 1985:294

Rhinoclemmys flammigera

Type locality: "Caño Maica, 10 km SE of Carmelitas, Territorio Federal Amazonas, Venezuela (4°4' N, 66°31' W)."

Type specimen: EBRG 1467, holotype.

Rhinoclemmys rubida (Cope 1870a)
Mexican Spotted Wood Turtle
(includes 2 subspecies)

*

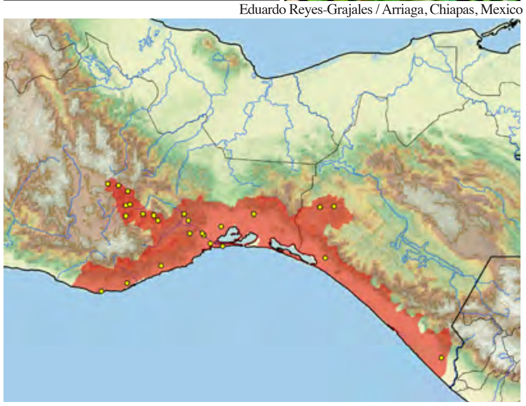
(subspecies: *rubida* = red, *perixantha* = purple)

Distribution: Mexico (Chiapas, Colima, Guerrero, Jalisco, México, Michoacán, Oaxaca)
Presumed Historic Indigenous Range: 78,865 sq. km
Size (Max SCL): male 17.9 cm, female 23.0 cm (see subspp.)
IUCN Red List: Near Threatened (NT) (van Dijk et al. 2007);
Previously: Vulnerable (VU) (TFTSG 1996)

Rhinoclemmys rubida rubida (Cope 1870a)
Oaxaca Wood Turtle

Michael Redmer / Mexico / captivity

Eduardo Reyes-Grajales / Arriaga, Chiapas, Mexico



*

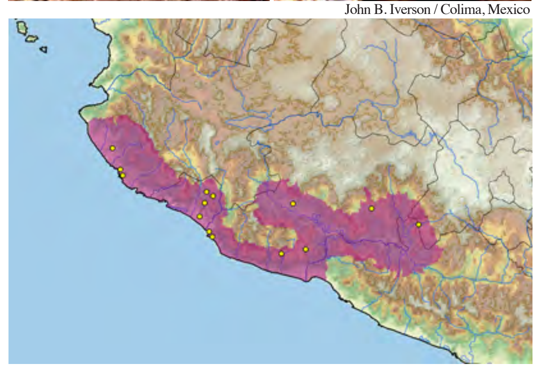
(subspecies: *rubida* = red)

Distribution: Mexico (Chiapas, Oaxaca)
Presumed Historic Indigenous Range: 27,340 sq. km
Size (Max SCL): male 17.9 cm, female 23.0 cm (Ernst 1978; Legler and Vogt 2013)
Synonymy:
Chelopus rubidus Cope 1870a:148
Geoclemmys rubida, Emys rubida, Nicoria rubida, Clemmys rubida, Geoemyda rubida, Geoemyda rubida rubida, Rhinoclemmys rubida, Rhinoclemmys rubida rubida, Callopsis rubida, Callopsis rubida rubida, Chelopus rubidus rubidus
Type locality: "Tuchitan Tehuantepec, Mexico" [Juchitán, Oaxaca].
Type specimens: ANSP 285, 337–341, USNM 45612–14, syntypes (9), see Cochran (1961), Malnate (1971), and Reynolds et al. (2007).
Rhinoclemmys mexicana Gray 1870b:659
Chelopus mexicana, Chelopus mexicanus, Emys mexicana
Type locality: "Mexico; San Juan del Rio" [Oaxaca].
Type specimens: NHMUK 1947.3.4.34 and 1947.3.5.60–61 (formerly 1870.6.20.1, 1871.2.7.45–46), syntypes (3).

Rhinoclemmys rubida perixantha (Mosimann and Rabb 1953)
Colima Wood Turtle

John B. Iverson / nr. Colima, Colima, Mexico

John B. Iverson / Colima, Mexico



*

(subspecies: *perixantha* = purple)

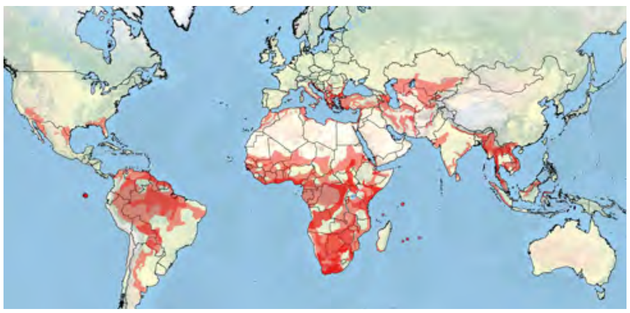
Distribution: Mexico (Colima, Guerrero, Jalisco, México, Michoacán)
Presumed Historic Indigenous Range: 51,525 sq. km
Size (Max SCL): male 14.1 cm, female 15.6 cm (Ernst 1978)
Synonymy:
Geoemyda rubida perixantha Mosimann and Rabb 1953:1
Rhinoclemmys rubida perixantha, Callopsis rubida perixantha, Chelopus rubidus perixanthus
Type locality: "8 kilometers south of Tecoman, Colima, Mexico."
Type specimen: UMMZ 80336, holotype, see Kluge (1984).

Testudinidae Batsch 1788

Testudines Batsch 1788:437
Testudia Rafinesque 1814:66
Tortudines Schmid 1819:10
Testudinidae Gray 1825:210
Tylopodae Wagler 1828:861
Dysmydae Ritgen 1828:270
Tylopodes Burmeister 1837:732
Baenodactyli Mayer 1849:198
Testudinides Pictet 1853:442
Testudinina Agassiz 1857a:356
Testudinidi Portis 1890:12

(includes 3 subfamilies)

Manouriinae
Xerobatinae
Testudininae



Testudinidae Species Richness

Manouriinae Gray 1869a

Manourina Gray 1869a:167
Manouriana Gray 1873j:17
Manouriina Baur 1888b:597
Manouriinae Turtle Taxonomy Working Group 2021:*hoc loco*

Manouria Gray 1854a

Manouria Gray 1854a:133
Type species: *Manouria fusca* Gray 1854a [= subjective synonym of *Testudo emys* Schlegel and Müller 1840], by original monotypy.

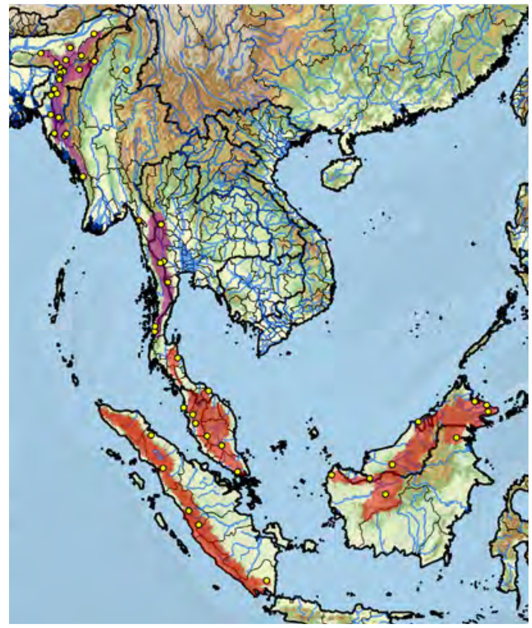
Teleopus Le Conte 1854:187
Type species: *Teleopus luxatus* Le Conte 1854 [= subjective synonym of *Testudo emys* Schlegel and Müller 1840], by monotypy.

Scapia Gray 1869a:167
Type species: *Testudo (Scapia) falconeri* Gray 1869 [= subjective synonym of *Testudo emys* Schlegel and Müller 1840 or *Testudo phayrei* Blyth 1854], by monotypy.

Manouria emys (Schlegel and Müller 1840) [(75)]

Asian Giant Tortoise

(includes 2 subspecies)



*

(subspecies: *emys* = red, *phayrei* = purple; orange dots = probable trade)

Distribution: Bangladesh, Brunei, India (Assam, Meghalaya, Mizoram, Nagaland), Indonesia (Kalimantan, Sumatra), Malaysia (East, West), Myanmar, Singapore (extirpated), Thailand

Presumed Historic Indigenous Range: 622,685 sq. km

Size (Max SCL): male 60.0 cm, female 58.0 cm (see subspp.)

CBFTT Account: Stanford, Wanchai, Schaffer, Schaffer, and Thirakhupt (2015)

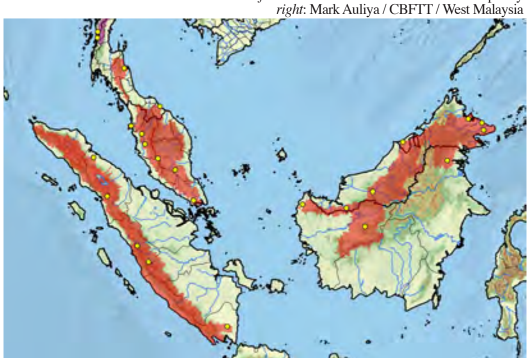
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Choudhury et al. 2019); Previously: Endangered (EN) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)

Manouria emys emys (Schlegel and Müller 1840) [75]
Asian Brown Giant Tortoise

Chuck Schaffer / CBFTT / Tabin Wildlife Reserve, Sabah, Malaysia (East)

left: Chuck Schaffer / CBFTT / No data / captivity
right: Mark Auliya / CBFTT / West Malaysia



•

(subspecies: *emys* = red, *phayrei* = purple)

Distribution: Brunei, Indonesia (Kalimantan, Sumatra), Malaysia (East, West), Singapore (extirpated), Thailand
Presumed Historic Indigenous Range: 467,688 sq. km
Size (Max SCL): male 56.0 cm (de Rooij 1915; Lim and Das 1999)
Synonymy:

Testudo emys Schlegel and Müller 1840:pl.4
Manouria emys, Manouria emys emys, Geochelone emys, Geochelone emys emys, Testudo emys emys
Type locality: "Sumatra" [Indonesia]. Restricted to "versant sud du Gunung (= Mont) Singgalang, dans la grande vallée dela rivière Anai, et à l'est de Padang, Sumatera Barat, Sumatra, Indonésie" [Indonesia] by Bour (1998:36).
Type specimen: RMNH 3808, lectotype, designated by Hoogmoed and Crumly (1984:251), discussed by Hoogmoed et al. (2010).

Testudo emydoides Duméril and Bibron *in* Duméril and Duméril 1851:4 (*nomen novum*)
Manouria emydoides
Comment: Unjustified replacement name for *emys*.

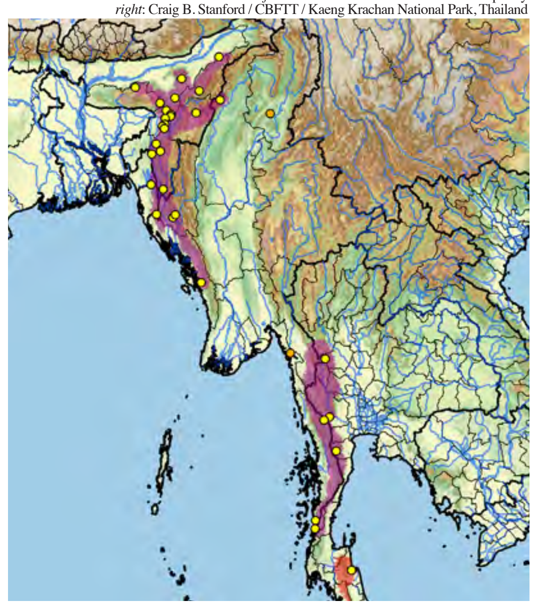
Manouria fusca Gray 1854a:134
Type locality: "Singapore." Restricted to "Pinang" [Malaysia] by Gray (1856:16).
Type specimen: NHMUK 1947.3.4.57, holotype.

Teleopus luxatus Le Conte 1854:187
Manouria luxata
Type locality: "Java" [Indonesia] (in error).
Type specimen: ANSP, holotype, see Baur (1892), apparently lost, not listed by Malnate (1971).

Manouria emys phayrei (Blyth 1854) [17:66] [75]
Burmese Black Giant Tortoise

Craig B. Stanford / CBFTT / Kaeng Krachan National Park, Thailand

left: Chuck Schaffer / CBFTT / No data / captivity
right: Craig B. Stanford / CBFTT / Kaeng Krachan National Park, Thailand



*

(subspecies: *emys* = red, *phayrei* = purple;
orange dots = probable trade)

Distribution: Bangladesh, India (Assam, Meghalaya, Mizoram, Nagaland), Myanmar, Thailand
Presumed Historic Indigenous Range: 154,997 sq. km
Size (Max SCL): male 60.0 cm, female 58.0 cm (Nutaphand 1979; Høybye-Mortensen 2004; Stanford et al. 2015 CBFTT)
Synonymy:

Testudo phayrei Blyth 1854:639 [17:66]
Scapia phayrei, Manouria emys phayrei
Type locality: "Arakan; Tenasserim Provinces...Burma" [Myanmar]. Restricted to "Arakan" [Myanmar] by Anderson (1872:132).
Type specimen: ZSI 813, lectotype, designated "type" by Anderson (1871:426,f.1–2), discussed by Bour (1998), see Das et al. (1998), Das (2009), and Kundu et al. (2018a).

Testudo (Scapia) falconeri Gray 1869a:169
Testudo falconeri, Scapia falconeri
Type locality: "India?"
Type specimen: Formerly NHMUK s/n, holotype, figured (f.1); returned to donor (Gray 1873j:18).

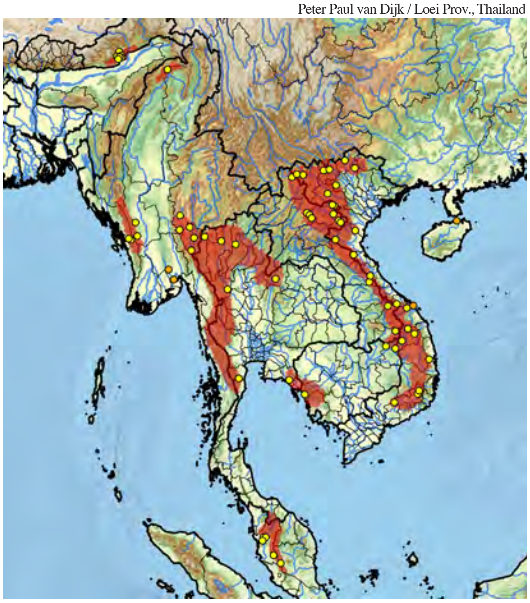
Testudo nutapundi Reimann and Nutaphand *in* Nutaphand 1979:193
Geochelone nutapundi, Manouria emys nutapundi, Geochelone emys nutapundi, Manouria nutapundi
Type locality: "Northern Thailand (Tak Province) and western Central Region (Kanchanaburi Province); Assam, Burma". Restricted to "Nord-Thailand, Tak-Provinz" by Obst (1983:253).
Type specimen: Not located, specimen figured (f.105-106), but not considered the holotype by Obst (1983).

Manouria impressa (Günther 1882)
Impressed Tortoise


David Emmett / TL / Cardamom Mts., Cambodia



Peter Paul van Dijk / Loei Prov., Thailand


*
(orange dots = probable trade)

Distribution: Cambodia, China (Yunnan [?]), India (Arunachal Pradesh, Assam [?]), Laos, Malaysia (West), Myanmar, Thailand, Vietnam
Presumed Historic Indigenous Range: 439,603 sq. km
Size (Max SCL): male 29.3 cm, female 35.9 cm (Chan-ard et al. 1996; Mital et al. 2020)
IUCN Red List: Endangered (EN A2cd) (Cota et al. 2021); Previously: Vulnerable (VU A1acd, B1+2acd) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)
Synonymy:
Geoemyda impressa Günther 1882:343
Testudo impressa, Geochelone impressa, Manouria impressa
Type locality: "Siam" [Thailand].
Type specimen: NHMUK 1947.3.5.7 (formerly 1882.4.20.1), holotype, see Bour (1998).
Geoemyda latinuchalis Vaillant 1894:68
Testudo latinuchalis
Type locality: "la rivière Noire, Tonkin" [Vietnam].
Type specimen: MNHN 1892.266, lectotype, designated by Bour (1998:30).
Testudo pseudemys Boulenger 1903a:144
Type locality: "Batang Padang district, South Perak (1,000 feet to 2,000 feet)" [Malaysia].
Type specimen: NHMUK 1947.3.5.6 (formerly 1903.4.13.6), lectotype, designated by Bour (1998:31).

XEROBATINAE Gray 1874

Xerobatina Gray 1874:723
Xerobatinae Gaffney and Meylan 1988:210

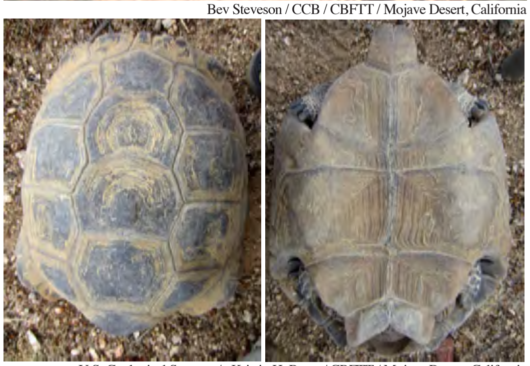
Gopherus Rafinesque 1832 (17:67) (**76**)

Gopherus Rafinesque 1815:74 (*nomen nudum*)
Gopherus Rafinesque 1832:64
Type species: *Gopherus polyphemus* [= *Testudo polyphemus* Daudin 1801], by original designation.
Xerobates Agassiz 1857a:252,446
Type species: *Xerobates berlandieri* Agassiz 1857a, by subsequent designation by Brown (1908:115).
Bysmachelys Johnston 1937:439
Type species: *Bysmachelys canyonensis* † Johnston 1937 [= subjective synonym of *Testudo pertenuis* † Cope 1892b (see TEWG 2015)], by original monotypy.
Scaptochelys Bramble 1982:852
Type species: *Scaptochelys agassizii* [= *Xerobates agassizii* Cooper 1861], by original designation.

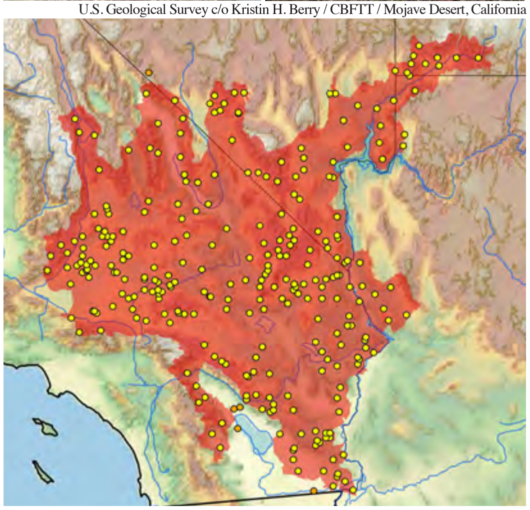
Gopherus agassizii (Cooper 1861) (10:22, 11:11)

Mojave Desert Tortoise, Agassiz's Desert Tortoise

Bev Steveson / CCB / CBFTT / Mojave Desert, California



U.S. Geological Survey c/o Kristin H. Berry / CBFTT / Mojave Desert, California



*

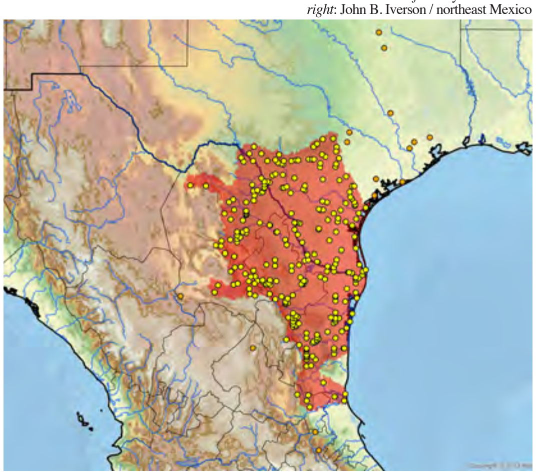
(orange dots = probable introduced)

Distribution: USA (Arizona, California, Nevada, Utah)
Presumed Historic Indigenous Range: 117,795 sq. km
Size (Max SCL): male 33.0 cm, female 37.4 cm (Berry and Murphy 2019 CBFTT)
CBFTT Account: Berry and Murphy (2019)
IUCN Red List: Critically Endangered (CR A2abce+4abce) (Berry et al. 2021); Previously: Vulnerable (VU A1acde+2cde, E) (TFTSG 1996)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Gopherus* spp. (1975)
Synonymy:
Xerobates agassizii Cooper 1861:120 (10:22)
Testudo agassizii, Gopherus agassizii, Gopherus polyphemus agassizii, Geochelone agassizii, Scaptochelys agassizii
Type locality: "mountains of California, near Fort Mojave" [USA]. Restricted to "California, San Bernardino County; Mountains of California, near Fort Mojave; Soda Valley (very approximately 35°6' N, 116°6' W)" by Murphy et al. (2011:51).
Type specimen: USNM 7888, lectotype, designated and genotyped by Murphy et al. (2011:51), see also Cochran (1961) and Reynolds et al. (2007).
Xerobates lepidocephalus Ottley and Velázques Solis 1989:497 (11:11)
Type locality: "western base of the Sierra San Vicente, approximately 1 km N of the Buena Mujer Dam, Baja California Sur, Mexico" [in error or introduced].
Type specimen: BYU 39706, holotype; genotyped by Murphy et al. (2011).

Gopherus berlandieri (Agassiz 1857a) (14:34) **(77)**
Texas Tortoise, Berlandier's Tortoise, *Galapago Tamaulipas*

Larry Ditto / CCB / Texas


left: Larry Ditto / Texas
right: John B. Iverson / northeast Mexico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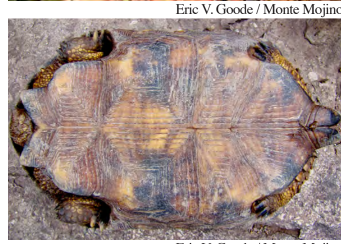
(orange dots = probable introduced)

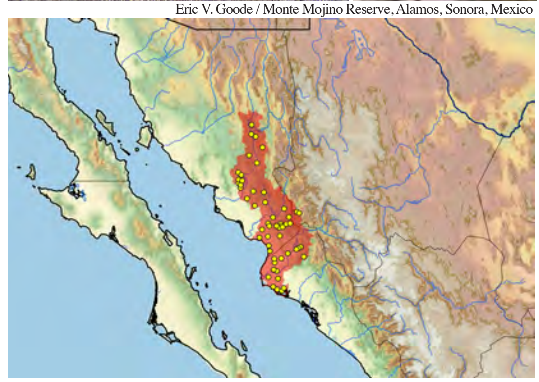
Distribution: Mexico (Coahuila, Nuevo Leon, San Luis Potosi, Tamaulipas), USA (Texas)
Presumed Historic Indigenous Range: 280,369 sq. km
Size (Max SCL): male 23.8 cm, female 21.0 cm (Rose and Judd 2014)
IUCN Red List: Least Concern (LC) (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2011)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Gopherus* spp. (1975)
Synonymy:
Testudo tuberculata Berlandier 1850:287 (14:34) **(77)** (*nomen oblitum* and junior homonym, not = *Testudo tuberculata* Pennant *in* Schoepff 1801 [= *Dermochelys coriacea*])
Testudo tuberculatu
Type locality: "Tamaulipas" [Mexico]. Restricted to "los llanos de Tamaulipas" [Mexico] by Bour (2017:53).
Type specimen: Not located, specimen figured in manuscript drawing by Berlandier in 1850 (pl.5), reproduced and designated lectotype by Bour (2017:f.3).
Testudo bicolor Berlandier 1850:287 (14:34) **(77)** (*nomen oblitum*)
Type locality: "Tamaulipas" [Mexico].
Type specimen: Not known or located.
Xerobates berlandieri Agassiz 1857a:392,447
Testudo berlandieri, Xerobates gopher berlandieri, Gopherus berlandieri, Gopherus polyphemus berlandieri, Scaptochelys berlandieri
Type locality: "southern Texas [USA] and Mexico." Restricted to "Lower Rio Grande, Texas" [USA] by Stejneger and Barbour (1917:121); and to "Brownsville, Cameron County, Texas, USA" by Smith and Taylor (1950a:361).
Type specimen: USNM 60(2), lectotype, designated by Bour (2017:61,f.8), also discussed by Cochran (1961) and Reynolds et al. (2007).
Testudo minima Berlandier *in* Bour 2017:58 (*nomen nudum*)
Comment: Original manuscript name for *Testudo bicolor* Berlandier 1850, never published.

Gopherus evgoodei Edwards, Karl, Vaughn, Rosen, Meléndez Torres, and Murphy 2016 (17:68)
Sinaloan Thornscrub Tortoise, Goode's Thornscrub Tortoise, *Tortuga Sinaloense de Matorral, Tortuga de Monte Sinaloense*

Eric V. Goode / Monte Mojino Reserve, Alamos, Sonora, Mexico




Eric V. Goode / Monte Mojino Reserve, Alamos, Sonora, Mexico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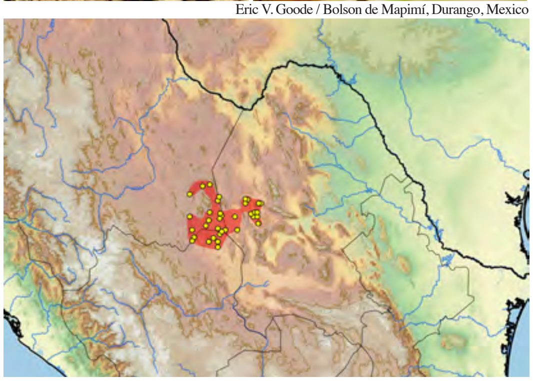
Distribution: Mexico (Chihuahua, Sinaloa, Sonora)
Presumed Historic Indigenous Range: 37,484 sq. km
Size (Max SCL): male 25.5 cm, female 26.1 cm (Karl, unpubl. data)
IUCN Red List: Vulnerable (VU A4ce) (Edwards et al. 2018)
CITES: Appendix II, as Testudinidae spp. (1977)
Synonymy:
Gopherus evgoodei Edwards, Karl, Vaughn, Rosen, Meléndez Torres, and Murphy 2016:140
Type locality: "Alamos (approximate location 27°02' N, 108°55' W, elevation 433 m), Sonora, Mexico."
Type specimen: AMNH 64160, holotype.

Gopherus flavomarginatus Legler 1959 (12:32) (**76**)
Bolson Tortoise, Mexican Giant Tortoise, *La Tortuga del Bolsón, Tortuga Grande, Tortuga Llanero*


Eric V. Goode / TCC / Bolson de Mapimí, Durango, Mexico


Eric V. Goode / Bolson de Mapimí, Durango, Mexico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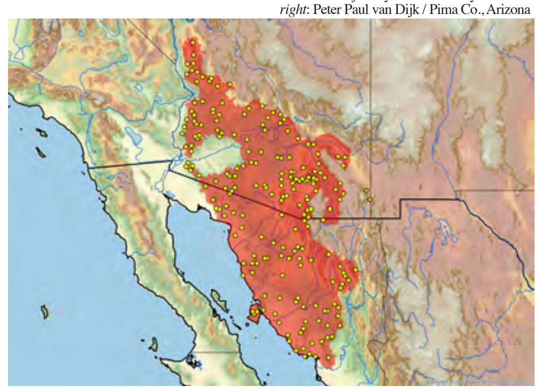
Distribution: Mexico (Chihuahua, Coahuila, Durango)
Introduced: USA (New Mexico)
Presumed Historic Indigenous Range: 15,752 sq. km
Size (Max SCL): male 35.6 cm, female 39.1 cm (Legler and Vogt 2013; McCoy et al. 2014; Wiese and Hillard, Turner Endangered Species Fund, unpubl. data); Max CCL: ca. 46.0 cm [estimated].
IUCN Red List: Critically Endangered (CR A4bcd) (Kiester et al. 2018); Previously: Vulnerable (VU A1cd) (van Dijk and Flores-Villela 2007); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix I (1979); Previously: Appendix II, as Testudinidae spp. (1977), and Appendix II, as *Gopherus* spp. (1975)
Synonymy:
Gopherus flavomarginatus Legler 1959:337
Gopherus polyphemus flavomarginatus, Gopherus flavomarginata
Type locality: "30 to 40 miles from Lerdo, Durango, Mexico."
Type specimen: USNM 61253, holotype, see Cochran (1961) and Reynolds et al. (2007).
Gopherus huecoensis † Strain 1966:24 (**52**)
Type locality: "Madden Arroyo, locality B.E.G. 40240, NW1/4NW1/4 Sec. 19, T. 7, Blk. 73, Hudspeth County, Texas" [USA].
Type specimen: BEG 40240-27, holotype, fossil, plastron and appendicular bones, figured (pl.2-6), see also Vlachos (2018).
Geologic age: Lower Pleistocene, Fort Hancock Formation, Late Blancan NALMA, Piacenzian–Gelasian, see Vlachos (2018).

Gopherus morafkai Murphy, Berry, Edwards, Leviton, Lathrop, and Riedle 2011 (11:11)
Sonoran Desert Tortoise, Morafka's Desert Tortoise


Peter Paul van Dijk / Pima Co., Arizona


left: Roy Averill-Murray / Arizona
right: Peter Paul van Dijk / Pima Co., Arizona

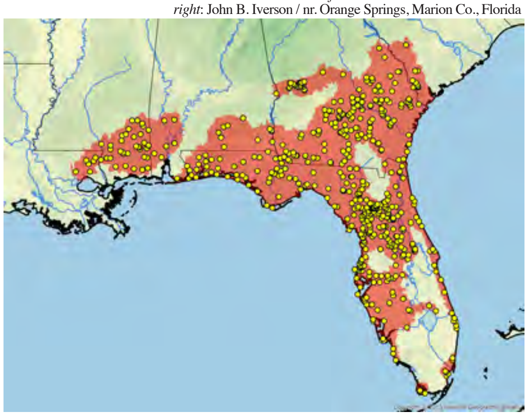

*
(orange dots = probable introduced)

Distribution: Mexico (Sonora), USA (Arizona)
Presumed Historic Indigenous Range: 195,025 sq. km
Size (Max SCL): male 31.4 cm, female 32.0 cm (Averill-Murray et al. 2002; Arizona Game and Fish Dept., unpubl. data)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Vulnerable (VU) (2011, 2020)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Gopherus* spp. (1975)
Synonymy:
Gopherus morafkai Murphy, Berry, Edwards, Leviton, Lathrop, and Riedle 2011:53 (11:11)
Xerobates morafkai
Type locality: "Tucson (approximate location 32°7' N, 110°56' W, elevation 948 m), Pima County, Arizona, U.S.A."
Type specimen: CAS 33867, holotype.

Gopherus polyphemus (Daudin 1801) [(12:33) **(78)**]
Gopher Tortoise

Kevin Main / CCB / Lake Wales Ridge, Florida

left: David Dennis / CRM 3 / Florida
right: John B. Iverson / nr. Orange Springs, Marion Co., Florida



*

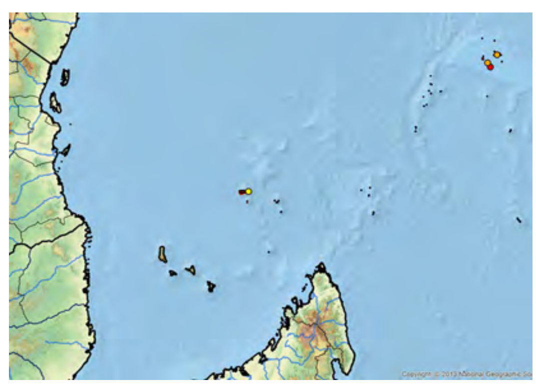
Distribution: USA (Florida, Georgia, South Carolina, Alabama, Mississippi, Louisiana)
Presumed Historic Indigenous Range: 231,497 sq. km
Size (Max SCL): male 44.0 cm, female 42.5 cm; Max CCL: male 54.5 cm (Mushinsky et al. 2006; Mrykalo et al. 2016; Bohlman et al. 2019)
IUCN Red List: Vulnerable (VU A1acde) (TFTSG 1996)
TFTSG Provisional Red List: Endangered (EN) (2011)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Gopherus* spp. (1975)
Synonymy:
Testudo polyphaemus Bartram 1791:18 (*nomen nudum*)
Testudo polyphemus Daudin 1801:256
Emys polyphemus, *Gopherus polyphemus*, *Xerobates polyphemus*, *Gopherus polyphemus polyphemus*
Type locality: "l'Amérique septentrionale, principalement sur les bords de la rivière Savannah et près de l'Alatamaha" [USA]. Restricted to "vicinity of Savannah, Georgia" [USA] by Schmidt (1953:104).
Type specimen: Not known or located.
Testudo depressa Guérin 1829:pl.1,f.1
Type locality: Not designated. Restricted to "vicinity of Savannah, Georgia" [USA] by Schmidt (1953:105).
Type specimens: MNHN 9252 and 9269, syntypes (2), identified by Bour (2003).
Testudo carolina Le Conte 1830:97 (*nomen novum* and junior homonym, not = *Testudo carolina* Linnaeus 1758 [= *Terrapene carolina carolina*])
Xerobates carolinus, *Gopherus carolinus*
Type locality: "pine forests of Georgia and Florida, ...never found north of Savannah river" [USA].
Type specimens: MNHN 9252 and 9269, syntypes (2), identified by Bour (2003).
Comment: Unjustified replacement name for *polyphemus*.
Testudo gopher Bartram *in* Gray 1844:4
Xerobates gopher
Type locality: Not designated. Restricted to "vicinity of Savannah, Georgia" [USA] by Schmidt (1953:105).
Type specimens: NHMUK 1839.10.18.30 and 1970.1916, syntypes (2).

***Gopherus*, sp. indet.**
Testudo australis Girard 1858:470 [(12:34)] (*nomen dubium et oblitum*)
Gopherus australis
Type locality: "Bay of Islands, New Zealand" [in error, trade].
Type specimen: Probably USNM, apparently lost, see TTWG (2012).

TESTUDININAE Batsch 1788
Testudines Batsch 1788:437
Testudinina Gray 1869a:167
Testudininae Siebenrock 1909:508

Aldabrachelys Loveridge and Williams 1957 [(07:52, 07:53, 08:13, 09:29, 09:30, 12:28, 14:32, 17:55)]
Megalochelys Fitzinger 1843:29 (junior homonym, not = *Megalochelys* Falconer and Cautley 1837 [= Testudinidae †])
Type species: *Testudo (Megalochelys) gigantea* [= *Testudo gigantea* Schweigger 1812], by original designation.
Aldabrachelys Loveridge and Williams 1957:225
Type species: *Geochelone* (*Aldabrachelys*) *gigantea* [= *Testudo gigantea* Schweigger 1812], by original designation.
Dipsochelys Bour 1982a:117
Type species: *Dipsochelys elephantina* [= *Testudo elephantina* Duméril and Bibron 1835 = subjective synonym of *Testudo gigantea* Schweigger 1812], by original designation.

Aldabrachelys gigantea (Schweigger 1812) [(07:54, 07:55, 08:13, 09:29, 09:30, 11:10, 12:28, 14:32, 17:56)]
Aldabra Giant Tortoise
(includes 4 subspecies)

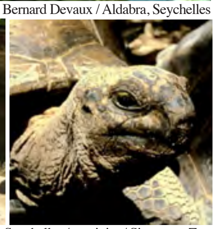


(subspecies: *gigantea* = red range with yellow dot, *daudinii* = red dot, *arnoldi* and *hololissa* = orange dots [probable])
Distribution: Seychelles (Aldabra, Granitic Islands)
Presumed Historic Indigenous Range: 438 sq. km
Size (Max SCL): male 138.0 cm, female 114.0 cm (see subspp.)
IUCN Red List: Vulnerable (VU D2) (TFTSG 1996)
TFTSG Provisional Red List: Endangered (EN) (2019)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Geochelone* spp. (1975)

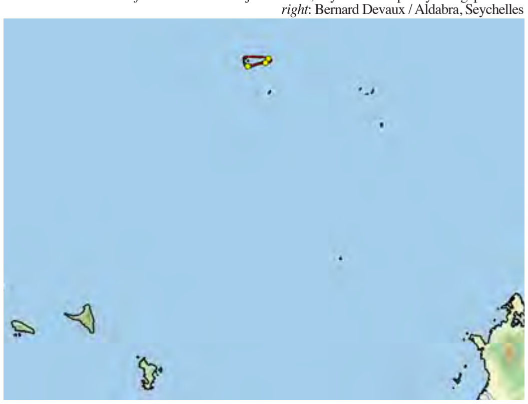
Aldabrachelys gigantea gigantea (Schweigger 1812) (07:54, 08:13, 09:29, 09:30, 11:10, 17:57)

Aldabra Giant Tortoise

Bernard Devaux / Aldabra, Seychelles



left: Peter Paul van Dijk / Aldabra, Seychelles / captivity / Singapore Zoo
right: Bernard Devaux / Aldabra, Seychelles



*

(subspecies: *gigantea* = red)

Distribution: Seychelles (Aldabra)

Introduced: Mauritius (Aigrettes, Rodrigues, Round), Seychelles (Assomption, Alphonse, Astove, Cerf, Cosmolédo, Cousin, Cousine, Curieuse, D'Arros, Desroches, Farquhar, Frégate, Grande Soeur, Moyenne, North, Rémire, Silhouette), Tanzania (Zanzibar [Changuu])

Presumed Historic Indigenous Range: 190 sq. km

Size (Max SCL): male 123.0 cm, female 97.0 cm; Max CCL: male 160.0 cm, female 131.0 (Gerlach and Canning 1998; Gerlach, unpubl. data)

TFTSG Provisional Red List: Endangered (EN) (2019)

Synonymy:

Testudo gigantea Schweigger 1812:327 (08:13, 09:29, 14:32) (*nomen conservandum* and partim, misidentified type, senior homonym, not *Testudo gigantea* † (Grandidier 1868) [= *Aldabrachelys grandidieri* †])

Geochelone (Chelonoidis) gigantea, Geochelone gigantea, Testudo gigantea gigantea, Geochelone gigantea gigantea, Aldabrachelys gigantea, Megalochelys gigantea, Megalochelys gigantea gigantea, Scapia gigantea, Dipsochelys gigantea, Aldabrachelys gigantea gigantea, Dipsochelys giganteus

Type locality: "Brasilia" [Brazil]. Restricted to "Dune Patates, South Island, Aldabra Atoll, Republic of Seychelles" by neotype designation by Frazier (2006:278).

Type specimen: USNM 269962, neotype, designated by Frazier (2006:278); MNHN 9554, the original holotype (= *Chelonoidis denticulatus*), rediscovered and designated by Bour (2006c:19), see also Ceríaco and Bour (2012) and Bour (2013a), but rejected and set aside by ICZN (2013b) in favor of the neotype designation.

Comment: Name conserved by ICZN (2013b), see Frazier (2008, 2009), Zug et al. (2009), Bour et al. (2009), and Takahashi et al. (2009).

Testudo dussumieri Schlegel *in* Gray 1830e:3 (*nomen nudum*)

Testudo dussumieri Gray 1831d:9 (09:29, 14:32) (*nomen suppressum*)

Dipsochelys dussumieri, Geochelone dussumieri, Aldabrachelys dussumieri, Dipsochelys dussumieri dussumieri

Type locality: "Insula Mauritiana, Insula Aldebra" [Mauritius and Aldabra, Seychelles]. Restricted to "Aldabra (N.W. of Madagascar)" by Hubrecht (1881:44), and to "Insula Aldebra" [Aldabra, Seychelles] by Bour (1984b:291).

Type specimen: RMNH 3231, lectotype, designated by Bour (2006c:21), discussed by Hoogmoed et al. (2010) and Frazier and Matyot (2010), who concluded that its provenance was most likely the granitic Seychelles rather than Aldabra; genotyped by Austin et al. (2003).

Comment: Name suppressed by ICZN (2013b), see Frazier (2008, 2009), Zug et al. (2009), Bour et al. (2009), and Takahashi et al. (2009).

Testudo elephantina Duméril and Bibron 1835:110

Testudo gigantea elephantina, Geochelone elephantina, Geochelone gigantea elephantina, Dipsochelys elephantina, Aldabrachelys elephantina, Dipsochelys elephantina elephantina

Type locality: "la plupart des îles qui sont situées dans le Canal de Mosambique, telle que Anjouan, Aldebra, les Comores, d'où on l'apporte fréquemment à Bourbon et à Maurice." Restricted to "Aldabra" [Seychelles] by Boulenger (1889:168); to "North Aldabra" by Rothschild (1915:418); and to "Ile Malabar, Aldabra Atoll, Republic of Seychelles" by Bour (1984b:291).

Type specimen: MNHN 7874, lectotype, designated by Rothschild (1915:425) per Bour (1985:54); genotyped by Austin et al. (2003).

Testudo ponderosa Günther 1877:35

Aldabrachelys ponderosa

Type locality: Not known. Restricted to "Aldabra" [Seychelles] by Bour (1984b:292).

Type specimen: NHMUK 1947.3.4.89 (formerly 1864.12.20.27), lectotype, designated by Bour (1985:54); NHMUK 1947.3.4.94 (formerly 1876.1.4.1), paralectotype, discussed by Gerlach and Canning (1998); NHMUK 1947.3.4.94 genotyped by Austin et al. (2003).

Testudo sumeirei Sauzier 1892:398

Geochelone sumeirei, Dipsochelys sumeirei, Megalochelys sumeirei, Dipsochelys elephantina sumeirei, Aldabrachelys sumeirei, Dipsochelys dussumieri sumeirei

Type locality: "probable...de Maurice..[&]..la Réunion..[&]..des Séchelles." Restricted to "Seychelles" by Rothschild (1899:360); to "Seychelles Islands?" by Auffenberg (1974:144), and to "central Seychelles" by Bour (1984b:292).

Type specimen: NHMUK 1929.12.27.1, holotype, discussed by Gerlach and Canning (1998); genotyped by Austin et al. (2003).

Testudo gouffei Rothschild 1906:753

Testudo gouffei, Geochelone gouffei, Geochelone (Aldabrachelys) gouffei, Geochelone (Aldabrachelys) gigantea gouffei, Geochelone gigantea gouffei, Megalochelys gouffei, Aldabrachelys gouffei

Type locality: "Therese Island, St. Anne's Channel, Seychelles Islands." Emended to "more likely...from Juan de Novo or Farquhar Island" [Seychelles] by Rothschild (1915:427).

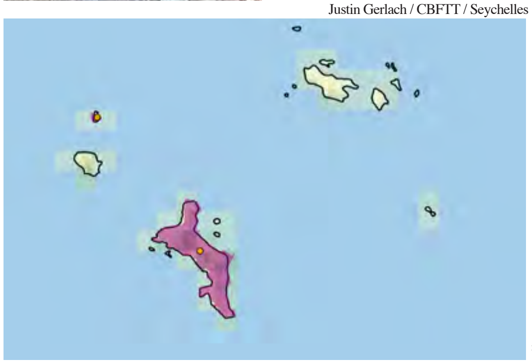
Type specimen: NHMUK 1949.1.4.66, holotype; genotyped by Austin et al. (2003).

Aldabrachelys gigantea arnoldi (Bour 1982a) (07:54, 09:30, 11:10)
Arnold's Giant Tortoise


John Pemberton / CBFTT / Seychelles

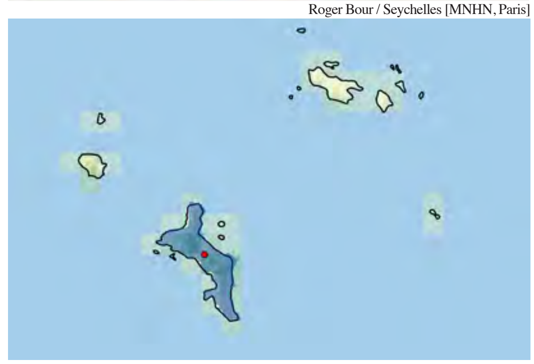


Justin Gerlach / CBFTT / Seychelles


*
(subspecies: *arnoldi* = purple; orange dots [probable])
Distribution: Seychelles (Mahé?, North? [all extirpated])
Introduced: Seychelles (North, Cousine, Frégate, Silhouette)
Presumed Historic Indigenous Range: 162 sq. km
Size (Max SCL): male 96.0 cm, female 88.0 cm; Max CCL: male 124.0 cm, female 111.0 cm (Gerlach and Canning 1998; Gerlach, unpubl. data)
TFTSG Provisional Red List: Critically Endangered (CR) (2019)
CBFTT Account: Gerlach (2009)
Synonymy:
Dipsochelys arnoldi Bour 1982a:121
Testudo arnoldi, Aldabrachelys arnoldi, Aldabrachelys gigantea arnoldi, Dipsochelys dussumieri arnoldi
Type locality: "Seychelles...probablement...les îles granitiques."
Type specimen: MNHN 9564, holotype; NHMUK 1874.2.6.5, paratype, genotyped by Austin et al. (2003).

Aldabrachelys gigantea daudinii (Duméril and Bibron 1835) (09:30)
Daudin's Giant Tortoise
(Extinct, ca. 1850)


Roger Bour / Seychelles [MNHN, Paris]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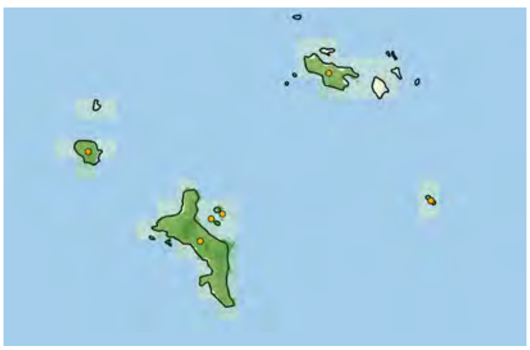
(subspecies: *daudinii* = blue; red dot [probable, extinct])
Distribution: Seychelles (Mahé? [extinct])
Presumed Historic Indigenous Range: 159 sq. km
Size (Max SCL): male 83.0 cm; Max CCL: male 98.0 cm (Gerlach and Canning 1998)
TFTSG Provisional Red List: Extinct (EX) (2011)
Synonymy:
Testudo daudinii Duméril and Bibron 1835:123
Testudo gigantea daudinii, Geochelone gigantea daudinii, Dipsochelys daudinii, Geochelone daudinii, Aldabrachelys daudinii, Aldabrachelys gigantea daudinii, Dipsochelys dussumieri daudinii
Type locality: "Indes orientales." Restricted to "les îles Seychelles granitiques" by Bour (1985:58).
Type specimen: MNHN 11819 (shell) and 7640 (its scutes), holotype, discussed by Bour (1985) and Gerlach and Canning (1998); genotyped by Austin et al. (2003); Uetz et al. (2019) erroneously listed only MNHN 7640.

Aldabrachelys gigantea hololissa (Günther 1877) (09:30, 11:10)
Seychelles Giant Tortoise

Justin Gerlach / CBFTT / Seychelles

Justin Gerlach / CBFTT / Seychelles



*

(subspecies: *hololissa* = green; orange dots [probable])

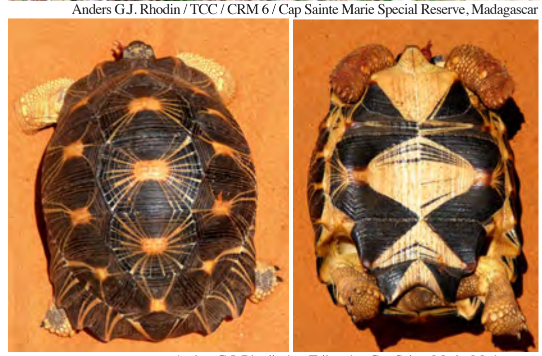
Distribution: Seychelles (Cerf?, Cousine?, Frégate?, Mahé?, Praslin?, Round?, Silhouette? [all extirpated])
Introduced: Seychelles (Cerf, Cousine, Round)
Presumed Historic Indigenous Range: 229 sq. km
Size (Max SCL): male 138.0 cm, female 114.0 cm; Max CCL: male 175.0 cm, female 147.0 cm (Gerlach and Canning 1998; Gerlach, unpubl. data)
TFTSG Provisional Red List: Critically Endangered (CR) (2019)
CBFTT Account: Gerlach (2011)
Synonymy:
Testudo hololissa Günther 1877:39
Dipsochelys hololissa, Geochelone hololissa, Aldabrachelys hololissa, Aldabrachelys gigantea hololissa, Dipsochelys dussumieri hololissa
Type locality: "Seychelle Islands...[probably] originally imported from the Aldabra group." Restricted to "des îles Seychelles" by Sauzier (1899:142).
Type specimen: UMZ R3796, neotype, designated by Gerlach and Canning (1998:12); RCSM 1021, lectotype, figured by Günther (1877:pl.7), designated by Rothschild (1915:426), destroyed during World War II (Bour 1985); RCSM 1020, paralectotype, also destroyed during WW II (Bour 1985); NHMUK 1888.3.20.1, paralectotype, labeled "type" by Boulenger (1889), identified by Gerlach and Canning (1998) as a *Dipsochelys dussumieri* [= *Aldabrachelys gigantea gigantea*] and removed from the type series; NHMUK 1888.3.20.1 genotyped by Austin et al. (2003); Uetz et al. (2019) erroneously listed only NHMUK 1888.3.20.1 as syntype.
Dipsochelys resurrecta Gerlach and Canning 1996:133 (*nomen nudum*)

Astrochelys Gray 1873j (07:52)

Astrochelys Gray 1873j:4
Type species: *Testudo (Astrochelys) radiata* [= *Testudo radiata* Shaw 1802], by original monotypy.
Asterochelys Gray 1874:724 (*nomen novum*)
Angonoka Le, Raxworthy, McCord, and Mertz 2006:528 (09:31)
Type species: *Angonoka yniphora* [= *Testudo yniphora* Vaillant 1885a], by original designation.

Astrochelys radiata (Shaw 1802)
Radiated Tortoise, *Sokake*

Anders G.J. Rhodin / TCC / CRM 6 / Cap Sainte Marie Special Reserve, Madagascar



Anders G.J. Rhodin / nr. Tsihombe, Cap Sainte Marie, Madagascar

Distribution: Madagascar
Introduced: Mauritius (Rodrigues, Round), Réunion
Presumed Historic Indigenous Range: 26,180 sq. km
Size (Max SCL): male 39.5 cm, female 35.6 cm (Pedrono 2008; Leuteritz and Ganz 2013; Pedrono and Smith 2013); long-term captive: female 48.0 cm (Rakotoarisoa and Hudson, unpubl. data)
IUCN Red List: Critically Endangered (CR A4d, E) (Leuteritz and Rioux Paquette 2008); Previously: Vulnerable (VU) (TFTSG 1996)
CITES: Appendix I (1975)
Synonymy:
Testudo coui Daudin 1801:271 (*nomen oblitum*)
Type locality: Not known.
Type specimen: Possibly MNHN, not located.

Testudo radiata Shaw 1802:22

Psammobates radiatus, Asterochelys radiata, Testudo radiata radiata, Geochelone radiata, Astrochelys radiata

Type locality: "Madagascar." Restricted to "Soalara (Baie de Saint-Augustin), sud-ouest de Madagascar" by Bour (1979:152).

Type specimen: NHMUK 1947.3.5.15, holotype.

Testudo madagascariensis Schweigger 1812:457 (*nomen nudum*)

Testudo desertorum Grandidier 1869:257

Type locality: "Madagascar."

Type specimen: Not known or located.

Testudo hypselonota Bourret 1941b:9

Type locality: "provenant d'un Chinois de Cholon qui l'avait...achetée au marché...il n'est pas certain qu'elle ait été trouvée en Cochinchine" [Vietnam] [trade specimen]. Restricted to "Cholon?... Indochina" by Wermuth and Mertens (1961:213) [in error]. Shown to be identical to *Testudo radiata* from Madagascar by Auffenberg (1963a:465); type locality restricted to "durch den Tierhandel...von Madagascar nach Indochina" by Wermuth (1965:285).

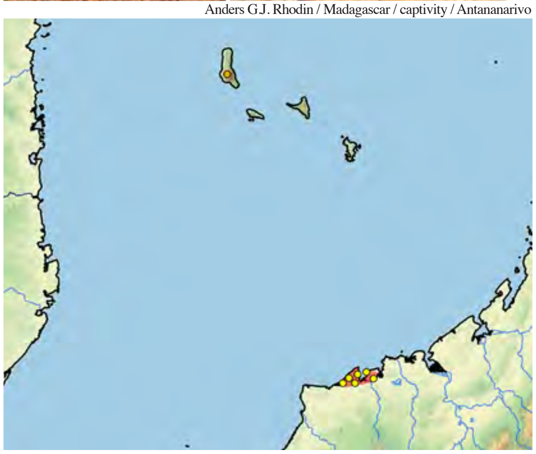
Type specimen: MNHN 1948.41 (formerly VNUH T.85), holotype, see Auffenberg (1963a) and Wermuth (1965).

Astrochelys yniphora (Vaillant 1885a) (07:56, 09:31) (**79**)

Ploughshare Tortoise, Plowshare Tortoise, *Angonoka*

Anders G.J. Rhodin / CCB / Baly Bay National Park, Madagascar

Anders G.J. Rhodin / Madagascar / captivity / Antananarivo



(orange dot = trade)

Distribution: Madagascar

Introduced: Mauritius (Rodrigues)

Presumed Historic Indigenous Range: 884 sq. km

Size (Max SCL): male 51.9 cm, female 42.6 cm (Pedrono and Markwell 2001; Pedrono 2008; Pedrono and Smith 2013; Pedrono and Clausen 2018)

IUCN Red List: Critically Endangered (CR A4ad, B2ab(v), C1,E) (Leuteritz and Pedrono 2008); Previously: Endangered (EN) (TFTSG 1996)

CITES: Appendix I (1975)

Synonymy:

Testudo yniphora Vaillant 1885a:441

Testudo radiata yniphora, Asterochelys yniphora, Geochelone yniphora, Geochelone (Asterochelys) yniphora, Astrochelys yniphora, Angonoka yniphora

Type locality: "un îlot situé au nord-nord-est de...grande Comore ...d'une localité située vers Aldabra" [in error]. Restricted to "cap d'Amparafaka (Baie de Baly), nord-ouest de Madagascar" by Bour (1979:152).

Type specimen: MNHN 1885.499, holotype, apparently lost, specimen figured (pl.13-14), see Bour (2007a).

Testudo hyniphora Vaillant *in* Vaillant and Grandidier 1910:40 (*nomen novum*)

Comment: Unjustified emendation of *yniphora*.

Centrochelys Gray 1872c (07:52)

Centrochelys Gray 1872c:5

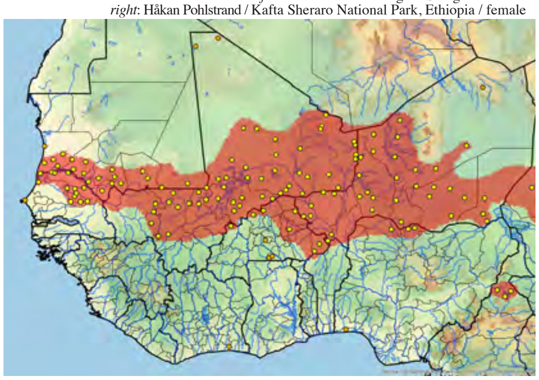
Type species: *Peltastes (Centrochelys) sulcatus* [= *Testudo sulcata* Miller 1779], by original monotypy.

Centrochelys sulcata (Miller 1779) (12:29)

African Spurred Tortoise, Grooved Tortoise, Sahel Tortoise, *Tortue Sillonnée*

Tomas Diagne / Katane, Senegal / male

left and center: Tomas Diagne / Senegal / subadult
right: Håkan Pohlstrand / Kafta Sheraro National Park, Ethiopia / female



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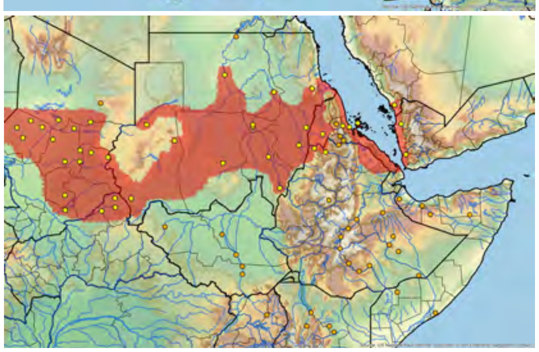


*

(orange dots = probable trade or introduced)

Distribution: Algeria (?), Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Djibouti (extirpated), Eritrea, Ethiopia, Mali, Mauritania, Niger, Nigeria, Saudi Arabia, Senegal, Sudan, Togo (?), Yemen

Introduced: Costa Rica, Ethiopia, Gambia, Somalia, Spain, USA (Hawaii)

Presumed Historic Indigenous Range: 3,384,127 sq. km

Size (Max SCL): male 86.0 cm, female 57.8 cm (Lambert 1993; Ernst et al 2006b; Itescu et al. 2014; Ardjima et al. 2020); Max CCL: male 101.0 cm, female 67.0 cm (Luiselli and Petrozzi, unpubl. data)

CBFTT Account: Petrozzi, Hema, Demaya, Benansio, Eniang, Diagne, Segniagbeto, and Luiselli (2020)

IUCN Red List: Endangered (EN A4bcd) (Petrozzi et al. 2021); Previously: Vulnerable (VU A1cd) (TFTSG 1996)

CITES: Appendix II, as Testudinidae spp. (1977); Zero annual export quota for specimens removed from the wild and traded for primarily commercial purposes (2000); Previously: Appendix II, as *Geochelone* spp. (1975)

Synonymy:

Testudo sulcata Miller 1779:pl.26

Geochelone (Geochelone) sulcata, Geochelone sulcata, Peltastes sulcatus, Centrochelys sulcatus, Centrochelys sulcata

Type locality: “India occidentali” [in error]. Restricted to “West Indies” [in error] by Miller and Shaw (1796:54).

Type specimen: Not located, type specimen figured (pl.26), discussed by Bour (2013b).

Testudo calcarata Schneider 1784:317 (*nomen novum*)

Chersine calcarata

Type locality: “Westindien.” [in error].

Type specimen: Figured in Miller (1779:pl.26), by default.

Comment: Unjustified replacement name for *sulcata*.

Testudo radiata senegalensis Gray 1831d:11

Geochelone senegalensis, Geochelone sulcata senegalensis

Type locality: “Senegal.”

Type specimen: MNHN, holotype, not located.

Testudo schoepfii Rüppell *in* Gray 1873j:13 (*nomen nudum* and junior homonym, not *Testudo schoepfii* Fitzinger 1826 [= *Kinixys erosa*]).

Type locality: “Abyssinia” [Ethiopia].

Type specimen: NHMUK, holotype, not located, see Gray (1873j).

Geochelone sulcata sudanensis Ballasina, Vandepitte, Mochi, and Fenwick 2006:111 (*nomen nudum*)

Chelonoidis Fitzinger 1835 (07:52, 17:58)

Chelonoidis Fitzinger 1835:112
Type species: *Testudo (Chelonoidis) boiei* [= *Testudo boiei* Wagler 1830a = subjective synonym of *Testudo carbonaria* Spix 1824], by subsequent designation by Fitzinger (1843:29). Genus established as *Geochelone (Chelonoidis)* without a type species.

Gopher Gray 1870a:190
Type species: *Testudo (Gopher) chilensis* Gray 1870a, by original monotypy.

Elephantopus Gray 1874:724 (junior homonym, not = *Elephantopus* Agassiz 1846 [= Siphonophora])
Type species: *Elephantopus planiceps* [= *Testudo planiceps* Gray 1854b = *Chelonoidis porteri*], by original monotypy.

Pampatestudo Lindholm 1929:285 (*nomen novum*)
Type species: *Testudo (Pampatestudo) chilensis* [= *Testudo (Gopher) chilensis* Gray 1870a], by original monotypy.

Monachelys Williams 1952:547
Type species: *Testudo (Monachelys) monensis* † Williams 1952, by original designation.

Darwintestudo Antenbrink-Vetter and Vetter 1998:4
Type species: *Darwintestudo hoodensis* [= *Testudo hoodensis* Van Denburgh 1907], by original designation.

Chelonoidis carbonarius (Spix 1824) (10:19, 10:20, 14:33, 17:58) (**80**)

Red-footed Tortoise, *Jabuti-Vermelho*, *Morrocoy Pata Roja*


Cassiano Zaparoli / Fazenda Caiman, Mato Grosso do Sul, Brazil



left: Eric V. Goode / captivity / El Impenetrable National Park, Chaco, Argentina
right: Cassiano Zaparoli / Fazenda Caiman, Mato Grosso do Sul, Brazil


*

(orange dots = introduced or trade)

Distribution: Argentina (Formosa), Bolivia (Beni, Cochabamba, La Paz, Pando, Santa Cruz), Brazil (Alagoas, Amazonas, Bahia, Maranhão, Mato Grosso, Mato Grosso do Sul, Pará, Pernambuco, Piauí, Rondônia, Roraima, Sergipe), Colombia (Antioquia, Arauca, Atlántico, Bolívar, Boyacá, Caldas, Caquetá, Casanare, Cauca, Cesar, Chocó, Córdoba, Cundinamarca, Guainía, La Guajira, Magdalena, Meta, Santander, Sucre, Tolima, Vichada), French Guiana, Guyana, Panama, Paraguay, Suriname, Venezuela (Apure, Barinas, Bolívar, Carabobo, Cojedes, Falcón, Guárico, Mérida, Miranda, Portuguesa, Sucre, Yaracuy, Zulia)

Introduced (possibly prehistoric): Anguilla, Antigua, Barbuda, Barbados, Brazil (Rio de Janeiro), British Virgin Islands, Colombia (Providencia), Dominica, Grenada, Guadeloupe, Martinique, Montserrat, Netherlands Antilles, Nicaragua (Maíz Grande), Saint-Barthélemy, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Vincent and the Grenadines, Trinidad, US Virgin Islands, Venezuela (Isla Margarita, Los Tostigos)

Presumed Historic Indigenous Range: 5,099,045 sq. km

Size (Max SCL): male 60.0 cm, female 44.2 (Pritchard 1980; Vinke and Vinke 1999; Vinke et al. 2008; Itescu et al. 2014)

IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

TFTSG Provisional Red List: Vulnerable (VU) (2011)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Geochelone* spp. (1975)

Synonymy:

Testudo carbonaria Spix 1824:22
Testudo tabulata carbonaria, Geochelone carbonaria, Chelonoidis carbonaria, Geochelone carbonaria carbonaria, Chelonoidis carbonaria carbonaria, Chelonoidis carbonarius
Type locality: "flumen Amazonum" [Amazonas or Pará, Brazil].
Type specimen: ZSM, holotype or syntypes, not known, apparently lost; specimen figured (pl.16), lectotype, designated by Hoogmoed and Gruber (1983:354), also see Franzen and Glaw (2007).

Testudo boiei Wagler 1830a:pl.13 (14:33)
Geochelone (Chelonoidis) boiei, Geochelone boiei, Chelonoidis boiei
Type locality: Not known.
Type specimen: ZSM, holotype or syntypes, not known, apparently lost; specimen figured (pl.13), lectotype, designated by Hoogmoed and Gruber (1983:354), also see Franzen and Glaw (2007).

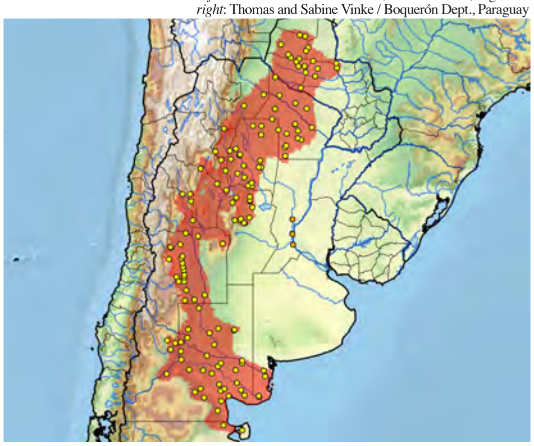
Testudo hercules truncata Gray 1830e:3 (10:7, 10:20)
Type locality: "South America."
Type specimen: OUM 8461, holotype, discussed by Nowak-Kemp and Fritz (2010).

Geochelone atlantica † López-Jurado, Mateo, and García-Márquez 1998 (**80**)
Centrochelys atlantica †
Type locality: "cráter de Pedra Lume...isla de Sal (Archipiélago de Cabo Verde)" [Cape Verde]. However, the type specimen's genotype closely aligns with extant specimens from Paraguay.
Type specimen: DBULPGC 17, holotype, femur, genotyped by Kehlmaier et al. (2021b).
Comment: Originally described from a femur and two peripheral bones as alleged Quaternary fossils embedded in chalky tufa-like matrix from Cape Verde, but shown by Kehlmaier et al. (2021b) to be from a single individual of *Chelonoidis carbonarius*, likely from Paraguay, that was alive at least from 1962 to 1974. How the type specimen bones became embedded in the matrix is unknown.

Chelonoidis chilensis (Gray 1870a) (07:57, 10:21, 12:30, 17:59) (**81**)
Chaco Tortoise, Pampas Tortoise


Maurice Rodrigues / TTN / Monte Desert, nr. Neuquén, Neuquén, Argentina


left: Leandro Alcalde / Baldecitos, San Juan Prov., Argentina
right: Thomas and Sabine Vinke / Boquerón Dept., Paraguay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(orange dots = probable trade)

Distribution: Argentina (Buenos Aires, Catamarca, Chaco, Chubut, Córdoba, Formosa, La Pampa, La Rioja, Mendoza, Neuquén, Rio Negro, Salta, San Juan, San Luis, Santa Fe, Santiago del Estero, Tucumán), Bolivia (Santa Cruz, Tarija), Paraguay

Presumed Historic Indigenous Range: 903,691 sq. km

Size (Max SCL): male 23.9 cm, female 43.3 cm (Freiberg 1973; Fritz et al. 2012a)

IUCN Red List: Vulnerable (VU A1cd) (TFTSG 1996)

TFTSG Provisional Red List: Vulnerable (VU) (2011)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Geochelone* spp. (1975)

Synonymy:

Testudo (Gopher) chilensis Gray 1870a:190
Testudo chilensis, Geochelone chilensis, Geochelone chilensis chilensis, Chelonoidis chilensis, Chelonoidis chilensis chilensis
Type locality: "Chili" [Chile; in error], see Sclater (1870:470). Emended to "Chili...N. Patagonia...Mendoza and the Pampas..[&]..Monte Video and Buenos Ayres" by Gray (1870d:707); and restricted to "Mendoza" [Argentina] by Boulenger (1889:159).
Type specimens: NHMUK 1947.3.5.8–9 (both formerly 1870.12.18.2), syntypes (2), possibly lost (McCarthy, pers. comm. *in* Vinke et al. 2008).

Testudo argentina Sclater 1870:471 (*nomen novum*)
Comment: Unjustified replacement name for *chilensis*.

Geochelone donosobarrosi Freiberg 1973:83 (12:30)
Geochelone chilensis donosobarrosi, Chelonoidis chilensis donosobarrosi, Chelonoidis donosobarrosi
Type locality: "San Antonio, Rio Negro" [Argentina].
Type specimen: USNM 192961, holotype, see Reynolds et al. (2007).

Geochelone petersi Freiberg 1973:86 (12:30)
Chelonoidis chilensis petersi, Chelonoidis petersi, Geochelone chilensis petersi
Type locality: "Kishka, La Banda, Santiago del Estero" [Argentina].
Type specimen: USNM 192959, holotype, see Reynolds et al. (2007).

Chelonoidis denticulatus (Linnaeus 1766) (10:19, 17:58)
Yellow-footed Tortoise, *Jabuti-Tinga, Morrocoy Pata Amarilla*


Carlos Alberto Jimenez / Madre de Dios, Peru


left: Guta Agostini / Amazonas, Brazil / captivity
right: Frank Deschandol / French Guiana


*

(red dots = possibe extirpated or trade;
orange dots = probable introduced or trade)

Distribution: Bolivia (Beni, La Paz, Pando, Santa Cruz), Brazil (Acre, Amapá, Amazonas, Bahia [?, extirpated?], Espírito Santo [?, extirpated?], Maranhão, Mato Grosso, Mato Grosso do Sul, Pará, Rio de Janeiro [?, extirpated?], Rondônia, Roraima, Tocantins), Colombia (Amazonas, Arauca, Caquetá, Casanare, Guainía, Guaviare, Meta, Putumayo, Vaupés, Vichada), Ecuador, French Guiana, Guyana, Peru (Cusco, Loreto, Madre de Dios, Pasco, Ucayali), Suriname, Trinidad, Venezuela (Amazonas, Bolívar, Delta Amacuro, Monagas)

Introduced: Guadeloupe

Presumed Historic Indigenous Range: 6,016,719 sq. km
Size (Max SCL): male 82.0 cm, female 73.1 cm (Pritchard and Trebbau 1984; Sajdak and Molina 1991)
IUCN Red List: Vulnerable (VU A1cd+2cd) (TFTSG 1996)
TFTSG Provisional Red List: Near Threatened (NT) (2011)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Geochelone* spp. (1975)
Synonymy:
Testudo denticulata Linnaeus 1766:352
Chersine denticulata, Geochelone (Geochelone) denticulata, Geochelone denticulata, Chelonoidis denticulata, Chelonoidis denticulatus
Type locality: "Virginia" [USA, in error].
Type specimens: UUZM s/n, NRM s/n (formerly MDG 21), syntypes (2), discussed by Schoepff (1801:119) and Andersson (1900:25), both apparently lost, listed by Thunberg (1828), but not by Holm (1957) or Wallin (2001), UUZM s/n figured in Schoepff (1801:pl.28,f.1).
Comment: Description cited as sourced from "Mus. De Geer" (MDG).
Testudo tabulata Walbaum 1782:122 (unavailable name)
Type locality: Not designated.
Type specimens: UPSZTY 281–83 (formerly UUZM 281–83 and MGA 50–52), possible syntypes (3), see Wallin (2001).
Comment: Unavailable name from a non-binomial work, see Wermuth (1956).
Testudo tessellata Stobaeus *in* Schneider 1792:262
Chersine tessellata
Type locality: "America australi" [South America].
Type specimen: Not known or located.
Comment: Description cited as sourcing Schneider (1783:362) and the unnamed species described in Gmelin (1789:1045,n.33), which in turn cited Stobaeus (1730:59).
Testudo stobaeana Gmelin *in* Schoepff 1793a:48 (*nomen nudum*)
Testudo tabulata Walbaum *in* Schoepff 1793a:56
Chersine tabulata, Geochelone (Chelonoidis) tabulata, Geochelone tabulata, Chelonoidis tabulata
Type locality: "Africa australi?" [South Africa, in error].
Type specimens: UPSZTY 281–83 (formerly UUZM 281–83 and MGA 50–52), possible syntypes (3), listed by Thunberg (1828) and Wallin (2001), type specimens figured in Schoepff (1793:pl.12,f.2,pl.13-14).
Testudo gigantea Schweigger 1812:327 (08:13, 09:29) (*partim*, misidentified type, senior homonym, not *Testudo gigantea* † (Grandidier 1868) [= *Aldabrachelys grandidieri* †])
Type locality: "Brasilia" [Brazil]. Restricted to "Dune Patates, South Island, Aldabra Atoll, Republic of Seychelles" by neotype designation by Frazier (2006:278).
Type specimen: USNM 269962, neotype (= *Aldabrachelys gigantea*), designated by Frazier (2006:278); MNHN 9554, the original holotype (= *Chelonoidis denticulata*), rediscovered and designated by Bour (2006c:19), see also Ceríaco and Bour (2012) and Bour (2013a).
Comment: Original holotype and name rejected and set aside by ICZN (2013b) in favor of the neotype designation.
Testudo terrestris brasiliensis Seba *in* Schweigger 1812:445 (*nomen nudum*)
Testudo brasiliensis
Testudo terrestris americana Stobaeus *in* Schweigger 1812:445 (*nomen novum*)
Testudo tabulata cayennensis Schweigger 1812:445 (*nomen nudum*)
Testudo terrestris cayennensis
Testudo terrestris surinamensis Stedman *in* Schweigger 1812:445 (*nomen nudum*)
Testudo hercules Spix 1824:20
Type locality: "sylvis ad flumen Solimoens" [Amazonas, Brazil].
Type specimen: ZSM, holotype or syntypes, not known, apparently lost, including type specimen figured (pl.14), see Hoogmoed and Gruber (1983).
Testudo sculpta Spix 1824:21 (senior homonym, not *Testudo sculpta* Brandt *in* Gray 1856b [= *Chersina angulata*]).
Type locality: "sylvis juxta flumen Amazonum" [Amazonas or Pará, Brazil].
Type specimen: ZSM 2753/0/1, lectotype, designated by Hoogmoed and Gruber (1983:354), see Franzen and Glaw (2007).
Testudo cagado Spix 1824:23
Type locality: "campis et nemoribus campestribus Bahiae" [Bahia, Brazil].
Type specimen: ZSM, holotype or syntypes, not known, apparently lost, including type specimen figured (pl.17), see Hoogmoed and Gruber (1983).
Testudo planata Gmelin *in* Gray 1831d:9 (*nomen nudum*)
Testudo foveolata Schinz 1833:40 (*nomen nudum*)

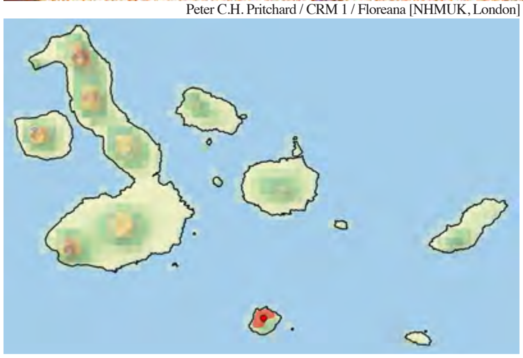
Chelonoidis niger (09:32, 12:31, 17:58, 17:60) (82)
Galápagos Giant Tortoise
(includes 15 subspecies, 1 unnamed)

Distribution: Ecuador (Galápagos: Española [Hood]; Fernandina [Narborough] (possibly extinct); Floreana [Charles] (extinct); Isabela [Albemarle]; Pinta [Abingdon] (extinct); Pinzón [Duncan]; San Cristóbal [Chatham]; Santa Cruz [Indefatigable]; Santa Fé [Barrington] (extinct); Santiago [San Salvador; James]
Presumed Historic Indigenous Range: 3,011 sq. km
Size (Max SCL): male 135.8 cm, female 122.0 cm; Max CCL: male 199.7 cm, female 197.2 cm; 95th Percentile CCL: male 151.0 cm, female 118.0 cm (see subspp.) (83)

Chelonoidis niger niger (Quoy and Gaimard 1824b) (07:58, 09:33, 12:31, 17:58, 17:62) **(84)**

Floreana Giant Tortoise, Charles Island Giant Tortoise
(Extinct, ca. 1850)

Peter C.H. Pritchard / CRM 1 / Floreana [NHMUK, London]

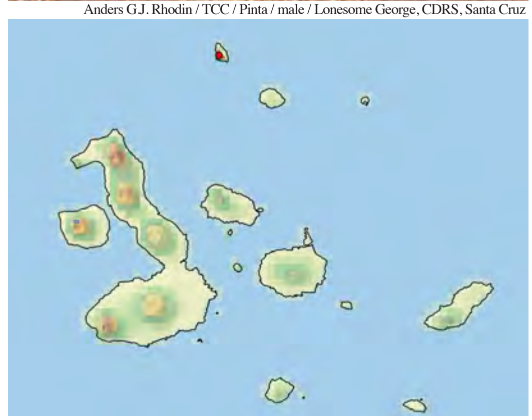


Distribution: Ecuador (Galápagos: Floreana [Charles] [extinct])
Introduced: Ecuador (Galápagos: Isabela [Albemarle]) (hybrids with *C. becki*)
Presumed Historic Indigenous Range: 81 sq. km
Size (Max SCL): male ca. 96.0 cm; Max CCL: male ca. 105.0 cm (Broome 1929)
IUCN Red List: Extinct (EX) (van Dijk et al. 2017), as *Chelonoidis niger*; Previously: Extinct (EX) (TFTSG 1996), as *Chelonoidis nigra nigra*
CITES: Appendix I (1975)
Synonymy:
Testudo californiana Quoy and Gaimard 1824a:90 (17:62) (*nomen oblitum*)
Testudo californica
Type locality: "La Californie...donnée vivante aux îles Sandwich" [California, USA; in error]. Erroneously given as "Sandwich Islands" [Hawaii, USA] by Wermuth and Mertens (1961, 1977).
Type specimen: MNHN 9550, holotype, discussed by Pritchard (1996) and Olson (2015).
Testudo nigra Quoy and Gaimard 1824b:174 (17:62) **(84)** (*nomen novum*)
Chelonoidis nigra, Geochelone nigra, Geochelone nigra nigra, Chelonoidis nigra nigra, Geochelone elephantopus nigra, Chelonoidis niger, Chelonoidis niger niger
Type locality: "la Californie...donnée vivante, aux îles Sandwich" [California, USA; in error]. Restricted arbitrarily to "Cerro Azul d'Isabela" [Galápagos, Ecuador] by Bour *in* David (1994:83); and to "Charles Island (Santa María or Floreana)" [Galápagos, Ecuador] by Pritchard (1996:49).
Type specimen: MNHN 9550, holotype, discussed by Pritchard (1996) and Olson (2015).
Comment: Unjustified replacement name for *californiana*.
Testudo elephantopus Harlan 1826:284 (09:33, 17:62) **(84)** (*nomen dubium*)
Testudo elephantopus elephantopus, Geochelone elephantopus, Geochelone elephantopus elephantopus, Chelonoidis elephantopus, Chelonoidis elephantopus elephantopus, Geochelone nigra elephantopus
Type locality: "Gallapagos Islands" [Galápagos, Ecuador]. Restricted to "South Albemarle" [Isabela, Galápagos, Ecuador] by Pritchard (1967:168); restricted to "Charles Island (Floreana, Santa Maria), Galapagos" [Ecuador] by Olson and Humphrey (2017:114).
Type specimens: ANSP, holotype or syntype, apparently lost, not listed by Malnate (1971), discussed by Olson and Humphrey (2017); MCZ 11063, possible syntype, designated by Garman (1917:292), see also Barbour and Loveridge (1929:350).
Testudo galapagoensis Baur 1889:1044
Testudo elephantopus galapagoensis, Geochelone elephantopus galapagoensis, Chelonoidis galapagoensis, Chelonoidis elephantopus galapagoensis, Geochelone (Chelonoidis) nigra galapagoensis, Geochelone nigra galapagoensis, Chelonoidis nigra galapagoensis
Type locality: "Charles Island" [Floreana, Galápagos, Ecuador].
Type specimen: MCZ 11064, lectotype, designated as the "type" by Garman (1917:289) and the "holotype" by Barbour and Loveridge (1929); Olson (2017) suggested that MCZ 11069 and 11070 should be regarded as "syntypes" (paralectotypes); MCZ 11070 genotyped by Poulakakis et al. (2008).

Chelonoidis niger abingdonii (Günther 1877) (09:34, 12:31)

Pinta Giant Tortoise, Abingdon Island Giant Tortoise
(Extinct, 2012)

Anders G.J. Rhodin / TCC / Pinta / male / Lonesome George, CDRS, Santa Cruz

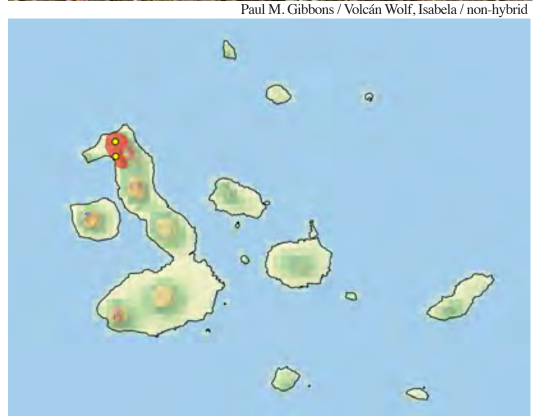


Distribution: Ecuador (Galápagos: Pinta [Abingdon] [extinct])
Introduced: Ecuador (Galápagos: Isabela [Albemarle]) (hybrids with *C. becki*)

Presumed Historic Indigenous Range: 39 sq. km
Size (Max SCL): male 99.1 cm, female 70.0 cm; Max CCL: male 106.0 cm, female ca. 85.0 cm [estimated] (Pritchard 2005; Chiari 2020) [83]
IUCN Red List: Extinct (EX) (Cayot et al. 2016), as *Chelonoidis abingdonii*; Previously: Extinct in the Wild (EW) (TFTSG 1996)
CITES: Appendix I, as *Chelonoidis niger* (1975)
Synonymy:
Testudo ephippium Günther 1874:422 (*nomen nudum*)
Testudo ephippium Günther 1875a:271 (*partim*, previously misidentified type)
Type locality: "Charles Island" [Floreana, Galápagos, Ecuador] [in error]. Restricted to "Duncan" [Pinzón, Galápagos, Ecuador] by Van Denburgh (1914:259) [in error], and to "Pinta (Abingdon)?" [Galápagos, Ecuador] by Garman (1917:pl.39).
Type specimen: NMSZ 1932.027.001–012 (shell and skeletal parts of same specimen) (formerly RSM 1822.058), holotype, see Baur (1889), Garman (1917), Herman et al. (1990), Pritchard (1996), and Olson (2017); NHMUK 1874.6.1.6, listed as "syntype" in the NHMUK catalogue, is not a type.
Testudo abingdonii Günther 1877:85
Testudo elephantopus abingdonii, Geochelone abingdonii, Geochelone elephantopus abingdonii, Chelonoidis abingdonii, Chelonoidis elephantopus abingdonii, Geochelone (Chelonoidis) nigra abingdonii, Geochelone nigra abingdonii, Chelonoidis nigra abingdonii, Chelonoidis elephantopus abingdonii, Chelonoidis niger abingdonii
Type locality: "Abingdon Island" [Pinta, Galápagos, Ecuador].
Type specimens: NHMUK 1947.3.4.39, 1947.3.4.95–96 (formerly 1876.6.21.38–40), syntypes (3).

Chelonoidis niger becki (Rothschild 1901) [12:31, 17:60]
Volcán Wolf Giant Tortoise, Wolf Volcano Giant Tortoise


Paul M. Gibbons / Volcán Wolf, Isabela / non-hybrid

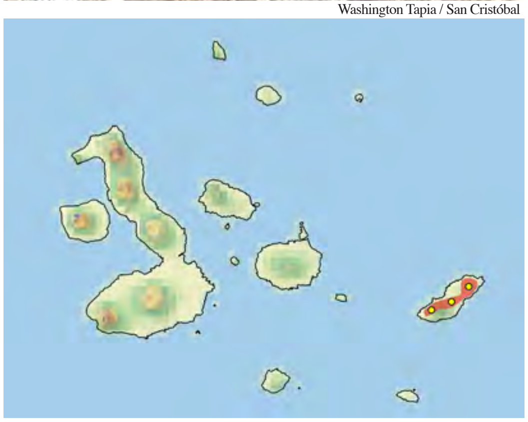


Distribution: Ecuador (Galápagos: Isabela [Albemarle])
Invasives: Hybrids with *Chelonoidis abingdonii* and *C. niger*
Presumed Historic Indigenous Range: 263 sq. km
Size (Max SCL): male ca. 105.0 cm, female ca. 83.0 cm [both estimated]; Max CCL: male 140.0 cm, female 110.4 cm; 95th Percentile CCL: male128.0 cm, female 87.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) [83]
IUCN Red List: Vulnerable (VU A1bde) (Caccone et al. 2017), as *Chelonoidis becki*; Previously: Vulnerable (VU D1+2) (TFTSG 1996), as *Chelonoidis nigra becki*
CITES: Appendix I, as *Chelonoidis niger* (1975)
Synonymy:
Testudo becki Rothschild 1901:372
Geochelone becki, Geochelone elephantopus becki, Chelonoidis becki, Chelonoidis elephantopus becki, Geochelone (Chelonoidis) nigra becki, Geochelone nigra becki, Chelonoidis nigra becki, Chelonoidis niger becki
Type locality: "Cape Berkeley, northern point of Albemarle Island, Galapagos Archipelago" [Isabela, Galápagos, Ecuador]. Restricted to "Bank's Bay, Albemarle" [Isabela, Galápagos, Ecuador] by Van Denburgh (1914:259).
Type specimen: NHMUK 1949.1.3.87, holotype.

Chelonoidis niger chathamensis (Van Denburgh 1907) (07:59, 12:31, 17:61)

San Cristóbal Giant Tortoise, Chatham Island Giant Tortoise

Washington Tapia / San Cristóbal



Distribution: Ecuador (Galápagos: San Cristóbal [Chatham])

Presumed Historic Indigenous Range: 250 sq. km

Size (Max SCL): male ca. 95.0 cm, female ca. 79.0 cm [both estimated]; Max CCL: male 124.7 cm, female 103.5 cm; 95th Percentile CCL: male 110.0 cm, female 85.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) **(83)**

IUCN Red List: Endangered (EN A1abde) (Caccone et al. 2017), as *Chelonoidis chathamensis*; Previously: Vulnerable (VU D1+2) (TFTSG 1996), as *Chelonoidis nigra chathamensis*

CITES: Appendix I, as *Chelonoidis niger* (1975)

Synonymy:

Testudo chathamensis Van Denburgh 1907:4

Testudo elephantopus chathamensis, *Geochelone chathamensis*, *Geochelone elephantopus chathamensis*, *Chelonoidis chathamensis*, *Chelonoidis elephantopus chathamensis*, *Geochelone (Chelonoidis) nigra chathamensis*, *Geochelone nigra chathamensis*, *Chelonoidis nigra chathamensis*, *Chelonoidis niger chathamensis*

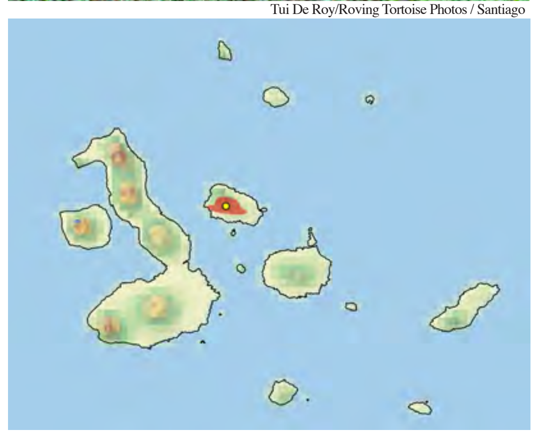
Type locality: "Chatham Island, Galapagos Archipelago" [San Cristóbal, Galápagos, Ecuador].

Type specimen: CAS 8127, holotype, see Slevin and Leviton (1956) and Pritchard (1996); CAS 8133, paratype, genotyped by Poulakakis et al. (2012).

Chelonoidis niger darwini (Van Denburgh 1907) (12:31, 17:60)

Santiago Giant Tortoise, James Island Giant Tortoise

Tui De Roy/Roving Tortoise Photos / Santiago



Distribution: Ecuador (Galápagos: Santiago [San Salvador] [James])

Presumed Historic Indigenous Range: 240 sq. km

Size (Max SCL): male ca. 107.0 cm, female ca. 95.0 cm [both estimated]; Max CCL: male 150.2 cm, female 134.4 cm; 95th Percentile CCL: male 134.0 cm, female 95.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) **(83)**

IUCN Red List: Critically Endangered (CR A1bde) (Cayot et al. 2016), as *Chelonoidis darwini*; Previously: Endangered (EN) (TFTSG 1996), as *Chelonoidis nigra darwini*

CITES: Appendix I, as *Chelonoidis niger* (1975)

Synonymy:

Testudo schweiggeri Fitzinger 1826:44 (*nomen nudum*)

Geochelone (Geochelone) schweiggeri Fitzinger 1835:122 (*nomen dubium et oblitum*, junior homonym, not = *Testudo schweiggeri* Gray *in* Duméril and Bibron 1835 [= *Testudo schweigeri* Gray 1830e] [= *Cylindraspis triserrata*])

Geochelone schweiggeri

Type locality: Not designated. Restricted to "America: Insel St. Jacob der Gallopagen" [= Santiago, Galápagos, Ecuador] by Fitzinger (1853:110).

Type specimen: Originally live in MSW, see Fitzinger (1853), apparently lost, possibly in NMW, not located or listed by Tiedemann and Häupl (1980) or Tiedemann et al. (1994).

Testudo darwini Van Denburgh 1907:4

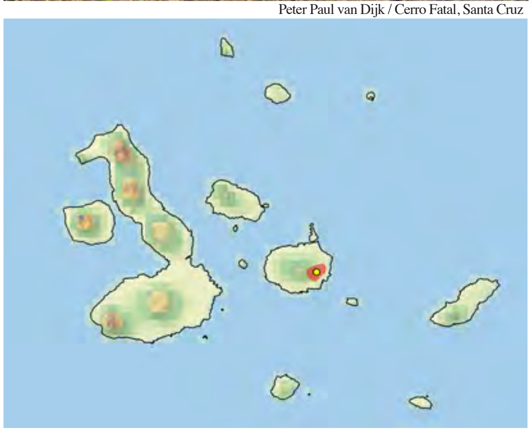
Testudo elephantopus darwini, *Geochelone darwini*, *Geochelone elephantopus darwini*, *Chelonoidis darwini*, *Chelonoidis elephantopus darwini*, *Geochelone (Chelonoidis) nigra darwini*, *Geochelone nigra darwini*, *Chelonoidis nigra darwini*, *Chelonoidis niger darwini*

Type locality: "James Island, Galapagos Archipelago" [Santiago, Galápagos, Ecuador].

Type specimen: CAS 8108, holotype, see Slevin and Leviton (1956).

Chelonoidis niger donfaustoi Poulakakis, Edwards, and Caccone *in* Poulakakis, Edwards, Chiari, Garrick, Russello, Benavides, Watkins-Colwell, Glaberman, Tapia, Gibbs, Cayot, and Caccone 2015 (17:61)
Eastern Santa Cruz Giant Tortoise, Cerro Fatal Giant Tortoise, Don Fausto's Giant Tortoise

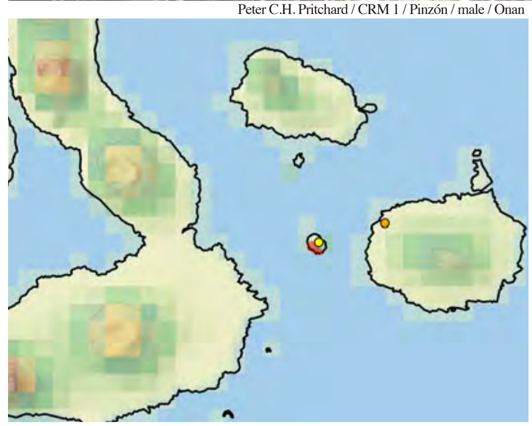

Peter Paul van Dijk / Cerro Fatal, Santa Cruz



Distribution: Ecuador (Galápagos: Santa Cruz [Indefatigable])
Presumed Historic Indigenous Range: 53 sq. km
Size (Max SCL): male ca. 112.0 cm, female ca. 87.0 cm [both estimated]; Max CCL: male 172.6.0 cm, female 133.0 cm; 95th Percentile CCL: male 141.0 cm, female 114.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) (83)
IUCN Red List: Critically Endangered (CR A2abce; B1ab(ii)) (Cayot et al. 2017), as *Chelonoidis donfaustoi*
CITES: Appendix I, as *Chelonoidis niger* (1975)
Synonymy:
Chelonoidis donfaustoi Poulakakis, Edwards, and Caccone *in* Poulakakis, Edwards, Chiari, Garrick, Russello, Benavides, Watkins-Colwell, Glaberman, Tapia, Gibbs, Cayot, and Caccone 2015:12
Chelonoidis nigra donfaustoi, Chelonoidis niger donfaustoi
Type locality: "Cerro Fatal in Santa Cruz" [Galápagos, Ecuador].
Type specimen: UWZM 32700, holotype; genotyped by Poulakakis et al. (2015).

Chelonoidis niger duncanensis (Pritchard 1996) (07:60, 12:31)
Pinzón Giant Tortoise, Duncan Island Giant Tortoise


Peter C.H. Pritchard / CRM 1 / Pinzón / male / Onan


(orange dot = introduced)

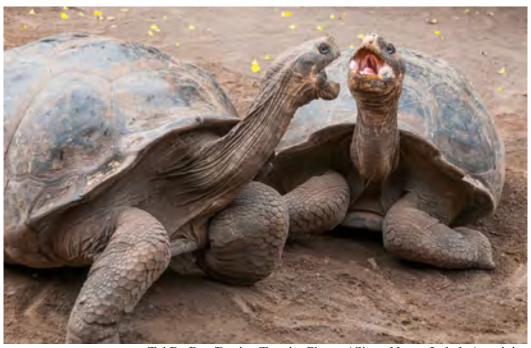
Distribution: Ecuador (Galápagos: Pinzón [Duncan])
Introduced: Ecuador (Galápagos: Santa Cruz [Indefatigable])
Presumed Historic Indigenous Range: 9 sq. km
Size (Max SCL): male ca. 85.0 cm, female ca. 80.0 cm [both estimated]; Max CCL: male 101.2 cm, female 94.6 cm; 95th Percentile CCL: male 94.0 cm, female 80.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) (83)
IUCN Red List: Vulnerable (VU A1abde; D1+2) (Cayot et al. 2017), as *Chelonoidis duncanensis*; Previously: Extinct in the Wild (EW) (TFTSG 1996), as *Chelonoidis nigra duncanensis*
CITES: Appendix I, as *Chelonoidis niger* (1975)
Synonymy:
Testudo ephippium Günther 1875a:271 (*partim*, previously misidentified type)
Testudo elephantopus ephippium, Geochelone elephantopus ephippium, Geochelone ephippium, Chelonoidis ephippium, Chelonoidis nigra ephippium, Chelonoidis elephantopus ephippium, Geochelone (Chelonoidis) nigra ephippium, Geochelone nigra ephippium

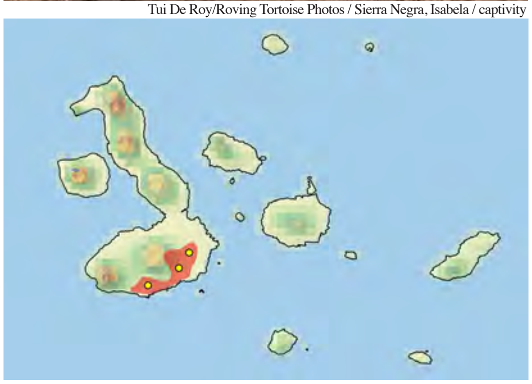
Type locality: "Charles Island" [Floreana, Galápagos, Ecuador] [in error]. Restricted to "Duncan" [Pinzón, Galápagos, Ecuador] by Van Denburgh (1914:259) [in error], and to "Pinta (Abingdon)?" [Pinta, Galápagos, Ecuador] by Garman (1917:pl.39).
Type specimen: NMSZ 1932.027.001–012 (shell and skeletal parts of same specimen) (formerly RSM 1822.058), holotype, see Baur (1889), Garman (1917), Herman et al. (1990), Pritchard (1996), and Olson (2017); NHMUK 1874.6.1.6, listed as "syntype" in the NHMUK catalogue, is not a type.

Testudo duncanensis Garman 1917:269 (*nomen nudum*)
Type locality: "Pinzon (Duncan)" [Galápagos, Ecuador].
Type specimen: MCZ 11068, labeled by Garman (unpubl.) as "type of Baur's *Testudo duncanensis*."

Geochelone nigra duncanensis Pritchard 1996:47
Chelonoidis nigra duncanensis, Chelonoidis duncanensis, Chelonoidis niger duncanensis
Type locality: "Duncan Island" [Pinzón, Galápagos, Ecuador].
Type specimen: MCZ 11068, holotype, designated lectotype of *Testudo duncanensis* Garman 1917 (*nomen nudum*), by Pritchard (1996:47); specimen figured in Garman (1917:pl.41).

Chelonoidis niger guntheri (Baur 1889) (07:64, 08:14, 09:36, 12:31, 17:60)
Sierra Negra Giant Tortoise


Tui De Roy/Roving Tortoise Photos / Sierra Negra, Isabela / captivity



Distribution: Ecuador (Galápagos: Isabela [Albemarle])
Presumed Historic Indigenous Range: 707 sq. km
Size (Max SCL): male ca. 94.0 cm, female ca. 77.0 cm [both estimated]; Max CCL: male 136.5 cm, female 111.4 cm; 95th Percentile CCL: male 129.0 ccm, female 99.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) **(83)**
IUCN Red List: Critically Endangered (CR A2bde) (Cayot et al. 2018), as *Chelonoidis guntheri*; Previously: Endangered (EN) (TFTSG 1996), as *Chelonoidis nigra guentheri*
CITES: Appendix I, as *Chelonoidis niger* (1975)
Synonymy:

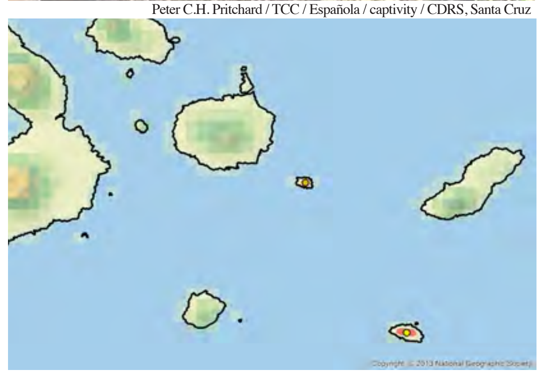
Testudo guntheri Baur 1889:1044 (07:64, 09:36) (senior homonym, not = *Testudo guntheri* Gadow *in* Van Denburgh 1914 [= *Cylindraspis triserrata*])
Testudo güntheri, Geochelone elephantopus güntheri, Geochelone güntheri, Geochelone (Chelonoidis) nigra güntheri, Geochelone nigra güntheri, Chelonoidis elephantopus güntheri, Geochelone elephantopus guntheri, Geochelone guntheri, Geochelone (Chelonoidis) nigra guntheri, Geochelone nigra guntheri, Chelonoidis elephantopus guntheri, Chelonoidis guntheri, Chelonoidis niger guntheri
Type locality: "Galapagos." Restricted to "Vilamil, Albemarle" [Isabela, Galápagos, Ecuador] by Van Denburgh (1914:259).
Type specimen: OUM 8656, lectotype, designated by Pritchard (1996:48), figured in Günther (1877:pl.30,f.A); Nowak-Kemp and Fritz (2010) listed this specimen as one of several syntypes.

Testudo wallacei Rothschild 1902:619 (12:31)
Testudo elephantopus wallacei, Geochelone elephantopus wallacei, Geochelone wallacei, Chelonoidis elephantopus wallacei, Chelonoidis nigra wallacei, Geochelone nigra wallacei
Type locality: "Chatham Island" [San Cristóbal, Galápagos, Ecuador] by supposition. Restricted to "Jervis" [Rábida, Galápagos, Ecuador] by Van Denburgh (1914:259).
Type specimen: NHMUK 1949.1.4.43, holotype.

Geochelone elephantopus guentheri Baur *in* Pritchard 1971b:50 (07:64, 09:36) (*nomen novum*, junior homonym, not = *Testudo guentheri* Gadow 1894 [= *Cylindraspis triserrata*])
Testudo guentheri, Geochelone guentheri, Chelonoidis guentheri, Chelonoidis elephantopus guentheri, Geochelone nigra guentheri, Chelonoidis nigra guentheri
Comment: Unjustified emendation of *güntheri* (= *guntheri*).

Chelonoidis niger hoodensis (Van Denburgh 1907) (12:31)
Española Giant Tortoise, Hood Island Giant Tortoise


Peter C.H. Pritchard / TCC / Española / captivity / CDRS, Santa Cruz


(orange dot = introduced)

Distribution: Ecuador (Galápagos: Española [Hood])
Introduced: Ecuador (Galápagos: Santa Fé [Barrington])
Presumed Historic Indigenous Range: 31 sq. km
Size (Max SCL): male ca. 97.0 cm, female ca. 78.0 cm [both

estimated]; Max CCL: male 119.2 cm, female 96.0 cm; 95th Percentile CCL: male 91.0 cm, female 76.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) [83]

IUCN Red List: Critically Endangered (CR A1bde) (Cayot et al. 2017), as *Chelonoidis hoodensis*; Previously: Critically Endangered (CR) (TFTSG 1996), as *Chelonoidis nigra hoodensis*

CITES: Appendix I, as *Chelonoidis niger* (1975)

Synonymy:

Testudo hoodensis Van Denburgh 1907:3

Testudo elephantopus hoodensis, Geochelone elephantopus hoodensis, Geochelone hoodensis, Chelonoidis hoodensis, Chelonoidis elephantopus hoodensis, Geochelone (Chelonoidis) nigra hoodensis, Geochelone nigra hoodensis, Chelonoidis nigra hoodensis, Darwintestudo hoodensis, Chelonoidis niger hoodensis

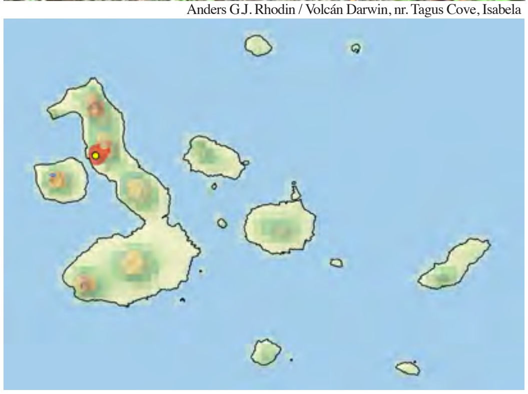
Type locality: "Hood Island, Galapagos Archipelago" [Española, Galápagos, Ecuador].

Type specimen: CAS 8121, holotype, see Slevin and Leviton (1956).

Chelonoidis niger microphyes (Günther 1875a) [07:64, 08:14, 09:36, 12:31]

Volcán Darwin Giant Tortoise, Darwin Volcano Giant Tortoise, Tagus Cove Giant Tortoise

Anders G.J. Rhodin / Volcán Darwin, nr. Tagus Cove, Isabela



Distribution: Ecuador (Galápagos: Isabela [Albemarle])

Presumed Historic Indigenous Range: 145 sq. km

Size (Max SCL): male ca. 73.8 cm, female ca. 64.5 cm [both estimated]; Max CCL: male 121.0 cm, female 104.0 cm; 95th Percentile CCL: male 120.0 cm, female 103.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) [83]

IUCN Red List: Endangered (EN A1bde) (Cayot et al. 2018), as *Chelonoidis microphyes*; Previously: Vulnerable (VU) (TFTSG 1996), as *Chelonoidis nigra microphyes*

CITES: Appendix I, as *Chelonoidis niger* (1975)

Synonymy:

Testudo microphyes Günther 1874:422 (*nomen nudum*)

Testudo microphyes Günther 1875a:275 [08:14]

Geochelone elephantopus microphyes, Geochelone microphyes, Chelonoidis microphyes, Chelonoidis elephantopus microphyes, Geochelone (Chelonoidis) nigra microphyes, Geochelone nigra microphyes, Chelonoidis nigra microphyes, Chelonoidis niger microphyes

Type locality: "Hood's Island" [Española, Galápagos, Ecuador] by supposition [in error]. Emended to "Tagus Cove, about 4 miles inland...northern Albemarle Island" [Isabela, Galápagos, Ecuador] by Günther (1877:78).

Type specimen: NHMUK 1947.3.4.88 (formerly 1875.12.29.1), holotype.

Testudo macrophyes Garman 1917:273

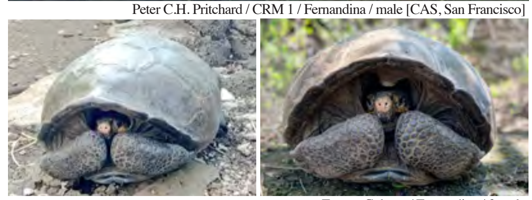
Type locality: "Santa Isabela Island (Albemarle) near Tagus Cove" [Isabela, Galápagos, Ecuador].

Type specimens: NHMUK 1876.6.21.41, 1947.3.4.91–3 (formerly 1876.6.21.42, 1880.12.20.1, 1886.3.5.1), syntypes (4).

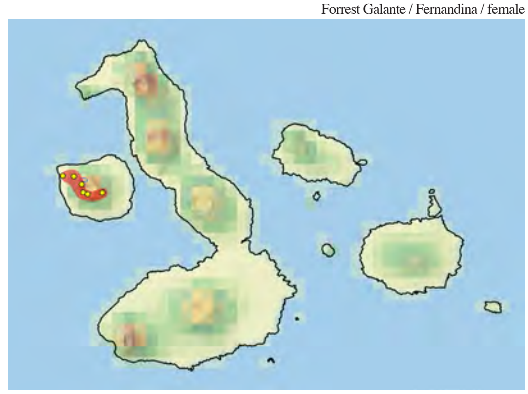
Chelonoidis niger phantasticus (Van Denburgh 1907) [07:62, 12:31, 17:58, 17:63] [85]

Fernandina Giant Tortoise, Narborough Island Giant Tortoise

Peter C.H. Pritchard / CRM 1 / Fernandina / male [CAS, San Francisco]



Forrest Galante / Fernandina / female



*

Distribution: Ecuador (Galápagos: Fernandina [Narborough])

Presumed Historic Indigenous Range: 137 sq. km

Size (Max SCL): male 88.0 cm, female ca. 45.0 cm [estimated]; Max CCL: male 106.7 cm, female 59.5 cm (Van Denburgh 1914; Giant Tortoise Restoration Initiative, unpubl. data)

IUCN Red List: Critically Endangered (Possibly Extinct) (CR(PE) D) (Rhodin et al. 2017), as *Chelonoidis phantasticus*; Previously: Not Evaluated (NE), TFTSG Provisional Red List: Extinct (EX) [17:63]

TFTSG Provisional Red List: Critically Endangered (CR) (2021)

CITES: Appendix I, as *Chelonoidis niger* (1975)

Synonymy:

Testudo phantasticus Van Denburgh 1907:4

Testudo phantastica, Testudo elephantopus phantastica, Geochelone elephantopus phantastica, Geochelone phantastica, Chelonoidis phantastica, Geochelone phantasticus, Chelonoidis elephantopus phantastica, Geochelone (Chelonoidis) nigra phantastica, Geochelone nigra phantastica, Chelonoidis nigra phantastica, Chelonoidis phantasticus, Chelonoidis niger phantasticus

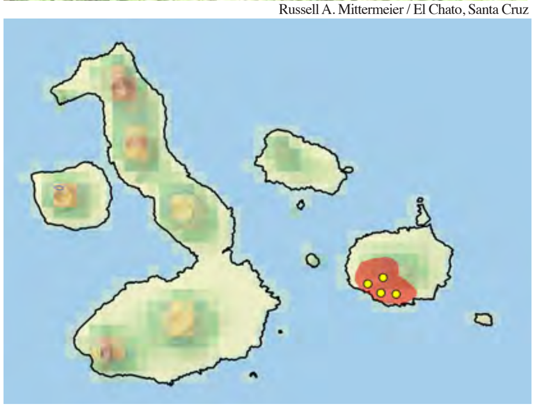
Type locality: "Narborough Island, Galapagos Archipelago" [Fernandina, Galápagos, Ecuador].

Type specimen: CAS 8101, holotype, see Slevin and Leviton (1956) and Pritchard (1996); genotyped by Poulakakis et al. (2012).

Chelonoidis niger porteri (Rothschild 1903) [07:63, 09:35, 12:31, 17:62] [86]

Western Santa Cruz Giant Tortoise, Indefatigable Island Giant Tortoise

Russell A. Mittermeier / El Chato, Santa Cruz



Distribution: Ecuador (Galápagos: Santa Cruz [Indefatigable])

Presumed Historic Indigenous Range: 306 sq. km

Size (Max SCL): male 135.8 cm, female ca. 122.0 cm (Pritchard 1996:37; White 2015) [female estimated]; Max CCL: male 191.7 cm, female 197.2 cm; 95th Percentile CCL: male 151.0 cm, female 118.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) [83]

IUCN Red List: Critically Endangered (CR A2bde) (Cayot et al. 2017), as *Chelonoidis porteri*; Previously: Endangered (EN C2a) (TFTSG 1996), as *Chelonoidis nigra porteri*

CITES: Appendix I, as *Chelonoidis niger* (1975)

Synonymy:

Testudo nigrita Duméril and Bibron 1835:80 [17:62] [86] (*nomen dubium*)

Testudo elephantopus nigrita, Geochelone nigrita, Chelonoidis nigrita, Geochelone elephantopus nigrita, Chelonoidis elephantopus nigrita, Geochelone (Chelonoidis) nigra nigrita, Geochelone nigra nigrita, Chelonoidis nigra nigrita

Type locality: Not known. Restricted to "Insel Indefatigable" [Santa Cruz, Galápagos, Ecuador] by Mertens and Wermuth (1955:376).

Type specimen: NHMUK 1949.1.4.37, lectotype, designated as "type" by Günther (1875a:268), discussed by Olson (2015).

Testudo planiceps Gray 1854b:12 [86] (*nomen dubium* and junior homonym, not = *Testudo planiceps* Schneider 1792 [= *Platemys platycephala platycephala*])

Geochelone planiceps, Chelonoidis planiceps

Type locality: "Galapagos Islands" [Galápagos, Ecuador].

Type specimen: NHMUK 1947.3.5.3 (formerly 1848.4.6.3), holotype.

Testudo porteri Rothschild 1903:119

Geochelone elephantopus porteri, Geochelone porteri, Geochelone nigra porteri, Chelonoidis elephantopus porteri, Chelonoidis nigra porteri, Chelonoidis porteri, Chelonoidis niger porteri

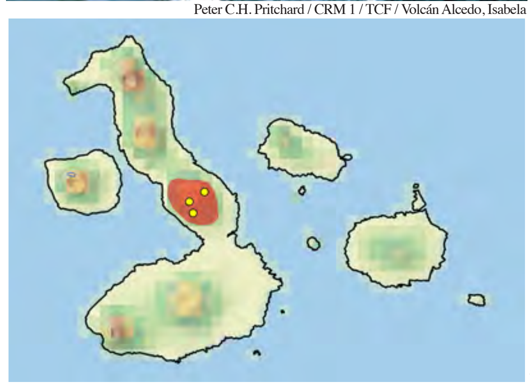
Type locality: "Indefatigable Island, Galapagos group" [Santa Cruz, Galápagos, Ecuador].

Type specimen: NHMUK 1949.1.4.38 and 1974.2464 (shell and bones from same specimen), holotype; genotyped by Poulakakis et al. (2015).

Chelonoidis niger vandenburghi (DeSola 1930) [07:64, 08:14, 09:36, 12:31, 17:60]

Volcán Alcedo Giant Tortoise, Alcedo Volcano Giant Tortoise

Peter C.H. Pritchard / CRM 1 / TCF / Volcán Alcedo, Isabela



Distribution: Ecuador (Galápagos: Isabela [Albemarle])

Presumed Historic Indigenous Range: 380 sq. km

Size (Max SCL): male 129.5 cm, female 90.2 cm [female estimated]; Max CCL: male 199.7 cm, female 145.5 cm; 95th Percentile CCL: male 148.0 cm, female 107.0 cm (Pritchard 1971a; Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) [83]

IUCN Red List: Vulnerable (VU A1bde) (Cayot et al. 2018), as *Chelonoidis vandenburghi*; Previously: Vulnerable (VU) (TFTSG 1996), as *Chelonoidis nigra vandenburghi*

CITES: Appendix I, as *Chelonoidis niger* (1975)

Synonymy:

Testudo vandenburghi DeSola 1930:80

Geochelone vandenburghi, Geochelone elephantopus *vandenburghi, Chelonoidis vandenburghi, Chelonoidis elephantopus vandenburghi, Geochelone (Chelonoidis) nigra vandenburghi, Geochelone nigra vandenburghi, Chelonoidis nigra vandenburghi, Chelonoidis niger vandenburghi*

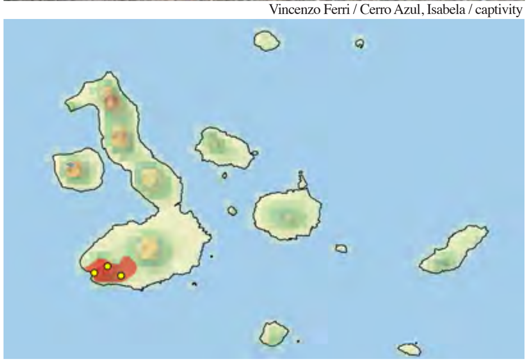
Type locality: "mid-Albemarle Island...forty miles from Villamil...at the coast on the southern border of Perry Isthmus...Cowley Mountain nearly north, while behind us...to the south...Villamil Mountain" [Isabela, Galápagos, Ecuador]. Emended to "Cowley Mountain... the first mountain north of Villamil Mountain" [= Volcán Alcedo, Isabela, Galápagos, Ecuador] by DeSola (1930:80).

Type specimen: CAS 8141, holotype, see Slevin and Leviton (1956).

Chelonoidis niger vicina (Günther 1875a) [07:64, 08:14, 09:36, 12:31, 17:60]

Cerro Azul Giant Tortoise, Iguana Cove Giant Tortoise

Vincenzo Ferri / Cerro Azul, Isabela / captivity



Distribution: Ecuador (Galápagos: Isabela [Albemarle])

Presumed Historic Indigenous Range: 357 sq. km

Size (Max SCL): male 84.2 cm, female 71.8 cm [both estimated]; Max CCL: male 138.0 cm, female 115.8 cm; 95th Percentile CCL: male 123.0 cm, female 98.0 cm (Galapagos Conservancy and Galapagos National Park Directorate, unpubl. data; Chiari 2020) [83]

IUCN Red List: Endangered (EN A2bde) (Cayot et al. 2018), as *Chelonoidis vicina*; Previously: Endangered (EN) (TFTSG 1996), as *Chelonoidis nigra vicina*

CITES: Appendix I, as *Chelonoidis niger* (1975)

Synonymy:

Testudo vicina Günther 1874:422 (*nomen nudum*)

Testudo vicina Günther 1875a:277

Geochelone vicina, Geochelone (Chelonoidis) nigra vicina, Geochelone nigra vicina, Geochelone elephantopus vicina, Chelonoidis elephantopus vicina, Chelonoidis nigra vicina, Chelonoidis vicina, Chelonoidis niger vicina

Type locality: "Galapagos" [Galápagos, Ecuador]. Restricted to "South Albemarle" [Isabela, Galápagos, Ecuador] by Günther (1877:73); and to "Iguana Cove, Albemarle" [Isabela, Galápagos, Ecuador] by Van Denburgh (1914:259).

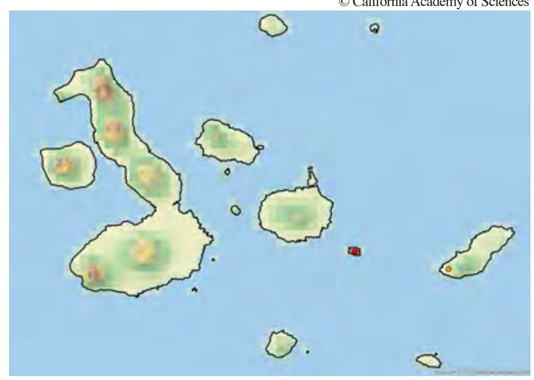
Type specimen: NHMUK 1947.3.4.90 (formerly 1874.7.15.1), holotype.

***Chelonoidis niger* (unnamed) subsp.** [87]

Santa Fé Giant Tortoise, Barrington Island Giant Tortoise

(Extinct, ca. 1890 [?])

Rebekah Kim / Plate 123, Fig. 2, Van Denburgh 1914 / Santa Fé
© California Academy of Sciences



*

(orange dot = possible original provenance)

Distribution: Ecuador (Galápagos: Santa Fé [Barrington] [?] [extinct]; possibly San Cristóbal [Chatham] [?] [extinct])

Presumed Historic Indigenous Range: 13 sq. km

Specimens: CAS 8142–8154, appendicular bones without associated skulls or shells, collected on Santa Fé (Barrington Island) in 1906.

Comment: Mitochondrial DNA of specimens CAS 8143, 8145–6, and 8148 genotyped by Poulakakis et al. (2012) and shown to be distinct and separate from a clade containing *abingdonii*, *hoodensis*, *chathamensis*, and *donfaustoi* (the latter still unnamed at that time). The original provenance of this taxon is questionable (Pritchard 1996:65), possibly southwestern San Cristóbal, but it has been referred to as an unnamed extinct taxon from Santa Fé by many since 2012 (see Caccone 2020; Gibbs et al. 2020).

***Chelonoidis niger*, subsp. indet.**

Testudo clivosa Garman 1917:283 (*nomen dubium*)

Geochelone clivosa, Chelonoidis clivosa

Type locality: "Mascarenes" by supposition [in error]. Emended to "?Galapagos Is." [Galápagos, Ecuador] by Barbour and Loveridge (1929:350).

Type specimen: MCZ 11075, holotype, see Barbour and Loveridge (1929).

Testudo typica Garman 1917:285 (*nomen dubium*)

Geochelone typica, Chelonoidis typica

Type locality: "Galapagos" [Galápagos, Ecuador].

Type specimen: MCZ 11072, holotype, see Barbour and Loveridge (1929).

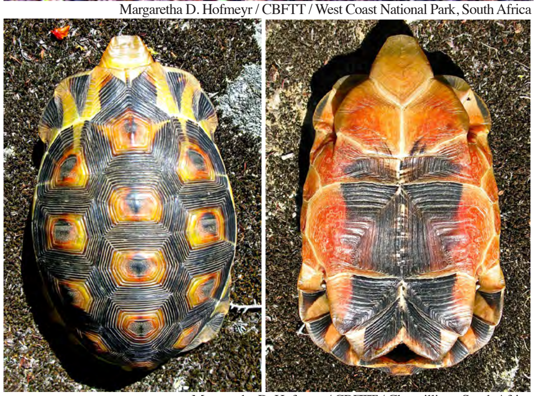
Chersina Gray 1830e (10:7)

Chersina Gray 1830e:5 (10:7)
Type species: *Testudo (Chersina) angulata* Duméril *in* Schweigger 1812], by original monotypy.
Goniochersus Lindholm 1929:285
Type species: *Testudo (Goniochersus) angulata* [= *Testudo angulata* Schweigger 1812], by original designation.
Neotestudo Hewitt 1931:504
Type species: *Neotestudo angulata* [= *Testudo angulata* Schweigger 1812], by original monotypy.

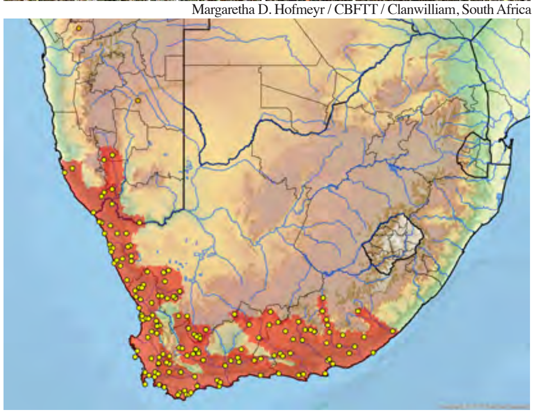
Chersina angulata (Duméril *in* Schweigger 1812) (09:37) **(88)**

Angulate Tortoise, South African Bowsprit Tortoise

Margaretha D. Hofmeyr / CBFTT / West Coast National Park, South Africa



Margaretha D. Hofmeyr / CBFTT / Clanwilliam, South Africa



*

(orange dots = probable trade)

Distribution: Namibia, South Africa
Presumed Historic Indigenous Range: 259,049 sq. km
Size (Max SCL): male 35.1 cm, female 21.6 cm (Hofmeyr 2009 CBFTT; Ceballos et al. 2013)
CBFTT Account: Hofmeyr (2009)
IUCN Red List: Least Concern (LC) (Hofmeyr and Keswick 2018); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Chersina* spp. (1975)
Synonymy:
Testudo angulata Duméril *in* Schweigger 1812:321
Testudo (Chersina) angulata, Chersina angulata, Testudo (Goniochersus) angulata, Goniochersus angulata, Goniochersus angulatus, Neotestudo angulata, Chersine angulata
Type locality: Not known.
Type specimen: MNHN 4087, lectotype, designated by Bour (2008e:32), see also Ceríaco and Bour (2012); MNHN 4067 erroneously referred to as lectotype by Bour (2008e:f.5) (as a typo).
Testudo bellii Gray 1828:2
Type locality: "Cape of Good Hope" [South Africa].
Type specimen: NHMUK 2005.1631, holotype, discussed by Bour (2008e), also erroneously referred to as 2005.1641 by Bour (2008e).
Chersina angulata pallida Gray 1831d:69
Type locality: Not known.
Type specimen: Possibly ZMH, holotype, not located.
Testudo flavofusca Gray 1844:11 (*nomen nudum*)
Testudo sculpta Brandt *in* Gray 1856b:12 (*nomen nudum* and junior homonym, not *Testudo sculpta* Spix 1824 [= *Chelonoidis denticulatus*]).
Type locality: "Cape of Good Hope" [South Africa].
Type specimen: NHMUK 1850.12.12, see Gray (1873j).

Chersobius Fitzinger 1835 (07:67, 10:23, 17:64) **(89)**

Chersobius Fitzinger 1835:112

Type species: *Testudo (Chersobius) signatus* Walbaum [= *Testudo signata* Gmelin 1789], by subsequent designation by Lindholm (1929:284).

Pseudomopus Hewitt 1931:496

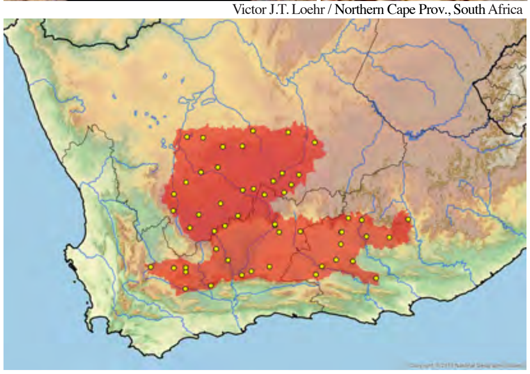
Type species: *Pseudomopus signatus* Walbaum [= *Testudo signata* Gmelin 1789], by original designation.

Chersobius boulengeri (Duerden 1906) (17:64) **(89)**

Karoo Dwarf Tortoise, Karoo Padloper

Victor J.T. Loehr / Northern Cape Prov., South Africa

Victor J.T. Loehr / Northern Cape Prov., South Africa



*

Distribution: South Africa

Presumed Historic Indigenous Range: 111,235 sq. km

Size (Max SCL): male 10.0 cm, female 11.0 cm (Boycott and Bourquin 2000)

IUCN Red List: Endangered (EN A4ace) (Hofmeyr et al. 2018); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996), as *Homopus boulengeri*

CITES: Appendix II, as Testudinidae spp. (1977), as *Homopus boulengeri*; Previously: Appendix II (1975)

Synonymy:

Homopus boulengeri Duerden 1906:406

Pseudomopus boulengeri, Chersobius boulengeri

Type locality: "South Africa—Districts of Willowmore, Aberdeen, and Beaufort West."

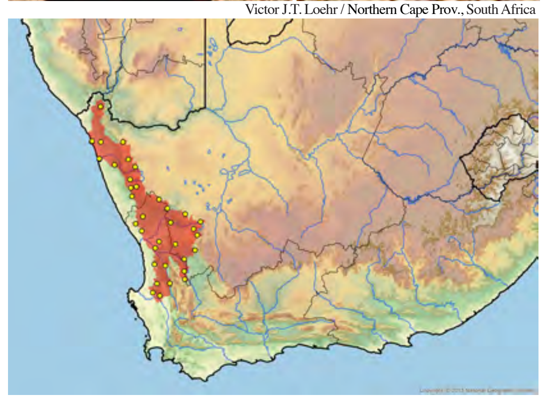
Type specimen: NHMUK 1946.1.23.4 (formerly1906.6.21.1), holotype.

Chersobius signatus (Gmelin 1789) (10:24, 17:64) **(89)**

Speckled Dwarf Tortoise, Speckled Tortoise, Speckled Padloper

Victor J.T. Loehr / Northern Cape Prov., South Africa

Victor J.T. Loehr / Northern Cape Prov., South Africa



*

Distribution: South Africa

Presumed Historic Indigenous Range: 39,014 sq. km

Size (Max SCL): male 9.6 cm, female 11.0 cm (Loehr et al. 2006; Ceballos et al. 2013)

IUCN Red List: Endangered (EN A4ace) (Hofmeyr et al. 2018); Previously: Near Threatened (NT) (TFTSG 1996), as *Homopus signatus*

CITES: Appendix II, as Testudinidae spp. (1977), as *Homopus signatus*; Previously: Appendix II (1975)

Synonymy:

Testudo signata Walbaum 1782:120 (unavailable name)

Type locality: Not known.

Type specimen: Not located, type specimen figured (f.1-2.).

Comment: Unavailable name from a non-binomial work, see Wermuth (1956).

Testudo signata Gmelin 1789:1043

Chersine signata, Homopus signatus, Pseudomopus signatus, Pseudomopus signatus signatus, Chersobius signatus, Homopus signata, Homopus signatus signatus

Type locality: "Virginia" [USA, in error]. Restricted to "vicinity of Springbok, Cape Province, South Africa" by Bour (1988:3).

Type specimens: Possibly NRM s/n (formerly MDG s/n), apparently lost, not listed by Andersson (1900), specimen figured in Walbaum (1782:f.1-2) designated lectotype by Bour (1988:1).

Comment: Description cited as sourced from Walbaum (1782:120).

Testudo cafra Daudin 1801:291 (10:24)

Homopus signatus cafra, Homopus signatus cafer

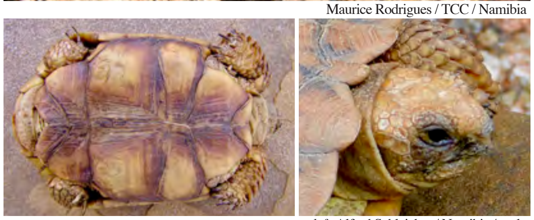
Type locality: "Afrique...la Cafrerie" [South Africa]. Restricted to "Drainage of the Olifants River, Cape Province, South Africa" by Bour (1988:3).
Type specimen: MNHN 7924, holotype, see Bour (1988).

Testudo juvencella Daudin 1802:380 (10:25)
Type locality: "Afrique" [Africa].
Type specimen: Possibly MNHN, not located.

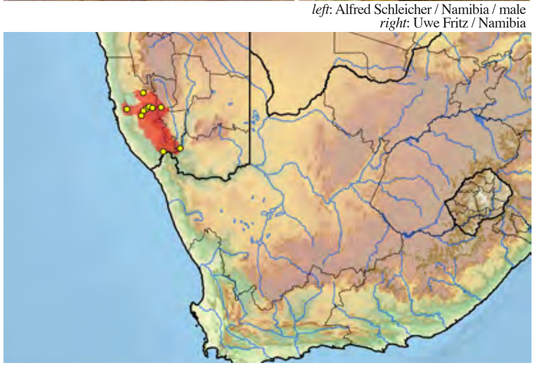
Pseudomopus signatus peersi Hewitt 1935:345
Homopus signatus peersi, Chersobius peersi
Type locality: "Klaver District, C.P. [Cape Province], near Van Rhynsdorp" [South Africa].
Type specimens: Possibly PEM or AMG, syntypes (2), figured (pl.36).

Chersobius solus (Branch 2007) (07:67, 17:64) (**89**)
Nama Tortoise, Nama Padloper

Maurice Rodrigues / TCC / Namibia



left: Alfred Schleicher / Namibia / male
right: Uwe Fritz / Namibia

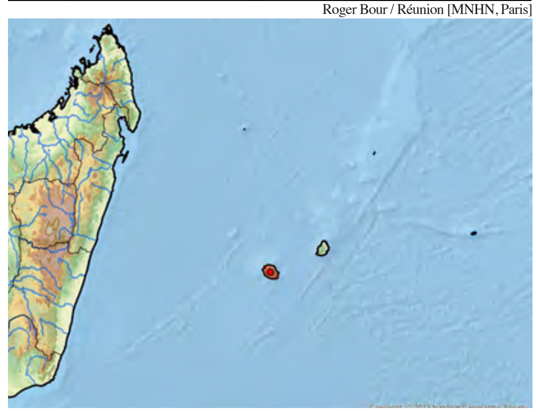


Distribution: Namibia
Presumed Historic Indigenous Range: 22,377 sq. km
Size (Max SCL): male 9.6 cm, female 11.4 cm (Schleicher 2004; Branch 2007)
IUCN Red List: Vulnerable (VU C2a) (Branch 2018); Previously: Vulnerable (VU) (Branch 1996), as *Homopus solus*, previously listed as *Homopus bergeri*
TFTSG Provisional Red List: Endangered (EN) (2013)
CITES: Appendix II, as Testudinidae spp. (1977), as *Homopus solus*; Previously: Appendix II (1975), as *Homopus bergeri*
Synonymy:
Homopus solos Devaux 2003:40 (*nomen nudum*)
Homopus solus Branch 2007:11
Chersobius solus
Type locality: "vicinity of Aus, Luderitz District, Namibia."
Type specimen: PEM 8754, holotype.

Cylindraspis Fitzinger 1835 (17:55) (**90**)
Chelonura Rafinesque 1815:74 (*nomen nudum*)
Chelonura Rafinesque 1832:64 (junior homonym, not = *Chelonura* Fleming 1822 [= *Chelydra*])
Type species: *Chelonura indica* [= *Testudo indica* Schneider 1783], by original designation.
Cylindraspis Fitzinger 1835:112
Type species: *Chersina* (*Cylindraspis*) *vosmaeri* Fitzinger 1826 [= *Testudo indica vosmaeri* Suckow 1798], by subsequent designation by Fitzinger (1843:29). Genus established as *Geochelone (Cylindraspis)* without a type species.

Cylindraspis indica (Schneider 1783) (07:65)
Reunion Giant Tortoise
(**Extinct**, ca. 1840)

Roger Bour / Réunion [MNHN, Paris]



Distribution: Réunion [extinct]
Presumed Historic Indigenous Range: 2,536 sq. km
Size (Max SCL): estimated: male ca. 117 cm, female ca. 50 cm (Bour 1985; Bour et al. 2014); measured: male 75.0 cm, female 36.5 cm [*C. borbonica*] (Bour 1985)
IUCN Red List: Extinct (EX) (WCMC 1996)
Synonymy:
Testudo indica Schneider 1783:355
Chelonura indica, Cylindrapis indica, Megalochelys indica, Geochelone indica, Cylindraspis indica
Type locality: "Ostindien". Restricted to "Côte de Coromandel" [Coromandel Coast, India] by Bour (1985:35) as per Perrault (1676:193), and to "Réunion" by Austin and Arnold (2001:2517).
Type specimen: MNHN 7819, holotype, discussed by Bour (1985, 2004c) and Gerlach (2004); genotyped by Austin and Arnold (2001) and Austin et al. (2002).
Testudo tabulata africana Schweigger 1812:322 (09:38)
Type locality: "Africa" by inference.
Type specimen: MNHN 9374, holotype, see Bour (1985, 2008) and Ceríaco and Bour (2012); genotyped by Austin et al. (2002).
Chersine retusa Merrem 1820:29 (*nomen novum*)
Testudo retusa
Comment: Unjustified replacement name for *indica*.
Testudo perraultii Duméril and Bibron 1835:126 (*nomen novum*)
Geochelone (Cylindraspis) perraultii, Testudo indica perraultii

Type locality: "Indes Orientales."
Type specimen: MNHN 9374, holotype, see Bour (1985, 2004c, 2008); genotyped by Austin et al. (2002).
Comment: Unjustified replacement name for *indica*.

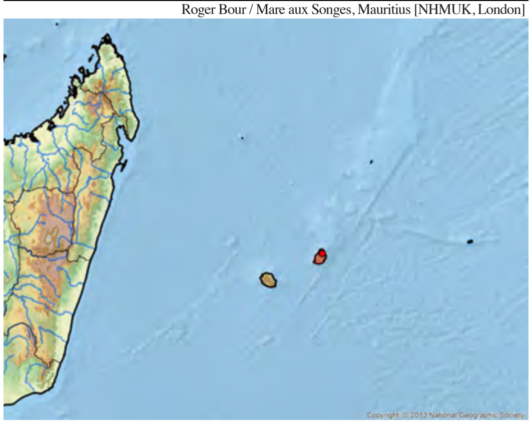
Testudo graii Duméril and Bibron 1835:135 (*nomen novum*)
Geochelone graii, *Cylindraspis graii*
Type locality: "Afrique?" [Africa].
Type specimen: MNHN 9374, holotype, see Bour (1985, 2008); genotyped by Austin et al. (2002).
Comment: Unjustified replacement name for *Testudo tabulata africana* Schweigger 1812.

Chersina grayi Strauch 1865:36 (*nomen novum*)
Geochelone grayi, *Geochelone (Cylindraspis) grayi*
Type locality: "Afrika."
Type specimen: MNHN 9374, holotype by default, see Bour (1985, 2008); genotyped by Austin et al. (2002).
Comment: Unjustified emendation of *graii*.

Cylindraspis borbonica Bour 1978:492
Type locality: "Réunion."
Type specimen: Specimen figured in Petit (1737:pl.7.f.3,5-6), holotype, by original designation, discussed also by Gerlach (2004).

Cylindraspis inepta (Günther 1873)
Mauritius Giant Domed Tortoise
(Extinct, ca. 1735)


Roger Bour / Mare aux Songes, Mauritius [NHMUK, London]



Distribution: Mauritius (Mauritius [extinct])
Presumed Historic Indigenous Range: 1,882 sq. km
Size (Max SCL): estimated: male ca. 104 cm (Bour et al. 2014); measured: female 76.0 cm (Bour 1985)
IUCN Red List: Extinct (EX) (WCMC 1996)
Synonymy:

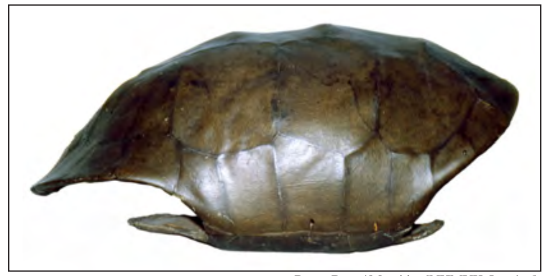
Testudo neraudii Gray 1831d:14 (*nomen oblitum*)
Type locality: "Isle of France" [Mauritius]. Restricted to "Quatre Cocos, Flacq, Maurice" [Mauritius] by Bour (1985:37).
Type specimens: MNHN 8383, 8385, syntypes (2).

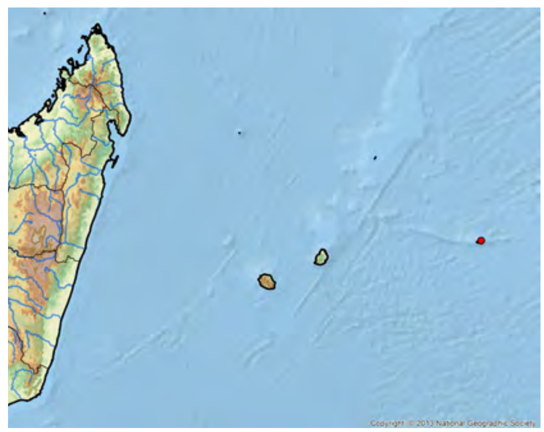
Testudo inepta Günther 1873:397
Geochelone inepta, *Cylindraspis inepta*
Type locality: "Mauritius." Restricted to "La Mare aux Songes...near Mahe'bourg...Mauritius" by Günther (1875b:297).
Type specimens: NHMUK 39927, 39931, 39937–38, 39943–44, 39963, 1877.11.13.1, syntypes (8), see Bour (1985) and Gerlach (2004).

Testudo boutonii Günther 1875b:297
Type locality: "La Mare aux Songes...near Mahe'bourg...Mauritius."
Type specimens: NHMUK 39936, 39943, syntypes (2); see Bour (1985).

Testudo sauzieri Gadow 1894:315
Geochelone sauzieri
Type locality: "Mare aux Songes, in Mauritius."
Type specimen: NHMUK 4676, holotype, see Bour (1985).

Cylindraspis peltastes (Duméril and Bibron 1835)
Rodrigues Domed Tortoise
(Extinct, ca. 1800)


Roger Bour / Mauritius [NHMUK, London]



Distribution: Mauritius (Rodrigues [extinct])
Presumed Historic Indigenous Range: 113 sq. km
Size (Max SCL): measured: male 46.0 cm, female 41.0 cm (Bour 1985; Bour et al. 2014)
IUCN Red List: Extinct (EX) (WCMC 1996)
Synonymy:

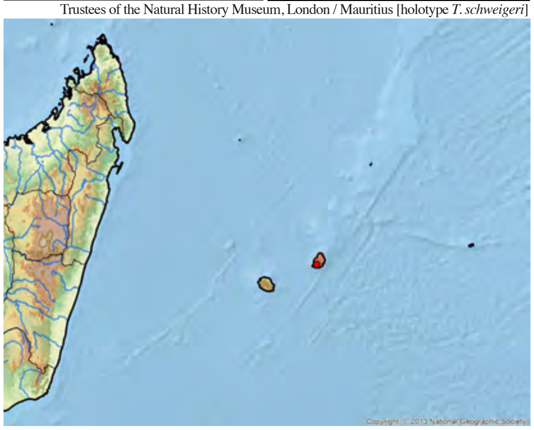
Testudo rotunda Latreille *in* Sonnini and Latreille 1801:107 (*partim, nomen dubium*)
Chersine rotunda, *Geochelone (Geochelone) rotunda*
Type locality: Not known. Restricted to "Mascarenes...Rodrigues" by Bour (2005e:25).
Type specimens: MNHN 1991, 1991.A, syntypes (2), discussed by Pritchard (1996), Gerlach (2004), and Bour (2005e).

Testudo peltastes Duméril and Bibron 1835:138
Geochelone peltastes, *Geochelone (Cylindraspis) peltastes*, *Cylindraspis peltastes*
Type locality: Not known. Restricted to "Rodriguez" [Rodrigues] by Günther (1877:53).
Type specimen: MNHN 7831, holotype, discussed by Bour (1985) and Gerlach (2004); genotyped by Austin et al. (2002).

Cylindraspis triserrata (Günther 1873)
Mauritius Giant Flat-shelled Tortoise
(Extinct, ca. 1735)

Trustees of the Natural History Museum, London / Mauritius [holotype *T. schweigeri*]

Trustees of the Natural History Museum, London / Mauritius [holotype *T. schweigeri*]



Distribution: Mauritius (Mauritius [extinct])
Presumed Historic Indigenous Range: 1,882 sq. km
Size (Max SCL): estimated: male ca. 75 cm (Bour 1985)
IUCN Red List: Extinct (EX) (WCMC 1996)
Synonymy:

Testudo schweigeri Gray 1830e:3 (10:7) (*nomen oblitum*)
Cylindraspis schweigeri
Type locality: Not known. Restricted to "Mauritius" by Austin and Arnold (2001:2517).
Type specimen: NHMUK 1947.3.5.5 (formerly 1876.10.28.4), holotype, figured in Boulenger (1889:156,pl.2-3, as "*Testudo schweiggeri* Gray 1831"), see also Gray (1831d:10), discussed by Bour (1985) and Bour et al. (2014); genotyped by Austin and Arnold (2001).

Testudo schweiggeri Gray *in* Duméril and Bibron 1835:108 (*nomen novum et oblitum*, senior homonym, not = *Geochelone (Geochelone) schweiggeri* Fitzinger 1835 [= *Chelonoidis darwini*])
Comment: Unjustified emendation of *schweigeri*.

Testudo triserrata Günther 1873:397
Geochelone triserrata, Cylindraspis triserrata
Type locality: "Mauritius." Restricted to "La Mare aux Songes...near Mahe'bourg...Mauritius" by Günther (1875b:297).
Type specimens: NHMUK 39928–29, 39932–35, 39939–42, 39945–47, 39964, 1947.3.5.5, syntypes (15), see Bour (1985) and Gerlach (2004).

Testudo leptocnemis Günther 1875b:297
Geochelone leptocnemis, Cylindraspis leptocnemis
Type locality: "district of Flacq..[&]..La Mare aux Songes...near Mahe'bourg...Mauritius." Restricted to "District of Flacq" [Mauritius] by Günther (1877:14).
Type specimen: NHMUK 1876.11.4.17, lectotype, designated and genotyped by Austin and Arnold (2001).

Testudo microtympanum Boulenger 1891:4
Geochelone microtympanum
Type locality: "Mauritius" by supposition.
Type specimen: RCSM s/n, holotype, apparently lost or destroyed during World War II, see Bour (1985) and Bour et al. (2014).

Testudo guentheri Gadow 1894:320 (senior homonym, not = *Geochelone elephantopus guentheri* Baur *in* Pritchard [= *Chelonoidis guntheri*])
Type locality: "Mare aux Songes...Mauritius."
Type specimens: NHMUK 4138–40, MNHN 1943.3, syntypes (4), see Bour (1985).

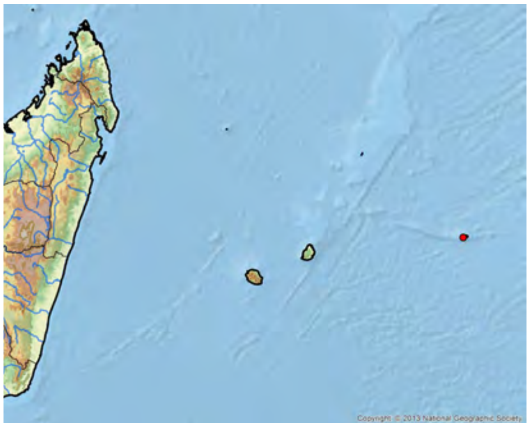
Testudo guntheri Gadow *in* Van Denburgh 1914:257 (*nomen novum*, junior homonym, not = *Testudo guntheri* Baur 1889 [= *Chelonoidis guntheri*])
Testudo güntheri

Testudo gadowi Van Denburgh 1914:257 (*nomen novum*)
Geochelone (Megalochelys) gadowi, Geochelone (Cylindraspis) gadowi
Type locality: "Mare aux Songes...Mauritius."
Type specimens: NHMUK 4138–40, MNHN 1943.3, syntypes (4) by default, see Bour (1985).
Comment: Replacement name for *Testudo günther*i (*guentheri*) Gadow.

Cylindraspis vosmaeri (Suckow 1798) (07:66) (**91**)
Rodrigues Giant Saddleback Tortoise
(Extinct, ca. 1800)

Roger Bour / Rodrigues [Ste. Geneviève]

Roger Bour / Rodrigues

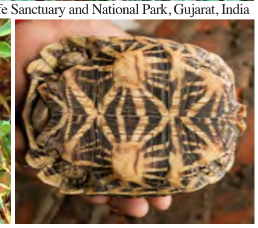


Distribution: Mauritius (Rodrigues [extinct])
Presumed Historic Indigenous Range: 113 sq. km
Size (Max SCL): estimated: male ca. 109 cm, female ca. 80 cm (Taffortet 1726; Milne-Edwards 1875; Bour 1985; Bour et al. 2014); measured: male 88.0 cm, female 68.0 cm (Bour 1985; Bour et al. 2014)
IUCN Red List: Extinct (EX) (WCMC 1996)
Synonymy:
Testudo indica. *Vosmaeri* Schoepff 1795:103 [91] (unavailable name)
Type locality: "Promontorio Bonae Spei" [Cape of Good Hope, South Africa] [in error].
Type specimen: RMNH 6001, type specimen figured (pl.22.B,f.[2-3]), see Hoogmoed et al. (2010) and Bour et al. (2014).
Comment: Name written to mean "*Testudo indica* sensu Vosmaer."
Testudo indica vosmaeri Suckow 1798:57
Testudo vosmaeri, *Geochelone (Cylindraspis) vosmaeri*, *Chersina* (*Cylindraspis*) *vosmaeri*, *Geochelone vosmaeri*, *Cylindraspis vosmaeri*
Type locality: Not given. Restricted to "Rodriguez" [Rodrigues] by Günther (1877:53); and to "Cap de Bonne-Espérance" [Cape of Good Hope, South Africa] [in error] by Vaillant (1893:269).
Type specimen: RMNH 6001, lectotype, designated by Bour (1985:40), discussed by Gerlach (2004) and Hoogmoed et al. (2010); genotyped by Austin et al. (2002); NMW 1461, listed by Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Gemel et al. (2019) as a "syntype" of "*Testudo vosmaeri* Fitzinger 1826," is a paralectotype, genotyped by Kehlmaier et al. (2019b).
Testudo rotunda Latreille *in* Sonnini and Latreille 1801:107 (*partim*, *nomen dubium*)
Chersine rotunda, *Geochelone (Geochelone) rotunda*
Type locality: Not known. Restricted to "Mascarenes...Rodrigues" by Bour (2005e:25).
Type specimens: MNHN 1991, 1991A, syntypes (2), see Pritchard (1996), Gerlach (2004), and Bour (2005e).
Testudo rodericensis Günther 1873:397
Type locality: "Rodriguez" [Rodrigues].
Type specimens: NHMUK 1876.11.4.1–9, syntypes (10), see Bour (1985).
Testudo commersoni Vaillant 1898:138
Geochelone commersoni, *Cylindraspis commersoni*
Type locality: "Rodrigue" [Rodrigues].
Type specimen: Not located, type specimen figured (f.1-4), see Bour (1985).

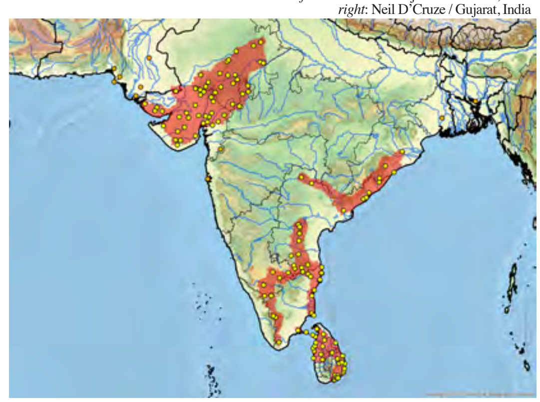
Geochelone Fitzinger 1835 [07:52]
Geochelone Fitzinger 1835:112
Type species: *Geochelone stellata* [= *Testudo stellata* Schweigger 1812 = objective synonym of *Testudo elegans* Schoepff 1795], by subsequent designation by Fitzinger (1843:29).

Geochelone elegans (Schoepff 1795) [17:65] [**92**]
Indian Star Tortoise

Raju Vyas / CBFTT / Gir Wildlife Sanctuary and National Park, Gujarat, India



left: Peter Paul van Dijk / Tamil Nadu, India
right: Neil D'Cruze / Gujarat, India



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(orange dots = probable trade)

Distribution: India (Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Odesha, Rajasthan, Tamil Nadu, Telangana), Pakistan, Sri Lanka
Presumed Historic Indigenous Range: 485,676 sq. km
Size (Max SCL): male 25.7 cm, female 46.7 cm [female estimated] (Frazier *in* Moll 1989; Vyas 2011; de Silva et al. 2017); Max CCL: female 57.5 cm (de Silva et al. 2017; D'Cruze et al. 2018 CBFTT)
CBFTT Account: D'Cruze, Mookerjee, Vyas, Macdonald, and de Silva (2018)
IUCN Red List: Vulnerable (VU A4cd) (Choudhury et al. 2020); Previously: Vulnerable (VU A4cd) (D'Cruze et al. 2016); Least Concern (LC) (ATTWG 2000), Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix I (2019); Previously: Appendix II, as Testudinidae spp. (1977), Appendix II, as *Geochelone* spp. (1975)
Synonymy:
Testudo elegans Schoepff 1795:111 [17:65]
Chersine elegans, *Peltastes stellatus elegans*, *Geochelone*

elegans, Geochelone elegans elegans

Type locality: "India orientali" [eastern India].

Type specimen: Not located, possibly lost, type specimen figured (pl.25); however, Schoepff (1801:113) stated that the specimen was from the "Museis Hagae Comitis et Harlemi" (possibly the Teylers Museum in Haarlem, Netherlands).

Testudo stellata Schweigger 1812:325 (17:65) (*nomen novum*)

Geochelone (Geochelone) stellata, Geochelone stellata, Peltastes stellatus

Type locality: "India orientali" [eastern India].

Type specimen: Not located, possibly lost, type specimen figured in Schoepff (1795:pl.25); however, Schoepff (1801:113) stated that the specimen was from the "Museis Hagae Comitis et Harlemi" (possibly the Teylers Museum in Haarlem, Netherlands).

Comment: Unjustified replacement name for *elegans*.

Testudo actinodes Bell 1828a:419

Type locality: "Africâ" [in error].

Type specimens: OUM 8555–56, 8558–60, syntypes (5), discussed by Nowak-Kemp and Fritz (2010); none of these is the type specimen figured by Bell (1828a:pl.23), so additional syntypes may exist.

Testudo actinoides Bell *in* Gray 1844:7 (*nomen novum*)

Peltastes stellatus actinoides

Comment: Unjustified emendation of *actinodes*.

Testudo megalopus Blyth 1854:640 (17:66)

Type locality: Not known. Restricted to "Calcutta (in West Bengal State, eastern India)." [Kolkata, West Bengal, India] by Das et al. (1998:127).

Type specimen: ZSI 792, holotype, see Das et al. (1998), not located by Kundu et al. (2018a).

Peltastes stellatus maura Gray 1870c:8

Testudo stellata maura

Type locality: Not known. Restricted to "India" by Gray (1873j:8).

Type specimen: NHMUK, holotype, see Gray (1873j), possibly lost.

Peltastes stellatus seba Gray 1870c:8

Type locality: Not known. Restricted to "India" by Gray (1873j:8).

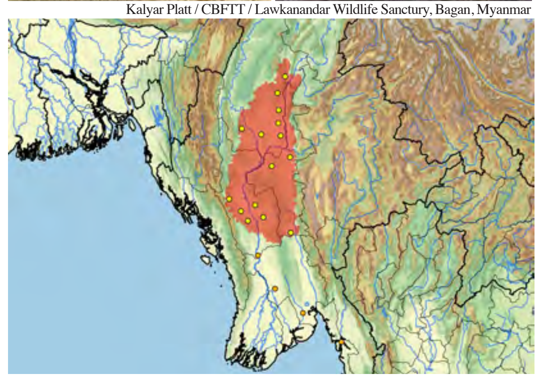
Type specimen: NHMUK 1843.2.29.6, holotype, see Gray (1873j), not located, possibly lost.

Geochelone platynota (Blyth 1863)

Burmese Star Tortoise

Kalyar Platt / CBFTT / Lawkanandar Wildlife Sanctury, Bagan, Myanmar

Kalyar Platt / CBFTT / Lawkanandar Wildlife Sanctury, Bagan, Myanmar



(orange dots = trade)

Distribution: Myanmar

Presumed Historic Indigenous Range: 85,181 sq. km

Size (Max SCL): male 25.0 cm, female 45.5 cm (Platt et al. 2011 CBFTT; Platt et al. 2019a)

CBFTT Account: Platt, Thanda Swe, Win Ko Ko, Platt, Khin Myo Myo, Rainwater, and Emmett (2011)

IUCN Red List: Critically Endangered (CR A1cd) (Praschag et al. 2020); Previously: Critically Endangered (CR A1cd+2cd, C2a) (ATTWG 2000), Critically Endangered (CR) (TFTSG 1996)

CITES: Appendix I (2013); Previously: Appendix II, as Testudinidae spp. (1977), Appendix II, as *Geochelone* spp. (1975)

Synonymy:

Testudo platynotus Blyth 1863:83

Peltastes platynotus, Testudo platynota, Geochelone platynota, Geochelone elegans platynota

Type locality: "Lower Pegu..[&]..Valley of the Irawadi" [Myanmar]. Restricted to "Irrawaddy Valley" [Myanmar] by Smith (1931:140).

Type specimens: ZSI 787–89, syntypes (3), see Das et al. (1998) and Kundu et al. (2018a); Uetz et al. (2019) erroneously listed syntypes as not located.

Homopus Duméril and Bibron 1834 (07:67, 10:23, 17:64) **(89)**

Homopus Duméril and Bibron 1834:357 (10:23)

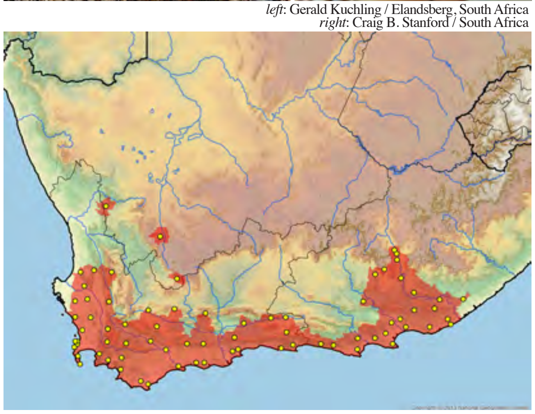
Type species: *Homopus areolatus* [*Tortue Aréolée* Schoepff = *Testudo areolata* Thunberg 1787], by subsequent designation by Duméril and Bibron (1835:7).

Homopus areolatus (Thunberg 1787) (17:64) **(89, 93)**

Parrot-beaked Dwarf Tortoise, Parrot-beaked Tortoise, Common Padloper

Gerald Kuchling / Elandsberg, South Africa

left: Gerald Kuchling / Elandsberg, South Africa
right: Craig B. Stanford / South Africa



*

Distribution: South Africa

Presumed Historic Indigenous Range: 85,707 sq. km

Size (Max SCL): male 10.0 cm, female 12.0 cm (Boycott and Bourquin 2000; Ceballos et al. 2013)

IUCN Red List: Least Concern (LC) (Hofmeyr and Keswick 2018); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)

Synonymy:

Testudo areolata Thunberg 1787:180

Chersine areolata, Homopus areolatus, Homopus areolata

Type locality: "Indien" [India] [in error].

Type specimen: UPSZTY 298 (formerly UUZM 298 and ZIUS 298), holotype, see Thunberg (1828) and Iverson (1992).

Testudo minuta Thunberg 1788:206 (*nomen nudum*)

Testudo miniata Lacepède 1788:166, synopsis[table] (09:6) (*nomen suppressum*)

Type locality: "Cap de Bonne-espérance" [South Africa].

Type specimen: Possibly MNHN, not located.

Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo fasciata Daudin 1801:294 (junior homonym, not = *Testudo fasciata* Suckow 1798 [= *Trachemys terrapen*])

Chersine fasciata

Type locality: "l'île de Ceilan" [Sri Lanka] [in error].

Type specimen: Possibly MNHN, not located.

Testudo africana Hermann 1804:218

Type locality: "Africa" by inference.

Type specimen: Possibly ZMUS, not located.

Chersine tetradactyla Merrem 1820:32

Type locality: "India orientali" [in error].

Type specimen: Not known or located.

Comment: Description cited as sourced from Linnaeus (1745:[33],n.23 and 1749a:139,n.23["354"]) and questionably Worm (1655:317).

Testudo areolata pallida Gray 1831d:13

Type locality: Not designated. Restricted to "Süd-Afrika" [South Africa] by Wermuth and Mertens (1961:175).

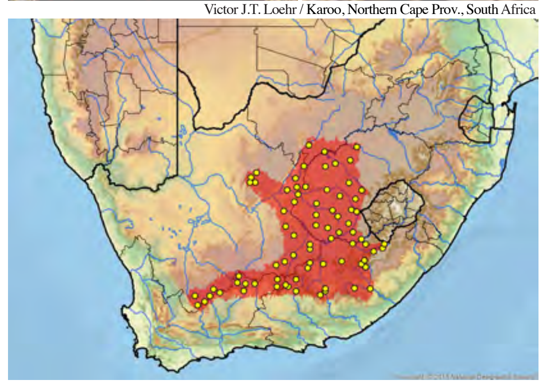
Type specimen: Possibly in OUM, originally live, not located, not listed by Nowak-Kemp and Fritz (2010).

Homopus femoralis Boulenger 1888a (17:64) **(89)**

Greater Padloper, Greater Dwarf Tortoise

Victor J.T. Loehr / Karoo, Northern Cape Prov., South Africa

Victor J.T. Loehr / Karoo, Northern Cape Prov., South Africa



Distribution: South Africa

Presumed Historic Indigenous Range: 212,535 sq. km

Size (Max SCL): male 13.7 cm, female 16.8 cm (Boycott and Bourquin 2000)

IUCN Red List: Least Concern (LC) (Hofmeyr and Keswick 2018); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)

Synonymy:
Homopus femoralis Boulenger 1888a:251
Testudo femoralis
Type locality: "South Africa...Cradock."
Type specimens: NHMUK 1946.1.22.54 (formerly 1888.12.28.1), syntype, two others not located.

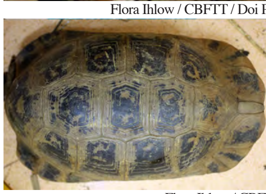
Indotestudo Lindholm 1929

Indotestudo Lindholm 1929:285
Type species: *Testudo (Indotestudo) elongata* [= *Testudo elongata* Blyth 1854], by original designation.

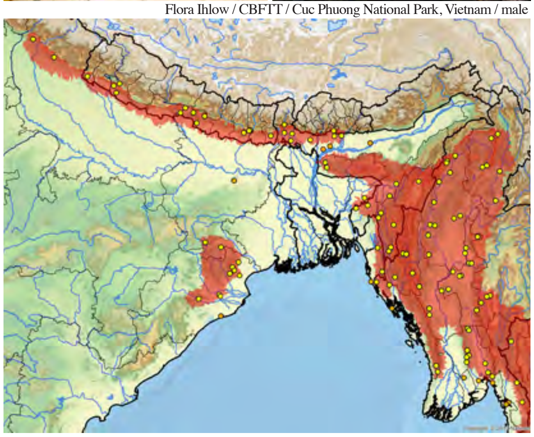
Indotestudo elongata (Blyth 1854) (17:66)

Elongated Tortoise, Yellow-headed Tortoise

Flora Ihlow / CBFTT / Doi Phu Nang National Park, Phayao Prov., Thailand



Flora Ihlow / CBFTT / Cuc Phuong National Park, Vietnam / male



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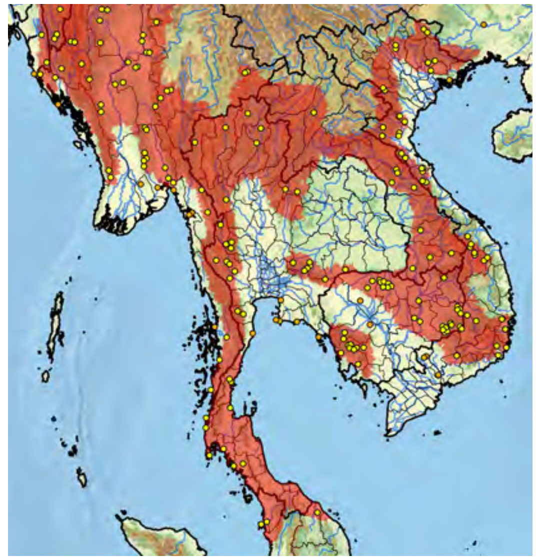

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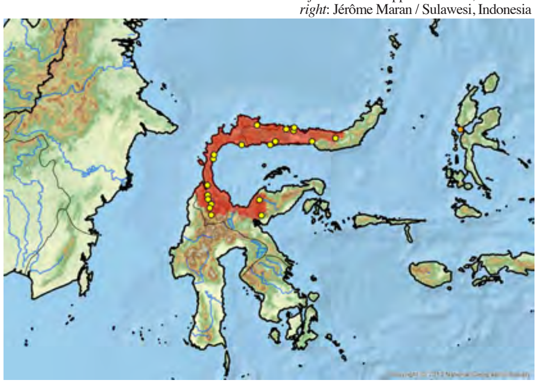
(orange dots = probable trade or introduced or temples)

Distribution: Bangladesh, Bhutan, Cambodia, China (?) (Guangxi, Yunnan), India (Assam, Bihar, Jharkhand, Meghalaya, Mizoram, Odisha, Sikkim, Tripura, Uttarakhand, Uttar Pradesh, West Bengal), Laos, Malaysia (West), Myanmar, Nepal, Thailand, Vietnam
Presumed Historic Indigenous Range: 1,308,716 sq. km
Size (Max SCL): male 38.0 cm, female 31.0 cm (Senneke 2006; Ceballos et al. 2013; Ihlow et al. 2016 CBFTT; Khin Myo Myo and Platt 2016)
CBFTT Account: Ihlow, Dawson, Hartmann, and Som (2016)
IUCN Red List: Critically Endangered (CR A2cd) (Rahman et al. 2019); Previously: Endangered (EN) (ATTWG 2000), Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)
Synonymy:
Testudo elongata Blyth 1854:639 (17:66)
Peltastes elongatus, *Indotestudo elongata*, *Geochelone elongata*, *Indotestudo elongata elongata*, *Geochelone elongata elongata*
Type locality: "Arakan" [Myanmar].
Type specimens: ZSI 796, 798–800, syntypes (4), see Das et al. (1998), Das (2009), and Kundu et al. (2018a).
Testudo parallelus Annandale 1913:76
Type locality: "Chaibassa (Singhbhum) district, Chota Nagpur" [India].
Type specimen: ZSI 11379, holotype, see Das et al. (1998).

Indotestudo forstenii (Schlegel and Müller 1845) [(17:69)]
Sulawesi Tortoise, Forsten's Tortoise


Jérôme Maran / Sulawesi, Indonesia


left: Sabine Schoppe / Sulawesi, Indonesia
right: Jérôme Maran / Sulawesi, Indonesia

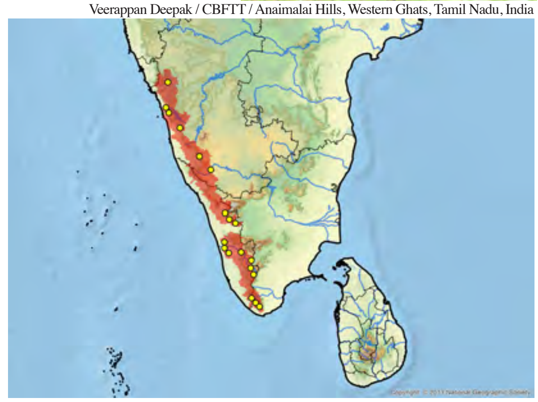

(orange dot = erroneous original type locality)

Distribution: Indonesia (Sulawesi)
Presumed Historic Indigenous Range: 43,814 sq. km
Size (Max SCL): male 30.9 cm, female 25.4 cm (Ernst et al. 2006b; Ives et al. 2008; Itescu et al. 2014)
IUCN Red List: Critically Endangered (CR A4cd) (Kusrini et al. 2021); Previously: Endangered (EN A1cd+2cd) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)
Synonymy:
Testudo forstenii Schlegel and Müller 1845:30 [(17:69)]
Peltastes forstenii, Geochelone forstenii, Indotestudo forstenii, Indotestudo elongata forstenii, Geochelone elongata forstenii
Type locality: "Gilolo...Indischen Archipel" [Halmahera, Moluccas, Indonesia] [probably in error]; restricted to "near Gorontalo, Sulawesi, Indonesia" by TTWG (2017:230).
Type specimen: RMNH 3811, holotype, identified and discussed by Hoogmoed and Crumly (1984) and Hoogmoed et al. (2010); Uetz et al. (2019) erroneously listed this specimen as a lectotype.

Indotestudo travancorica (Boulenger 1907) [(07:68)]
Travancore Tortoise


Veerappan Deepak / CBFTT / Anaimalai Hills, Western Ghats, Tamil Nadu, India


Veerappan Deepak / CBFTT / Anaimalai Hills, Western Ghats, Tamil Nadu, India



Distribution: India (Karnataka, Kerala, Tamil Nadu)
Presumed Historic Indigenous Range: 44,765 sq. km
Size (Max SCL): male 33.1 cm, female 29.5 cm (Deepak et al. 2011 CBFTT; Ceballos et al. 2013)
CBFTT Account: Deepak, Ramesh, Bhupathy, and Vasudevan (2011)
IUCN Red List: Vulnerable (VU A1cd) (ATTWG 2000)
TFTSG Provisional Red List: Endangered (EN) (2011)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)
Synonymy:
Testudo travancorica Boulenger 1907:560
Geochelone travancorica, Indotestudo travancorica, Indotestudo elongata travancorica, Geochelone elongata travancorica
Type locality: "near Trivandrum..[&]..Travancore hills between 500 and 1,000 feet altitude" [India].
Type specimens: NHMUK 1946.1.22.80–81 (formerly 1906.7.18.6–7), and 1947.3.5.4 (formerly 1933.11.11.1), syntypes (3), see Das (2009).

Kinixys **Bell 1827** (12:35)

Kinixys Bell 1827:398

Type species: *Kinixys homeana* Bell 1827, by subsequent designation by Bell (1828c:514).

Kinyxis Gray 1830e:6 (*nomen novum*)

Cinixys Wagler 1830b:138 (*nomen novum*)

Cinothorax Fitzinger 1835:108

Type species: *Cinixys (Cinothorax) bellianus* [= *Testudo (Kinyxis) belliana* Gray 1830e], by subsequent designation by Fitzinger (1843:29).

Kinixis Hallowell 1839:161 (*nomen novum*)

Cinyxis Peters 1866:887 (*nomen novum*)

Kinothorax Gray 1873j:16 (*nomen novum*)

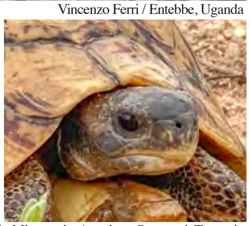
Madakinixys Vuillemin 1972b:169

Type species: *Madakinixys domerguei* Vuillemin 1972b, by original monotypy.

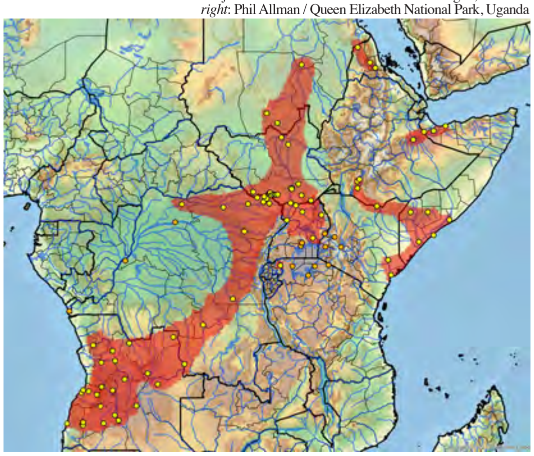
Kinixys belliana **Gray 1830e** (07:69, 08:11, 10:7, 12:35)

Bell's Hinge-back Tortoise

Vincenzo Ferri / Entebbe, Uganda



left: Russell A. Mittermeier / northern Serengeti, Tanzania
right: Phil Allman / Queen Elizabeth National Park, Uganda



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(orange dots = possible trade or transport or misidentified)

Distribution: Angola, Congo (DRC), Congo (ROC), Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Sudan, Tanzania, Uganda

Presumed Historic Indigenous Range: 2,268,595 sq. km

Size (Max SCL): 23.0 cm (Mifsud and Stapleton 2014)

IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)

TFTSG Provisional Red List: Vulnerable (VU) (2013)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Kinixys* spp. (1975)

Synonymy:

Testudo (Kinyxis) belliana Gray 1830e:6 (10:7)

Kinixys belliana, Cinixys (Cinothorax) belliana, Cinixys belliana, Cinothorax bellianus, Kinixys belliana belliana

Type locality: Not known.

Type specimen: NHMUK 1979.919, holotype, see Bour (2006d).

Kinixys schoensis Rüppell 1845:226

Kinixys belliana schoensis

Type locality: "Schoa, südlich von Abyssinien" [Ethiopia].

Type specimen: SMF 7719, holotype, see Mertens (1967b) and Bour (2006d).

Kinixys belliana mertensi Laurent 1956:27

Type locality: "Dika, Uele...le nord du Congo" [Democratic Republic of Congo (DRC)].

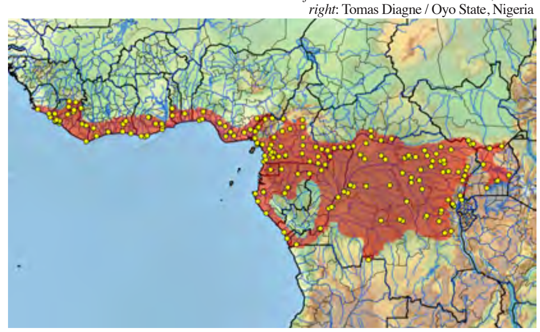
Type specimen: MRAC 4417, holotype.

Kinixys erosa **(Schweigger 1812)** (12:35)

Forest Hinge-back Tortoise, Serrated Hinge-back Tortoise

Tomas Diagne / Oyo State, Nigeria

left: Laurent Chirio / Kinero Malibé, Gabon
right: Tomas Diagne / Oyo State, Nigeria



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Distribution: Angola, Benin, Cameroon, Central African Republic, Congo (DRC), Congo (ROC), Equatorial Guinea, Gabon, Ghana, Guinea, Ivory Coast (Côte d'Ivoire), Liberia, Nigeria, Sierra Leone, South Sudan, Togo, Uganda

Presumed Historic Indigenous Range: 2,810,555 sq. km

Size (Max SCL): male 40.0 cm, female 29.9 cm (Maran 2006c; Luiselli and Diagne 2014 CBFTT)

CBFTT Account: Luiselli and Diagne (2014)

IUCN Red List: Data Deficient (DD) (TFTSG 1996)

TFTSG Provisional Red List: Endangered (EN) (2013)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Kinixys* spp. (1975)

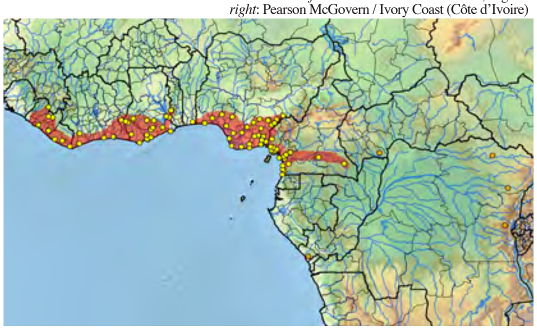
Synonymy:

Testudo erosa Schweigger 1812:321
Kinixys erosa, Cinixys erosa, Kinixis erosa, Kinixys belliana erosa
Type locality: "America septentrionali" [North America] [in error].
Type specimen: Not located, specimen figured in Shaw (1802:f.13), lectotype, designated by Bour (2006d:8).
Testudo schoepfii Fitzinger 1826:44 (*nomen nudum* and senior homonym, not *Testudo schoepfii* Rüppell *in* Gray 1873j [= *Centrochelys sulcata*])
Kinixys castanea Bell 1827:398
Cinixys (Cinixys) castanea, Cinixys castanea, Kinixis castanea
Type locality: "Africa."
Type specimens: OUM 8519–21, syntypes (3), discussed by Nowak-Kemp and Fritz (2010). NHMUK 1947.3.5.71 also listed as a syntype in NHMUK catalogue.
Kinixis denticulata Hallowell 1839:161
Kinixys denticulata
Type locality: "Liberia...banks of the St. Paul and Mesurado rivers."
Type specimen: Not located, type specimen figured (pl.8-9).

Kinixys homeana **Bell 1827** (12:35)
Home's Hinge-back Tortoise


Tomas Diagne / CBFTT / Cameroon


left: Luca Luiselli / Port Harcourt, Nigeria
right: Pearson McGovern / Ivory Coast (Côte d'Ivoire)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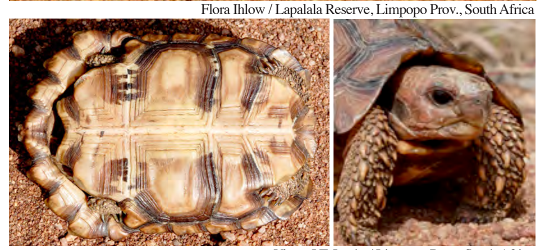
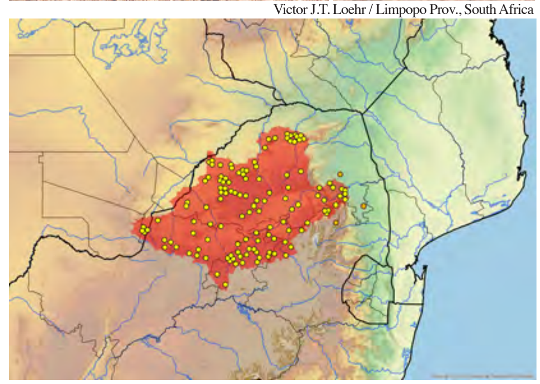
(orange dots = questionable or trade)

Distribution: Benin, Cameroon, Equatorial Guinea (?), Ghana, Guinea (?), Ivory Coast (Côte d'Ivoire), Liberia, Nigeria, Togo
Presumed Historic Indigenous Range: 435,434 sq. km
Size (Max SCL): male 25.1 cm, female 25.8 cm (Luiselli and Diagne 2013 CBFTT; Segniagbeto et al. 2015)
CBFTT Account: Luiselli and Diagne (2013)
IUCN Red List: Critically Endangered (CR A2bcd+4bcd) (Luiselli et al. 2021); Previously: Vulnerable (VU A2cd) (Luiselli et al. 2006); Data Deficient (DD) (TFTSG 1996)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Kinixys* spp. (1975)
Synonymy:
Kinixys homeana Bell 1827:400
Testudo homeana, Cinixys homeana, Cinixys (Cinothorax) homeana, Testudo (Kinyxis) homeana, Kinixys belliana homeana
Type locality: "Africâ occidentali...Sierra Leone". Emended to "Cape Coast, Ashantee" [Ghana] by Boulenger (1889:143) and to "Cape Coast, Ashanti, i.e. Gold Coast" [Ghana] by Loveridge and Williams (1957:400).
Type specimens: OUM 8522, NHMUK a,b (2), syntypes (3), discussed by Nowak-Kemp and Fritz (2010). Two unnumbered NHMUK specimens (a and b, listed by Boulenger 1889) identified as syntypes by Bour (pers. comm.).

Kinixys lobatsiana **Power 1927** (12:35)
Lobatse Hinged Tortoise, Lobatse Hinge-back Tortoise


Flora Ihlow / Lapalala Reserve, Limpopo Prov., South Africa


Victor J.T. Loehr / Limpopo Prov., South Africa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(orange dots = possibly introduced or uncertain)

Distribution: Botswana, South Africa
Presumed Historic Indigenous Range: 114,837 sq. km
Size (Max SCL): male 17.0 cm, female 20.0 cm (Boycott and Bourquin 2000; Ceballos et al. 2013)
IUCN Red List: Vulnerable (VU A4cde) (Hofmeyr and Boycott 2018)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Kinixys* spp. (1975)
Synonymy:
Cinixys lobatsiana Power 1927:410

Kinixys lobatsiana, Kinixys belliana lobatsiana

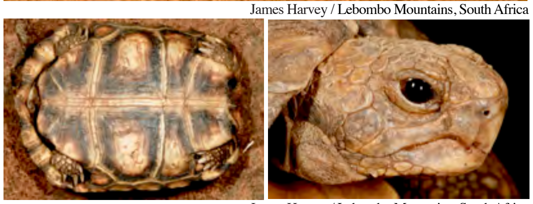
Type locality: "Lobatsi [Bechuanaland Protectorate]" [Botswana].

Type specimens: NHMUK 1947.3.5.72 (formerly 1931.12.14.1) and MMK 217, 221, and 224, syntypes (4); Uetz et al. (2019) erroneously listed NHMUK 1979.919 as the holotype, but that specimen is the holotype of *Kinixys belliana*.

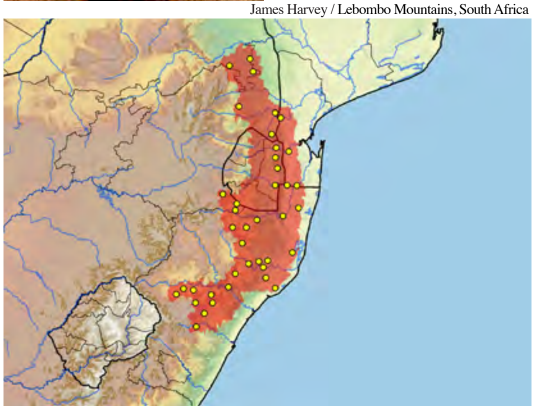
Kinixys natalensis Hewitt 1935 (12:35)

Natal Hinge-back Tortoise, KwaZulu-Natal Hinge-back Tortoise

James Harvey / Lebombo Mountains, South Africa



James Harvey / Lebombo Mountains, South Africa



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Distribution: Eswatini (Swaziland), Mozambique, South Africa

Presumed Historic Indigenous Range: 70,751 sq. km

Size (Max SCL): male 13.0 cm, female 17.2 cm (Bourquin 1992; Boycott and Bourquin 2000; Ceballos et al. 2013)

IUCN Red List: Vulnerable (VU A4c) (Hofmeyr and Boycott 2018); Previously: Near Threatened (NT) (TFTSG 1996)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Kinixys* spp. (1975)

Synonymy:

Kinixys natalensis Hewitt 1935:353

Kinixys belliana natalensis

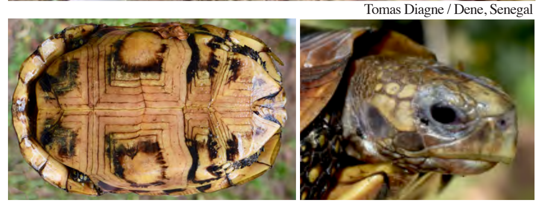
Type locality: "Jameson Drift, Tugela River, and...Dimane stream, near Jameson Drift" [Natal] [South Africa]. Restricted to "Dimane stream, near Jameson Drift, Tugela Valley, Natal" [South Africa] by lectotype designation by Broadley (1981b:206).

Type specimens: PEM s/n (formerly AMG s/n), lectotype, designated by Broadley (1981b:206,f.7).

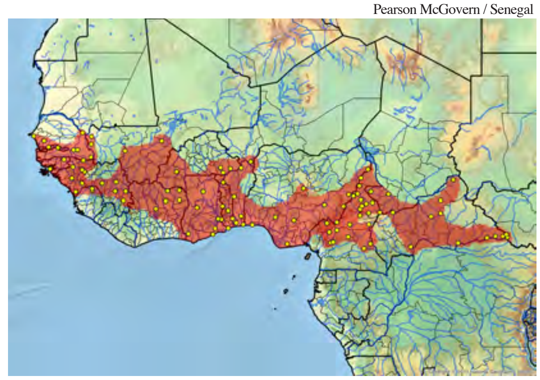
Kinixys nogueyi (Lataste 1886) (08:11, 09:39, 12:35)

Western Hinge-back Tortoise

Tomas Diagne / Dene, Senegal



Pearson McGovern / Senegal



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Distribution: Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo (DRC), Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast (Côte d'Ivoire), Mali, Mauritania (?), Niger, Nigeria, Senegal, Sierra Leone, South Sudan, Togo

Presumed Historic Indigenous Range: 2,445,542 sq. km

Size (Max SCL): male 28.3 cm, female 28.7 cm (Luiselli and Segniagbeto, unpubl. data)

IUCN Red List: Not Evaluated (NE)

TFTSG Provisional Red List: Vulnerable (VU) (2013)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Kinixys* spp. (1975)

Synonymy:

Homopus nogueyi Lataste 1886:286

Cinixys nogueyi, Cinixys belliana nogueyi, Kinixys nogueyi, Kinixys belliana nogueyi

Type locality: "Médine (Haut-Sénégal)" [= Médine, Mali].

Type specimens: NHMUK 1946.1.22.46, 1947.3.5.75 (formerly 1920.1.20.3240–1, syntypes (2).

Cinixys dorri Lataste 1888:164

Type locality: "Haut-Sénégal" [Mali]. Restricted to "Bakel, Haut-Sénégal" [= Bakel, Senegal] by Mertens and Wermuth (1955:372).

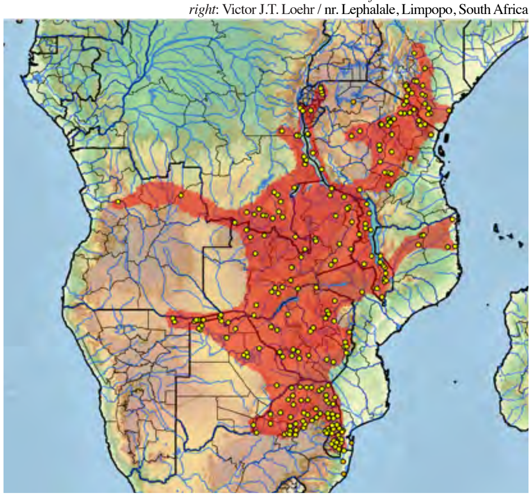
Type specimens: NHMUK 1946.1.22.94 (formerly 1920.1.20.3709), syntype, plus at least two others, not located.

Kinixys spekii Gray 1863d [12:35]
Speke's Hinge-back Tortoise, Speke's Hinged Tortoise


Richard C. Boycott / Dinedor Farm, Eswatini (Swaziland)



left: Flora Ihlow / South Africa
right: Victor J.T. Loehr / nr. Lephalale, Limpopo, South Africa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(orange dots = possible trade or introduced)

Distribution: Angola, Botswana, Burundi, Congo (DRC), Eswatini (Swaziland), Kenya, Malawi, Mozambique, Namibia (Caprivi), Rwanda, South Africa, Tanzania, Zambia, Zimbabwe
Presumed Historic Indigenous Range: 2,540,498 sq. km
Size (Max SCL): male 18.1 cm, female 21.0 cm (Boycott and Bourquin 2000; Boycott 2001)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Vulnerable (VU) (2013)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Kinixys* spp. (1975)
Synonymy:
Kinixys spekii Gray 1863d:381
Cinixys spekii, Kinixys belliana spekii
Type locality: "Central Africa". Restricted to "Tanganyika Territory east of the lakes" [Tanzania] by Loveridge (1936:218).
Type specimen: NHMUK 1947.3.5.74 (formerly 1863.8.11.8), holotype; Uetz et al. (2019) erroneously listed NHMUK 1936.5.3.117 as holotype.
Homopus darlingi Boulenger 1902b:15
Kinixys darlingi, Kinixys belliana darlingi
Type locality: "Mashonaland...Rhodesia...district about Salisbury... at Mazoë and between Umtali and Marandellas". Restricted to "Mashonaland" [Zimbabwe] by Mertens and Wermuth (1955:372) and to "Salisbury District, Mashonaland, Southern Rhodesia" [Zimbabwe] by Fritz and Havaš (2007:286).
Type specimen: NHMUK 1946.1.22.60 (formerly 1902.2.12.1), holotype.
Testudo procterae Loveridge 1923:928
Malacochersus procterae
Type locality: "Ikikuyu, Dodoma Dist., Tanganyika Territory" [Tanzania]. Restricted to "Ikikuyu, south of Gulwe, Tanganyika Territory" [Tanzania] by Fritz and Havaš (2007:286).
Type specimen: NHMUK 1946.1.22.59 (formerly 1923.10.9.102), holotype.
Kinixys australis Hewitt 1931:477
Kinixys australis australis, Kinixys belliana australis
Type locality: "White River, Eastern Transvaal" [South Africa].
Type specimen: AMG 78C, lectotype, designated by Broadley (1981b:212).
Kinixys jordani Hewitt 1931:482
Type locality: "Isoka, N. Rhodesia" [Zambia].
Type specimens: Apparently AMG s/n, syntypes (2), specimens figured (pl.37,f.7-9).
Kinixys youngi Hewitt 1931:486
Type locality: "Nyasaland...near Livingstonia, on the shore of the lake" [Malawi].
Type specimens: Apparently AMG s/n, syntypes (2), specimens figured (pl.37,f.10-11).
Kinixys australis mababiensis FitzSimons 1932:37
Kinixys belliana mababiensis
Type locality: "Tsotsoroga Pan, Mababe Flats" [South Africa].
Type specimen: TMP 14689, holotype.

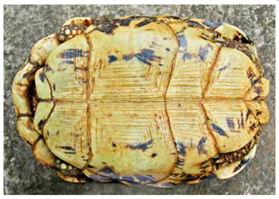
Kinixys zombensis Hewitt 1931 [12:35]
Southeastern Hinge-back Tortoise
(includes 2 subspecies)


(subspecies: *zombensis* = red, *domerguei* = orange dots)

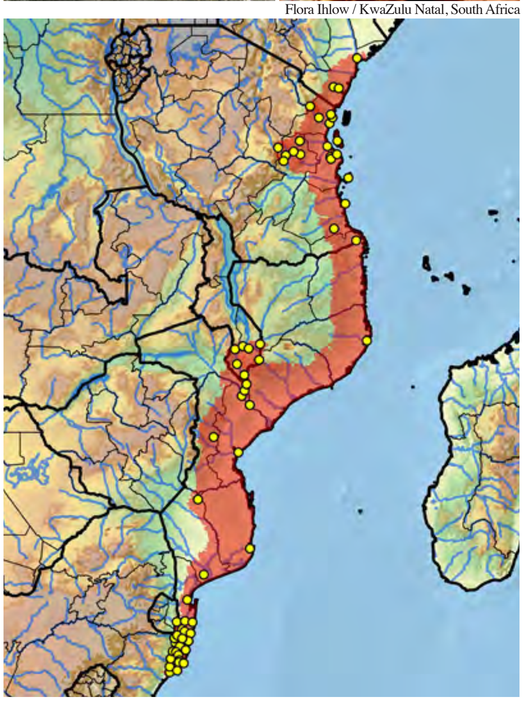
Distribution: Eswatini (Swaziland) (?), Kenya, Malawi, Mozambique, South Africa, Tanzania, Madagascar (possible prehistoric introduction)
Presumed Historic Indigenous Range: 611,903 sq. km
Size (Max SCL): male 23.0 cm, female 23.0 cm (see subspp.)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Vulnerable (VU) (2013)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Kinixys* spp. (1975)

Kinixys zombensis zombensis Hewitt 1931 (12:35)
Southeastern Hinge-back Tortoise

Flora Ihlow / Bonamanzi Game Reserve, KwaZulu Natal, South Africa



Flora Ihlow / KwaZulu Natal, South Africa



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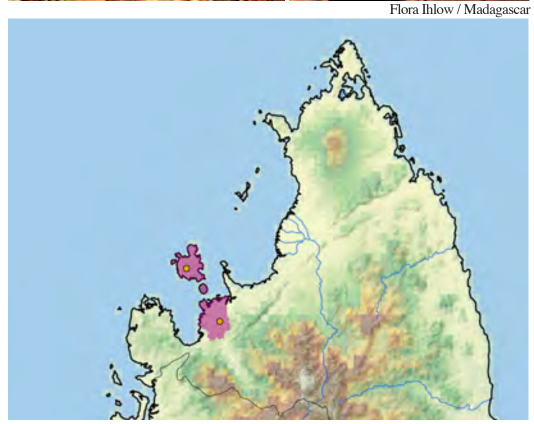
(subspecies: *zombensis* = red)

Distribution: Eswatini (Swaziland) (?), Kenya, Malawi, Mozambique, South Africa, Tanzania
Presumed Historic Indigenous Range: 611,068 sq. km
Size (Max SCL): male 20.6 cm, female 21.7 cm (Mifsud and Stapleton 2014)
Synonymy:
Kinixys belliana zombensis Hewitt 1931:469
Kinixys zombensis, Kinixys zombensis zombensis
Type locality: “Zomba, Nyassaland” [Malawi].
Type specimen: PEM 14961 (formerly AMG 121), holotype, see Uetz et al. (2019).
Kinixys belliana zuluensis Hewitt 1931:471
Kinixys zuluensis
Type locality: “Richards Bay, Zululand” [South Africa].
Type specimen: NM 1203, lectotype, designated as the type by Broadley (1981b:210,f.10).

Kinixys zombensis domerguei (Vuillemin 1972b) (12:35)
Madagascan Hinge-back Tortoise

Thomas E.J. Leuteritz / CRM 6 / Nosy Faly, Madagascar

Flora Ihlow / Madagascar



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(subspecies: *domerguei* = purple; orange dots)

Distribution: Madagascar (possible prehistoric introduction)
Presumed Historic Indigenous Range: 835 sq. km
Size (Max SCL): male 23.0 cm, female 23.0 cm (Pedrono 2008)
Synonymy:
Madakinixys domerguei Vuillemin 1972b:169
Kinixys belliana domerguei, Kinixys zombensis domerguei
Type locality: “Madagascar”. Restricted to “canton d’Antsakoamanondro, N.W. de Madagascar” by Bour (1985:60).
Type specimen: MNHN 1993.0275 (formerly A.275), holotype, see Bour (2006e).

Malacochersus Lindholm 1929

Malacochersus Lindholm 1929:285

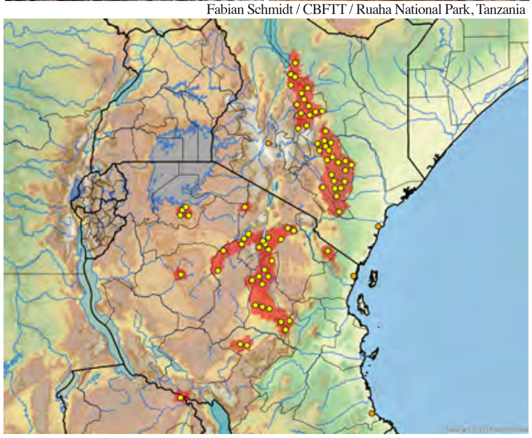
Type species: *Testudo (Malacochersus) tornieri* [= *Testudo tornieri* Siebenrock 1903b], by original designation.

Malacochersus tornieri (Siebenrock 1903b)

Pancake Tortoise

Fabian Schmidt / CBFTT / Ruaha National Park, Tanzania

Fabian Schmidt / CBFTT / Ruaha National Park, Tanzania



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(orange dots = probable trade or erroneous records)

Distribution: Kenya, Tanzania, Zambia

Presumed Historic Indigenous Range: 121,863 sq. km

Size (Max SCL): male 17.0 cm, female 17.8 cm (Mwaya et al. 2018 CBFTT)

CBFTT Account: Mwaya, Moll, Malonza, and Ngwava (2018)

IUCN Red List: Critically Endangered (CR A4abcd) (Mwaya et al. 2019); Previously: Vulnerable (VU) (TFTSG 1996)

CITES: Appendix I (2019); Previously: Appendix II, as Testudinidae spp. (1977), Appendix II, as *Kinixys* spp. (1975)

Synonymy:

Testudo tornieri Siebenrock 1903b:443

Testudo (Malacochersus) tornieri, *Malacochersus tornieri*

Type locality: "Bussisia am Viktoria Nyanza" [Tanzania]. Emended to "Bussisia, Süden des Victoria-Sees, Tanganyika-Territorium" [Tanzania] by Mertens and Wermuth (1955:374).

Type specimen: ZMB 11748, holotype, figured (f.1-3), destroyed during World War II, see Fritz et al. (1994); Iverson (1992) and Uetz et al. (2019) erroneously listed ZMB 11740 as holotype.

Testudo loveridgii Boulenger 1920:263

Malacochersus loveridgii

Type locality: "Afrique orientale à Dodoma, entre Kilossa et Tabora" [Tanzania]. Restricted to "Dodoma, Ugogo, Tanganyika Territory" [Tanzania] by Fritz and Havaš (2007:287).

Type specimens: NHMUK 1946.1.22.50–51 (formerly 1920.5.4.1–2) and MCZ 39956–57, syntypes (4), see Barbour and Loveridge (1946).

Psammobates Fitzinger 1835

Psammobates Fitzinger 1835:113

Type species: *Psammobates geometricus* Fitzinger [= *Testudo geometrica* Linnaeus 1758], by subsequent designation by Fitzinger (1843:29).

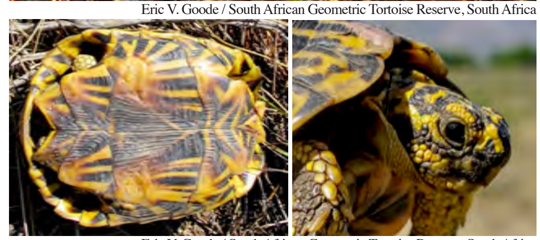
Chersinella Gray 1870c:8

Type species: *Chersinella geometrica* [= *Testudo geometrica* Linnaeus 1758], by subsequent designation by Hewitt (1933:259). Genus established as *Peltastes (Chersinella)* without a type species. Lindholm (1929:286) previously designated *Testudo graeca* Linnaeus 1758 as type species, but it was not originally included in *Chersinella* by Gray (1870c), so therefore has no validity as type.

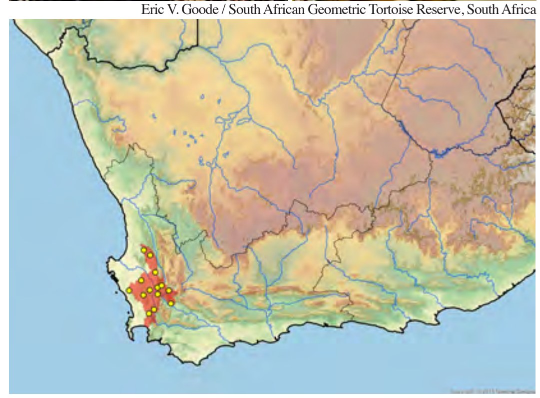
Psammobates geometricus (Linnaeus 1758)

Geometric Tortoise

Eric V. Goode / South African Geometric Tortoise Reserve, South Africa



Eric V. Goode / South African Geometric Tortoise Reserve, South Africa



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Distribution: South Africa

Presumed Historic Indigenous Range: 6,261 sq. km

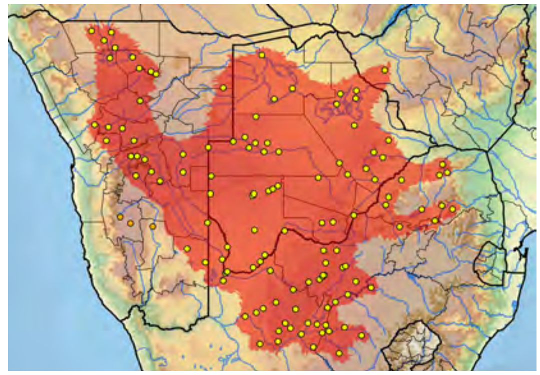
Size (Max SCL): male 12.3 cm, female 16.5 cm (Baard 1995; Ernst et al. 2006b; Itescu et al. 2014)

IUCN Red List: Critically Endangered (CR A4ace) (Hofmeyr and Baard 2018); Previously: Critically Endangered (CR) (Hofmeyr and Baard 2015); Previously: Endangered (EN) (TFTSG 1996)
CITES: Appendix I (1975)
Synonymy:
Testudo geometrica Linnaeus 1758:199
Chersine geometrica, Hydrone geometrica, Psammobates geometricus, Peltastes geometricus, Peltastes geometrica, Peltastes (Chersinella) geometrica, Chersinella geometrica, Psammobates geometrica, Geochelone geometrica
Type locality: "Asia." Restricted to "southwestern Cape Province, South Africa" by Baard (1991:9).
Type specimen: UPSZTY 20 (formerly UUZM 20), syntype, recorded as type by Wallin (1977, 2001), but identified as a *Testudo elegans* Schoepff (= *Geochelone elegans*); specimen figured in Piso (1658:105:f.1) (part of the composite syntype series), designated lectotype by Hoogmoed and Crumly (1984:255).
Comment: Description cited as sourced from Linnaeus (1749a:139, n.24), Worm (1655:317), Piso (1658:pl.105), Grew (1681:36,pl.3,f.1–2), Ray (1693:259), Seba (1734: pl.80,f.8), and Linnaeus (1754:50), but this last entry in error, as this specimen at NRM = *Testudo amboinensis* Linnaeus 1754 (= *Rhinoclemmys punctularia*) (Rhodin and Åhlander, unpubl. data), previously erroneously identified as a *Mesoclemmys gibba* (Andersson 1900; Wallin 1977).
Testudo luteola Daudin 1801:277
Type locality: Not known.
Type specimen: Possibly MNHN, not located, type specimen figured (pl.25,f.3).
Peltastes geographicus Gray 1869a:173 (*nomen novum*)
Testudo geographica
Comment: Erroneous misprint for *geometrica*, see Gray (1870c:9).
Testudo strauchi Lidth de Jeude 1893:312
Chersinella strauchi
Type locality: "Cape of Good Hope" [South Africa].
Type specimen: RMNH 6011, holotype, discussed by Hoogmoed and Crumly (1984) and Hoogmoed et al. (2010).

Psammobates oculifer (Kuhl 1820)
Serrated Tent Tortoise, Kalahari Tent Tortoise

William R. Branch / Botswana

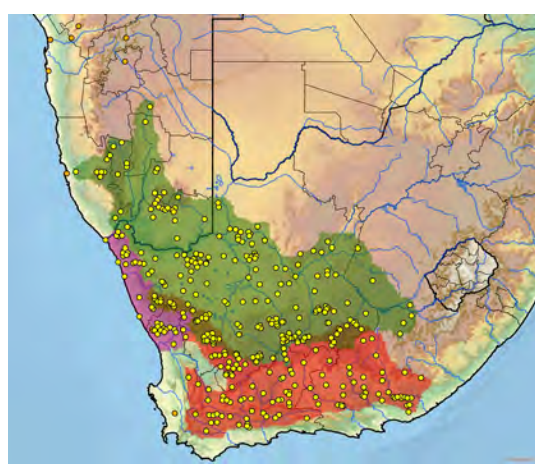
Victor J.T. Loehr / Northern Cape Prov., South Africa



(orange dots = trade or possible misidentified)

Distribution: Botswana, Namibia, South Africa, Zimbabwe
Presumed Historic Indigenous Range: 1,078,671 sq. km
Size (Max SCL): male 11.8 cm, female 14.7 cm (Boycott and Bourquin 2000; Itescu et al. 2014)
IUCN Red List: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Least Concern (LC) (2013)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)
Synonymy:
Testudo oculifera Kuhl 1820:77
Emys oculifera, Clemmys oculifera, Chersinella oculifera, Psammobates oculifera, Psammobates oculifer, Psammobates oculiferus
Type locality: "Cap" [Cape of Good Hope, South Africa].
Type specimen: ZMB 223, holotype, apparently lost, destroyed during World War II, see Fritz et al. (1994).
Emys occilifera Kuhl *in* Gray 1830e:9 (*nomen novum*)
Comment: Unjustified emendation or error for *oculifera*.
Emys kuhlii Gray 1831d:73 (*nomen dubium*)
Type locality: Not known.
Type specimen: ZMB s/n, holotype, apparently lost.
Testudo semiserrata Smith 1839a:Reptilia,pl.6
Peltastes semiserratus
Type locality: "districts between Latakoo and the Tropic of Capricorn" [South Africa].
Type specimens: NMSZ 1859.013.1729 (formerly RSM) and NHMUK 1947.3.5.13 (formerly 1863.2.21.44), syntypes (2); NMSZ 1859.013.1729 listed as "holotype" by Herman et al. (1990).

Psammobates tentorius (Bell 1828a) (17:61) (**94**)
Tent Tortoise
(includes 3 subspecies)



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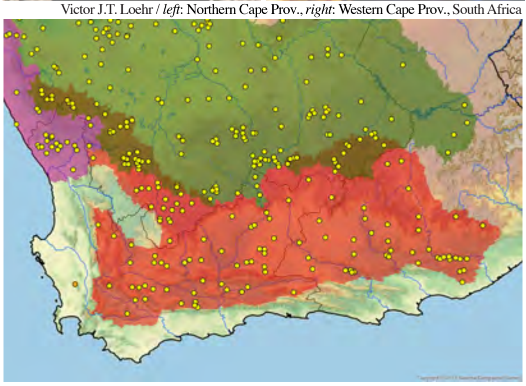
(subspecies: *tentorius* = red, *trimeni* = purple, *verroxii* = green; overlap = intergrades; orange dots = probable trade or introduced)

Distribution: Namibia, South Africa
Presumed Historic Indigenous Range: 548,201 sq. km
Size (Max SCL): male 12.0 cm, female 14.5 cm (see subspp.)
IUCN Red List: Least Concern (LC) (Hofmeyr et al. 2018); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)

Psammobates tentorius tentorius (Bell 1828a) [94]
Southern Tent Tortoise, Common Tent Tortoise


Victor J.T. Loehr / nr. Prince Albert, Western Cape Prov., South Africa


Victor J.T. Loehr / *left*: Northern Cape Prov., *right*: Western Cape Prov., South Africa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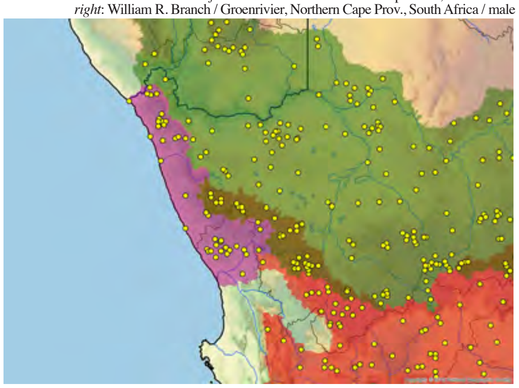
(subspecies: *tentorius* = red, *trimeni* = purple, *verroxii* = green; overlap = intergrades; orange dot = probable trade or introduced)
Distribution: South Africa
Presumed Historic Indigenous Range: 174,265 sq. km
Size (Max SCL): male 10.0 cm, female 13.1 cm (Boycott and Bourquin 2000)
TFTSG Provisional Red List: Least Concern (LC) (2017)
Synonymy:
Testudo tentoria Bell 1828a:420
Testudo geometrica tentoria, Peltastes tentorius, Peltastes (Chersinella) tentoria, Chersinella tentoria, Chersinella tentoria tentoria, Psammobates tentoria, Psammobates tentoria tentoria, Psammobates tentorius, Psammobates tentorius tentorius, Testudo tentoria tentoria
Type locality: "Africâ?"
Type specimen: OUM 8570, holotype, discussed by Nowak-Kemp and Fritz (2010).

Testudo geometrica nigriventris Gray 1856b:8
Type locality: "South Africa."
Type specimens: NHMUK s/n, not located, syntypes (6).
Chersinella tentoria albanica Hewitt 1933b:266
Psammobates tentoria albanica
Type locality: "neighbourhood of farm Mayfair, Albany District" [South Africa].
Type specimens: Possibly PEM or AMG, syntypes (4), figured (pl.14,f.10-15).
Chersinella tentoria tentorioides Hewitt 1933b:268
Psammobates tentoria tentorioides
Type locality: "Bowden Hall, Middelburg district, C.P." [Cape Province, South Africa].
Type specimen: Possibly PEM or AMG, holotype, figured (pl.14,f.16).
Chersinella tentoria piscatella Hewitt 1933b:269
Psammobates tentoria piscatella
Type locality: "Little Fish River, Somerset East district" [South Africa].
Type specimen: Possibly PEM, holotype, figured (pl.14,f.17-18).
Chersinella tentoria subsulcata Hewitt 1933b:270
Type locality: "farm "Brighton" near Steytlerville" [South Africa].
Type specimen: Possibly PEM or AMG, holotype.
Chersinella tentoria karuica Hewitt 1933b:272
Psammobates tentoria karuica
Type locality: "farm "Drogekloof" near Klaarstroom, Prince Albert district" [South Africa].
Type specimens: Possibly PEM or AMG, syntypes (9), figured (pl.14,f.19-24,pl.15,f.25-28).
Chersinella tentoria duerdeni Hewitt 1933b:279
Psammobates tentoria duerdeni
Type locality: "Graaff Reinet, C.P." [Cape Province, South Africa].
Type specimen: Possibly PEM or AMG, holotype, figured (pl.15,f.29).
Chersinella tentoria lativittata Hewitt 1933b:281
Type locality: "Willowmore" [South Africa].
Type specimens: Possibly PEM or AMG, syntypes (2), figured (pl.15,f.32-34).
Chersinella tentoria karuella Hewitt 1933b:283
Type locality: "Uniondale, C.P." [Cape Province, South Africa].
Type specimen: Possibly PEM or AMG, holotype, figured (pl.15,f.35).
Chersinella tentoria hexensis Hewitt 1933b:286
Type locality: "Hex River, Worcester district" [Cape Province, South Africa].
Type specimens: Possibly PEM or AMG, syntypes (4), figured (pl.15,f.39-40).

Psammobates tentorius trimeni (Boulenger 1886a) [(94)]
Western Tent Tortoise

William R. Branch / Groenrivier, South Africa / male

left: Victor J.T. Loehr / Northern Cape Prov., South Africa
right: William R. Branch / Groenrivier, Northern Cape Prov., South Africa / male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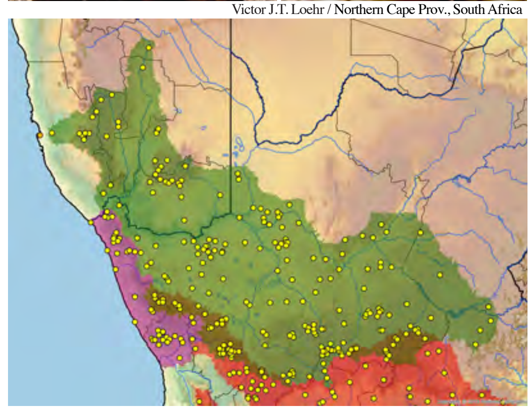
(subspecies: *tentorius* = red, *trimeni* = purple, *verroxii* = green; overlap = intergrades)

Distribution: Namibia (?), South Africa
Presumed Historic Indigenous Range: 32,253 sq. km
Size (Max SCL): male 10.0 cm, female 14.5 cm (Boycott and Bourquin 2000)
TFTSG Provisional Red List: Endangered (EN) (2017)
Synonymy:
Testudo trimeni Boulenger 1886a:541
Chersinella trimeni, *Psammobates trimeni*, *Psammobates tentorius trimeni*, *Testudo tentoria trimeni*, *Psammobates tentoria trimeni*
Type locality: "Mouth of the Orange River" [Little Namaqualand, South Africa].
Type specimens: NHMUK 1947.3.5.10–12, syntypes (3).

Psammobates tentorius verroxii (Smith 1839b) [(94)]
Northern Tent Tortoise

Victor J.T. Loehr / nr. Beaufort West, Northern Cape Prov., South Africa

Victor J.T. Loehr / Northern Cape Prov., South Africa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(subspecies: *tentorius* = red, *trimeni* = purple, *verroxii* = green; overlap = intergrades; orange dot = probable trade)

Distribution: Namibia, South Africa
Presumed Historic Indigenous Range: 367,871 sq. km
Size (Max SCL): male 12.0 cm, female 14.0 cm (Boycott and Bourquin 2000)
TFTSG Provisional Red List: Least Concern (LC) (2017)
Synonymy:
Testudo verroxii Smith 1839b:Reptilia,pl.8
Peltastes verroxii, *Chersinella verroxii*, *Chersinella verroxii verroxii*, *Psammobates tentorius verroxii*, *Testudo tentoria verroxii*, *Psammobates tentoria verroxii*, *Testudo tentorius verroxii*
Type locality: "South Africa, near the sources of the Garriep or Orange River." Restricted to "somewhere north of Aliwal North, between the Orange and Caledon Rivers...roughly 260 miles east of Niekirk's Hope" [South Africa] by Power (1932:466).
Type specimen: NMSZ 1859.013.1680 (formerly RSM), holotype, see FitzSimons (1937); Herman et al. (1990) erroneously recorded it as 1959.013.1680 (a typo).
Peltastes verreauxii Gray 1870b:656 (*nomen novum*)
Testudo verreauxii, *Psammobates verreauxii*
Comment: Unjustified emendation or error for *verroxii*.
Testudo fiski Boulenger 1886a:542
Testudo tentoria fiski, *Chersinella fiski*, *Chersinella fiski fiski*, *Psammobates fiski*, *Psammobates fiski fiski*

Type locality: “De Aar, not far from Hopetown” [South Africa].
Type specimen: NHMUK 1946.1.22.65 (formerly 1886.8.30.1), holotype.

Testudo smithi Boulenger 1886a:542
Chersinella verroxii smithi, Testudo smithi smithi, Testudo verroxii smithi
Type locality: “S. Africa” [South Africa].
Type specimen: NHMUK 1947.3.4.2 (formerly 1847.3.5.20), holotype.

Testudo seimundi Boulenger 1903b:216
Chersinella fiski seimundi
Type locality: “3 miles east of Deelfontein” [Richmond District, Cape Province, South Africa].
Type specimen: NHMUK 1946.1.22.58 (formerly 1903.4.27.1), holotype.

Testudo boettgeri Siebenrock 1904a:194 (junior homonym, not = *Testudo graeca boettgeri* Mojsisovics 1889 [= *Testudo (Chersine) hermanni boettgeri*])
Chersinella verroxii boettgeri, Chersinella boettgeri
Type locality: “Groß-Namaland in Südwestafrika” [Great Namaqualand, Namibia].
Type specimen: SMF 7793, holotype, see Mertens (1967b).

Homopus bergeri Lindholm 1906:348 (07:67)
Testudo bergeri, Chersinella verroxii bergeri, Testudo smithi bergeri, Testudo verroxii bergeri
Type locality: “nach Gibeon in Deutsch-Südwestafrika...möglicherweise weiter im Innern Südafrikas” [Namibia or South Africa].
Type specimen: MWNH 711, holotype, discussed by Branch (2007).

Testudo oscarboettgeri Lindholm 1929:295 (*nomen novum*)
Type locality: “Groß-Namaland in Südwestafrika” [Great Namaqualand, Namibia].
Type specimen: SMF 7793, holotype, by default, see Mertens (1967b).
Comment: Justified emendation for *Testudo boettgeri* Siebenrock 1904a.

Chersinella schonlandi Hewitt 1934:303
Type locality: “Namaqualand, C.P.” [Little Namaqualand, Cape Province, South Africa].
Type specimen: Possibly PEM or AMG, holotype, figured (pl.16,f.46).

Chersinella fiski cronwrighti Hewitt 1934:317
Psammobates fiski cronwrighti
Type locality: “Hanover, C.P.” [Cape Province, South Africa].
Type specimen: Possibly PEM or AMG, holotype, figured (pl.16,f.58).

Chersinella fiski orangensis Hewitt 1934:319
Type locality: “between Philipstown and Petrusville district” [Cape Province, South Africa].
Type specimen: Possibly PEM or AMG, holotype, figured (pl.16,f.59-60).

Chersinella fiski colesbergensis Hewitt 1934:321
Psammobates fiski colesbergensis
Type locality: “Colesberg” [Cape Province, South Africa].
Type specimen: Possibly PEM or AMG, holotype, figured (pl.16,f.61).

Chersinella fiski grica Hewitt 1934:323
Type locality: “Marydale, situated about midway between Prieska and Kenhardt” [Prieska District, Cape Province, South Africa].
Type specimens: Possibly PEM or AMG, syntypes (2), figured (pl.16,f.63,pl.17,f.67).

Chersinella fiski gricoides Hewitt 1934:326
Type locality: “Niekerks Hope, about midway between Griquatown and Prieska, C.P.” [Niekerkshoop, Hay District, Cape Province, South Africa].
Type specimens: Possibly PEM or AMG, syntypes (2), figured (pl.17,f.72-75).

Chersinella verroxii amasensis Hewitt 1934:333
Type locality: “Ukamas district” [Cape Province, South Africa].
Type specimens: Possibly PEM or AMG, syntypes (2).

Psammobates depressa FitzSimons 1938:154
Type locality: “8 miles west of Aus, Great Namaqualand” [Namibia].
Type specimen: TMP 17821, holotype.

Pyxis Bell 1827

Pyxis Bell 1827:395
Type species: *Pyxis arachnoides* Bell 1827, by original monotypy.

Acinixys Siebenrock 1902b:12
Type species: *Acinixys planicauda* [= *Testudo planicauda* Grandidier 1867], by original monotypy.

Bellemys Williams 1950a:512 (*nomen novum*)

Pyxoides Vuillemin and Domergue 1972:193
Type species: *Pyxoides brygooi* Vuillemin and Domergue 1972, by original monotypy.

Pyxis arachnoides Bell 1827
Spider Tortoise, *Kapila*
(includes 3 subspecies)


*

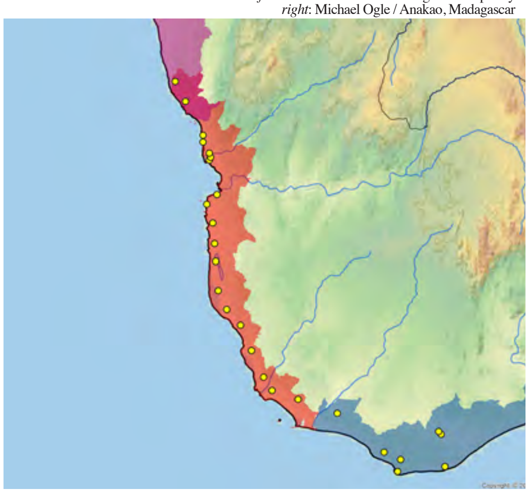
(subspecies: *arachnoides* = red, *brygooi* = purple, *oblonga* = blue; overlap = intergrades)

Distribution: Madagascar
Presumed Historic Indigenous Range: 18,559 sq. km
Size (Max SCL): male 14.4 cm, female 15.7 cm (see subspp.)
IUCN Red List: Critically Endangered (CR A4cd; E) (Leuteritz and Walker 2020); Previously: Critically Endangered (CR) (Leuteritz and Walker 2014); Critically Endangered (CR) (Leuteritz and Walker 2008); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix I (2005); Previously: Appendix II, as Testudinidae spp. (1977), Appendix II, as *Pyxis* spp. (1975)

Pyxis arachnoides arachnoides Bell 1827 (07:70)
Spider Tortoise, Common Spider Tortoise

Michael Ogle / Anakao, Madagascar

left: Anders G.J. Rhodin / Madagascar / captivity
right: Michael Ogle / Anakao, Madagascar



*

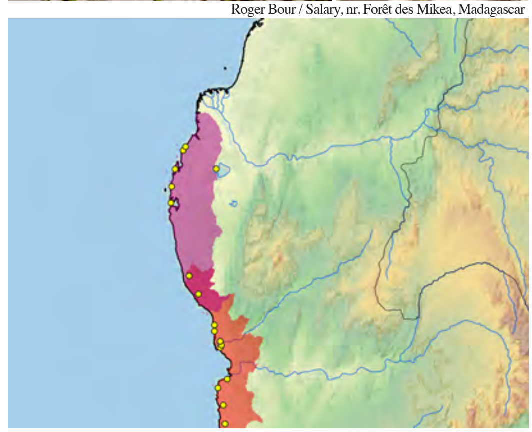
(subspecies: *arachnoides* = red, *brygooi* = purple, *oblonga* = blue; overlap = intergrades)

Distribution: Madagascar
Presumed Historic Indigenous Range: 7,088 sq. km
Size (Max SCL): male 14.4 cm, female 15.7 cm (Pedrono 2008; Pedrono and Smith 2013; Walker, unpubl. data)
Synonymy:
Pyxis arachnoides Bell 1827:395
Testudo (Pyxis) arachnoides, Testudo arachnoides, Pyxis arachnoidea, Bellemys arachnoides, Pyxis arachnoides arachnoides
Type locality: Not known. Restricted to "Soalara (Baie de Saint-Augustin), sud-ouest de Madagascar" by Bour (1979:153).
Type specimen: OUM 1092, lectotype, designated by Bour (1979:153), discussed by Nowak-Kemp and Fritz (2010).
Testudo (Pyxis) aranoides Gray 1830e:6 (*nomen novum*)
Pyxis aranoides
Comment: Unjustified emendation or error for *arachnoides*.
Pyxis madagascariensis Lesson 1831a:120
Type locality: "Madagascar."
Type specimen: Possibly MNHN, holotype, not located.

Pyxis arachnoides brygooi (Vuillemin and Domergue 1972)
Northern Spider Tortoise

Roger Bour / Salary, nr. Forêt des Mikea, Madagascar

Roger Bour / Salary, nr. Forêt des Mikea, Madagascar



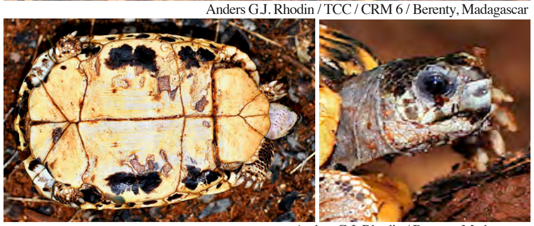
*

(subspecies: *arachnoides* = red, *brygooi* = purple; overlap = intergrades)

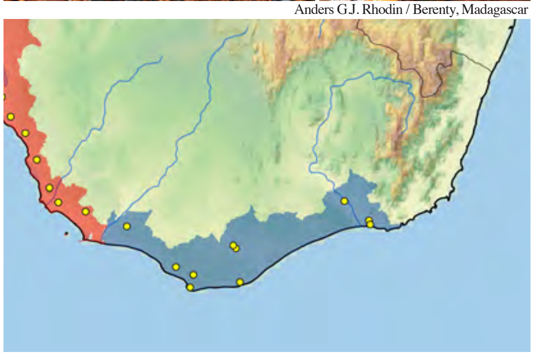
Distribution: Madagascar
Presumed Historic Indigenous Range: 5,464 sq. km
Size (Max SCL): male 12.3 cm, female 12.8 cm (Walker, unpubl. data)
Synonymy:
Pyxoides brygooi Vuillemin and Domergue 1972:193
Pyxis arachnoides brygooi
Type locality: "la côte Sud-Ouest, entre Morombe et Tuléar, aux alentours du lac Ihotry, dans la forêt des Mikea" [Madagascar]. Restricted to "Ampanonga (N.-W. Lac Ihotry), sud-ouest de Madagascar" by Bour (1979:153).
Type specimen: MNHN A.277, holotype, see Bour (1981).

Pyxis arachnoides oblonga Gray 1869a
Southern Spider Tortoise

Anders G.J. Rhodin / TCC / CRM 6 / Berenty, Madagascar



Anders G.J. Rhodin / Berenty, Madagascar



*

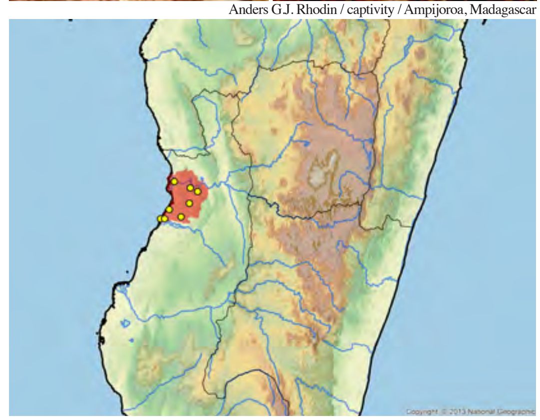
(subspecies: *arachnoides* = red, *oblonga* = blue)

Distribution: Madagascar
Presumed Historic Indigenous Range: 6,849 sq. km
Size (Max SCL): male 11.8 cm, female 15.4 cm (Walker, unpubl. data)
Synonymy:
Pyxis arachnoidea oblonga Gray 1869a:173
Pyxis arachnoides oblonga
Type locality: Not known. Restricted to "Asia" by Gray (1873j:14); to "Madagascar; Mauritius" by Boulenger (1889:145); and to "Cap Sainte-Marie, province de Tuléar (Toliara), sud du Madagascar" by Bour (1982b:30).
Type specimen: NHMUK 1861.3.20.31, holotype, see Bour (1982b).
Pyxis arachnoides matzi Bour 1979:143
Type locality: "Cap Sainte-Marie (Province de Tuléar), extrême sud du Madagascar."
Type specimen: MNHN 1978.24, holotype, see Bour (1981).

Pyxis planicauda (Grandidier 1867)
Flat-tailed Tortoise, Flat-shelled Spider Tortoise, *Kapidolo*

Miguel Pedrono / CRM 6 / Kirindy Forest, Madagascar

Anders G.J. Rhodin / captivity / Ampijoroa, Madagascar



Distribution: Madagascar
Presumed Historic Indigenous Range: 5,374 sq. km
Size (Max SCL): male 14.1 cm, female 15.9 cm (Bloxam and Hayes 1991; Pedrono and Smith 2013)
IUCN Red List: Critically Endangered (CR A4acd) (Leuteritz et al. 2008); Previously: Endangered (TFTSG 1996)
CITES: Appendix I (2003); Previously: Appendix II, as Testudinidae spp. (1977), Appendix II, as *Pyxis* spp. (1975)
Synonymy:
Testudo planicauda Grandidier 1867:223
Acinixys planicauda, *Pyxis (Acinixys) planicauda*, *Pyxis planicauda*
Type locality: "Mouroundava...cote sud-ouest de Madagascar" [Morondava].
Type specimen: MNHN 9373 (formerly 1867.44), holotype; NMW 23479, listed as "syntype" by Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Gemel et al. (2019), is not a type; discussed by Bour (2005c).
Testudo morondavaensis Vuillemin 1972a:127
Type locality: "Morondava (côte sud-ouest de Madagascar)."
Type specimen: MNHN A.276, holotype, discussed by Bour (2005c).

Stigmochelys Gray 1873j (07:52, 10:26)

Stigmochelys Gray 1873j:5

Type species: *Testudo (Stigmochelys) pardalis* Bell 1828a, by original monotypy.

Megachersine Hewitt 1933b:257

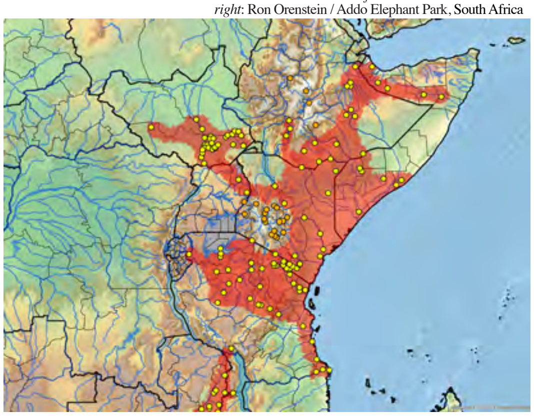
Type species: *Megachersine pardalis* [= *Testudo pardalis* Bell 1828a], by original designation.

Stigmochelys pardalis (Bell 1828a) (07:71, 10:27) (**95**)

Leopard Tortoise

Victor J.T. Loehr / nr. Beaufort West, Northern Cape, South Africa

left: Flora Ihlow / South Africa
right: Ron Orenstein / Addo Elephant Park, South Africa



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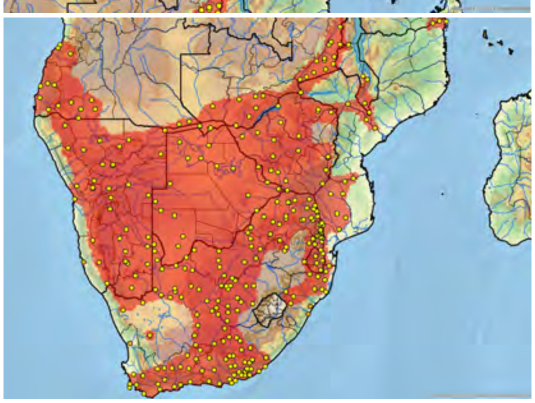


*

(orange dots = possible introduced or questionable)

Distribution: Angola, Botswana, Burundi, Djibouti (?) (extirpated?), Eswatini (Swaziland), Ethiopia, Kenya, Malawi, Mozambique, Namibia, Rwanda, Somalia, South Africa, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe

Presumed Historic Indigenous Range: 4,560,754 sq. km

Size (Max SCL): male 65.5 cm, female 75.0 cm (Lambert 1995; Lambert et al. 1998; Boycott and Bourquin 2000)

IUCN Red List: Least Concern (LC) (Baker et al. 2015); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II (1975)

Synonymy:

Testudo pardalis Bell 1828a:420

Geochelone (Geochelone) pardalis, Geochelone pardalis, Testudo (Stigmochelys) pardalis, Megachersine pardalis, Testudo pardalis pardalis, Geochelone pardalis pardalis, Stigmochelys pardalis, Centrochelys pardalis, Centrochelys pardalis pardalis, Stigmochelys pardalis pardalis, Psammobates pardalis

Type locality: "Promont. Bonae Spei" [Cape of Good Hope, South Africa].

Type specimen: OUM s/n, originally live, holotype figured (pl.25), apparently lost, not listed by Nowak-Kemp and Fritz (2010);

Testudo biguttata Cuvier 1829:10 (*nomen nudum*)

Testudo armata Boie *in* Gray 1830e:4 (*nomen nudum*)

Testudo bipunctata Gray 1830e:4 (*nomen nudum*)

Testudo pardalis babcocki Loveridge 1935:4 (10:27)

Geochelone pardalis babcocki, Geochelone babcocki, Stigmochelys pardalis babcocki

Type locality: "western slopes of Mount Debasien, Karamoja, Uganda at 5,500 feet."

Type specimen: MCZ 40003, holotype, see Barbour and Loveridge (1946).

Testudo Linnaeus 1758 (07:72, 17:56, 17:70)

Testudo Linnaeus 1758:197

Type species: *Testudo graeca* Linnaeus 1758 [= subjective synonym of *Testudo ibera* Pallas 1814], by subsequent designation by Fitzinger (1843:29) and Lindholm (1929:284); not *Testudo graeca* Auct. [= subjective synonym of *Testudo hermanni* Gmelin 1789] by earlier designation by Bell (1828c:514).

Chersine Merrem 1820:29 (09:40)

Type species: "*T. graeca* »L.« auct. = *T. hermanni* Gmelin" [= *Testudo hermanni* Gmelin 1789], by subsequent designation by Lindholm (1929:286).

Chersini Merrem *in* Gray 1825:210 (*nomen novum*)

Chersus Wagler 1830b:138

Type species: *Chersus marginatus* [*Testudo marginata* Schoepff 1793a], by monotypy.

Cherseus Gray 1856b:10 (*nomen novum*)

Peltastes Gray 1869a:167,171 (junior homonym, not = *Peltastes* Illiger 1807 [= Hymenoptera] or *Peltastes* Agassiz 1838 [= Echinodermata] or *Peltastes* Fischer-Waldheim 1839 [= Orthoptera])

Type species: *Testudo graeca* Linnaeus 1758 [= *Peltastes graecus* sensu Gray 1869] [= subjective synonym of *Testudo ibera* Pallas 1814], by subsequent designation by Lindholm (1929:286).

Peltonia Gray 1872c:4 (*nomen novum*)

Medaestia Wussow 1916:170 (09:40)

Type species: *Medaestia graeca* sensu Wussow 1916 [= subjective synonym of *Testudo hermanni* Gmelin 1789] by subsequent designation by Mertens (1949:232). Genus established as *Testudo (Medaestia)* without a type species.

Pseudotestudo Loveridge and Williams 1957:166, 276

Type species: *Testudo (Pseudotestudo) kleinmanni* [= *Testudo kleinmanni* Lortet 1883], by original designation.

Protestudo Chkhikvadze 1970:245

Type species: *Protestudo bessarabica* [= *Testudo bessarabica* † Riabinin 1918], by original designation.

Furculachelys Highfield 1990:1

Type species: *Furculachelys nabeulensis* Highfield 1990 [= *Testudo graeca nabeulensis*], by subsequent designation by Fritz and Havaš (2007:295).

Eurotestudo Lapparent de Broin, Bour, Parham, and Perälä 2006a:803

Type species: *Eurotestudo hermanni* [= *Testudo hermanni* Gmelin 1789], by original designation.

Testudo (Testudo) Linnaeus 1758 (07:72, 17:70)

Testudo Linnaeus 1758:197

Type species: *Testudo graeca* Linnaeus 1758 [= subjective synonym of *Testudo ibera* Pallas 1814], by subsequent designation by Fitzinger (1843:29) and Lindholm (1929:284); not *Testudo graeca* Auct. [= subjective synonym of *Testudo hermanni* Gmelin 1789] by earlier designation by Bell (1828c:514).

Chersus Wagler 1830b:138

Type species: *Chersus marginatus* [*Testudo marginata* Schoepff 1793a], by monotypy.

Cherseus Gray 1856b:10 (*nomen novum*)

Peltastes Gray 1869a:167,171 (junior homonym, not = *Peltastes* Illiger 1807 [= Hymenoptera] or *Peltastes* Agassiz 1838 [= Echinodermata] or *Peltastes* Fischer-Waldheim 1839 [= Orthoptera])

Type species: *Testudo graeca* Linnaeus 1758 [= *Peltastes graecus* sensu Gray 1869] [= subjective synonym of *Testudo ibera* Pallas 1814], by subsequent designation by Lindholm (1929:286).

Peltonia Gray 1872c:4 (*nomen novum*)

Pseudotestudo Loveridge and Williams 1957:166, 276

Type species: *Testudo (Pseudotestudo) kleinmanni* [= *Testudo kleinmanni* Lortet 1883], by original designation.

Protestudo Chkhikvadze 1970:245

Type species: *Protestudo bessarabica* [= *Testudo bessarabica* † Riabinin 1918], by original designation.

Furculachelys Highfield 1990:1

Type species: *Furculachelys nabeulensis* Highfield 1990 [= *Testudo graeca nabeulensis*], by subsequent designation by Fritz and Havaš (2007:295).

Testudo (Testudo) graeca Linnaeus 1758 (07:73, 11:12, 12:36, 14:35, 17:71, 17:72) (**96**)

Spur-thighed Tortoise, Greek Tortoise, Moorish Tortoise (includes 10 subspecies)

1 2 3

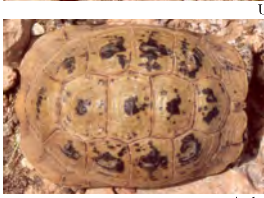
(subspecies [map #]: *graeca* = red [1], *armeniaca* = purple [3], *buxtoni* = blue [3], *cyrenaica* = orange [2], *ibera* = green [2,3], *marokkensis* = tourmaline [1], *nabeulensis* = gray [1], *terrestris* = brown [2,3], *whitei* = pink [1], *zarudnyi* = olive [3]; overlap = intergrades [2,3]; orange dots = uncertain, possible or probable trade, or introduced)

Distribution: Afghanistan (?), Algeria, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Iran (Alborz, Ardabil, Chahar Mahal Va Bakhtiari, East Azarbaijan, Fars, Gilan, Hamedan, Hormozgan, Ilam, Isfahan, Kerman, Kermanshah, Khorasan Razavi, Kohgiluyeh Va Boyer Ahmad, Kordestan, Lorestan, Markazi, Qazvin, Qom, Sistan Va Baluchestan, South Khorasan, Tehran, West Azarbaijan, Yazd, Zanjan), Iraq, Israel, Jordan, Kosovo, Lebanon, Libya, Moldova, Morocco, North Macedonia, Pakistan (?),

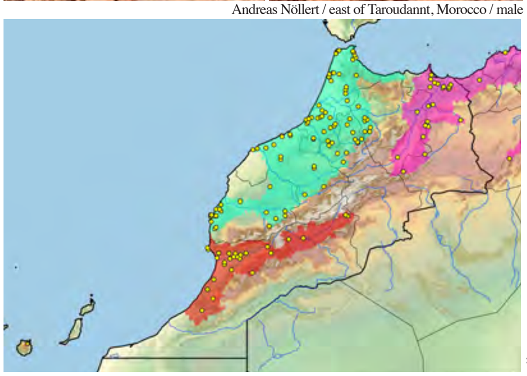
Palestine (West Bank), Romania, Russia (Chechnya [?], Dagestan, Krasnodarskiy), Serbia, Spain, Syria, Tunisia, Turkey (Asian, European), Turkmenistan (?)
Introduced: Egypt, France, Greece (Crete), Italy (Continental, Sardinia [prehistoric], Sicily), Malta (?), Spain (Continental, Balearic Islands)
Presumed Historic Indigenous Range: 1,713,313 sq. km
Size (Max SCL): male 38.9 cm, female 31.6 cm (see subspp.)
IUCN Red List: Vulnerable (VU A1cd) (TFTSG 1996); Regional (Europe): Vulnerable (VU A2bcde+4bcde) (van Dijk et al. 2004; Cox and Temple 2009)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Testudo* spp. (1975)

Testudo (Testudo) graeca graeca Linnaeus 1758 (09:41) (**96**)
Souss Valley Tortoise

Uwe Fritz / foothills of Jbel Amsittene, Morocco



Andreas Nöllert / east of Taroudannt, Morocco / male



*

(subspecies: *graeca* = red, *marokkensis* = tourmaline, *whitei* = pink; orange dot = uncertain, possible or probable trade, or introduced)

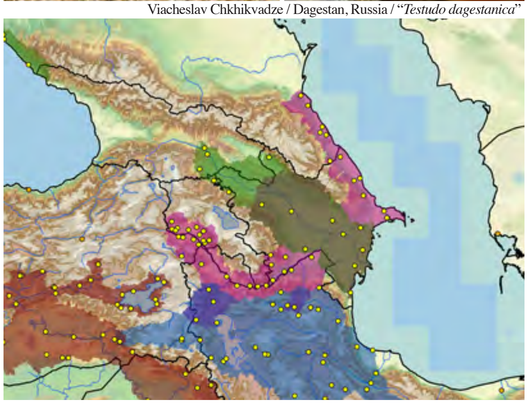
Distribution: Morocco
Presumed Historic Indigenous Range: 39,679 sq. km
Size (Max SCL): male 19.5 cm, female 24.9 cm (Pieh 2001)
Synonymy:
Testudo graeca Linnaeus 1758:198 (**96**)
Testudo graeca graeca, Peltastes graecus
Type locality: "Africa." Restricted to "Santa Cruz in Barbarie" by Houttuyn (1764:56), incorrectly emended to "Santa-Cruz (alte spanische Festung bei Oran in der Algérie)" [Algeria] by Strauch (1862:67); correctly restricted to "Agadir in Morocco" by Schweiger and Gemel (2020:33).
Type specimen: Specimen figured in Edwards (1751:pl.204), holotype, designated and discussed by Bour (1987a); Thunberg (1828) listed a specimen in the UUZM acquired in the early 1800s from the MGA, possibly formerly in the MFA, but unlikely a type.
Comment: Description cited as sourced from Edwards (1751:pl.204). Type locality corrected by Schweiger and Gemel (2020), necessitating redefining the distributional range of the subspecies *graeca* from northeast Morocco through central Algeria to southwest Morocco.
Testudo pusilla Linnaeus 1758:199 (senior homonym, not = *Testudo pusilla* † Bergounioux 1936)
Chersine pusilla
Type locality: "India." Restricted to "Cap. b. spei" [Cape of Good Hope, South Africa] by Linnaeus (1766:353); further restricted to "Santa-Cruz (alte spanische Festung bei Oran in der Algérie)" [Algeria] by Strauch (1862:67) and "Santa Cruz, Oran" [Algeria] by Wermuth (1956:402); further restricted here to "Agadir, Morocco."
Type specimens: UUZM s/n, possible syntype, apparently lost, listed by Linné and Thunberg (1780), but not by Thunberg (1828), Lönnberg (1896), Andersson (1900), Holm (1957), or Wallin (2001).
Comment: Description cited as sourced from Grew (1681:38,pl.3,f.3), Worm (1655:315), and Ray (1693:259), but cited by Linnaeus (1766:353) as also sourced from Edwards (1751:pl.204).
Testudo mauritanica Duméril and Bibron 1835:44 (**96**)
Testudo graeca mauritanica, Chersus mauritanicus, Peltastes mauritanicus, Testudo ibera mauritanica
Type locality: "Mauritanie..[&]..les côtes occidentales de la mer Caspienne..[&]..les environs d'Alger." Restricted to "Umgebung von Algier" [Algeria] by Mertens and Wermuth (1955:378); further restricted here to "Agadir, Morocco."
Type specimens: Specimen figured in Edwards (1751:pl.204), lectotype, designated by Bour (1987a:111); USNM 10980 (formerly MNHN 22), originally a syntype, now a paralectotype, discussed by Cochran (1961) and Reynolds et al. (2007); MNHN 0.1937, invalid neotype, designated by Schweiger and Gemel (2020:36).
Testudo graeca soussensis Pieh 2001:211 (**96**)
Testudo soussensis, Testudo (Testudo) graeca soussensis
Type locality: "Umgebung von Agadir 30°28'N, 9°55'W, Sousstal, Südwest-Marokko" [Morocco].
Type specimen: MTD 33842, holotype.

Testudo (Testudo) graeca armeniaca Chkhikvadze and Bakradze 1991 (11:12) (**97,98**)

Araxes Tortoise

Marine Arakelyan / Vanand region, Araxes valley, Armenia

Viacheslav Chkhikvadze / Dagestan, Russia / "*Testudo dagestanica*"



*

(subspecies: *armeniaca* = purple, *buxtoni* = blue, *ibera* = green, *terrestris* = brown; overlap = intergrades; orange dots = uncertain, possible or probable trade, or introduced)

Distribution: Armenia, Azerbaijan, Georgia, Iran (Ardabil, East Azarbaijan, West Azarbaijan), Russia (Dagestan), Turkey

Presumed Historic Indigenous Range: 109,611 sq. km

Size (Max SCL): male 19.1 cm, female 27.0 cm (Pieh et al. 2002; Arakelyan et al. 2018)

Synonymy:

Testudo graeca pallasi Chkhikvadze 1989:67 (*nomen nudum*)

Testudo graeca armeniaca Chkhikvadze 1989:67 (*nomen nudum*)

Testudo graeca armeniaca Chkhikvadze and Bakradze 1991:60

Testudo armeniaca, *Testudo terrestris armeniaca*

Type locality: "Мегри, ЮВ Армянской ССР" [Megri, SE Armenian SSR] [Armenia].

Type specimen: GNM 13.3.007 (formerly ANGSSR), holotype.

Testudo graeca pallasi Chkhikvadze and Bakradze 2002:276

Testudo pallasi, *Testudo marginata pallasi*

Type locality: "Дагестан, окрестности села Гиляры-Даг" [Dagestan, near the village of Gilyary-Dag]. Emended to "Gilyar, near Gilyary-Dag mountain, Magaramkent District, Dagestan, Russia (41.558499 N, 48.257204 E)" by TTWG (2017:152).

Type specimen: GNM NQ13-3-5 (formerly IPANG), holotype.

Testudo dagestanica Chkhikvadze, Mazanaeva, and Shammakov 2011:337 (11:12)

Testudo graeca dagestanica

Type locality: "Папас (Южный Дагестан)" [Papas (Southern Dagestan)] [Russia].

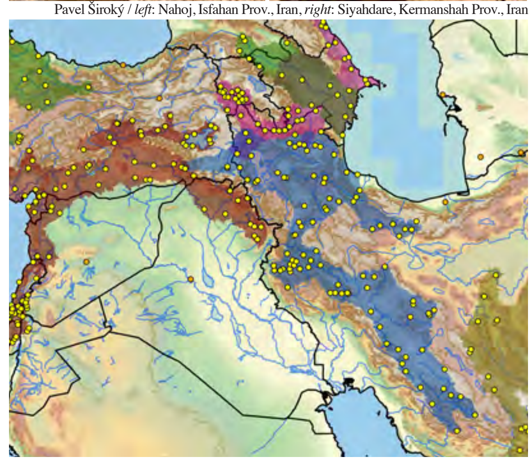
Type specimen: GNM 13.11.1, holotype.

Testudo (Testudo) graeca buxtoni Boulenger 1921 (10:28) (**97,98**)

Buxton's Tortoise

Pavel Široký / Dehlili, Kermanshah Prov., Iran

Pavel Široký / *left*: Nahoj, Isfahan Prov., Iran, *right*: Siyahdare, Kermanshah Prov., Iran



*

(subspecies: *armeniaca* = purple, *buxtoni* = blue, *ibera* = green, *terrestris* = brown, *zarudnyi* = olive; overlap = intergrades; orange dots = uncertain, possible or probable trade, or introduced)

Distribution: Iran (Alborz, Ardabil, Chahar Mahal Va Bakhtiari, East Azarbaijan, Fars, Gilan, Hamedan, Ilam, Isfahan, Kermanshah, Kordestan, Lorestan, Markazi, Qazvin, Tehran, West Azarbaijan, Zanjan), Turkey

Presumed Historic Indigenous Range: 287,196 sq. km

Size (Max SCL): male 24.0 cm, female 27.3 cm (Perälä 2002c; Türkozan et al. 2010)

Synonymy:

Testudo ecaudata Pallas 1814:19 (10:28) (*nomen dubium* and junior homonym, not = *Testudo ecaudata* Daudin 1801 [= *Mauremys caspica*])

Type locality: "nemorosis Persiae mari caspio conterminis" [forests of Persia along the Caspian Sea] [Iran].

Type specimen: Not located; type specimen figured in an originally unpublished drawing by Pallas (1814:pl.3), reproduced in Darevsky and Mertens (1973:101), misidentified as a *Psammobates tentorius* by them, but identified as a juvenile *Testudo graeca* ssp. by TTWG (2017:244).

Testudo buxtoni Boulenger 1921:251

Testudo terrestris buxtoni, Testudo ibera buxtoni, Testudo graeca buxtoni

Type locality: "Manjil, between Resht and Kasuin, South Coast of the Caspian Sea, on a hill-side about 7,000–7,500 feet...northern Persia" [Iran].

Type specimen: NHMUK 1947.3.5.16 (formerly 1920.8.6.1), holotype.

Testudo perses Perälä 2002c:81

Testudo graeca perses, Testudo ibera perses

Type locality: "vicinity of Lalabad village, some 25 mi NW Kermānshāh, Kermānshāhān province, W Iran...34°27'N 46°50'E."

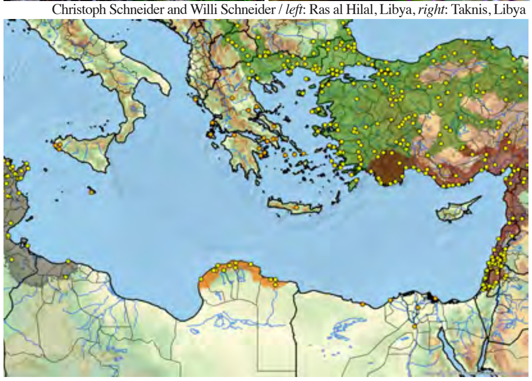
Type specimen: FMNH 130820, holotype.

Testudo (Testudo) graeca cyrenaica Pieh and Perälä 2002

Cyrenaican Spur-thighed Tortoise

Christoph Schneider and Willi Schneider / Qasr Libya, Libya

Christoph Schneider and Willi Schneider / *left*: Ras al Hilal, Libya, *right*: Taknis, Libya



*

(subspecies: *cyrenaica* = orange, *ibera* = green, *nabeulensis* = gray, *terrestris* = brown; overlap = intergrades; orange dots = uncertain, possible or probable trade, or introduced)

Distribution: Libya

Presumed Historic Indigenous Range: 19,999 sq. km

Size (Max SCL): male 19.3 cm, female 18.1 cm (Pieh and Perälä 2002)

Synonymy:

Testudo graeca cyrenaica Pieh and Perälä 2002:8

Testudo cyrenaica

Type locality: "Derna 32°46'N, 22°39'E (= Darnah, Cyrenaika Ostlibyen" [Libya].

Type specimen: MTDK 31880, holotype.

Testudo (Testudo) graeca ibera Pallas 1814 (11:12) (97,98)

Asia Minor Tortoise

Alexander A. Inozemtsev / CCB / TCF / nr. Novorossiysk, Krasnodarskiy, Russia

Chris Leone / Ankara, Turkey / captivity

*

(subspecies: *armeniaca* = purple, *buxtoni* = blue, *ibera* = green, *terrestris* = brown; overlap = intergrades; orange dots = uncertain, possible or probable trade, or introduced)

Distribution: Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Kosovo, Moldova, North Macedonia, Romania, Russia (Krasnodarskiy), Serbia, Turkey

Introduced: Greece (Crete)

Presumed Historic Indigenous Range: 503,895 sq. km

Size (Max SCL): male 38.9 cm, female 31.5 cm (Beshkov 1997; Auer and Herz 2006; Türkozan et al. 2010)

IUCN Red List: The currently synonymized taxon *Testudo graeca nikolskii* listed as Critically Endangered (CR A1abcde+2bcde) (ERASG 1996)

Synonymy:

Testudo ibera Pallas 1814:18

Chersus iberus, Cherseus iberus, Medaestia ibera, Testudo graeca ibera, Testudo ibera ibera, Testudo terrestris ibera

Type locality: "Caucasi meridionalibus..&..convallibus orae meridionalis montosae Chersonesi tauricae" [southern Caucasus ..&.. steep mountainous southern coast of Crimea]. Restricted to "Iberia, haud pro cul a Tiflisio" [Tbilisi, Georgia] by Eichwald (1831:196); to "das Gebiet des mittleren Kura-Tales im Kaukasus" [Georgia] by Mertens (1946:113); and to "Tbilissi (Tiflis), Géorgie, URSS" [Georgia] by Bour (1987a:112).

Type specimen: Not located; type specimen figured in an originally unpublished drawing by Pallas (1814:pl.2,f.2-3), discussed by Strauch (1862) and reproduced in Darevsky and Mertens (1973:100) and Bour (1987a:113), designated as lectotype by Bour (1987a:112).

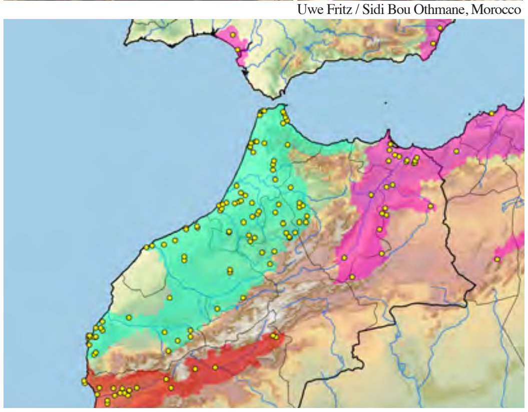
Testudo georgicana Güldenstedt *in* Pallas 1814:18 (*nomen nudum*)

Testudo iberia Blyth 1854:642 (17:66) (*nomen novum*)
Comment: Unjustified emendation or error for *ibera*.
Testudo ibera bicaudalis Venzmer 1920:289
Type locality: "cilicischen Taurus in der kleinasiatischen Türkei" [Taurus Mts., Cilicia, Turkey].
Type specimens: Not located, type specimen figured (f.1-2).
Testudo ibera racovitzai Calinescu 1931:169
Type locality: "Turtucaia (jud. Durostor)" [Romania] [now Tutrakan, Silistra, Bulgaria].
Type specimens: Not located, type specimen figured (f.6-7).
Testudo graeca nikolskii Chkhikvadze and Tuniyev 1986:618
Testudo ibera nikolskii, *Testudo terrestris nikolskii*, *Testudo nikolskii*
Type locality: "Поселок Небуг Туапсинского района (Краснодарский край)" [Nebug Settlement, Tuapse Co., Krasnodar District] [Russia].
Type specimen: GNM 13.3.008 (formerly ANGSSR), holotype.
Testudo graeca pontica Khosatzky 1987:58 (*nomen nudum*)

Testudo (Testudo) graeca marokkensis Pieh and Perälä 2004 (09:42)
Morocco Tortoise


Uwe Fritz / Sidi Bou Othmane, Morocco

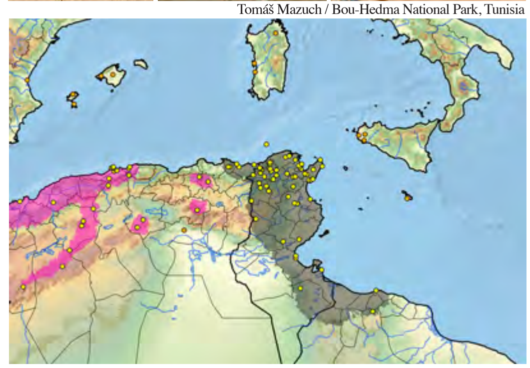

Uwe Fritz / Sidi Bou Othmane, Morocco


*
(subspecies: *graeca* = red, *marokkensis* = tourmaline, *whitei* = pink)
Distribution: Morocco
Introduced: Spain
Presumed Historic Indigenous Range: 90,358 sq. km
Size (Max SCL): male 17.2 cm, female 21.4 cm (Carretero et al. 2005; Ben Kaddour et al. 2008; Bonnet et al. 2010)
Synonymy:
Testudo graeca marokkensis Pieh and Perälä 2004:22 (09:42)
Type locality: "Tarmilete (33°23'N 6°04'W)" [Morocco].
Type specimen: SMNS 7602, holotype, see Bour (2004d).
Testudo graeca lamberti Pieh and Perälä 2004:33 (09:42)
Type locality: "22 km nördlich von Tetuan (= Tetouan; Tétuan 35°34'N 5°22'W)" [Morocco].
Type specimen: NHMUK 1974.661, holotype, see Bour (2004d).

Testudo (Testudo) graeca nabeulensis (Highfield 1990)
Nabeul Tortoise


Norbert Halasz / Nabeul, Tunisia / captivity


Tomáš Mazuch / Bou-Hedma National Park, Tunisia

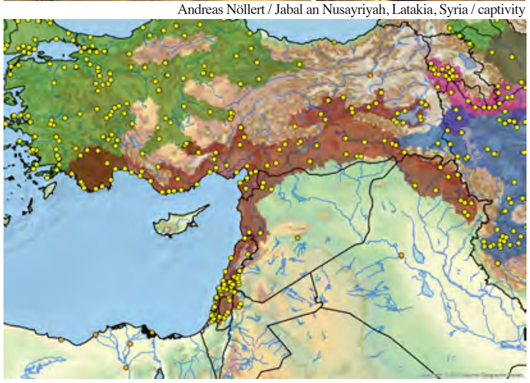

*
(subspecies: *whitei* = pink, *nabeulensis* = gray; orange dots = uncertain, possible or probable trade, or introduced)
Distribution: Algeria, Libya, Tunisia
Introduced: Italy (Sardinia, Sicily)
Presumed Historic Indigenous Range: 124,478 sq. km
Size (Max SCL): male 13.7 cm (Highfield and Martin 1989c)
Synonymy:
Testudo flavominimaralis Highfield and Martin 1989c:[9] (*nomen dubium*)
Testudo graeca flavominimaralis
Type locality: "North Africa." Restricted to "Libya" by Highfield (1990:41).
Type specimen: TT 89/07/AI, holotype, originally live, not located, specimen figured (pl.1).
Furculachelys nabeulensis Highfield 1990:32
Testudo nabeulensis, *Testudo graeca nabeulensis*
Type locality: "forested area in the region of Nabeul, Tunisia." Restricted to "Waldgebiet 7–8 km nordwestlich von Nabeul Richtung Grombalia (Tunesien)" [Tunisia] by Pieh and Perälä (2004:42).
Type specimen: TT s/n, not located, holotype figured (p.51).
Testudo graeca sarda Ballasina 1995:166 (*nomen nudum*)
Testudo graeca sardinia van der Kuyl, Ballasina, Dekker, Maas, Willemsen, and Goudsmit 2002:180 (*nomen nudum*)

Testudo (Testudo) graeca terrestris Forskål 1775 [10:29, 17:72]
Mesopotamian Tortoise


Norbert Halasz / Aleppo, Syria / captivity



Andreas Nöllert / Jabal an Nusayriyah, Latakia, Syria / captivity


*

(subspecies: *armeniaca* = purple, *buxtoni* = blue, *ibera* = green, *terrestris* = brown; overlap = intergrades; orange dots = uncertain, possible or probable trade, or introduced)

Distribution: Iraq, Israel, Jordan, Lebanon, Palestine (West Bank), Syria, Turkey

Presumed Historic Indigenous Range: 240,593 sq. km

Size (Max SCL): male 24.0 cm, female 26.0 cm (Türkozan et al. 2010)

Synonymy:

Testudo terrestris Forskål 1775:viii,12 [10:13] (*nomen conservandum*, junior homonym, not = *Testudo terrestris* Garsault 1764 (*nomen oblitum*) [= *Emys orbicularis orbicularis*], nor = *Testudo terrestris* Fermin 1765 [= *Chelus fimbriata* (*nomen conservandum*)])

Testudo graeca terrestris, *Testudo terrestris terrestris*, *Testudo ibera terrestris*

Type locality: "Lohajae..&..Kahirae..&..Aleppo..&..Libanon" [Al Luhayyah..&..Cairo..&..Aleppo..&..Mount Lebanon]. Restricted to "Arabien" [Saudi Arabia] by Wermuth (1956:402), to "Libanon-Gebirge, Israel" by Wermuth (1958:152), to "environs d'Alep (= Halab), Syrie" [Syria] by Bour (1989:14), and to "Aleppo (Alep, Halab; 36°12' N, 37°09' E), Syria (Syrian Arab Republic)" by Perälä and Bour (2004:117).

Type specimen: Not designated, original syntypes apparently lost (Webb, pers. comm. *in* Iverson 1992); NMW 18674:2, neotype, designated by Perälä and Bour (2004:117), see Gemel et al. (2019).

Comment: Name conserved by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Testudo zolhafa Forskål *in* Gray 1830e:5 (*nomen nudum*)

Testudo floweri Bodenheimer 1935:197 [17:72]

Testudo graeca floweri, *Testudo terrestris floweri*, *Testudo ibera floweri*

Type locality: "the Negeb...Palestine" [Israel]. Restricted to "Negev, Palestine (environs de Gaza, Israël)" [Israel] by Bour (1989:14).

Type specimens: Not known or located.

Testudo graeca anamurensis Weissinger 1987:14

Testudo ibera anamurensis, *Testudo terrestris anamurensis*, *Testudo anamurensis*

Type locality: "Strand von Anamurum, 7 km westlich von Anamur, SW–Küste der Türkei" [Turkey].

Type specimen: NMW 30795:1, holotype, see Tiedemann et al. (1994) and Gemel et al. (2019).

Testudo antakyensis Perälä 1996:16

Testudo graeca antakyensis, *Testudo terrestris antakyensis*, *Testudo ibera antakyensis*

Type locality: "mountains to the east of Antakya in southern Turkey."

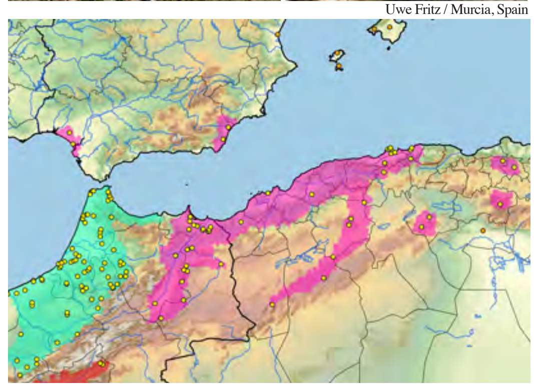
Type specimen: NHMUK 1998.70, holotype.

Testudo (Testudo) graeca whitei Bennett *in* White 1836 [96]
Mediterranean Spur-thighed Tortoise


Uwe Fritz / Murcia, Spain



Uwe Fritz / Murcia, Spain


*

(subspecies: *graeca* = red, *marokkensis* = tourmaline, *nabeulensis* = gray, *whitei* = pink; orange dots = uncertain, possible or probable trade, or introduced)

Distribution: Algeria, Morocco, Spain

Introduced: Spain (Balearic Islands)

Presumed Historic Indigenous Range: 109,370 sq. km

Size (Max SCL): male 24.0 cm, female 28.0 cm (Highfield and Martin 1989b)

Synonymy:

Testudo whitei Bennett *in* White 1836:361 [09:41]

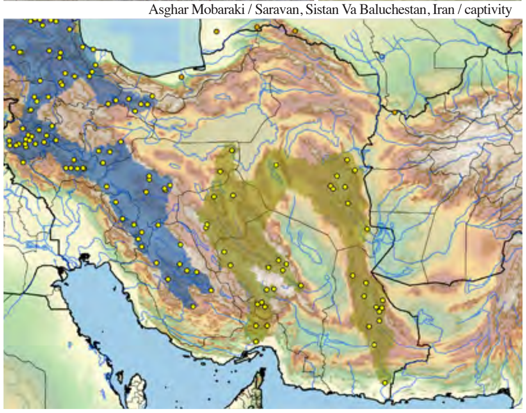
Peltastes marginatus whitei, *Testudo marginata whitei*, *Furculachelys whitei*, *Testudo graeca whitei*

Type locality: Not known. Restricted to "S. Europe" by Gray (1873j:11) and to "Algiers and its environs, Algeria" by Highfield and Martin (1989b:21).
Type specimen: NHMUK 1853.4.17.1, holotype, discussed by Gray (1870c, 1873j) and Highfield and Martin (1989b).
Comment: Type locality for the subspecies *graeca* corrected by Schweiger and Gemel (2020), necessitating redefining its distributional range to southwest Morocco and resurrecting *whitei* as the name for the subspecies from northeast Morocco through central Algeria.

Testudo (Testudo) graeca zarudnyi Nikolsky 1896
Iranian Tortoise

Asghar Mobaraki / Saravan, Sistan Va Baluchestan, Iran / captivity


Asghar Mobaraki / Saravan, Sistan Va Baluchestan, Iran / captivity



*

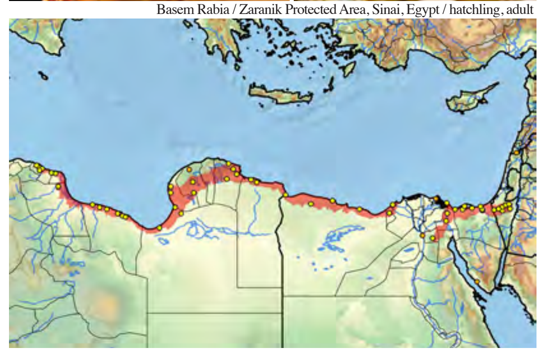
(subspecies: *buxtoni* = blue, *zarudnyi* = olive;
orange dots = uncertain, possible or probable trade, or introduced)

Distribution: Afghanistan (?), Iran (Fars, Hormozgan, Isfahan, Kerman, Khorasan Razavi, Sistan Va Baluchestan, South Khorasan, Yazd), Pakistan (?), Turkmenistan (?)
Presumed Historic Indigenous Range: 271,606 sq. km
Size (Max SCL): female 28.2 cm (Highfield and Martin 1989a).
Synonymy:
Testudo zarudnyi Nikolsky 1896:369
Testudo graeca zarudnyi, *Testudo ibera zarudnyi*, *Testudo terrestris zarudnyi*
Type locality: "Persia orientali" [Iran]. Restricted to "montibus provinciae Birdschan in Persiae orientali" [Iran] by Nikolsky (1897:308); and to "Birjand in Khorāsan province, NE Iran (32º53' N 59º03' E)" by Perälä (2002c:84).
Type specimen: ZIN 8738, holotype, erroneously designated lectotype by Perälä (2002c:84), discussed and genotyped by Parham et al. (2012).

Testudo (Testudo) kleinmanni Lortet 1883 (07:74, 17:73)
Egyptian Tortoise

Basem Rabia / Zaranik Protected Area, Sinai, Egypt


Basem Rabia / Zaranik Protected Area, Sinai, Egypt / hatchling, adult



*

(orange dots = probable trade or extirpated)

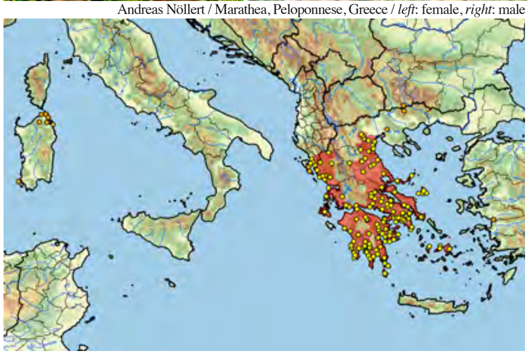
Distribution: Egypt, Israel, Libya, Palestine? (Gaza? [extirpated])
Presumed Historic Indigenous Range: 79,288 sq. km
Size (Max SCL): male 10.6 cm, female 14.4 cm (Farkas et al. 1997; Perälä 2001; Itescu et al. 2014)
IUCN Red List: Critically Endangered (CR A2abcd+3d) (Perälä 2003a); Previously: Endangered (EN) (TFTSG 1996). The currently synonymized taxon *Testudo werneri* was previously listed separately as Critically Endangered (CR A2abcde+3de) (Perälä 2003b).
CITES: Appendix I (1995); Previously: Appendix II, as Testudinidae spp. (1977), Appendix II, as *Testudo* spp. (1975)
Synonymy:
Testudo leithii Günther 1869:502 (junior homonym, not = *Testudo leithii* † Carter 1852)
Peltastes leithii, *Medaestia leithii*
Type locality: "Sindh" [Pakistan] [in error].
Type specimen: NHMUK 1947.3.4.35 (formerly 1869.8.28.5), holotype.
Testudo kleinmanni Lortet 1883:188
Pseudotestudo kleinmanni, *Testudo kleinmanni kleinmanni*
Type locality: "la basse Égypte, surtout dans les environs d'Alexandrie" [Egypt].
Type specimen: MHNL 42000414, lectotype, designated by Perälä (2001:579); SMF 7810, erroneously designated "lectotype" by Mertens (1967b:52), is not a type.
Testudo werneri Perälä 2001:570 (07:74)
Testudo kleinmanni werneri

Type locality: "Northern Negev desert, Israel (14 km south of Be'er Sheva)."
Type specimen: HUJ 949, holotype.

Testudo (Testudo) marginata Schoepff 1793a (07:75, 11:12, 11:13)
Marginated Tortoise

Andreas Nöllert / Marathea, Peloponnese, Greece

Andreas Nöllert / Marathea, Peloponnese, Greece / *left*: female, *right*: male



*

(orange dots = probable trade or introduced)

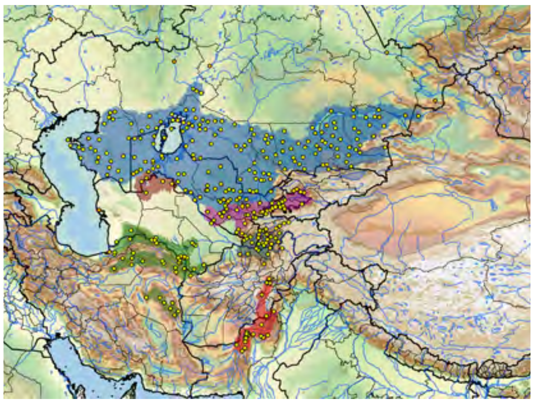
Distribution: Albania, Greece
Introduced: Bulgaria, Cyprus, Italy (Sardinia [prehistoric])
Presumed Historic Indigenous Range: 63,112 sq. km
Size (Max SCL): male 42.0 cm, female 40.3 cm (Bour 1996; Coutard 2006; Bringsøe et al. 2001); Max CCL: female 50.0 cm (Ducotterd 1997)
IUCN Red List: Least Concern (LC) (van Dijk et al. 2004); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Testudo* spp. (1975)
Synonymy:
Testudo tabulata campanulata Walbaum 1782:124 (unavailable name)
Comment: Unavailable name from a non-binomial work, see Wermuth (1956).
Testudo marginata Schoepff 1793a:52
Chersine marginata, Chersus marginatus, Peltastes marginatus, Peltastes marginata, Testudo marginata marginata
Type locality: Not known. Restricted to "Morea oggi Pelopponneso, Grecia" [Greece] by Bruno (1986:238), and "Greece, probably province of Attica, Stereá Eláda" by Bour (1987a:111).
Type specimen: MZUS 143, specimen figured in Schoepff (1792:pl.11-12,f.1) and Bour (1987a:f.20-22), designated lectotype by Bour (1987a:118); Thunberg (1828) listed a UUZM specimen from MGA and Wallin (2001) listed UUZM 278 (formerly MGA 47) as a type, possibly a paralectotype.
Testudo graja Hermann *in* Schoepff 1793a:52
Type locality: Not designated. Restricted to "Griechenland" [Greece] by Mertens and Wermuth (1955:380).
Type specimen: MZUS 143, lectotype, designated by Bour (1987a:118), figured in Schoepff (1792:pl.11-12,f.1).
Comment: Schoepff cited the author as Hermann, whose own description of *Testudo graja* was published posthumously (Hermann 1804:219).
Testudo campanulata Walbaum *in* Gray 1830e:4 (*nomen nudum*)
Testudo graji Gray 1830e:4 (*nomen novum*)
Comment: Unjustified emendation or error for *graja*.
Testudo campanulata Walbaum *in* Strauch 1862:65
Type locality: "Griechenland" [Greece].
Type specimens: Possibly ZIN, syntypes (2), not located.
Peltastes marginatus melas Gray 1870c:10
Type locality: "Greece."
Type specimen: NHMUK 1846.6.15.65, holotype.
Testudo nemoralis Schreiber 1875:557
Type locality: "Griechenland und Süditalien" [Greece and Italy]. Restricted to "Griechenland" [Greece] by Mertens and Wermuth (1955:380).
Type specimens: Not located, type specimen figured (f.118-119).
Testudo marginata cretensis † Bachmayer, Brinkerink, and Symeonidis 1975:111
Type locality: "Gerani-Höhle an der Nordküste der Insel Kreta in der Nähe von Rethymnon" [Gerani Cave, Crete, Greece].
Type specimen: AMPG 3/1974, holotype, fossil, nearly whole shell, figured (pl.18-20).
Geologic age: Pleistocene, Neogenkalk [Neogene lime].
Testudo marginata sarda Mayer 1992:95
Type locality: "Olbia...Sardinia" [Italy].
Type specimens: None designated.
Testudo weissingeri Bour 1996:30
Testudo marginata weissingeri
Type locality: "Kardamili, Messénie, Grèce" [Greece].
Type specimen: MNHN 1989.3317, holotype.

Testudo (Agrionemys) Khosatzky and Mlynarski 1966 (07:72, 09:40, 17:70)

Testudinella Gray 1870c:12 (junior homonym, not = *Testudinella* Bory de Saint-Vincent 1822 [= Rotatoria])
Type species: *Testudinella horsfieldii* [= *Testudo horsfieldii* Gray 1844], by original monotypy.
Agrionemys Khosatzky and Mlynarski 1966:123 (*nomen novum*)
Type species: *Agrionemys horsfieldi* [= *Testudo horsfieldii* Gray 1844], by original designation.

Testudo (Agrionemys) horsfieldii Gray 1844 (07:77, 08:15, 09:43, 10:30, 14:38)

Central Asian Tortoise, Steppe Tortoise, Horsfield's Tortoise (includes 5 subspecies and one taxonomically unspecified population of *T. (A.) horsfieldii* sensu lato)


*

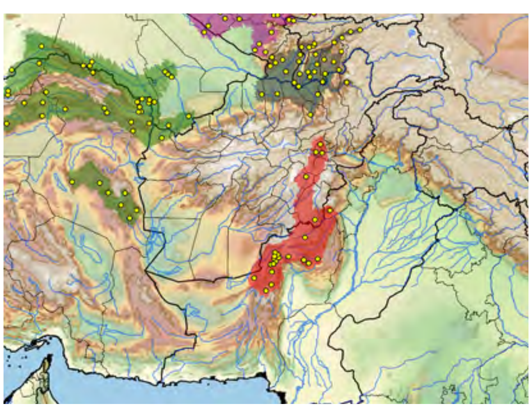
(subspecies: *horsfieldii* = red, *bogdanovi* = purple, *kazachstanica* = blue, *kuznetzovi* = brown, *rustamovi* = green, taxonomically unspecified population of *T. (A.) horsfieldii* sensu lato = gray; orange dots = uncertain, possible trade, or introduced)

Distribution: Afghanistan, China (Xinjiang), Iran (Golestan, Khorasan Razavi, North Khorasan, Semnan, South Khorasan), Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan, Uzbekistan
Introduced: Latvia
Presumed Historic Indigenous Range: 1,662,984 sq. km
Size (Max SCL): male 19.0 cm, female 28.6 cm (see subspp.)
IUCN Red List: Vulnerable (VU A2d) (TFTSG 1996)
CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Testudo* spp. (1975)

Synonymy:
Testudo horsfieldii Gray 1844:7
Testudinella horsfieldii, Homopus horsfieldii, Testudo (Homopus) horsfieldii, Medaestia horsfieldii, Agrionemys horsfieldii, Testudo horsfieldi, Testudo horsfieldii horsfieldii, Agrionemys horsfieldii horsfieldii
Type locality: "India, Affghanistan [p.7]...Cabul [p.vi]." Restricted to "Afghanistan" by Günther (1864:7).
Type specimen: NHMUK 1947.3.4.3, holotype.
Homopus burnesii Blyth 1854:642 (17:66)
Type locality: "Afghanistan."
Type specimen: ZSI 793, holotype, see Das et al. (1998) and Kundu et al. (2018a).
Testudo baluchiorum Annandale 1906:75 (10:28)
Agrionemys horsfieldii baluchiorum
Type locality: "Baluchistan" [Pakistan].
Type specimen: ZSI 11420, holotype, see Das et al. (1998) and Kundu et al. (2018a).
Testudo hardwickei Cotton 1918:114 *nomen nudum*
Testudo hardwickii
Type locality: "Wano" [Wana, Khyber Pakhtunkhwa Prov., Pakistan].

Testudo (Agrionemys) horsfieldii horsfieldii Gray 1844 (10:30)

Central Asian Tortoise, Steppe Tortoise, Horsfield's Tortoise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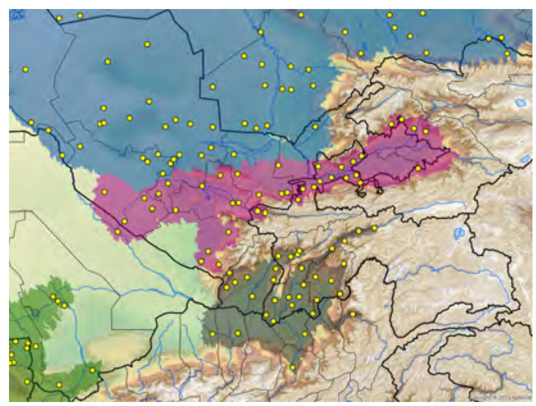
(subspecies: *horsfieldii* = red, *bogdanovi* = purple, *rustamovi* = green, taxonomically unspecified population of *T. (A.) horsfieldii* sensu lato = gray)

Distribution: Afghanistan, Pakistan
Presumed Historic Indigenous Range: 96,621 sq. km
Size (Max SCL): female 21.1 cm (Annandale 1906)

Testudo (Agrionemys) horsfieldii bogdanovi Chkhikvadze *in* Chkhikvadze, Brushko, and Kubykin 2008 (10:30)

Fergana Valley Steppe Tortoise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(subspecies: *bogdanovi* = purple, *kazachstanica* = blue, *rustamovi* = green, taxonomically unspecified population of *T. (A.) horsfieldii* sensu lato = gray)

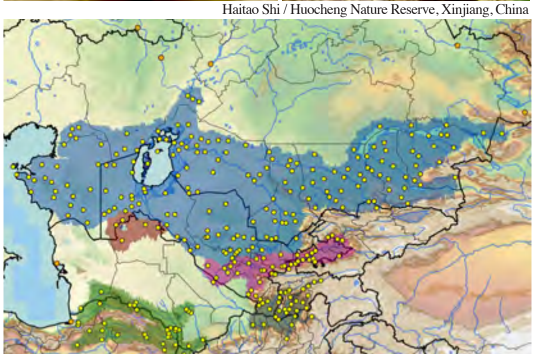
Distribution: Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
Presumed Historic Indigenous Range: 108,260 sq. km
Size (Max SCL): male 12.4 cm, female 18.2 cm (Gnetneva 2020)
Synonymy:
Agrionemys bogdanovi Chkhikvadze *in* Chkhikvadze, Brushko, and Kubykin 2008:100
Testudo horsfieldii bogdanovi, Agrionemys horsfieldii bogdanovi, Agrionemys bogdanovi
Type locality: "Узбекистан (Окрестности городов Бухара, Самарканд, Карши), Восточный Туркменистан (окрестности Чарджоу) и Киргизстан (Чуйская долина и окрестности города Ош)" [Uzbekistan (vicinity of the cities of Bukhara, Samarkand, Karshi), East Turkmenistan (near Chardzhou) and Kyrgyzstan (Chuy valley and vicinity of Osh)]. Restricted to "Ферганская долина" [Ferghana Valley] [Uzbekistan] by Chkhikvadze et al. (2009:49).
Type specimen: GNM 13.4.60 (formerly GSM), holotype.

Testudo (Agrionemys) horsfieldii kazachstanica Chkhikvadze 1988 (09:43, 10:30, 14:38)

Kazakhstan Steppe Tortoise

Haitao Shi / Huocheng Nature Reserve, Xinjiang, China

Haitao Shi / Huocheng Nature Reserve, Xinjiang, China



*

(subspecies: *bogdanovi* = purple, *kazachstanica* = blue, *kuznetzovi* = brown, *rustamovi* = green, taxonomically unspecified population of *T. (A.) horsfieldii* sensu lato = gray; orange dots = uncertain, possible trade, or introduced)

Distribution: China (Xinjiang), Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan

Presumed Historic Indigenous Range: 1,126,892 sq. km

Size (Max SCL): male 18.9 cm, female 28.6 cm (Yakovleva 1961; Gnetneva 2020)

Synonymy:

Agrionemys horsfieldi kazachstanica Chkhikvadze 1988:110

Testudo horsfieldii kazachstanica, Agrionemys horsfieldii kazachstanica, Agrionemys kazachstanica

Type locality: "Южное Прибалхашье, поселок Каратал" [southern Pribalkhashye (= Balkash), Karatal village]" [Kazakhstan].

Type specimen: GNM 13.4.1, holotype.

Agrionemys kazachstanica terbishi Chkhikvadze 2009:60 (10:30, 14:38)

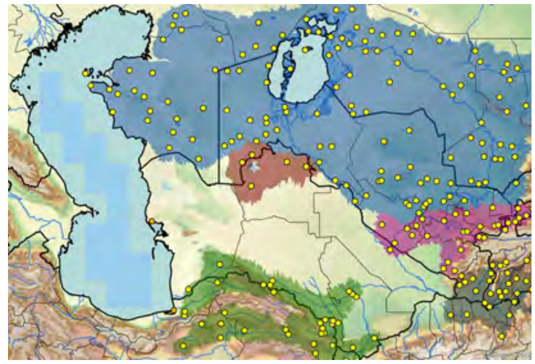
Testudo horsfieldii terbishi, Agrionemys horsfieldii terbishi

Type locality: "Монголия, г. Кобдо" [Mongolia, nr. Khovd] [probable trade specimen].

Type specimen: PIK s/n, holotype, figured (p.60); apparently lost (Ansorge et al. 2012).

Testudo (Agrionemys) horsfieldii kuznetzovi Chkhikvadze, Ataev, Shammakov, and Zatoka *in* Chkhikvadze, Ataev, and Shammakov 2009 (10:30)

Turkmenistan Steppe Tortoise



*

(subspecies: *bogdanovi* = purple, *kazachstanica* = blue, *kuznetzovi* = brown, *rustamovi* = green, taxonomically unspecified population of *T. (A.) horsfieldii* sensu lato = gray; orange dots = uncertain, possible trade, or introduced)

Distribution: Turkmenistan, Uzbekistan

Presumed Historic Indigenous Range: 45,520 sq. km

Size (Max SCL): male 18.2 cm, female 22.4 cm (Gnetneva 2020)

Synonymy:

Agrionemys kazachstanica kuznetzovi Chkhikvadze, Ataev, Shammakov, and Zatoka *in* Chkhikvadze, Ataev, and Shammakov 2009:52

Testudo horsfieldii kuznetzovi, Agrionemys horsfieldii kuznetzovi, Agrionemys kuznetzovi, Agrionemys kuznetsovi

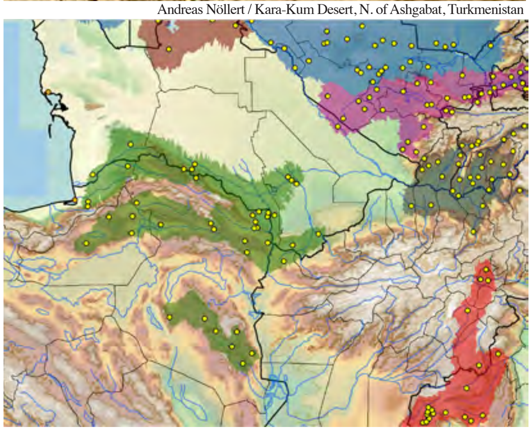
Type locality: "впадины Акчакая (Северный Туркменистан, к западу от г. Дашогуз – бывш. Ташауз)" [Akchakai depression (North Turkmenistan, west of the city of Dashoguz – prev. Tashauz)].

Type specimen: GNM s/n, holotype, figured (f.4-6).

Testudo (Agrionemys) horsfieldii rustamovi Chkhikvadze, Amiranashvili, and Ataev 1990 (09:43, 10:30)

Kopet-Dag Steppe Tortoise

Andreas Nöllert / Kara-Kum Desert, N. of Ashgabat, Turkmenistan



*

(subspecies: *horsfieldii* = red, *bogdanovi* = purple, *kazachstanica* = blue, *kuznetzovi* = brown, *rustamovi* = green, taxonomically unspecified population of *T. (A.) horsfieldii* sensu lato = gray; orange dots = uncertain, possible trade, or introduced)

Distribution: Afghanistan, Iran (Golestan, Khorasan Razavi, North Khorasan, Semnan), Turkmenistan

Presumed Historic Indigenous Range: 215,260 sq. km

Size (Max SCL): male 23.4 cm, female 23.9 cm (Chkhikvadze et al. 2010)

Synonymy:

Agrionemys horsfieldi rustamovi Chkhikvadze, Amiranashvili, and Ataev 1990:73

Agrionemys horsfieldii rustamovi, *Testudo horsfieldii rustamovi*, *Agrionemys rustamovi*

Type locality: "село Мадау (Кизыл-Атрекский район), Юго-Западный Туркменистан" [Madau village (Kizyl-Atrek region), south-western Turkmenistan].

Type specimen: GNM 13.4.88, holotype.

Testudo (Chersine) Merrem 1820 (07:72, 09:40, 17:70)

Chersine Merrem 1820:29 (09:40)

Type species: "*T. graeca* »L.« auct. = *T. hermanni* Gmelin" [= *Testudo hermanni* Gmelin 1789], by subsequent designation by Lindholm (1929:286).

Chersini Merrem *in* Gray 1825:210 (*nomen novum*)

Medaestia Wussow 1916:170 (09:40)

Type species: *Medaestia graeca* sensu Wussow 1916 [= subjective synonym of *Testudo hermanni* Gmelin 1789] by subsequent designation by Mertens (1949:232). Genus established as *Testudo (Medaestia)* without a type species.

Eurotestudo Lapparent de Broin, Bour, Parham, and Perälä 2006a:803

Type species: *Eurotestudo hermanni* [= *Testudo hermanni* Gmelin 1789], by original designation.

Testudo (Chersine) hermanni Gmelin 1789 (14:36, 14:37, 17:74) (**99**)

Hermann's Tortoise

(includes 2 subspecies)

•

(subspecies: *hermanni* = red, *boettgeri* = purple; orange dots = probable introduced or trade)

Distribution: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, France (Continental, Corsica), Greece, Italy (Continental, Kosovo, Sardinia [prehistoric introduction], Sicily), Montenegro, North Macedonia, Romania, Serbia, Slovenia, Spain (Continental, Balearic Islands [prehistoric introduction]), Turkey (European)

Introduced: France, Malta (?), Spain (Balearic Islands)

Presumed Historic Indigenous Range: 367,431 sq. km

Size (Max SCL): male 31.4 cm, female 35.7 cm (see subspp.)

CBFTT Account: Bertolero, Cheylan, Hailey, Livoreil, and Willemsen (2011)

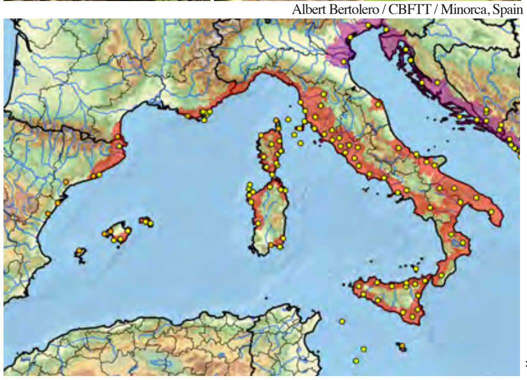
IUCN Red List: Near Threatened (NT) (van Dijk et al. 2004); Previously: Near Threatened (NT) (TFTSG 1996)

CITES: Appendix II, as Testudinidae spp. (1977); Previously: Appendix II, as *Testudo* spp. (1975)

Testudo (Chersine) hermanni hermanni Gmelin 1789 (07:76, 14:36) **(99, 100)**
Western Hermann's Tortoise


Francesco Luigi Leonetti / Strongoli, Calabria, Italy


Albert Bertolero / CBFTT / Minorca, Spain

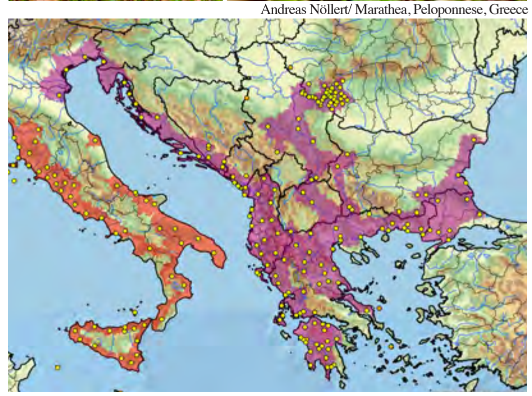

*
(subspecies: *hermanni* = red, *boettgeri* = purple; orange dots = probable introduced or trade)

Distribution: France (Continental, Corsica), Italy (Continental, Sicily), Spain (Continental)
Introduced: Italy (Sardinia [prehistoric introduction]), Spain (Balearic Islands)
Presumed Historic Indigenous Range: 121,111 sq. km
Size (Max SCL): male 19.6 cm, female 20.0 cm (Cheylan 2001)
IUCN Red List: Endangered (EN B1+2abcde) (ERASG 1996)
Synonymy:
Testudo hermanni Gmelin 1789:1041
Testudo hermanni hermanni, Protestudo hermanni, Agrionemys hermanni, Eurotestudo hermanni, Chersine hermanni, Chersine hermanni hermanni
Type locality: Not designated. Restricted to "Collobrières, massif de Maures, Var, France" by Bour (1987a:116).
Type specimen: MZUS 121, holotype, figured in Schoepff (1792:pl.8) and Bour (1987a:f.6-7), discussed by Bour (1987a, 2001).
Comment: Description cited as sourced from Schneider (1783:348), who cited notes by Hermann (pers. comm.).
Testudo graeca bettai Lataste 1881:396
Type locality: Not known.
Type specimen: NHMUK 1947.3.4.54 (formerly 1920.1.20.915), holotype, see Bour (1987a).
Testudo hermanni robertmertensi Wermuth 1952:162
Type locality: "Gebirge nördlich von Arta, Mallorca, Balearen" [mountains north of Arta, Mallorca, Balearic Islands] [Spain].
Type specimen: SMF 37468, holotype, see Mertens (1967b).

Testudo (Chersine) hermanni boettgeri Mojsisovics 1889 **(99)**
Eastern Hermann's Tortoise


Adrian Hailey / CBFTT / Greece


Andreas Nöllert/ Marathea, Peloponnese, Greece


*
(subspecies: *hermanni* = red, *boettgeri* = purple; orange dots = probable introduced or trade)

Distribution: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Italy (Continental), Kosovo, Montenegro, North Macedonia, Romania, Serbia, Slovenia, Turkey (European)
Presumed Historic Indigenous Range: 246,320 sq. km
Size (Max SCL): male 31.4 cm, female 35.7 cm (Beshkov 1997; Cheylan 2001)
Synonymy:
Testudo graeca boettgeri Mojsisovics 1889:242 (senior homonym, not = *Testudo boettgeri* Siebenrock 1904a [= *Psammobates tentorius verroxii*])
Testudo hermanni boettgeri, Testudo boettgeri, Testudo boettgeri boettgeri, Eurotestudo boettgeri, Chersine hermanni boettgeri
Type locality: "Orsova...Cernathal...Süd-Ungarn" [Romania]. Restricted to "Orsova, Banat" [Romania] by Boettger (1893:11).
Type specimen: SMF 7836, lectotype, designated as the type by Boettger (1893:11), listed as "holotype" by Mertens (1967b), see Bour (1987a); specimen figured in Bour (1987a:f.12-14).
Testudo graeca hercegovinensis Werner 1899:818
Testudo hercegovinensis, Testudo boettgeri hercegovinensis, Testudo hermanni hercegovinensis, Eurotestudo

hercegovinensis
Type locality: "Trebinje...Hercegovina" [Bosnia and Herzegovina].
Type specimen: NMW 1222, lectotype, designated by Bour (1987a:116), see Tiedemann et al. (1994) and Gemel et al. (2019).
Testudo enriquesi Parenzan 1932:1160
Type locality: "Conca di Elbassan, nella vallata dello Skumbi, in Albania Centrale."
Type specimen: Not located, holotype figured (pl.1-4), see Bour (1987a).

TRIONYCHIA Zittel 1889 (3)

Potamites Duméril and Bibron 1834:353
Diacostoidea Baur 1887:99
Trionychia Zittel 1889:513
Chilotae Baur 1890c:536

TRIONYCHOIDEA Gray 1825

Trionicidae Gray 1825:212
Trionychoidea Fitzinger 1826:5
Trionychia Hümmel 1929:362
(includes 2 families)
CARETTOCHELYIDAE
TRIONYCHIDAE

CARETTOCHELYIDAE Boulenger 1887a

Carettochelydidae Boulenger 1887a:171
Carettochelydes Baur 1891a:190
Carettochelyidae Baur 1891c:637

Carettochelyidae Species Richness

Carettochelys Ramsay 1886

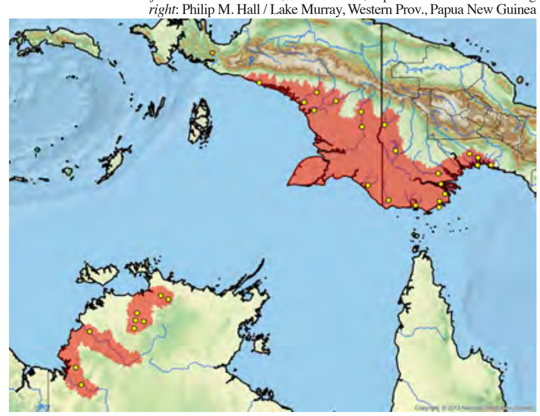
Carettochelys Ramsay 1886:158
Type species: *Carettochelys insculpta* Ramsay 1886, by original monotypy.

Carettochelys insculpta Ramsay 1886 (07:78, 08:10)

Pig-nosed Turtle, Fly River Turtle

John Cann / CBFTT / Daly R., Northern Territory, Australia

left: Fred Parker / Balimo, Western Prov., Papua New Guinea / hatchling
right: Philip M. Hall / Lake Murray, Western Prov., Papua New Guinea



*

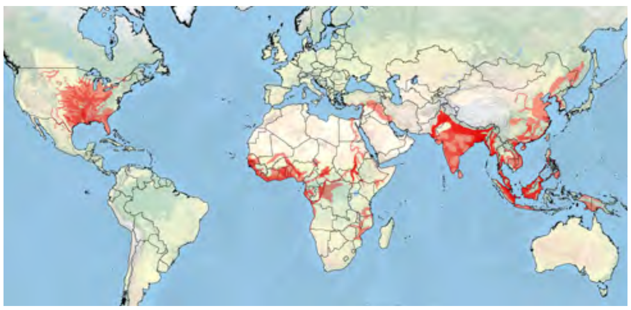
(orange dot = introduced or trade)

Distribution: Australia (Northern Territory), Indonesia (Papua), Papua New Guinea (Southern)
Presumed Historic Indigenous Range: 242,878 sq. km
Size (Max SCL): male 41.3 cm, female 52.5 cm (Georges et al. 2006; Ceballos et al. 2013; Hall, unpubl. data); Max CCL: male 53.0 cm [estimated], female 61.0 cm (Georges and Kennett 1989; Eisemberg et al. 2011)
CBFTT Account: Georges, Doody, Eisemberg, Alacs, and Rose (2008)
IUCN Red List: Endangered (EN A2bd+4bd) (Eisemberg et al. 2018); Previously: Vulnerable (VU) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II (2005).
Synonymy:
Carettochelys insculptus Ramsay 1886:158
Carettocchelys insculptus, Carettochelys insculpta, Carettochelys insculpta insculpta
Type locality: "Fly River, New Guinea." Restricted to "Strickland River...upper right hand branch of the Fly River" by Waite (1905:110); and to "Turtle Camp, Strickland River [Papua New Guinea] [6º25'30" S, 142º04'30" W]" by Mackay (2003:39).
Type specimen: AMS R3677, holotype, see Cogger (1979), Cogger et al. (1983), Shea and Sadlier (1999), and Cann and Sadlier (2017).

Carettochelys insculpta canni Wells 2002a:1 (07:78, 08:10, 10:43) (unavailable name)
Carettochelys canni
Type locality: "near Ooloo Crossing, Daly River, Northern Territory [Australia]"
Type specimen: NTM 1213, holotype.

TRIONYCHIDAE Gray 1825

Amydae Oppel 1811:9 (*partim*)
Trionyces Schmid 1819:18
Trionicidae Gray 1825:212
Trionychoidea Fitzinger 1826:5
Trionychidae Bell 1828c:515
Trionycidae Bonaparte 1831:63
Trionychides Pictet 1853:455
Trionychidi Portis 1890:22
(includes 2 subfamilies)
CYCLANORBINAE
TRIONYCHINAE



Trionychidae Species Richness

CYCLANORBINAE Lydekker 1889

Cyclanosteina Gray 1864b:94
Cyclanorbinae Lydekker 1889:x
Cyclanorbidae Deraniyagala 1939:290

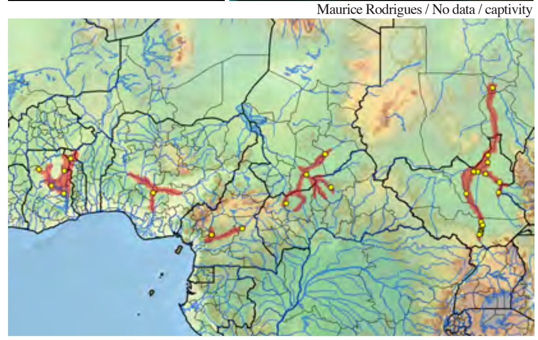
Cyclanorbis Gray 1854a

Cryptopus Duméril and Bibron 1835:499 (junior homonym, not = *Cryptopus* Latreille 1829 [= Crustacea])
Type species: *Cryptopus senegalensis* Duméril and Bibron 1835, by subsequent designation by Bour et al. (1995:82).
Cyclanorbis Gray 1854a:135
Type species: *Cyclanorbis petersii* Gray 1854a [= subjective synonym of *Cryptopus senegalensis* Duméril and Bibron 1835], by original monotypy.
Cryptopodus Duméril 1856:374 (*nomen novum*)
Cyclanosteus Gray 1856a:201
Type species: *Cyclanosteus senegalensis* [= *Cryptopus senegalensis* Duméril and Bibron 1835], by subsequent designation by Günther (1865:108).
Tetrathyra Gray 1865a:205
Type species: *Tetrathyra baikii* Gray 1865a [= subjective synonym of *Cryptopus senegalensis* Duméril and Bibron 1835], by original monotypy.
Baikiea Gray 1869a:215
Type species: *Baikiea elegans* Gray 1869a, by original monotypy.

Cyclanorbis elegans (Gray 1869a)
Nubian Flapshell Turtle

Luca Luiselli / White Nile, South Sudan

Maurice Rodrigues / No data / captivity



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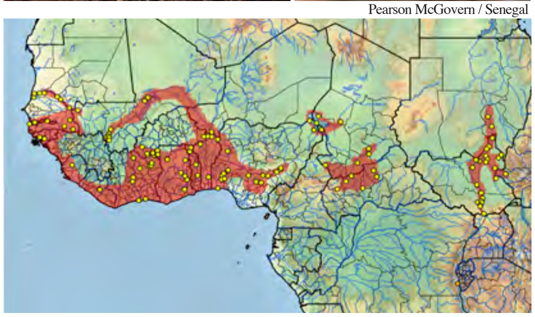
Distribution: Benin (?), Cameroon, Central African Republic, Chad, Ethiopia (?), Ghana, Nigeria, South Sudan, Sudan, Togo
Presumed Historic Indigenous Range: 264,925 sq. km
Size (Max SCL): male 67.6 cm, female 70.0 cm (Gramentz 2008; Baker et al. 2015 CBFTT)
CBFTT Account: Baker, Diagne, and Luiselli (2015)
IUCN Red List: Critically Endangered (CR A2bcd+4bcd) (Baker et al. 2016); Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II (2017)
Synonymy:
Baikiea elegans Gray 1869a:222
Cyclanorbis elegans, Cyclanosteus elegans
Type locality: "Africa." Restricted to "West Africa" by Gray (1873j:86); and to "Niger River drainage in west Africa" by Webb (1975a:349).
Type specimen: NHMUK 1946.1.22.15 (formerly 1865.5.3.35), lectotype, designated by Webb (1975a:348).
Cyclanorbis oligotylus Siebenrock 1902c:810
Type locality: "Nubien...oberen Nil" [Nubia...upper Nile] [Sudan].
Type specimens: NMW 1682, 1848, syntypes (2), see Tiedemann et al. (1994) and Gemel et al. (2019).

Cyclanorbis senegalensis (Duméril and Bibron 1835) (17:75)
Sahelian Flapshell Turtle, Senegal Flapshell Turtle


William R. Branch / Northern Prov., Sierra Leone



Pearson McGovern / Senegal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(orange dot = possible trade)

Distribution: Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast (Côte d'Ivoire), Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, South Sudan, Sudan, Togo, Uganda (?)
Presumed Historic Indigenous Range: 1,998,159 sq. km
Size (Max SCL): male 18.7 cm, female 35.5 cm (Pritchard 2001; Gramentz 2008); Max CCL: female 37.9 cm (McGovern et al. 2021 CBFTT)
CBFTT Account: McGovern, Diagne, Diagne, Luiselli, and Meylan (2021)
IUCN Red List: Vulnerable (VU A2bcd+4bcd) (Diagne et al. 2016); Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II (2017)
Synonymy:
Cryptopus senegalensis Duméril and Bibron 1835:504
Emyda senegalensis, Cyclanosteus senegalensis, Cyclanorbis senegalensis
Type locality: "Sénégal."
Type specimen: MNHN 4151, holotype, discussed Bour et al. (1995).
Cyclanorbis petersii Gray 1854a:135
Cyclanosteus petersii, Cycloderma petersii
Type locality: "West Africa, River Gambia" [The Gambia].
Type specimen: NHMUK 1947.3.6.23, holotype.
Cycloderma senegalense Duméril 1861a:168 (*nomen novum*)
Comment: Unjustified emendation for *senegalensis*.
Tetrathyra baikii Gray 1865a:205
Type locality: "West Africa, River Niger?" Restricted to "Niger River drainage in west Africa" by Webb (1975a:350).
Type specimen: NHMUK 1947.3.6.25 (formerly 1865.9.13.1), lectotype, designated by Webb (1975a:349).
Cyclanosteus senegalensis equilifera Gray 1865b:425
Type locality: "the Niger" [Niger River, West Africa].
Type specimen: NHMUK, holotype, not identified, figured (f.2) and in Gray (1870:f.38a), see Gray (1873i:87).
Cyclanosteus senegalensis normalis Gray 1865b:425
Type locality: "the Niger" [Niger River, West Africa].
Type specimen: NHMUK number?, holotype, not identified.
Cyclanosteus senegalensis callosa Gray 1865b:425
Type locality: "the Niger" [Niger River, West Africa].
Type specimen: NHMUK 1865.5.3.75, holotype, figured (f.1) and in Gray (1870:f.38), see Gray (1873i:87).
Tetrathyra vaillantii Rochebrune 1884:36
Type locality: "Sénégambie" [Senegal and The Gambia].
Type specimens: Not located, syntypes, two figured (pl.4,f.1-2).

Cycloderma Peters 1854

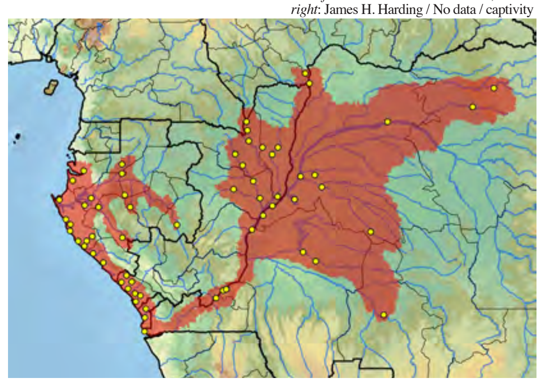
Cycloderma Peters 1854:216
Type species: *Cycloderma frenatum* Peters 1854, by original monotypy.
Heptathyra Cope 1860:294
Type species: *Heptathyra aubryi* [= *Cryptopodus aubryi* Duméril 1856], by original monotypy.
Aspidochelys Gray 1860a:6
Type species: *Aspidochelys livingstonii* Gray 1860a [= subjective synonym of *Cycloderma frenatum* Peters 1854], by original monotypy.

Cycloderma aubryi (Duméril 1856) (10:31)
Aubry's Flapshell Turtle


Olivier S.G. Pauwels / Gamba, Ogooué-Maritime Prov., Gabon



left: Laurent Chirio / Lambarene, Gabon
right: James H. Harding / No data / captivity



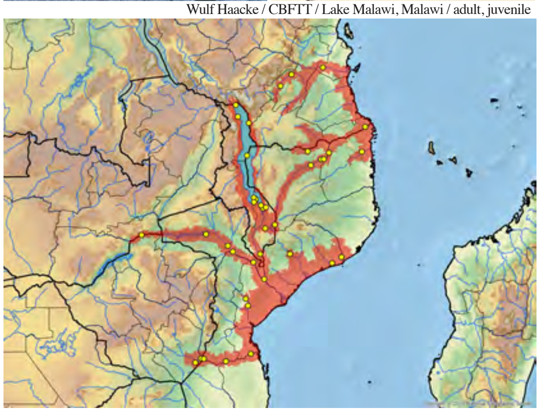
Distribution: Angola (Cabinda), Cameroon, Central African Republic, Congo (DRC), Congo (ROC), Gabon

Presumed Historic Indigenous Range: 799,752 sq. km
Size (Max SCL): male 40.0 cm, female 50.7 cm; Max CCL: male 46.6 cm, female 61.0 cm (Gramentz 1998; Maran 2006a; Gramentz 2008)
IUCN Red List: Vulnerable (VU A2bcd+4bcd) (Chirio et al. 2017); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II (2017)
Synonymy:
Cryptopodus aubryi Duméril 1856:374 (10:31)
Cryptopus aubryi, Cycloderma aubryi, Heptathyra aubryi
Type locality: "Gabon."
Type specimen: MNHN 8006, holotype, discussed by Bour et al. (1995) and Bour (2008d).

Cycloderma frenatum Peters 1854
Zambezi Flapshell Turtle

Martin Grimm / Rufiji R., Tanzania

Wulf Haacke / CBFTT / Lake Malawi, Malawi / adult, juvenile



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Distribution: Malawi, Mozambique, Tanzania, Zambia, Zimbabwe
Presumed Historic Indigenous Range: 334,128 sq. km
Size (Max SCL): male 46.5 cm, female 49.0 cm [estimated]; Max CCL: male 56.0 cm, female 58.9 cm (Gray 1860a; Peters 1882; Gramentz 2008; Broadley and Sachsse 2011 CBFTT)
CBFTT Account: Broadley and Sachsse (2011)
IUCN Red List: Endangered (EN A3d) (van Dijk 2016); Previously: Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II (2017)
Synonymy:
Cycloderma frenatum Peters 1854:216
Cyclanosteus frenatus, Heptathyra frenata
Type locality: "In fluminibus Zambeze et Licuare..[&]..Tette et Sena..[&]..terra Boror" [Mozambique]. Restricted to "Sambesi bei Tete" [Mozambique] by Fritz et al. (1994:169).
Type specimen: ZMB 4815, lectotype, designated by Fritz et al. (1994:169); Uetz et al. (2019) listed ZMB 47, 49–50, 4815, 8243, and 8432 as syntypes.
Aspidochelys livingstonii Gray 1860a:6
Heptathyra livingstonii
Type locality: "Mozambique in tributaries of River Zambesi?"
Type specimen: NHMUK 1947.3.4.16, holotype.

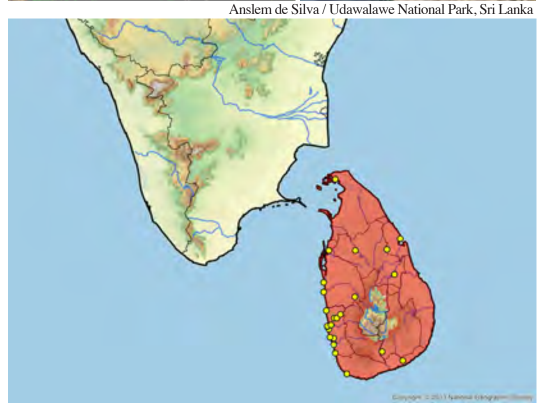
Lissemys Smith 1931 (11:14)

Emyda Gray 1830e:19 (10:7) (junior homonym, not = *Emyda* Rafinesque 1815 [= *Emys*])
Type species: *Emyda punctata* [= *Testudo punctata* Lacepède 1788 (*nomen suppressum*) = *Testudo punctata* Bonnaterre 1789], by original monotypy.
Lissemys Smith 1931:xxviii, 154 (*nomen novum*)
Type species: *Lissemys punctata* [= *Testudo punctata* Lacepède 1788 (*nomen suppressum*) = *Testudo punctata* Bonnaterre 1789], by original designation.

Lissemys ceylonensis (Gray 1856a) (11:14)
Sri Lankan Flapshell Turtle

Anslem de Silva / Udawalawe National Park, Sri Lanka

Anslem de Silva / Udawalawe National Park, Sri Lanka



Distribution: Sri Lanka
Presumed Historic Indigenous Range: 62,568 sq. km
Size (Max SCL): female 37.0 cm (Deraniyagala 1939; Webb 1982; Itescu et al. 2014)
IUCN Red List: Vulnerable (VU A2d) (Praschag et al. 2021)
CITES: Appendix II (1995), as part of *Lissemys punctata*

Synonymy:

Emyda ceylonensis Gray 1856a:201

Emyda granosa ceylonensis, Lissemys ceylonensis, Lissemys punctata ceylonensis

Type locality: “Ceylon” [Sri Lanka].

Type specimens: NHMUK 1854.3.21.18, 1947.3.4.17, syntypes (2); 1947.3.4.17 listed as “holotype” by Webb (1980).

Lissemys punctata sinhaleyus † Deraniyagala 1953:5

Type locality: “near Ratnapura...Ceylon” [Sri Lanka].

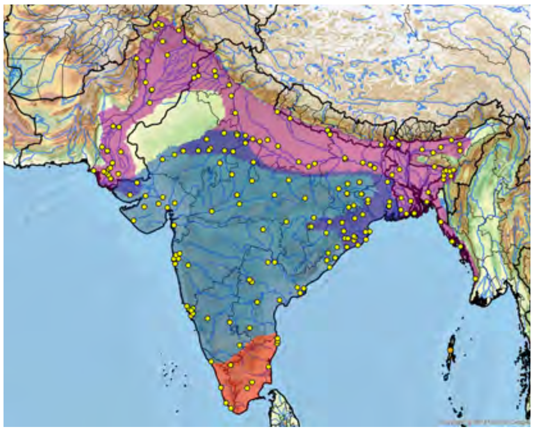
Type specimen: RNM F283, holotype, fossil, hypoplastron.

Geologic age: Late Pleistocene, Ratnapura Beds.

Lissemys punctata (Bonnaterre 1789) (09:44, 11:14) (**101**)

Indian Flapshell Turtle

(includes 3 subspecies)



*

(subspecies: *punctata* = red, *andersoni* = purple, *vittata* = blue; overlap = intergrades; orange dot = introduced *andersoni*)

Distribution: Bangladesh, India (Andhra Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Jammu, Jharkhand, Kerala, Madhya Pradesh, Odisha, Punjab, Tamil Nadu, Sikkim, Telangana, Uttarakhand, Uttar Pradesh, West Bengal), Myanmar, Nepal, Pakistan

Introduced: India (Andaman Islands)

Presumed Historic Indigenous Range: 3,126,265 sq. km

Size (Max SCL): male 23.0 cm, female 37.0 cm (see subspp.)

CBFTT Account: Bhupathy, Webb, and Praschag (2014)

IUCN Red List: Vulnerable (VU A2cd+4cd) (Rahman et al. 2021); Previously: Least Concern (LC) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)

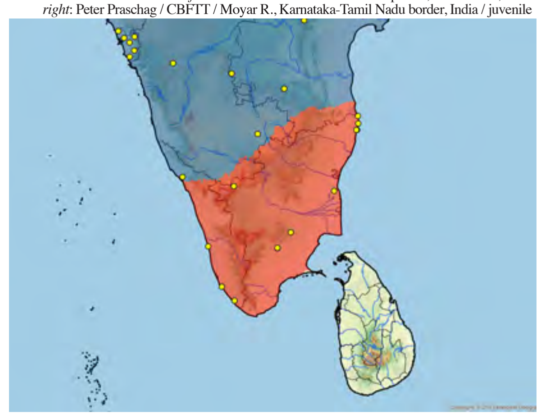
CITES: Appendix II (1995); Previously: Appendix I (1975)

Lissemys punctata punctata (Bonnaterre 1789) (11:14) (**101**)

Southern Indian Flapshell Turtle

Indraneil Das / CBFTT / Mamallapuram, Tamil Nadu, India

left: Indraneil Das / CBFTT / Mamallapuram, Tamil Nadu, India
right: Peter Praschag / CBFTT / Moyar R., Karnataka-Tamil Nadu border, India / juvenile



*

(subspecies: *punctata* = red, *vittata* = blue)

Distribution: India (Kerala, Tamil Nadu)

Presumed Historic Indigenous Range: 183,068 sq. km

Size (Max SCL): No data located; Mean CL (SCL or CCL?): female 18.2 cm (Premkishore and Chandran 1996)

Synonymy:

Testudo punctata Lacepède 1788:171, synopsis[table] (09:6) (*nomen suppressum*; senior homonym, not = *Testudo punctata* Schoepff 1792 (*nomen suppressum*) [= *Clemmys guttata*])

Type locality: “les grandes Indes” [India]. Restricted to “Pondicherry, South Arcot (district), Tamil Nadu (state), India” by Webb (1980a:552).

Type specimen: MNHN 7978, holotype, type specimen figured (pl. opp.171), discussed by Webb (1980a) and Bour et al. (1995).

Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).

Testudo punctata Bonnaterre 1789:30 (senior homonym, not = *Testudo punctata* Schoepff 1792 (*nomen suppressum*) [= *Clemmys guttata*])

Trionyx (Emyda) punctatus, Trionyx punctatus, Emyda punctata, Trionyx punctata, Lissemys punctata, Lissemys punctata punctata, Trionyx punctatus punctatus

Type locality: “les grandes Indes” [India]. Restricted to “Pondicherry, South Arcot (district), Tamil Nadu (state), India” by Webb (1980a:552).

Type specimen: MNHN 7978, holotype, discussed by Webb (1980a) and Bour et al. (1995).

Testudo sonnerati Meyer 1790:83 (09:8) (*nomen novum et oblitum*)

Comment: Unjustified replacement name for *punctata*.

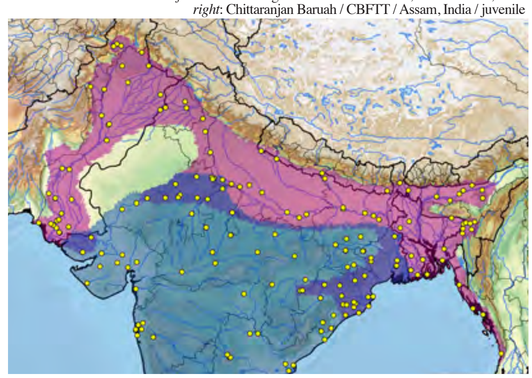
Testudo granulosa Suckow 1798:48 (*nomen novum*)
Comment: Unjustified replacement name for *punctata*.
Testudo scabra Latreille *in* Sonnini and Latreille 1801:164 (*nomen novum* and junior homonym, not = *Testudo scabra* Linnaeus 1758 [= *Rhinoclemmys punctularia punctularia*])
Comment: Unjustified replacement name for *punctata*.
Testudo granosa Schoepff 1801:127
Trionyx granosus, Cryptopus granosus, Emyda granosa, Emyda granosa granosa, Lissemys punctata granosa, Trionyx punctatus granosus
Type locality: "Coromandeliae" [India].
Type specimens: ZMB, syntypes (2), apparently lost (Webb 1980a).
Comment: Unjustified emendation of *granulosa*.
Testudo granulata Daudin 1801:81 (*nomen novum*)
Type locality: "les grandes Indes" [India]. Restricted to "Pondicherry, South Arcot (district), Tamil Nadu (state), India" by Webb (1980a:552).
Type specimen: MNHN 7978, holotype, by default, type specimen figured in Lacepède (1788:pl.opp.171) and Daudin (1801:pl.19,f.2), see Webb (1980a) and Bour et al. (1995).
Comment: Unjustified emendation of *granulosa*.
Trionyx coromandelicus Geoffroy Saint-Hilaire 1809a:364 (*nomen novum*)
Type locality: "La Côte de Coromandel" [India].
Type specimen: MNHN 7978, holotype, by default, discussed by Webb (1980a) and Bour et al. (1995).
Comment: Unjustified replacement name for *granosa* and *granulata*.
Emyda dura Buchanan-Hamilton *in* Anderson 1876:514 (*nomen nudum*)

Lissemys punctata andersoni Webb 1980a [(11:14)] [(**101**)]
Spotted Northern Indian Flapshell Turtle


Shailendra Singh / CBFTT / Ghaghra R., Uttar Pradesh, India



left: Shailendra Singh / CBFTT / Yamuna R., Uttar Pradesh, India
right: Chittaranjan Baruah / CBFTT / Assam, India / juvenile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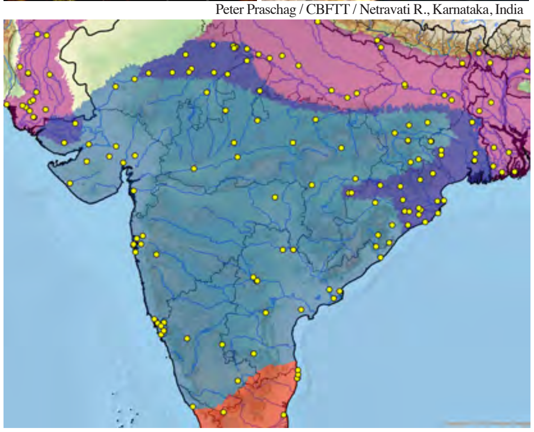
(subspecies: *andersoni* = purple, *vittata* = blue; overlap = intergrades)
Distribution: Bangladesh, India (Assam, Bihar, Chhattisgarh, Haryana, Jammu, Madhya Pradesh, Meghalaya, Rajasthan, Sikkim, Uttarakhand, Uttar Pradesh, West Bengal), Myanmar, Nepal, Pakistan
Introduced: India (Andaman Islands)
Presumed Historic Indigenous Range: 1,311,991 sq. km
Size (Max SCL): male 23.0 cm, female 37.0 cm (Yadava and Prasad 1982; Agarwal 1987; Baruah et al. 2012; Ceballos et al. 2013; Bhupathy et al. 2014 CBFTT)
Synonymy:
Lissemys punctata andersoni Webb 1980a:554
Lissemys andersoni
Type locality: "Belbari, Terai, southeastern Nepal, elevation 210 m."
Type specimen: MNHN 1977.1486, holotype; Bour et al. (1995) erroneously listed MNHN 1977.1986.

Lissemys punctata vittata (Peters 1854) (11:14) (**101**)
Central Indian Flapshell Turtle


Shailendra Singh / CBFTT / Mahanadi R., Odisha, India


Peter Praschag / CBFTT / Netravati R., Karnataka, India


*

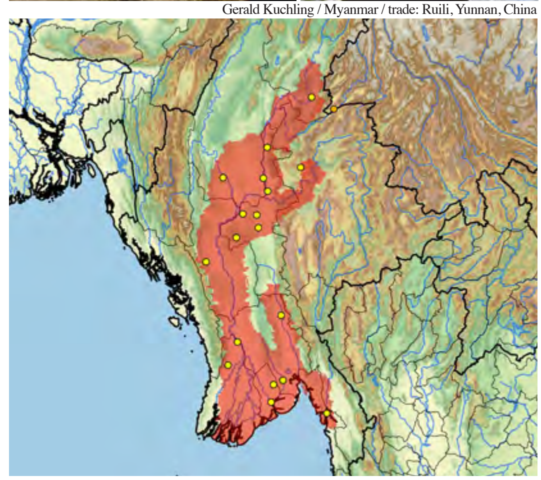
(subspecies: *punctata* = red, *andersoni* = purple, *vittata* = blue; overlap = intergrades)

Distribution: Bangladesh (?), India (Andhra Pradesh, Chhattisgarh?, Goa, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan), Pakistan (?)
Presumed Historic Indigenous Range: 1,903,820 sq. km
Size (Max SCL): No data located
Synonymy:
Emyda vittata Peters 1854:216
Emyda granosa vittata, *Lissemys punctata vittata*
Type locality: "India orientalis, Goa."
Type specimens: ZMB 46, 17772, syntypes (2), ZMB 46 erroneously listed as "holotype" by Webb (1980a), see Fritz et al. (1994).
Emyda granosa intermedia Annandale 1912a:171
Type locality: "Near Purulia, Manbhum Dist." [India].
Type specimens: ZSI 16764–65, syntypes (2), see Das et al. (1998), not located by Kundu et al. (2018a).

Lissemys scutata (Peters 1868) (11:14)
Burmese Flapshell Turtle


Gerald Kuchling / CRM 2 / Myanmar / trade: Ruili, Yunnan, China


Gerald Kuchling / Myanmar / trade: Ruili, Yunnan, China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(orange dot = probable trade)

Distribution: Myanmar
Presumed Historic Indigenous Range: 180,806 sq. km
Size (Max SCL): 25.0 cm (Platt et al. 2018)
IUCN Red List: Least Concern (LC) (Horne et al. 2021);
Previously: Data Deficient (DD) (ATTWG 2000); Data Deficient (DD) (TFTSG 1996)
CITES: Appendix II (1995)
Synonymy:
Emyda scutata Peters 1868:449
Emyda granosa scutata, *Lissemys punctata scutata*, *Trionyx punctatus scutatus*, *Lissemys scutata*
Type locality: "Pegú" [Myanmar].
Type specimen: ZMB 6029, holotype, see Fritz et al. (1994).
Emyda fuscomaculata Gray 1873c:308
Type locality: Not designated. Restricted to "Asia, Pegu?" [Myanmar] by Gray (1873j:89).
Type specimen: NHMUK 1946.1.22.4 (formerly 1868.4.3.138), holotype.

Trionychinae Gray 1825

Amydae Oppel 1811:9 (*partim*)
Trionyces Schmid 1819:18
Trionicidae Gray 1825:212
Trionychoidea Fitzinger 1826:5
Trionychinae Lydekker 1889:4

Amyda Schweigger *in* Geoffroy Saint-Hilaire 1809a

Amyda Schweigger *in* Geoffroy Saint-Hilaire 1809a:365
Type species: *Amyda javanica* Schweigger *in* Geoffroy Saint-Hilaire 1809a [= subjective synonym of *Testudo cartilaginea* Boddaert 1770], by original monotypy.
Amida Duméril and Bibron 1834:416 (*nomen novum*)
Potamochelys Fitzinger 1843:30
Type species: *Aspidonectes (Potamochelys) javanica* Wagler [= *Amyda javanica* Schweigger *in* Geoffroy Saint-Hilaire 1809a] [= subjective synonym of *Testudo cartilaginea* Boddaert 1770], by original monotypy.
Aspilus Gray 1864b:83 (junior homonym, not = *Aspilus* Schaum 1848 [= Coleoptera])
Type species: *Aspilus cariniferus* [= *Trionyx cariniferus* Gray 1856b] [= subjective synonym of *Testudo cartilaginea* Boddaert 1770], by original designation.
Ida Gray 1873h:55 (junior homonym, not = *Ida* Gray 1838 [= Sauria] or *Ida* Gray 1840 [= Gastropoda] or *Ida* Robineau-Desvoidy 1863 [= Diptera])
Type species: *Ida ornata* [= *Trionyx ornatus* Gray 1861a] [= subjective synonym of *Testudo cartilaginea* Boddaert 1770], by original monotypy.

Amyda cartilaginea (Boddaert 1770) (17:76)

Asiatic Softshell Turtle
(includes 2 subspecies and several taxonomically unspecified populations of *A. cartilaginea* sensu lato)


*

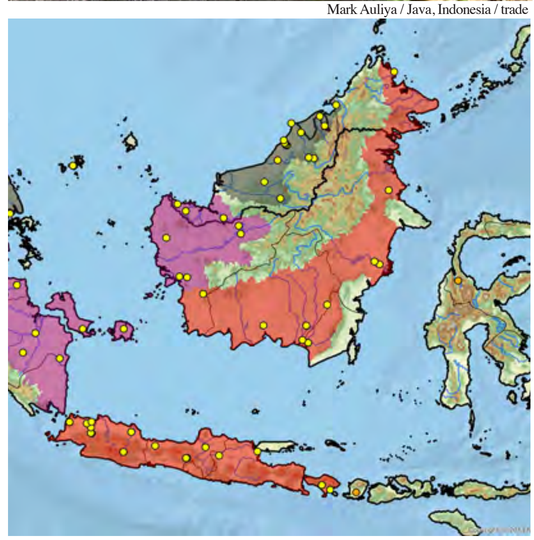
(subspecies: *cartilaginea* = red, *maculosa* = purple, taxonomically unspecified populations of *A. cartilaginea* sensu lato = gray, orange dots = probable trade)

Distribution: Brunei, Indonesia (Bali, Java, Kalimantan, Sumatra), Malaysia (East, West), Singapore, Thailand
Introduced or Trade: Indonesia (Lesser Sundas, Moluccas, Sulawesi)
Presumed Historic Indigenous Range: 1,059,398 sq. km
Size (Max SCL): male 75.0 cm (see subspp.)
CBFTT Account: Auliya, van Dijk, Moll, and Meylan (2016) [includes *Amyda ornata*]
IUCN Red List: Vulnerable (VU A1cd+2cd) (ATTWG 2000); Previously: Vulnerable (VU) (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) (2011)
CITES: Appendix II (2005)

Amyda cartilaginea cartilaginea (Boddaert 1770) (17:76)

South Sundas Softshell Turtle

Mark Auliya / Java, Indonesia / trade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(subspecies: *cartilaginea* = red, *maculosa* = purple, taxonomically unspecified populations of *A. cartilaginea* sensu lato = gray, orange dots = probable trade)

Distribution: Indonesia (Bali, Java, Kalimantan), Malaysia (East)
Introduced or Trade: Indonesia (Lesser Sundas [Lombok]), Moluccas [Ambon, Seram]), Sulawesi)
Presumed Historic Indigenous Range: 418,241 sq. km
Size (Max SCL): male 71.0 cm [estimated]; Max CCL: male 80.0 cm (Kusrini et al. 2009; Auliya et al. 2016 CBFTT)
Synonymy:
Testudo cartilaginea Boddaert 1770:1
Gymnopus cartilaginea, Trionyx cartilagineus, Aspidonectes cartilagineus, Potamochelys cartilagineus, Amyda cartilaginea, Amyda cartilaginea cartilaginea
Type locality: Not known. Restricted to "Java" [Indonesia] by Baur (1893a:220).
Type specimen: MNHN 4150, holotype, discussed by Bour et al. (1995) and Bour (2007c).
Testudo membranacea Blumenbach 1779:257 (*nomen dubium*)
Type locality: "Guiana" [Guyana, in error].
Type specimen: Originally ZMUG, now possibly ZFMK, apparently lost, type specimen figured in Schneider (1783:pl.1), see Wermuth (1956).
Testudo boddaerti Schneider 1787:12 (*nomen novum*)
Trionyx boddaerti, Testudo boddarti, Testudo bodderti
Comment: Unjustified replacement name for *cartilaginea*, see Wermuth (1956).
Testudo striata Suckow 1798:37 (*partim*, *nomen novum*)
Comment: Unjustified replacement name for *cartilaginea*.

Trionyx javanicus Schweigger *in* Geoffroy Saint-Hilaire 1809a:365 (senior homonym, not = *Trionyx javanicus* Gray 1830e [= *Nilssonia gangetica* or *Nilssonia leithii*])
Amyda javanica, Trionyx iavanicus, Tyrse javanica, Aspidonectes javanicus, Trionyx stellatus javanica, Aspilus javanicus, Potamochelys javanicus
Type locality: "Java et les îles voisines" [Indonesia].
Type specimen: MNHN 9380, lectotype, designated by Bour et al. (1995:77), see Bour (2007c) and Ceríaco and Bour (2012).

Trionyx stellatus Geoffroy Saint-Hilaire 1809a:365 (*nomen novum*)
Potamochelys stellatus
Type specimen: MNHN 4150, holotype, discussed by Bour et al. (1995).
Comment: Unjustified replacement name for *cartilaginea*.

Trionyx cariniferus Gray 1856b:67
Aspilus cariniferus, Trionyx carinifera
Type locality: "Moluccas" [Indonesia].
Type specimen: NHMUK 1946.1.22.95, holotype.

Aspilus punctulatus Gray 1864b:84
Type locality: "Amboina or Ceram" [Indonesia].
Type specimens: NHMUK 1855.3.24.1 (3 specimens), syntypes (3).

Trionyx jeudi Gray 1869a:217
Type locality: "Java?" [Indonesia].
Type specimen: NHMUK 1947.3.6.11 (formerly 1867.4.2.177), holotype.

Testudo alba Boddaert *in* Gray 1873j:85 (*nomen nudum*)

Trionyx trinilensis † Jaekel 1911:78
Type locality: "Pithecanthropus-schichten...Java...Trinil" [Indonesia].
Type specimens: ZMB (MNB s/n or MB s/n), syntypes (2), fossil, plastral bones, figured (pl.15,f.12-13), see Karl (1987).
Geologic age: Pleistocene, Trinil Beds.

Trionyx nakornsrithammarajensis Nutaphand 1979:209 (nomen dubium)
Amyda nakornsrithammarajensis
Type locality: "Southern Thailand (Nakorn Sri Thammaraj Province)."
Type specimen: Not located, type specimen figured (f.139-140).
Comment: Unclear whether this described taxon is distinct or not, but it appears phenotypically closer to *A. c. cartilaginea* than to *A. c. maculosa* or *A. ornata*, and for now we consider it a taxonomically unspecified population of *A. cartilaginea* sensu lato.

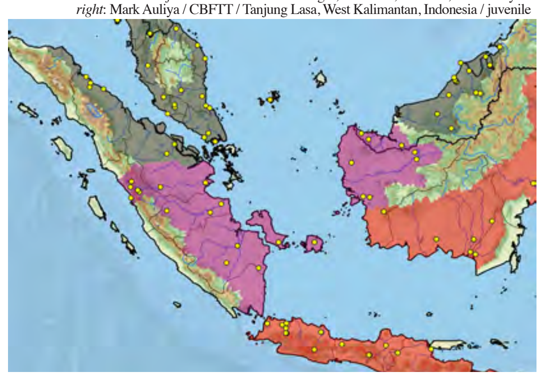
Trionyx cartilageneus nakorn Nutaphand 1990:[8] (*nomen invalidum*)
Trionyx cartilagineus nakorn, Amyda cartilaginea nakorn
Comment: Unjustified emendation for *nakornsrithammarajensis*.

Amyda cartilaginea maculosa Fritz, Gemel, Kehlmaier, Vamberger, and Praschag 2014a [17:76]
North Sundas Softshell Turtle


Mark Auliya / CBFTT / Anjungan, West Kalimantan, Indonesia



left: Indraneil Das / Balai Ringin, nr. Serian, Sarawak, East Malaysia
right: Mark Auliya / CBFTT / Tanjung Lasa, West Kalimantan, Indonesia / juvenile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(subspecies: *cartilaginea* = red, *maculosa* = purple, taxonomically unspecified populations of *A. cartilaginea* sensu lato = gray)

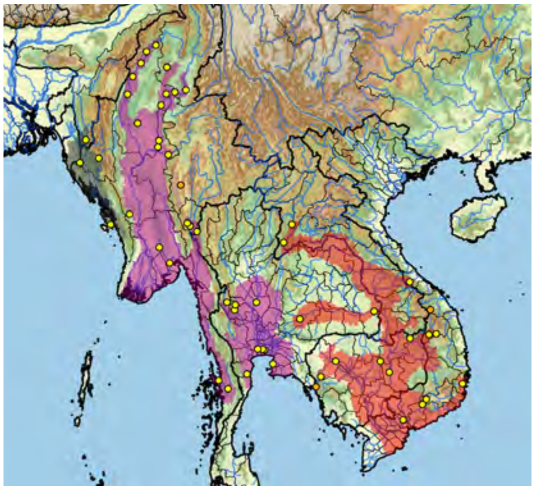
Distribution: Brunei (?), Indonesia (Kalimantan, Sumatra), Malaysia (East, West?), Thailand (?)
Presumed Historic Indigenous Range: 331,403 sq. km
Size (Max SCL): male 75.0 cm [estimated]; Max CCL: male 85.0 cm (Mardiastuti 2008; Auliya et al. 2016 CBFTT)
Synonymy:

Amyda cartilaginea maculosa Fritz, Gemel, Kehlmaier, Vamberger, and Praschag 2014a:240
Type locality: "Nanga Badau, Kalimantan, Indonesia ("Nanga Bandang, Borneo")."
Type specimen: NMW 30204:3, holotype, see Gemel et al. (2019).

Amyda ornata (Gray 1861a) (17:76)

Southeast Asian Softshell Turtle

(includes 2 subspecies and a taxonomically unspecified population of *A. ornata* sensu lato)



*

(subspecies: *ornata* = red, *phayrei* = purple, taxonomically unspecified population of *A. ornata* sensu lato = gray, orange dots = possible trade)

Distribution: Bangladesh, Cambodia, India (Mizoram), Laos, Myanmar, Thailand, Vietnam

Introduced: Indonesia (Lesser Sundas, Sulawesi)

Presumed Historic Indigenous Range: 684,596 sq. km

Size (Max SCL): male 65.0 cm, female 54.0 cm (see subspp.)

CBFTT Account: Auliya, van Dijk, Moll, and Meylan (2016) [as part of *Amyda cartilaginea*]

IUCN Red List: Vulnerable (VU A1cd+2cd) (ATTWG 2000), as part of *Amyda cartilaginea*; Previously: Vulnerable (VU) (TFTSG 1996), as part of *A. cartilaginea*

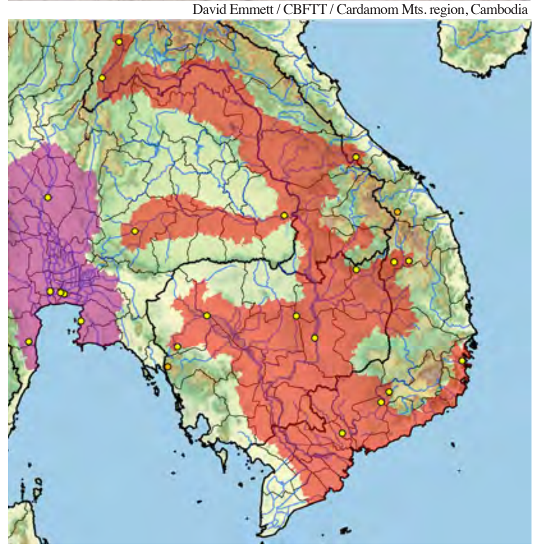
TFTSG Provisional Red List: Vulnerable (VU) (2015)

CITES: Appendix II (2005), as part of *A. cartilaginea*

Amyda ornata ornata (Gray 1861) (17:76)

Indochinese Softshell Turtle

David Emmett / CBFTT / Cardamom Mts. region, Cambodia



*

(subspecies: *ornata* = red, *phayrei* = purple; orange dots = possible trade)

Distribution: Cambodia, Laos, Thailand, Vietnam

Presumed Historic Indigenous Range: 302,408 sq. km

Size (Max SCL): No data located

Synonymy:

Trionyx ornatus Gray 1861a:41

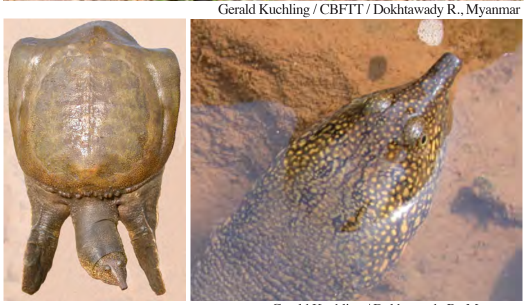
Aspilus ornatus, Ida ornata, Amyda ornata, Amyda ornata ornata, Amyda cartilaginea ornata

Type locality: "Camboja" [Cambodia].

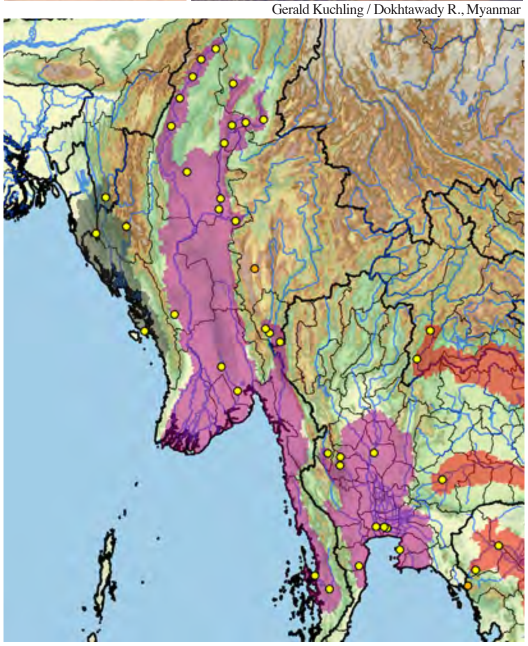
Type specimen: NHMUK 1946.1.22.6–7, parts of one specimen (formerly 1860.11.14.1), holotype.

Amyda ornata phayrei (Theobald 1868b) (17:76)
Burmese Softshell Turtle

Gerald Kuchling / CBFTT / Dokhtawady R., Myanmar



Gerald Kuchling / Dokhtawady R., Myanmar



*

(subspecies: *ornata* = red, *phayrei* = purple, taxonomically unspecified population of *A. ornata* sensu lato = gray, orange dots = possible trade)

Distribution: Bangladesh (?), India (?) (Mizoram), Myanmar, Thailand
Presumed Historic Indigenous Range: 339,379 sq. km
Size (Max SCL): male 65.0 cm, female 54.0 cm [both estimated]; Max CCL: male 73.0 cm, female 61.0 cm (Kitana 1997)
Synonymy:
Trionyx phayrei Theobald 1868b:18
Aspidonectes phayrei, Amyda ornata phayrei, Amyda cartilaginea ornata
Type locality: "montium Arakanensium, prope Bassein" [Arakan Hills, Bassein, Myanmar].
Type specimen: NHMUK 1868.5.18.2 (skull) and 1887.8.6.1 (shell), holotype.
Trionyx ephippium Theobald 1875:177
Type locality: "Tenasserim" [Myanmar].
Type specimen: NHMUK 1946.1.22.8 (formerly 1881.7.8.8–9), holotype.
Trionyx phayrii Boulenger 1889:ix (*nomen novum*)
Amyda phayrii
Comment: Unjustified emendation or error for *phayrei*.

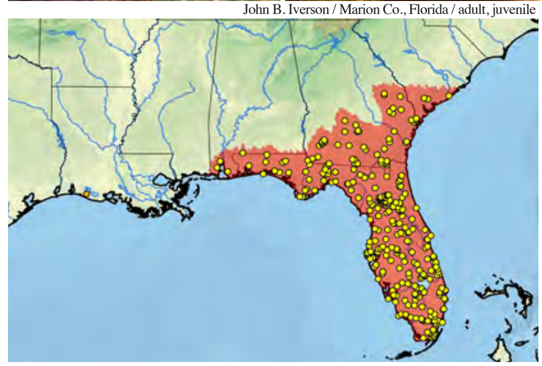
Apalone Rafinesque 1832

Aplaxia Rafinesque 1817:166 (*nomen oblitum*)
Type species: *Aplaxia nasica* Rafinesque 1817 (*nomen nudum*) [= *Trionyx nasica* Rafinesque 1822 (*nomen suppressum*] [= subjective synonym of *Trionyx spiniferus* LeSueur 1827], by original monotypy.
Apalone Rafinesque 1832:64
Type species: *Apalone hudsonica* Rafinesque 1832 [= subjective synonym of *Trionyx spiniferus* LeSueur 1827], by original monotypy.
Mesodeca Rafinesque 1832:64
Type species: *Mesodeca bartrami* [= *Testudo bartrami* Daudin 1801] [= subjective synonym of *Testudo ferox* Schneider 1783], by original monotypy.
Platypeltis Fitzinger 1835:109
Type species: *Platypeltis ferox* Fitzinger [= *Testudo ferox* Schneider 1783], by subsequent designation by Fitzinger (1843:30). Genus established as *Trionyx (Platypeltis)* without a type species.
Callinia Gray 1869a:221
Type species: *Callinia spinifera* [= *Trionyx spiniferus* LeSueur 1827], by subsequent designation by Stejneger (1907:514).
Euamyda Stejneger 1944:7
Type species: *Euamyda mutica* [= *Trionyx muticus* LeSueur 1827], by original monotypy.

Apalone ferox (Schneider 1783)
Florida Softshell Turtle

Matthew Aresco / CRM 3 / Leon Co., Florida

John B. Iverson / Marion Co., Florida / adult, juvenile



(orange dot = introduced)

Distribution: USA (Alabama, Florida, Georgia, South Carolina)

Presumed Historic Indigenous Range: 234,380 sq. km
Size (Max SCL): male 32.4 cm, female 67.3 cm; Max CCL: female 73.8 cm (Pritchard 2001; Ernst and Lovich 2009)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix III (USA) (2016)
Synonymy:
Testudo ferox Schneider 1783:330
Emydes ferox, Trionyx ferox, Amyda ferox, Aspidonectes ferox, Platypeltis ferox, Amyda ferox ferox, Trionyx ferox ferox, Apalone ferox
Type locality: "Savannach und Alatama..&..Ost-Florida" [Savannah and Altamaha [Georgia] and East Florida] [USA]. Restricted to "Savannah river, Ga." [Georgia, USA] by Baur (1893a:220), to "East Florida" [USA] by Neill (1951:17), and to "Savannah River (at Savannah), Georgia" [USA] by Schwartz (1956b:8).
Type specimen: NHMUK 1947.3.6.17 (formerly 53a), holotype, figured in Pennant (1771:pl.10,f.1-3), see Boulenger (1889) and Stejneger (1944).
Testudo mollis Lacepède 1788:137, synopsis[table] (09:6) (*nomen suppressum*)
Type locality: "sud de la Caroline, rivières de Savannah & d'Alatamaha..&..la Floride orientale" [USA].
Type specimen: Possibly MNHN, not located, type specimen figured (pl.opp.137).
Comment: Name suppressed by ICZN (2005a) as published in a rejected and invalid non-binomial work, see Savage (2003).
Testudo mollis Bonnaterre 1789:25
Type locality: "rivières de Savannah, d'Alatamaha, de la Floride, & de la Caroline méridionale" [USA].
Type specimen: Possibly MNHN, not located, type specimen figured in Lacepède (1788:pl.opp.137).
Testudo (ferox) verrucosa Schoepff 1795:90 (senior homonym, not = *Testudo verrucosa* Suckow 1798 [= *Rhinoclemmys punctularia punctularia*])
Testudo verrucosa, Trionyx verrucosus
Type locality: "Floridae Orientalis" [USA]. Restricted to "Halfway Pond...between...Palatka and Gainesville, Fla...somewhere in southwestern Putnam County" [Florida, USA] by Harper (1940:717) by restriction of *nomen novum* replacement name *Testudo bartrami* Daudin 1801.
Type specimen: Not located, type specimen figured in Bartram (1791:pl.4-5).
Testudo bartrami Daudin 1801:74 (*nomen novum*)
Chelys bartrami, Trionyx bartrami, Mesodeca bartrami
Type locality: "la Floride orientale" [Florida, USA]. Restricted to "Halfway Pond...between...Palatka and Gainesville, Fla...somewhere in southwestern Putnam County" [Florida, USA] by Harper (1940:717).
Type specimen: Not located, type specimen figured in Bartram (1791:pl.4-5).
Comment: Unjustified replacement name for *verrucosa*.
Trionyx carinatus Geoffroy Saint-Hilaire 1809a:365
Aspidonectes carinatus
Type locality: Not known. Restricted to "Savannah River, Georgia" [USA] by Schmidt (1953:108).
Type specimen: MNHN, holotype, apparently lost, see Stejneger (1944) and Bour et al. (1995).
Trionyx georgianus Geoffroy Saint-Hilaire 1809a:367 (*nomen novum*)
Type locality: "Les fleuves de la Géorgie et de la Caroline" [USA], but should be the same as for *ferox* by default, which was restricted to "Savannah River (at Savannah), Georgia" [USA] by Schwartz (1956b:8).
Comment: Unjustified replacement name for *ferox*.
Trionyx georgicus Geoffroy Saint-Hilaire 1809b:17 (*nomen novum*)
Type locality: "Les fleuves de la Géorgie et de la Caroline" [USA]. Restricted to "Savannah River, Georgia" [USA] by Schmidt (1953:109).
Comment: Unjustified emendation of *georgianus*.
Trionyx brongniarti Schweigger 1812:288 (*nomen novum*)
Testudo brongniarti, Platypeltis brongniarti
Type locality: Not known. Should be the same as for *carinatus* by default, which was restricted to "Savannah River, Georgia" [USA] by Schmidt (1953:108), but *brongniarti* instead incorrectly restricted to "St. John's River, Florida" [USA] by Schmidt (1953:109).
Type specimen: MNHN, holotype, same as *carinatus* by default, apparently lost, see Stejneger (1944) and Bour et al. (1995).
Comment: Unjustified replacement name for *carinatus*.
Trionyx harlani Bell *in* Harlan 1835:159
Type locality: "East Florida" [USA].
Type specimen: Not located, possibly originally in OUM, but also possibly a replacement name for *bartrami*.

Apalone mutica (LeSueur 1827)
Smooth Softshell Turtle
(includes 2 subspecies)


*
(subspecies: *mutica* = red, *calvata* = purple)

Distribution: USA (Alabama, Arkansas, Florida, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania [extirpated], South Dakota, Tennessee, Texas, West Virginia, Wisconsin)
Presumed Historic Indigenous Range: 660,220 sq. km
Size (Max SCL): male 26.6 cm, female 35.6 cm (see subspp.)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix III (USA) (2016)

Apalone mutica mutica (LeSueur 1827)
Midland Smooth Softshell Turtle

Peter V. Lindeman / Scioto R., Pike Co., Ohio

John L. Carr / Ouachita Parish, Louisiana

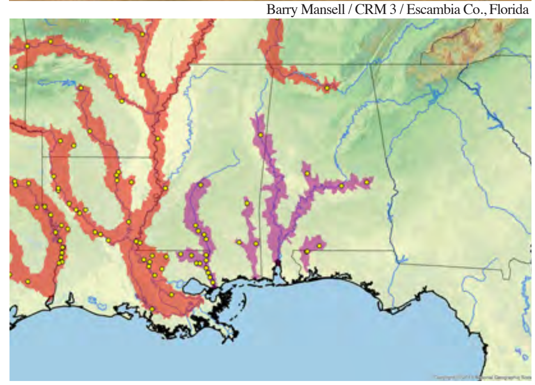
*

(subspecies: *mutica* = red, *calvata* = purple)

Distribution: USA (Alabama, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania [extirpated], South Dakota, Tennessee, Texas, West Virginia, Wisconsin)
Presumed Historic Indigenous Range: 623,570 sq. km
Size (Max SCL): male 26.6 cm, female 35.6 cm (Barko and Briggler 2006; Ernst and Lovich 2009)
Synonymy:
Trionyx pusilla Rafinesque 1822:3 (*nomen suppressum*)
Type locality: "United States" [USA].
Type specimen: Not known or located.
Comment: Name suppressed by ICZN (1984) as published in a rejected and invalid work, see Smith et al. (1980a).
Trionyx muticus LeSueur 1827:263
Aspidonectes muticus, Gymnopus muticus, Amyda mutica, Euamyda mutica, Trionyx muticus, Trionyx muticus muticus, Apalone mutica, Apalone muticus, Apalone mutica mutica
Type locality: "Newharmony, sur le Wabash, à peu de distance de son embouchure dans l'Ohio...l'Etat de l'Indiana" [USA].
Type specimen: MNHN 8813, lectotype, designated by Stejneger (1944:14) and Webb (1962:534), see also Bour et al. (1995) and Bour (2010).
Potamochelys microcephalus Gray 1864b:87
Callinia microcephala, Potamochelys microcephala
Type locality: "Sarawak" [Malaysia, in error]. Emended to "___?" [not known] by Boulenger (1889:262); restricted to "New Harmony, Indiana" [USA] by Schmidt (1953:110).
Type specimen: NHMUK 1947.3.6.22 (formerly 1856.9.19.22), holotype.

Apalone mutica calvata (Webb 1959) (17:77)
Gulf Coast Smooth Softshell Turtle

Barry Mansell / CRM 3 / Escambia Co., Florida

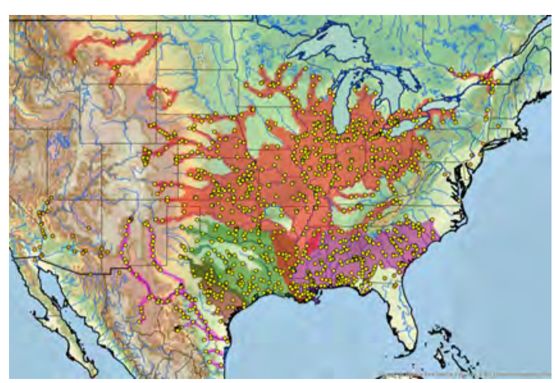


*

(subspecies: *mutica* = red, *calvata* = purple)

Distribution: USA (Alabama, Florida, Louisiana, Mississippi)
Presumed Historic Indigenous Range: 36,650 sq. km
Size (Max SCL): male 18.0 cm, female 28.7 cm (Mount 1975; Moler 2006a; Krysko et al. 2019)
Synonymy:
Trionyx muticus calvatus Webb 1959:519
Apalone mutica calvata, Apalone calvata
Type locality: "Pearl River, Roses Bluff, 14 miles northeast Jackson, Rankin County, Mississippi" [USA].
Type specimen: UIMNH 31071, holotype.

Apalone spinifera (LeSueur 1827) (12:37)
Spiny Softshell Turtle
(includes 6 subspecies)



*

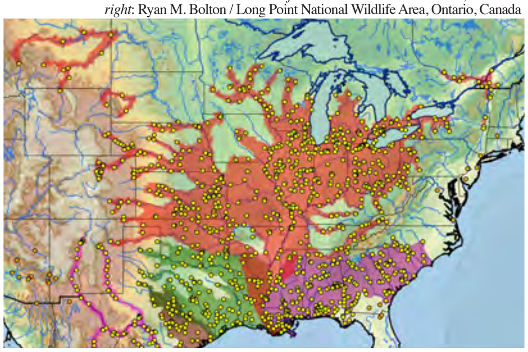
(subspecies: *spinifera* = red, *aspera* = purple, *atra* = blue, *emoryi* = pink, *guadalupensis* = brown, *pallida* = green; overlap = intergrades; orange dots = probable introduced)

Distribution: Canada (Ontario, Québec), Mexico (Chihuahua, Coahuila, Nuevo Leon, Tamaulipas), USA (Alabama, Arkansas, Colorado, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, Wyoming)
Introduced: Mexico (Sonora, Chihuahua); USA (Arizona, California, Hawaii, Massachusetts, Nevada, New Jersey, New York, Pennsylvania, Utah, Virginia)
Presumed Historic Indigenous Range: 2,741,831 sq. km
Size (Max SCL): male 27.5 cm, female 54.0 cm (see subspp.)
IUCN Red List: Least Concern (LC) (van Dijk 2011); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix III (USA) (2016)

Apalone spinifera spinifera (LeSueur 1827) (08:22)
Northern Spiny Softshell Turtle

John B. Iverson / Muscatine, Muscatine Co., Iowa / female

left: John B. Iverson / Buffalo Co., Nebraska
right: Ryan M. Bolton / Long Point National Wildlife Area, Ontario, Canada



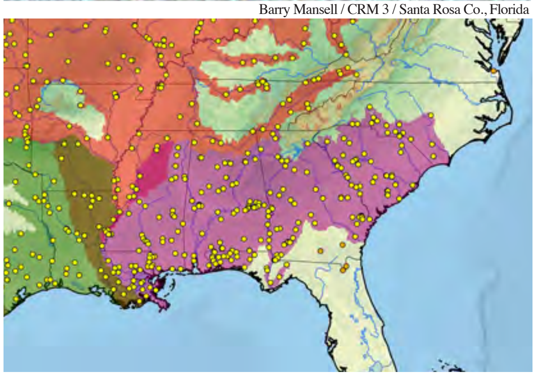
*

(subspecies: *spinifera* = red, *aspera* = purple, *emoryi* = pink, *guadalupensis* = brown, *pallida* = green; overlap = intergrades; orange dots = probable introduced)

Distribution: Canada (Ontario, Québec), USA (Alabama, Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, Wyoming)
Presumed Historic Indigenous Range: 1,706,333 sq. km
Size (Max SCL): male 27.5 cm, female 54.0 cm (Halk 1986; Barko and Briggler 2006)
Synonymy:
Aplaxia nasica Rafinesque 1817:166 (*nomen nudum*)
Trionyx ohiensis Rafinesque 1818:354 (*nomen oblitum*) (7)
Type locality: "the Ohio" [Ohio River, USA]
Type specimen: Not located, type specimen figured in manuscript drawing by Rafinesque in 1818, reproduced by Bell and Bauer (2020:f.7).
Trionyx nasica Rafinesque 1822:3 (*nomen suppressum*)
Type locality: "western streams...United States" [USA].
Type specimen: Not known or located.
Comment: Name suppressed by ICZN (1984) as published in a rejected and invalid work, see Smith et al. (1980a).
Trionyx spiniferus LeSueur 1827:258
Gymnopus spiniferus, Gymnopodus spiniferus, Aspidonectes spinifer, Gymnopus spinifer, Trionyx spinifer, Callinia spicifera, Callinia spinifera, Platypeltis spinifer, Tyrse spinifera, Amyda spinifera, Platypeltis spinifera, Amyda spinifer, Amyda spinifera spinifera, Trionyx spinifera, Trionyx spinifera spinifera, Amyda ferox spinifera, Trionyx ferox spinifera, Trionyx spinifer spinifer, Trionyx spiniferus spiniferus, Apalone spinifera, Apalone spiniferus, Apalone spinifera spinifera
Type locality: "Newharmony, sur le Wabash, à peu de distance de son embouchure dans l'Ohio...l'Etat de l'Indiana" [USA].
Type specimen: MNHN 8808, lectotype, designated by Webb (1962:491), discussed by Bour et al. (1995) and Bour (2010).
Trionyx ocellatus LeSueur 1827:261 (senior homonym, not = *Trionyx ocellatus* Gray 1832a [= *Nilssonia hurum*])
Type locality: "Newharmony, sur le Wabash, à peu de distance de son embouchure dans l'Ohio...l'Etat de l'Indiana" [USA].
Type specimen: MNHN 6957, lectotype, designated by Webb (1962:491), discussed by Bour et al. (1995) and Bour (2010).
Apalone hudsonica Rafinesque 1832:64
Type locality: "River Hudson between the falls of Hadley, Glen and Baker, and further up to the source" [USA]. Restricted to "Hudson River, near Baker's Falls, Saratoga County, New York" [USA] by Webb (1962:491).
Type specimen: Not known or located, see Webb (1973).
Trionyx annulifer Wied-Neuwied 1839:140 (*nomen novum*)
Comment: Unjustified replacement name for *ocellatus*.
Tyrse argus Gray 1844:48
Trionyx argus
Type locality: "West Africa, Sierra Leone?" [in error]. Emended to "___?" [not known] by Boulenger (1889:260); restricted to "New Harmony, Indiana" [USA] by Schmidt (1953:110).
Type specimen: NHMUK 1947.3.6.18 (formerly 1843.9.6.12), holotype.
Trionyx annulatus Gray 1856b:69 (*nomen novum*)
Comment: Unjustified replacement name or error for *annulifer*.
Aspidonectes nuchalis Agassiz 1857a:402,406
Platypeltis nuchalis
Type locality: "Cumberland River..[&]..head waters of the Tennessee River" [USA]. Restricted to "Cumberland River near Nashville, Tennessee" [USA] by Schmidt (1953:110).
Type specimen: MCZ 1623, lectotype, designated by Webb (1962:492), see also Barbour and Loveridge (1929) and Stejneger (1944).
Gymnopus olivaceus Wied-Neuwied 1865:55 (*nomen novum*)
Comment: Unjustified replacement name for *ocellatus*.
Amyda spinifera hartwegi Conant and Goin 1948:1 (08:22)
Amyda ferox hartwegi, Trionyx ferox hartwegi, Trionyx spinifer hartwegi, Trionyx spiniferus hartwegi, Apalone spinifera hartwegi
Type locality: "Wichita, Sedgwick County, Kansas" [USA].
Type specimen: UMMZ 95365, holotype.

Apalone spinifera aspera (Agassiz 1857a)
Gulf Coast Spiny Softshell Turtle

Barry Mansell / CRM 3 / Santa Rosa Co., Florida



*

(subspecies: *spinifera* = red, *aspera* = purple, *pallida* = green; overlap = intergrades; orange dots = probable introduced)

Distribution: USA (Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina)

Presumed Historic Indigenous Range: 475,031 sq. km

Size (Max SCL): male 20.3 cm, female 45.4 cm (Stejneger 1944; Moler 2006b)

Synonymy:

Aspidonectes asper Agassiz 1857a:402,405

Platypeltis asper, Amyda spinifera aspera, Amyda ferox aspera, Trionyx ferox aspera, Trionyx spinifer asper, Trionyx spiniferus asper, Trionyx spiniferus asperus, Apalone spinifera asper, Apalone spinifera aspera

Type locality: "Mississippi" [USA]. Restricted to "Lake Concordia, La." [Louisiana, USA] by Baur (1893:220) and Schmidt (1953:109); and to "Pearl River at Columbus, Marion County, Mississippi" [USA] by Webb (1960:7).

Type specimen: MCZ 1597, lectotype, designated by Webb (1960:6), see also Reynolds et al. (2007); Uetz et al. (2019) erroneously listed MCZ 37172 as the holotype, but that specimen is a syntype of *Platypeltis agassizii* Baur 1888c.

Platypeltis agassizii Baur 1888c:1122

Trionyx agassizii, Pelodiscus agassizii, Aspidonectes agassizii, Trionyx spiniferus agassizii, Amyda agassizii, Amyda ferox agassizii, Trionyx ferox agassizii

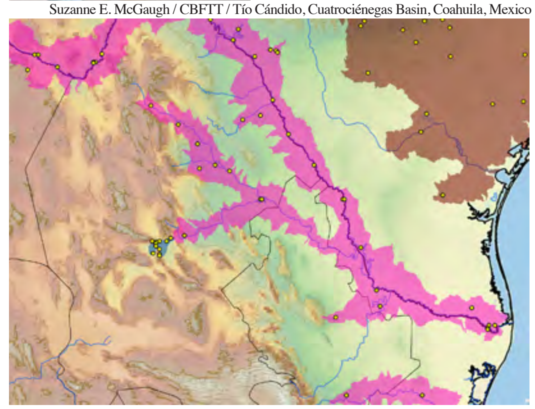
Type locality: Not designated. Restricted to "Savannah, Savannah River" [Georgia, USA] by Schwartz (1956b:17).

Type specimen: MCZ 37172, holotype, see Stejneger (1944), discussed also by Cochran (1961) and Reynolds et al. (2007).

Apalone spinifera atra (Webb and Legler 1960) (07:79, 08:23, 12:37)
Black Spiny Softshell Turtle, Cuatro Cienegas Softshell

Suzanne E. McGaugh / CBFTT / Tío Cándido, Cuatrociénegas Basin, Coahuila, Mexico

Suzanne E. McGaugh / CBFTT / Tío Cándido, Cuatrociénegas Basin, Coahuila, Mexico



*

(subspecies: *atra* = blue, *emoryi* = pink, *guadalupensis* = brown)

Distribution: Mexico (Coahuila)

Presumed Historic Indigenous Range: 535 sq. km

Size (Max SCL): male 24.7 cm, female 29.4 cm (Cerdá-Ardura et al. 2008 CBFTT; Legler and Vogt 2013)

CBFTT Account: Cerdá-Ardura, Soberón-Mobarak, McGaugh, and Vogt (2008)

IUCN Red List: Critically Endangered (CR A1ace+2c) (TFTSG 1996), originally listed as *Apalone ater*

CITES: Appendix I (1975)

Synonymy:

Trionyx ater Webb and Legler 1960:21

Trionyx spinifer ater, Trionyx spiniferus ater, Apalone spinifera ater, Apalone ater, Apalone spiniferus ater, Apalone spinifera atra, Apalone (Apalone) atra, Apalone atra

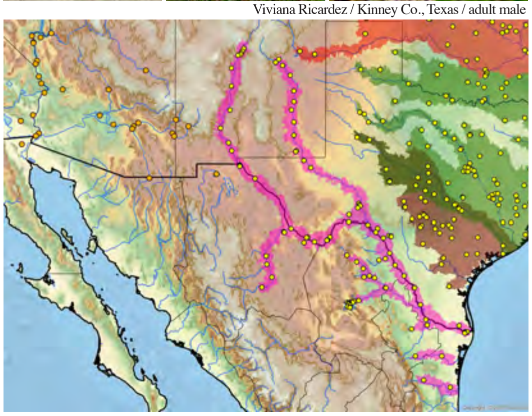
Type locality: "16 kilometers south of Cuatro Ciénegas, Coahuila... Mexico." Emended to "Poza del Tío Cándido, 16 km southwest of Cuatrociénegas de Carranza, central Coahuila, México" by Cerdá-Ardura et al. (2008:2).

Type specimen: KU 46903, holotype, see Duellman and Berg (1962).

Apalone spinifera emoryi (Agassiz 1857a) (12:37)
Texas Spiny Softshell Turtle


Vincenzo Ferri / Texas / captivity / juvenile


Viviana Ricardez / Kinney Co., Texas / adult male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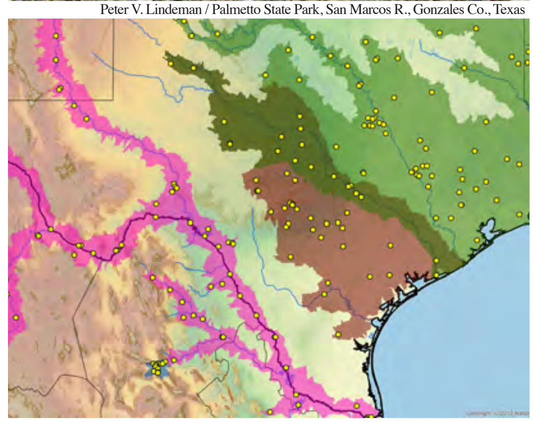
(subspecies: *spinifera* = red, *atra* = blue, *emoryi* = pink, *guadalupensis* = brown, *pallida* = green; overlap = intergrades; orange dots = probable introduced)

Distribution: Mexico (Chihuahua, Coahuila, Nuevo Leon, Tamaulipas), USA (Texas)
Presumed Historic Indigenous Range: 151,396 sq. km
Size (Max SCL): male 27.3 cm, female 45.0 cm (Legler and Vogt 2013; Brown et al. 2020; Franklin, unpubl. data); male recorded to 36.1 cm (Degenhardt et al. 1996), but likely a misidentified female
Synonymy:
Aspidonectes emoryi Agassiz 1857a:392,407
Trionyx emoryi, Platypeltis emoryi, Amyda emoryi, Amyda ferox emoryi, Trionyx ferox emoryi, Trionyx spinifer emoryi, Trionyx spinifera emoryi, Trionyx spiniferus emoryi, Apalone spinifera emoryi
Type locality: "lower Rio Grande of Texas, near Brownsville" [USA].
Type specimen: USNM 7855, lectotype, designated by Webb (1962:514), see also Cochran (1961) and Reynolds et al. (2007).
Aspidonectes emyda Gray 1870c:95 (*nomen novum*)
Comment: Unjustified replacement name or error for *emoryi*.
Aspidonectes georgii Gray 1870c:109 (*nomen novum*)
Comment: Unjustified replacement name or error for *emoryi*.

Apalone spinifera guadalupensis (Webb 1962)
Guadalupe Spiny Softshell Turtle


Peter V. Lindeman / Palmetto State Park, San Marcos R., Gonzales Co., Texas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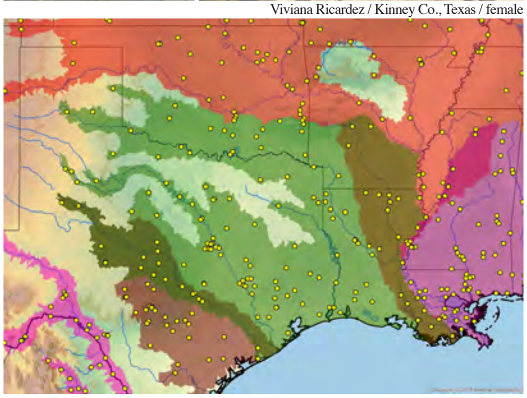
(subspecies: *atra* = blue, *emoryi* = pink, *guadalupensis* = brown, *pallida* = green; overlap = intergrades)

Distribution: USA (Texas)
Presumed Historic Indigenous Range: 124,208 sq. km
Size (Max SCL): male 17.3 cm, female 35.2 cm (Franklin, unpubl. data)
Synonymy:
Trionyx spinifer guadalupensis Webb 1962:517
Trionyx spiniferus guadalupensis, Apalone spinifera guadalupensis
Type locality: "15 miles northeast Tilden, McMullen County, Texas" [USA].
Type specimen: UMMZ 89926, holotype, see Kluge (1984).

Apalone spinifera pallida (Webb 1962)
Pallid Spiny Softshell Turtle

Stanley E. Trauth / nr. Horatio, Sevier Co., Arkansas


Viviana Ricardez / Kinney Co., Texas / female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(subspecies: *spinifera* = red, *aspera* = purple, *emoryi* = pink, *guadalupensis* = brown, *pallida* = green; overlap = intergrades)

Distribution: USA (Arkansas, Louisiana, Oklahoma, Texas)
Presumed Historic Indigenous Range: 434,117 sq. km
Size (Max SCL): male 23.7 cm, female 47.6 cm (Munscher and Brinker et al., unpubl. data)
Synonymy:
Trionyx spinifer pallidus Webb 1962:522
Trionyx pallidus, *Trionyx spiniferus pallidus*, *Apalone spinifera pallida*, *Apalone spinifera pallidus*
Type locality: "Lake Caddo, Caddo Parish, Louisiana" [USA].
Type specimen: LSUM 111652 (formerly TU 484), holotype.

Chitra Gray 1844

Chitra Gray 1844:49
Type species: *Chitra indica* [= *Trionyx indicus* Gray 1830e], by original monotypy.

Chitra chitra Nutaphand 1986
Asian Narrow-headed Softshell Turtle
(includes 2 subspecies)


*

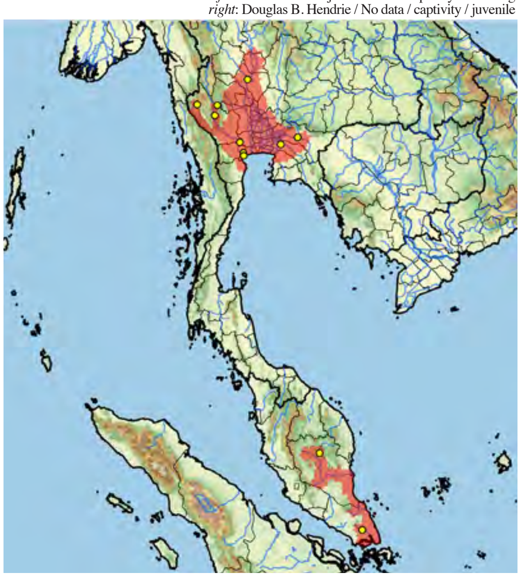
(subspecies: *chitra* = red, *javanensis* = purple)

Distribution: Indonesia (Java, Sumatra), Malaysia (West), Thailand
Presumed Historic Indigenous Range: 151,250 sq. km
Size (Max SCL): 140.0 cm (see subspp.)
IUCN Red List: Critically Endangered (CR A2cd) (Cota et al. 2019); Previously: Critically Endangered (CR) (ATTWG 2000); Critically Endangered (CR) (TFTSG 1996)
CITES: Appendix I (2013); Previously: Appendix II, as *Chitra* spp. (2003)

Chitra chitra chitra Nutaphand 1986
Siamese Narrow-headed Softshell Turtle

Chris Tabaka / TCC / Thailand / captivity

left: Peter Paul van Dijk / Thailand / captivity / hatchling
right: Douglas B. Hendrie / No data / captivity / juvenile



*

(subspecies: *chitra* = red)

Distribution: Malaysia (West), Thailand
Presumed Historic Indigenous Range: 90,238 sq. km
Size (Max SCL): 140.0 cm (McCord and Pritchard 2003a; Ernst et al. 2006b; van Dijk, unpubl. data)
Synonymy:

Chitra chitra chitra Nutaphand 1986:65 (*nomen conservandum*)
Chitra chitra
Type locality: "Khwae Noi and Khwae Yai rivers of Kanchanaburi Province and in the Mae Klong river of Ratburi Province" [Thailand]. Restricted to "[Mae Klong in Ratburi and Khwae River in Kanchanaburi]" by Nutaphand (1990:113); and to "Kanburi (= Kanchanaburi), where the Khwae Noi and the Khwae Yai Rivers join to form the Mae Klong River in Kanchanaburi Province, Thailand" by McCord and Pritchard (2003a:18).
Type specimen: Not located, specimen figured in Nutaphand (1990:104), lectotype, erroneously listed as "holotype" by McCord and Pritchard (2003a:18); specimen figured in Nutaphand (1986:65), paralectotype, erroneously designated "lectotype" by Webb and van Dijk (2004:96).
Comment: Name conserved by ICZN (2005b), see McCord and Pritchard (2003b).

Chitra chitra javanensis McCord and Pritchard 2003a
Javanese Narrow-headed Softshell Turtle, Labi-labi Bintang

Dian Sartika / nr. Bojonegoro, Bengawan Solo, East Java, Indonesia

*

(subspecies: *chitra* = red, *javanensis* = purple)

Distribution: Indonesia (Java, Sumatra)
Presumed Historic Indigenous Range: 61,012 sq. km
Size (Max SCL): 129.0 cm (Iskandar 2004)
Synonymy:

Chitra selenkae † Jaekel 1911:80 (*nomen suppressum*)
Type locality: "Pithecanthropus-schichten...Java...Trinil" [Indonesia].
Type specimens: ZMB (MNB s/n or MB s/n), syntypes (4), fossils, nearly complete carapace plus plastral bones, figured (pl.15,f.1–2,11,14), see Karl (1987) and McCord and Pritchard (2003a).
Geologic age: Pleistocene, Trinil Beds.
Comment: Name suppressed by ICZN (2005b), see McCord and Pritchard (2003b).

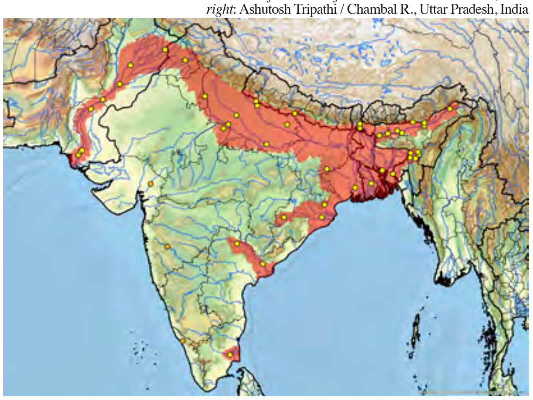
Chitra chitra javanensis McCord and Pritchard 2003a:41
Chitra chitra javanica
Type locality: "Pasuruan River drainage, near Pasuruan, Probolinggo District, East Java, Indonesia." Emended to "Bengawan (= river) Solo, between Kalitidu and Padangan, Bojonegoro District, East Java" [Indonesia] by Iskandar (2004:129).
Type specimen: MZB 199, holotype.

Chitra indica (Gray 1830e) (10:7)
Indian Narrow-headed Softshell Turtle


Shekar Dattatri / CBFTT / Chambal R., Rajasthan, India



left: Chittaranjan Baruah / CBFTT / Assam, India
right: Ashutosh Tripathi / Chambal R., Uttar Pradesh, India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(orange dots = trade or questionable)

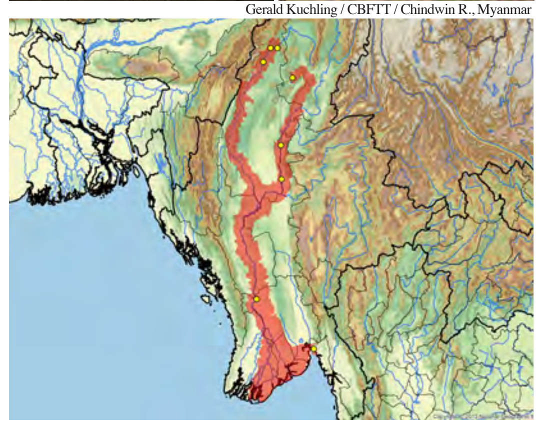
Distribution: Bangladesh, India (Andhra Pradesh, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal), Nepal, Pakistan
Presumed Historic Indigenous Range: 1,033,912 sq. km
Size (Max SCL): male 61.5 cm, female 99.0 cm [estimated] (Rashid and Swingland 1997); Max CCL: female 110.0 cm (Das and Singh 2009 CBFTT)
CBFTT Account: Das and Singh (2009)
IUCN Red List: Endangered (EN A1cd+2cd) (ATTWG 2000); Previously: Vulnerable (VU) (TFTSG 1996)
TFTSG Provisional Red List: Endangered (EN) (2011, 2018)
CITES: Appendix II, as *Chitra* spp. (2003)
Synonymy:
Trionyx indicus Gray 1830e:18 (10:7)
Trionyx egyptiacus indicus, Trionyx aegyptiacus indica, Chitra indica, Gymnopus indicus, Trionyx aegyptianus indicus, Aspidonectes indicus
Type locality: "India." Restricted to "Fatehgahr, Ganges" [Fatehgarh, Uttar Pradesh, India] by Smith (1931:162).
Type specimen: RCSM 685, holotype, apparently lost, see Farkas (1994); specimen figured in Gray (1831f:pl.80), lectotype, listed as "type" by Webb (1980b), and erroneously as "neotype" by McCord and Pritchard (2003a).
Testudo chitra Buchanan-Hamilton *in* Gray 1831d:47 (*nomen nudum*)
Gymnopus lineatus Duméril and Bibron 1835:491
Trionyx lineatus
Type locality: "le Gange" [India].
Type specimen: MNHN 6968, holotype, discussed by Bour et al. (1995).

Chitra vandijki McCord and Pritchard 2003a
Burmese Narrow-headed Softshell Turtle


Win Ko Ko / CBFTT / TCC / Chindwin R., Myanmar



Gerald Kuchling / CBFTT / Chindwin R., Myanmar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Distribution: Myanmar
Presumed Historic Indigenous Range: 103,361 sq. km
Size (Max SCL): ca. 100.0 cm? (Platt et al. 2014 CBFTT); max recorded: 31.0 cm (Platt et al. 2018)
CBFTT Account: Platt, Platt, Win Ko Ko, and Rainwater (2014)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Platt et al. 2021)
CITES: Appendix I (2013); Previously: Appendix II, as *Chitra* spp. (2003)
Synonymy:
Chitra burmanica Jaruthanin 2002:40 (*nomen nudum*)
Chitra vandijki McCord and Pritchard 2003a:39
Type locality: "Khayansat Kone Village (23°16.30'N; 95°58.99'E) on the Ayeyarwaddy River...Myanmar."
Type specimen: PCHP(CRI) 7059, holotype, figured (f.11); apparently lost (Thomson, pers. comm.); PCHP(CRI) 4896–97, 5050, paratypes (3).

Dogania Gray 1844

Dogania Gray 1844:49

Type species: *Dogania subplana* [= *Trionyx subplanus* Geoffroy Saint-Hilaire 1809b], by original monotypy.

Sarbieria Gray 1869a:211

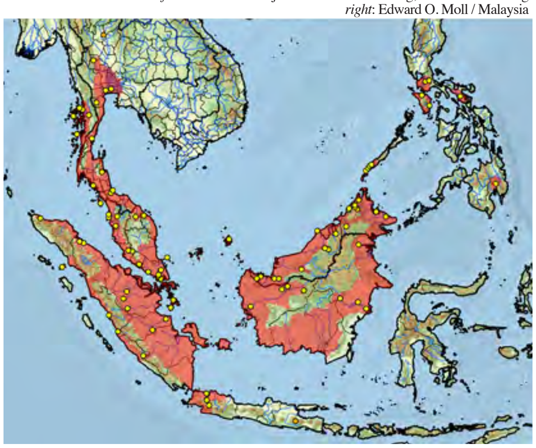
Type species: *Sarbieria frenata* [= *Trionyx frenatus* Gray 1856b] [= subjective synonym of *Trionyx subplanus* Geoffroy Saint-Hilaire 1809b], by original monotypy.

Dogania subplana (Geoffroy Saint-Hilaire 1809b)

Malayan Softshell Turtle

Edward O. Moll / Malaysia

left: Peter Paul van Dijk / CRM 2 / Khao Luang, Thailand / hatchling
right: Edward O. Moll / Malaysia



*

(orange dots = possible trade or questionable)

Distribution: Brunei, Indonesia (Java, Kalimantan, Sumatra), Malaysia (East, West), Myanmar, Philippines (Luzon, Mindanao, Mindoro, Palawan), Singapore, Thailand

Presumed Historic Indigenous Range: 1,078,975 sq. km

Size (Max SCL): 31.0 cm (Grossman and Grychta 1998; Pritchard 2001)

IUCN Red List: Least Concern (LC) (Cota et al. 2021); Previously: Least Concern (LC) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)

CITES: Appendix II (2013)

Synonymy:

Trionyx subplanus Geoffroy Saint-Hilaire 1809b:11

Gymnopus subplanus, Amyda subplana, Dogania subplana, Dogania subplanus

Type locality: Not known. Possibly "Malaysia or Java, Indonesia," discussed by Bour et al. (1995:79), but not formally restricted.

Type specimen: MNHN A.5182, holotype, discussed by Bour et al. (1995).

Trionyx frenatus Gray 1856b:67

Potamochelys frenatus, Sarbieria frenata

Type locality: "Singapore."

Type specimens: NHMUK 1947.3.6.4–5 (formerly 1852.9.13.49, 1853.5.3.8), syntypes (2).

Gymnopus javanicus Bibron *in* Gray 1856b:67 (*nomen nudum*)

Dogania guentheri Gray 1862c:265

Trionyx (Dogania) güntheri, Trionyx guentheri, Trionyx güntheri, Dogania güntheri

Type locality: "India."

Type specimen: NHMUK 1947.3.6.6 (formerly 1860.3.19.1025), holotype.

Trionyx dillwynii Gray 1873c:306

Type locality: "Borneo" [Malaysia or Indonesia].

Type specimen: NHMUK 1946.1.22.12 (formerly 1872.2.19.60), holotype, see Gray (1873j).

Trionyx vertebralis Strauch 1890:113

Type locality: "aus dem Flusse Gabon im aequatorialen West-Afrika" [in error], or "nicht aus Afrika, sondern aus irgend einem Theile Süd-Asiens stammt" [not from Africa, but from some part of South Asia]. Restricted to "Süd-Asien" by Wermuth and Mertens (1961:255).

Type specimen: ZIN 5391, holotype.

Trionyx pecki Bartlett 1895a:30

Type locality: "Borneo" [Sarawak, Malaysia].

Type specimen: Possibly SMK, holotype, originally live.

Nilssonia Gray 1872a (07:80, 11:15, 17:78)

Nilssonia Gray 1872a:332

Type species: *Nilssonia formosa* [= *Trionyx formosus* Gray 1869a], by original monotopy.

Isola Gray 1873h:51

Type species: *Isola peguensis* [= *Trionyx peguensis* Gray 1870c] [= subjective synonym of *Trionyx formosus* Gray 1869a], by original monotypy.

Aspideretes Hay 1904:274

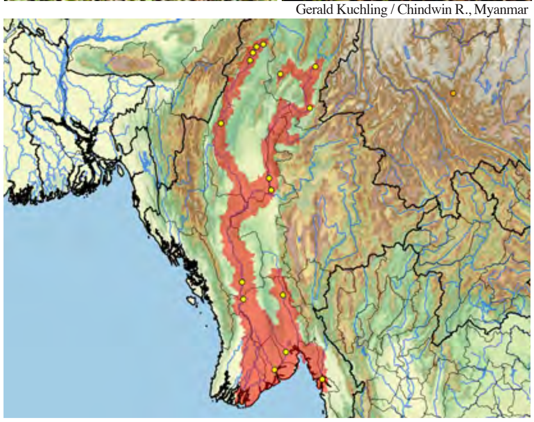
Type species: *Aspideretes gangeticus* [= *Trionyx gangeticus* Cuvier 1825], by original designation.

Nilssonia formosa (Gray 1869a)

Burmese Peacock Softshell Turtle

Peter Paul van Dijk / TCC / Myanmar / captivity

Gerald Kuchling / Chindwin R., Myanmar



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(orange dot = probable trade or introduced)

Distribution: Myanmar

Presumed Historic Indigenous Range: 142,290 sq. km

Size (Max SCL): 57.0 cm (van Dijk *in* Pritchard 2001); Max CCL: 65.0 cm (Ernst et al. 2006b; Itescu et al. 2014)

IUCN Red List: Critically Endangered (CR A2cd+4cd) (Horne et al. 2021); Previously: Endangered (EN A1cd+2d, B1+2c) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)

CITES: Appendix II (2013)

Synonymy:

Trionyx formosus Gray 1869a:217

Nilssonia formosa, Aspidonectes formosus, Isola formosa, Trionyx formosa, Amyda formosus, Amyda formosa

Type locality: "Pegu" [Myanmar].

Type specimen: NHMUK 1946.1.22.11 (formerly 1868.4.3.143), holotype.

Trionyx peguensis Gray 1870c:99

Isola peguensis

Type locality: "Pegu" [Myanmar].

Type specimen: NHMUK 1946.1.22.10 (formerly 1868.4.3.142), holotype.

Trionyx grayii Theobald 1875:176

Type locality: "neighbourhood of Thayet-myo...Irawadi valley" [Myanmar].

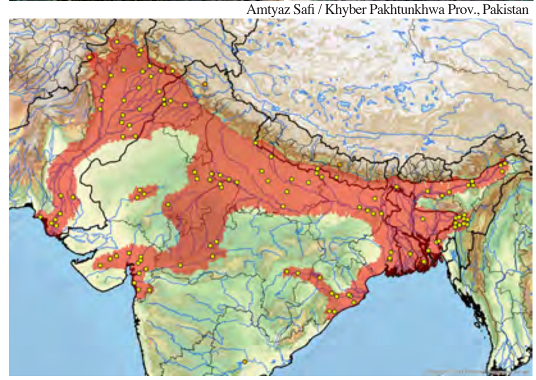
Type specimen: NHMUK 1947.3.6.9 (formerly 1881.7.8.3), holotype.

Nilssonia gangetica (Cuvier 1825) (12:38)

Indian Softshell Turtle, Ganges Softshell Turtle

B.C. Choudhury / CRM 2 / India

Amtyaz Safi / Khyber Pakhtunkhwa Prov., Pakistan



*

(orange dots = probable trade or introduced)

Distribution: Afghanistan, Bangladesh, India (Bihar, Gujarat, Jammu, Jharkhand, Madhya Pradesh, Odisha, Punjab, Rajasthan, Uttar Pradesh), Nepal, Pakistan

Presumed Historic Indigenous Range: 1,371,884 sq. km

Size (Max SCL): male 77.0 cm, female 94.0 cm (Rashid and Swingland 1997; Pritchard 2001; Ernst et al. 2006b; Baruah et al. 2012)

IUCN Red List: Endangered (EN A2d+4d) (Ahmed et al. 2021); Previously: Vulnerable (VU A1d+2d) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)

CITES: Appendix I (1975), originally as *Aspideretes gangeticus*

Synonymy:

Trionyx gangeticus Cuvier 1825:186,203

Aspidonectes gangeticus, Tyrse gangetica, Isola gangetica, Aspideretes gangeticus, Trionyx gangeticus, Amyda gangetica, Nilssonia gangetica, Nilssonia gangetica gangetica

Type locality: "du Gange" [Ganges River, India].

Type specimen: MNHN 9387, lectotype, designated by Bour et al. (1995:79).

Trionyx javanicus Gray 1830e:19 [(10:7)] (*partim*, junior homonym, not = *Trionyx javanicus* Schweigger *in* Geoffroy Saint-Hilaire 1809a [= *Amyda cartilaginea cartilaginea*])

Tyrse javanica

Type locality: "Java and India."

Type specimen: Not known or located.

Gymnopus duvaucelii Duméril and Bibron 1835:487 (*partim, nomen novum*)

Trionyx gangeticus mahanaddicus Annandale 1912b:262

Nilssonia gangetica mahanaddica

Type locality: "Sambalpur and Cuttack, Orissa" [India]. Restricted to "Cuttack, Orissa" [Odisha, India] by Smith (1931:167).

Type specimen: ZSI 17014, holotype, see Das et al. (1998) and Kundu et al. (2018a), listed as *Trionyx gangeticus mahanadicus*.

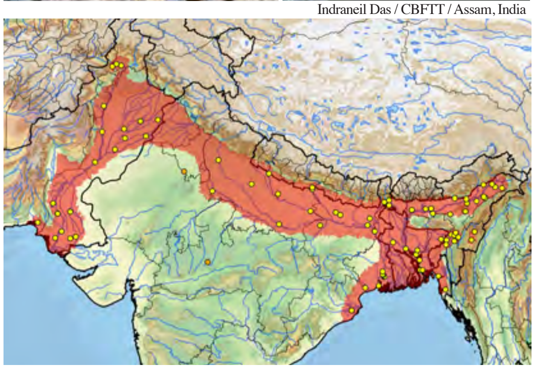
Trionyx gangeticus mahanadicus Das, Dattagupta, and Gayen 1998:128 (*nomen invalidum*)

Nilssonia hurum (Gray 1830e) [(10:7)]

Indian Peacock Softshell Turtle

Chittaranjan Baruah / CBFTT / Brahmaputra R., India

Indraneil Das / CBFTT / Assam, India



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(orange dots = possible trade or questionable)

Distribution: Bangladesh, India (Assam, Bihar, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh, West Bengal), Nepal, Pakistan

Presumed Historic Indigenous Range: 1,039,648 sq. km

Size (Max SCL): male 45.5 cm, female 60.0 cm (Rashid and Swingland 1997; Pritchard 2001; Das et al. 2010 CBFTT; Baruah et al. 2012)

CBFTT Account: Das, Basu, and Singh (2010)

IUCN Red List: Endangered (EN A2d+4d) (Das et al. 2021);

Previously: Vulnerable (VU A1cd+2d) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996)

CITES: Appendix I (1975), originally as *Aspideretes hurum*

Synonymy:

Trionyx occellatus Gray 1830d:pl.78 (*nomen oblitum*)

Type locality: "India." Restricted to "Barrackpore, India" by Webb (1980b:71).

Type specimen: NHMUK, holotype or syntypes, apparently lost, specimen figured (pl.78), lectotype, designated as "type" by Webb (1980b).

Trionyx hurum Gray 1830e:18 [(10:7)]

Isola hurum, Aspideretes hurum, Aspidonectes hurum, Tyrse hurum, Amyda hurum, Nilssonia hurum

Type locality: "India." Restricted to "Fatehgarh, Ganges" [Fatehgarh, Uttar Pradesh, India] by Smith (1931:171), and to "Barrackpore (about 23 kilometers north Calcutta), West Bengal, India" by Webb (1980b:71).

Type specimen: NHMUK, holotype or syntypes, apparently lost, specimen figured in Gray (1835:pl.66), lectotype, designated as "type" by Webb (1980b).

Testudo chim Buchanan-Hamilton *in* Gray 1831d:47 (*nomen nudum*)

Trionyx ocellatus Gray 1832a:directions (*nomen novum* and junior homonym, not = *Trionyx ocellatus* LeSueur 1827 [= *Apalone spinifera spinifera*])

Testudo ocellata, Gymnopus ocellatus

Comment: Emended name for *occellatus*.

Gymnopus duvaucelii Duméril and Bibron 1835:487 (*partim, nomen novum*)

Trionyx sewaare Gray 1872a:336

Type locality: "Bengal" [India or Bangladesh]. Restricted to "Ganges" [India] by Smith (1931:171).

Type specimen: Specimen figured in Hardwicke (1835:pl.36), lectotype, designated as "type" by Webb (1980b); NHMUK 1973.1051–2, possible paralectotypes (2).

Trionyx bellii Gray 1872a:337

Type locality: "Asia."

Type specimen: Possibly OUM, holotype, apparently lost.

Trionyx buchanani Theobald 1874:78

Type locality: "Bengal" [India or Bangladesh].

Type specimen: ZSI 1090, holotype, see Das et al. (1998) and Kundu et al. (2018a).

Trionyx hurum sivalensis † Lydekker 1889:9

Trionyx sivalensis

Type locality: "India...Siwalik Hills." [Punjab]

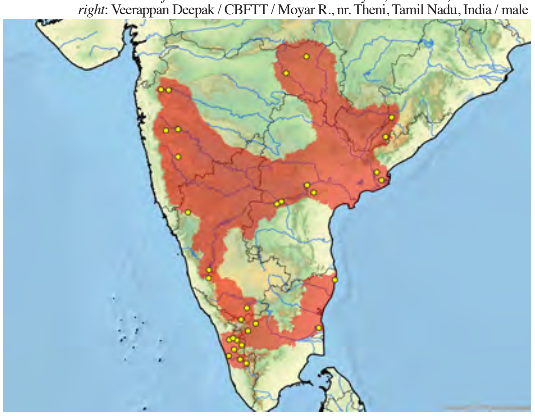
Type specimens: ZSI E.163, syntypes (2), fossil, carapace and plastral fragments, figured in Lydekker (1885:pl.27,f.3,3a); NHM(P) R.601, cast of plastral fragment.

Geologic age: Late Pliocene to Early Pleistocene.

Nilssonia leithii (Gray 1872a)
Leith's Softshell Turtle

Rahul Naik / CBFTT / Godavari R. nr. Nashik, Maharashtra, India

left: Shashwat Sirsi / CBFTT / Cauvery R., Karnataka, India / female
right: Veerappan Deepak / CBFTT / Moyar R., nr. Theni, Tamil Nadu, India / male



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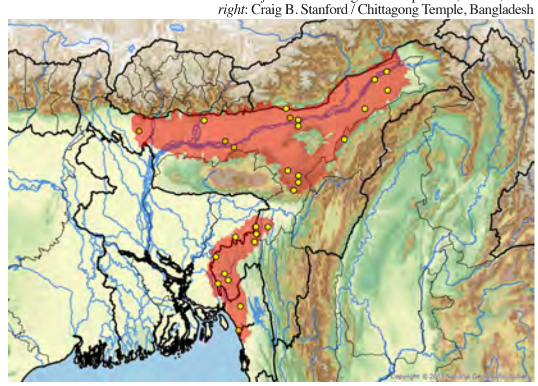
Distribution: India (Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu)
Presumed Historic Indigenous Range: 487,778 sq. km
Size (Max SCL): male 63.5 cm, female 54.8 cm (Moll and Vijaya 1986; Deepak and Vasudevan 2009); Max CCL: male 72.0 cm, possibly to ca. 100 cm (Das et al. 2014 CBFTT)
CBFTT Account: Das, Sirsi, Vasudevan, and Murthy (2014)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Praschag et al. 2021); Previously: Vulnerable (VU A1c) (ATTWG 2000); Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II (2013)
Synonymy:
Trionyx javanicus Gray 1830e:19 (10:7) (*partim*, junior homonym, not = *Trionyx javanicus* Schweigger *in* Geoffroy Saint-Hilaire 1809a [= *Amyda cartilaginea cartilaginea*])
Tyrse javanica
Type locality: "Java and India."
Type specimen: Not known or located.
Testudo gotaghol Buchanan-Hamilton *in* Gray 1831d:48 (*nomen nudum*)
Trionyx leithii Gray 1872a:334
Isola leithii, Aspideretes leithii, Amyda leithii, Nilssonia leithii
Type locality: "Poonah" [Poona, Maharashtra, India].
Type specimens: NHMUK 1947.3.4.15 and 1947.3.6.7 (formerly 1869.8.28.10, 1870.7.11.1), syntypes (2).
Aspilus gataghol Gray 1872a:339
Trionyx gataghol, Trionyx gatajhal
Type locality: "India." Restricted to "the vicinity of Barrackpore" [West Bengal, India] by Webb (1980b:72).
Type specimen: NHMUK, holotype or syntypes, apparently lost, specimen figured in Gray (1835:pl.65), lectotype, designated as "type" by Webb (1980b).
Trionyx sulcifrons Annandale 1915b:341
Type locality: "Nagpur,...Central Provinces of India." [Nagpur, Maharashtra, India].
Type specimen: ZSI 17973, holotype, see Das et al. (1998) and Kundu et al. (2018a).

Nilssonia nigricans (Anderson 1875) (07:81, 17:78)
Black Softshell Turtle, Bostami Softshell

Chittaranjan Baruah / TCC / Madhab Temple, Hajo, Assam, India

left: Peter Praschag / Brahmaputra R., Assam, India
right: Craig B. Stanford / Chittagong Temple, Bangladesh



(orange dots = temple pond populations)

Distribution: Bangladesh, India (Assam, Tripura, West Bengal)
Presumed Historic Indigenous Range: 91,508 sq. km
Size (Max SCL): male 81.0 cm, female 74.0 cm (Smith 1931; Ahsan and Saeed 1989; Ahsan et al. 1991); Max CCL: male 91.0 cm (Das 1995; Pritchard 2001; Ernst et al. 2006b)
IUCN Red List: Critically Endangered (CR A4cd) (Praschag et al. 2021); Previously: Extinct in the Wild (EW) (Asmat 2002); Critically Endangered (CR) (ATTWG 2000), Critically Endangered (CR) (TFTSG 1996)
CITES: Appendix I (1975), originally as *Aspideretes nigricans*
Synonymy:
Trionyx nigricans Anderson 1875:284
Amyda nigricans, Aspideretes nigricans, Nilssonia nigricans

Type locality: "Chittagong, Bengal" [Bangladesh].
Type specimens: ZSI 664, 1898, syntypes (2), see Das et al. (1998), Das (2009), and Kundu et al. (2018a).

Palea Meylan 1987

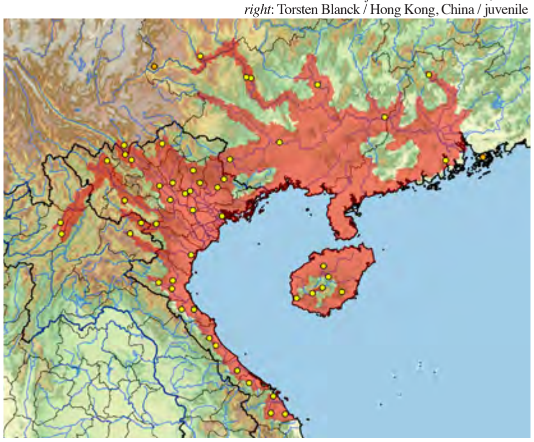
Palea Meylan 1987:77
Type species: *Palea steindachneri* [= *Trionyx steindachneri* Siebenrock 1906a], by original designation.

Palea steindachneri (Siebenrock 1906a)

Wattle-necked Softshell Turtle

Torsten Blanck / Hong Kong, China

left: Haitao Shi / Hainan, China
right: Torsten Blanck / Hong Kong, China / juvenile



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(orange dot = probable trade or introduced)

Distribution: China (Guangdong, Guangxi, Guizhou, Hainan, Yunnan), Laos, Vietnam
Introduced: China (Hong Kong), Mauritius, Réunion, USA (Hawaii [Kauai])
Presumed Historic Indigenous Range: 319,021 sq. km
Size (Max SCL): female 44.5 cm (Pritchard 2001; Ernst and Bogadek 2005)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Fong et al. 2021); Previously: Endangered (EN A1cd+2cd) (ATTWG 2000); Near Threatened (NT) (TFTSG 1996)
CITES: Appendix II (2013); Previously: Appendix III (China) (2005)
Synonymy:
Aspidonectes californiana Rivers 1889:233 (*nomen suppressum*)
Pelodiscus californianus
Type locality: "Sacramento River, near the city of Sacramento... California" [USA] [in error, introduced trade specimen].
Type specimen: UCMZ, holotype, apparently lost, see Webb (1975b).
Comment: Name suppressed by ICZN (1982), see Webb (1978).

Trionyx steindachneri Siebenrock 1906a:579 (*nomen conservandum*)
Amyda steindachneri, Palea steindachneri, Pelodiscus steindachneri
Type locality: "Kau-Kongriver...Insel Hainan" [China]; emended to "Kau-Kong (= Gaugong) River, Hainan Island, Hainan Prov., China" by Zhao and Adler (1993:174).
Type specimen: NMW 20373, holotype, see Tiedemann and Häupl (1980), Tiedemann et al. (1994), and Gemel et al. (2019).
Comment: Name conserved by ICZN (1982), see Webb (1978).

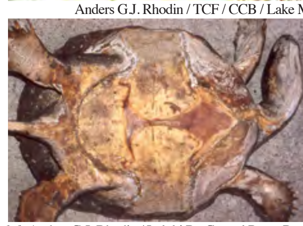
Pelochelys Gray 1864b

Pelochelys Gray 1864b:89 (17:4, 17:79) (5)
Type species: *Pelochelys cantorii* Gray 1864b, by subsequent designation by Günther (1865:108).

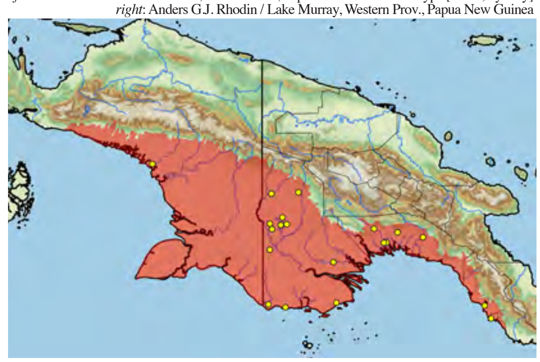
Pelochelys bibroni (Owen 1853)

Southern New Guinea Giant Softshell Turtle, Striped New Guinea Softshell Turtle

Anders G.J. Rhodin / TCF / CCB / Lake Murray, Western Prov., Papua New Guinea



left: Anders G.J. Rhodin / Laloki R., Central Prov., Papua New Guinea / neotype [AMS, Sydney]
right: Anders G.J. Rhodin / Lake Murray, Western Prov., Papua New Guinea



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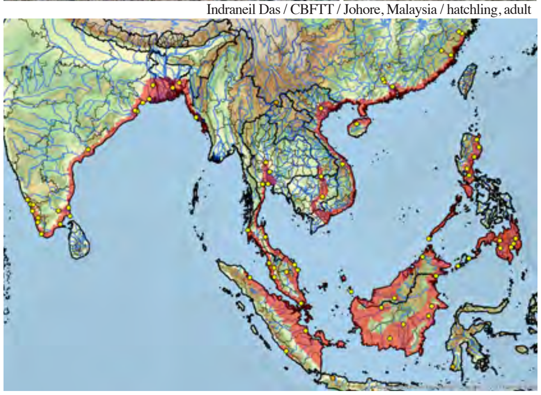
Distribution: Australia (?) (Queensland, possibly vagrant?); Indonesia (Papua), Papua New Guinea (Southern)
Presumed Historic Indigenous Range: 255,612 sq. km
Size (Max SCL): 102.0 cm (Rhodin et al. 1993; Pritchard 2001; Itescu et al. 2014)
IUCN Red List: Vulnerable (VU A2d+4d) (Georges et al. 2020); Previously: Vulnerable (VU A1cd+2cd) (ATTWG 2000), Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II, as *Pelochelys* spp. (2003)

Synonymy:
Trionyx (Gymnopus) bibroni Owen 1853:185
Trionyx bibroni, Pelochelys bibroni, Pelochelys (Ferepelochelys) bibroni, Ferepelochelys bibroni
Type locality: "Australian." Restricted to "Laloki River, Astrolabe Range, 40 miles [ca. 65 km] from its entry into Redscar Bay (9°20'S 147°14'E), Central District, Papua New Guinea" by Webb (1995a:302).
Type specimen: NHMUK 1946.1.22.13, 1947.3.4.5 (formerly RCSM 954–959, 1093–94; single specimen in parts), holotype, destroyed in World War II, see Webb (1995a); AMS 3425–26, 131315 (single specimen, in parts), neotype, designated by Webb (1995a:302).

Pelochelys cantorii Gray 1864b (17:4, 17:79) (5)
Asian Giant Softshell Turtle, Cantor's Giant Softshell Turtle


Annette Olsson / CBFTT / TCC / nr. Kratie, Mekong R., Cambodia


Indraneil Das / CBFTT / Johore, Malaysia / hatchling, adult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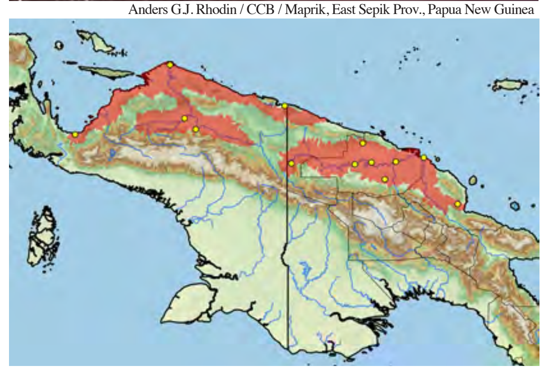
(orange dots = possible trade or uncertain)

Distribution: Bangladesh, Brunei, Cambodia, China (Fujian, Guangdong, Guangxi, Hainan, Zhejiang), India (Kerala, Odisha, Tamil Nadu, West Bengal), Indonesia (Kalimantan, Sumatra), Laos, Malaysia (East, West), Myanmar, Philippines (Luzon, Mindanao, Palawan), Singapore (extirpated), Thailand, Vietnam
Presumed Historic Indigenous Range: 1,514,742 sq. km
Size (Max SCL): 100.0 cm (Das 2008 CBFTT)
CBFTT Account: Das (2008)
IUCN Red List: Critically Endangered (CR A2cd+4cd) (Choudhury et al. 2021); Previously: Endangered (EN A1cd+2cd) (ATTWG 2000); Vulnerable (VU) (TFTSG 1996)
CITES: Appendix II, as *Pelochelys* spp. (2003)

Synonymy:
Pelochelys cantorii Gray 1864b:90
Type locality: "Malacca" [Malaysia].
Type specimen: NHMUK 1947.3.6.21–22 (parts of one specimen) (formerly 1860.4.19.1444), holotype, see Webb (1995) and Das (2009).
Pelochelys cumingii Gray 1864b:90
Chitra indica cumingii
Type locality: "Philippines."
Type specimens: NHMUK 1946.1.22.13 and 1947.3.4.5, syntypes (2).
Pelochelys cantoris Boulenger 1889:ix (*nomen novum*)
Pelochelys poljakowii Strauch 1890:118
Type locality: "Fu-tschau" [China]. Emended to "Fu-tschau (= Fuzhou Shi), Fujian Province, China" by Zhao and Adler (1993:174).
Type specimens: Possibly ZIN 7896–7, syntypes (2), type specimens figured (pl.4,f.1–3).
Chitra minor † Jaekel 1911:80
Type locality: "Pithecanthropus-schichten...Java...Trinil" [Indonesia].
Type specimens: ZMB (MNB s/n or MB s/n), syntypes (2), fossil, plastral fragments, figured (pl.15,f.3-4), see Karl (1987) and McCord and Pritchard (2003a).
Geologic age: Pleistocene, Trinil Beds.

Pelochelys signifera Webb 2003
Northern New Guinea Softshell Turtle


Anders G.J. Rhodin / CCB / Maprik, East Sepik Prov., Papua New Guinea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Distribution: Indonesia (Papua), Papua New Guinea (Northern)
Presumed Historic Indigenous Range: 111,493 sq. km
Size (Max SCL): ca. 100.0 cm (Rhodin et al. 2018 IUCN)
IUCN Red List: Vulnerable (VU A4cde) (Rhodin et al. 2018)
CITES: Appendix II, as *Pelochelys* spp. (2003)
Synonymy:
Pelochelys signifera Webb 2003:100
Pelochelys (Ferepelochelys) signifera, Ferepelochelys signifera
Type locality: "Wanggar River, Weyland Range, Geelvinck Bay, N. New Guinea (Papua Province, Indonesia)."
Type specimen: NHMUK 1921.11.11.4, holotype.

Pelodiscus Fitzinger 1835 (07:82, 10:32, 11:16)

Pelodiscus Fitzinger 1835:110

Type species: *Aspidonectes (Pelodiscus) sinensis* [= *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by subsequent designation by Fitzinger (1843:30). Genus established as *Trionyx (Pelodiscus)* without a type species.

Landemania Gray 1869a:211

Type species: *Landemania irrorata* Gray 1869a [= subjective synonym of *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by original designation.

Psilognathus Heude 1880:24

Type species: *Psilognathus laevis* Heude 1880 [= subjective synonym of *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by original monotypy.

Temnognathus Heude 1880:25

Type species: *Temnognathus mordax* Heude 1880 [= subjective synonym of *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by original monotypy.

Gomphopelta Heude 1880:27

Type species: *Gomphopelta officinae* Heude 1880 [= subjective synonym of *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by original monotypy.

Coelognathus Heude 1880:29

Type species: *Coelognathus novemcostatus* Heude 1880 [= subjective synonym of *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by original monotypy.

Tortisternum Heude 1880:31

Type species: *Tortisternum novemcostatum* Heude 1880 [= subjective synonym of *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by original monotypy.

Ceramopelta Heude 1880:33

Type species: *Ceramopelta latirostris* Heude 1880 [= subjective synonym of *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by original monotypy.

Coptopelta Heude 1880:34

Type species: *Coptopelta septemcostata* Heude 1880 [= subjective synonym of *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by original monotypy.

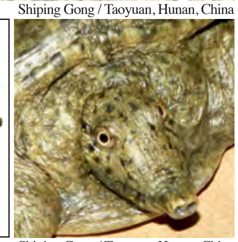
Cinctisternum Heude 1880:36

Type species: *Cinctisternum bicinctum* Heude 1880 [= subjective synonym of *Trionyx (Aspidonectes) sinensis* Wiegmann 1834], by original monotypy.

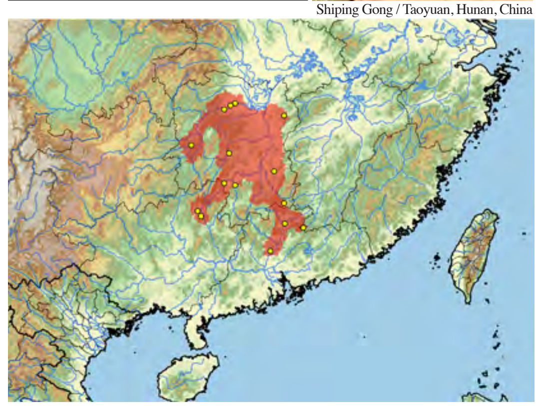
Pelodiscus axenaria (Zhou, Zhang, and Fang 1991) (10:32, 11:16) (**102**)

Hunan Softshell Turtle, Central Chinese Softshell Turtle

Shiping Gong / Taoyuan, Hunan, China



Shiping Gong / Taoyuan, Hunan, China



*

Distribution: China (Guangdong, Guangxi, Hunan, Jiangxi)
Presumed Historic Indigenous Range: 134,834 sq. km
Size (Max SCL): 20.0 cm (Gong et al. 2018)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)
CITES: Appendix II (2013); Previously: Appendix III (China) (2005)

Synonymy:

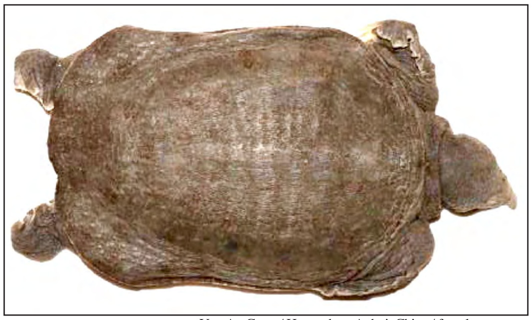
Trionyx axenaria Zhou, Zhang, and Fang 1991:382

Pelodiscus axenaria, *Pelodiscus axenarius*

Type locality: "Taoyuan, Pingjiang, Rucheng, Lingling, Shaoyang Counties, Hunan Province, China" [in Chinese]. Erroneously restricted to "Xiang River...Quanzhou County, Guangxi, China" by Yang et al. (2011:22).

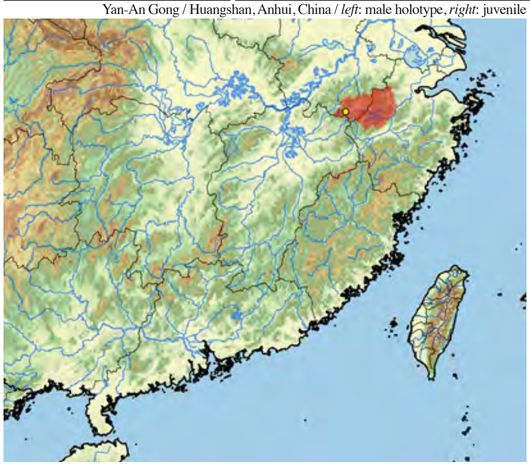
Type specimen: Not designated or located, a specimen figured (f.1-2).

Pelodiscus huangshanensis Gong, Peng, Huang, and Nie *in* Gong, Peng, Huang, Lin, Huang, Xu, Yang, and Nie 2021 (102)
Huangshan Softshell Turtle, Horse-hoof Softshell Turtle



Yan-An Gong / Huangshan, Anhui, China / female paratype


Yan-An Gong / Huangshan, Anhui, China / *left*: male holotype, *right*: juvenile

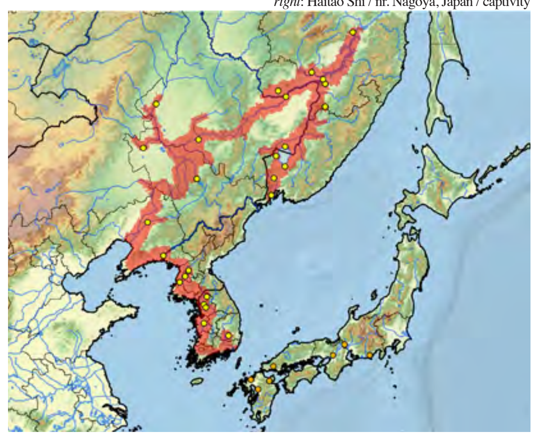

*

Distribution: China (Anhui, Zhejiang [?])
Presumed Historic Indigenous Range: 15,820 sq. km
Size (Max SCL): 11.6 cm (Gong et al. 2021)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2021)
CITES: Appendix II (2013), as part of *P. axenaria*
Synonymy:
Pelodiscus huangshanensis Gong, Peng, Huang, and Nie *in* Gong, Peng, Huang, Lin, Huang, Xu, Yang, and Nie 2021:140
Type locality: "Xikou Town, Xiuning County, Huangshan City, Anhui Province, China (118.02°N, 29.69°E, and 170 m A.S.L.)." Geographic coordinates corrected here to "29.69ºN, 118.02ºE."
Type specimen: ANU 20210001, holotype.

Pelodiscus maackii (Brandt 1857) (10:32, 11:16, 17:80)
Northern Chinese Softshell Turtle, Amur Softshell Turtle

Dayoung Lee / Sillim-dong, Gwanak-gu, Seoul, South Korea


left: Norbert Schneeweiss / Lake Khanka, Russia
right: Haitao Shi / nr. Nagoya, Japan / captivity


*

(orange dots = probable historic introductions)
Distribution: China (Heilongjiang, Jilin, Liaoning, Nei Mong-gu), North Korea, Russia (Amurskaya, Khabarovskiy, Primorskiy, Yevreyskaya), Japan (historic introduction?), South Korea
Introduced: USA (Hawaii [Oahu])
Presumed Historic Indigenous Range: 353,225 sq. km
Size (Max SCL): 45.0 cm (Kuzmin 2002; Gong et al. 2018)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Data Deficient (DD) (2011, 2018)
CITES: Appendix II (2013); Previously: Appendix III (China) (2005)
Synonymy:
Trionyx maackii Brandt 1857:110
Amyda maackii, *Pelodiscus maackii*
Type locality: "in fluminibus australioribus lateralibus Amuris, nominatim in fluviis Sungari et Ussuri, nec non in ipsius fluminis Amuris parte inter fluvios modo dictos obvia" [in the more southern rivers next to the Amur, namely the Sungari and Ussuri rivers, and also in the part of the Amur river between these rivers] [Russia]. Restricted to "Southern Amur R. and Ussuri R." [Russia] by Stejneger (1907:529).
Type specimen: Not known or located.

Pelodiscus parviformis Tang 1997 (10:32, 11:16) (**103**)
Lesser Chinese Softshell Turtle

Mian Hou / Guilin, Guangxi, China

Shiping Gong / Longshen, Guangxi, China

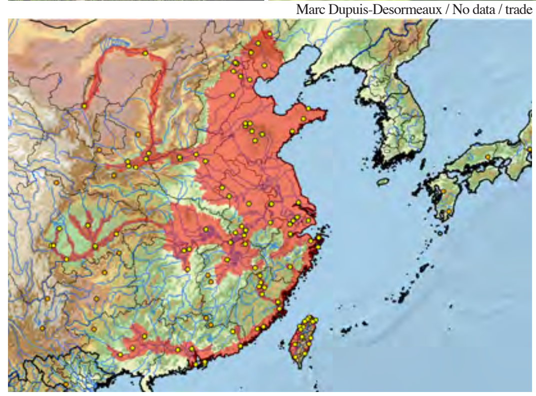
*

Distribution: China (Guangxi, Hunan)
Presumed Historic Indigenous Range: 33,831 sq. km
Size (Max SCL): 16.0 cm (Farkas et al. 2019)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Critically Endangered (CR) (2018)
CITES: Appendix II (2013); Previously: Appendix III (China) (2005)
Synonymy:
Pelodiscus parviformis Tang 1997:13
Type locality: “Quanzhou, Xing’an, Guanyang, Ziyuan, Lingchuan counties of Guangxi Auto. Region; Dong’an, Qiyang, Daoxian counties of Hunan Province” [China].
Type specimen: GXUA 95012, holotype.

Pelodiscus sinensis (Wiegmann 1834) (10:32, 11:16, 14:30, 17:80, 17:81) (**104**)
Chinese Softshell Turtle

Tien-Hsi Chen / Keelung R., nr. Taipei, Taiwan

Marc Dupuis-Desormeaux / No data / trade



*

(orange dots = probable trade, introduced, or uncertain identification)
Distribution: China (Anhui, Beijing, Fujian, Guangdong, Guangxi, Hebei, Henan, Hong Kong, Hubei, Hunan, Jiangsu, Jiangxi, Macau, Nei Mongol, Ningxia, Shaanxi, Shandong, Shanxi, Sichuan, Tianjin, Zhejiang), Taiwan
Introduced: Bosnia and Herzegovina, Brazil (Pará), Croatia, Guam, Indonesia (Java, Kalimantan, Sumatra, Timor), Iran, Japan (Bonin Islands, Honshu, Kyoshu, Ryukyu Archipelago, Shikoku), Kyrgyzstan, Laos, Malaysia (East, West), Northern Mariana Islands, Philippines (Bohol, Cebu, Latvia, Leyte, Luzon, Mindanao, Mindoro, Panay), Serbia, Singapore, Slovenia, South Korea, Spain, Thailand, Timor-Leste, USA (Hawaii [Kauai, Oahu], Virginia), Vietnam
Presumed Historic Indigenous Range: 1,098,710 sq. km
Size (Max SCL): 23.0 cm (Farkas et al. 2019)
IUCN Red List: Vulnerable (VU A1d+2d) (ATTWG 2000); Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
TFTSG Provisional Red List: Vulnerable (VU) *or* Endangered (EN) (2011)
Synonymy:
Testudo rostrata Thunberg 1787:179 (*nomen suppressum*)
Emydes rostrata, *Trionyx rostratus*
Type locality: Not known.
Type specimen: UPSZTY 128 (formerly UUZM 128 and UUZM 2), holotype, see Thunberg (1828), Lönnberg (1896), Webb (1985, 1990) and Wallin (2001).
Comment: Name suppressed by ICZN (1991), see Webb (1990).

Testudo striata Suckow 1798:37 (*partim, nomen novum*)
Comment: Unjustified replacement name for *rostrata*.

Testudo semimembranacea Hermann 1804:219 (*nomen suppressum*)
Type locality: "Japania" [Japan].
Type specimen: Possibly ZMUS, not located.
Comment: Name suppressed by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961).

Trionyx stellatus var. *Japon* Temminck and Schlegel 1834:pls.5,7 (10:18, 14:30) (invalid vernacular name)

Trionyx (Aspidonectes) sinensis Wiegmann 1834:189 (17:81) (*nomen conservandum*)
Trionyx sinensis, Pelodiscus sinensis, Tyrse sinensis, Amyda sinensis, Trionyx sinensis sinensis, Amyda sinensis sinensis, Pelodiscus sinensis sinensis
Type locality: "kleinen Insel im Tigerflusse, dicht bei Macao" [on a small island in the Tiger River, close to Macao] [China].
Type specimen: ZMB 38, lectotype, designated and genotyped by Stuckas and Fritz (2011:337).
Comment: Name conserved by ICZN (1963), see Wermuth (1956) and Mertens and Wermuth (1961), and by ICZN (1991), see Webb (1990).

Trionyx japonica Temminck and Schlegel 1838:139 (14:30)
Amyda japonica, Pelodiscus sinensis japonicus
Type locality: "Japon" [Japan].
Type specimens: RMNH 3259, 3264, syntypes (2), discussed by Hoogmoed et al. (2010).

Trionyx tuberculatus Cantor 1842a:16 (17:82) (*nomen nudum*)

Trionyx tuberculatus Cantor 1842b:482 (17:82)
Potamochelys tuberculatus, Amyda tuberculata, Trionyx sinensis tuberculatus, Amyda sinensis tuberculata, Pelodiscus sinensis tuberculatus
Type locality: "Chusan...Island" [Zhoushan Island, Zhejiang, China].
Type specimens: NHMUK 1946.1.22.87–89, syntypes (3).

Tyrse perocellata Gray 1844:48
Trionyx perocellatus, Potamochelys perocellatus, Landemania perocellata, Gymnopus perocellatus
Type locality: "Canton, China" [Guangzhou Shi, Guandong, China].
Type specimens: NHMUK 1946.1.22.87–89, syntypes (3), same as *Trionyx tuberculatus*.

Trionyx schlegelii Brandt 1857:111
Amyda schlegelii
Type locality: "China borealis...et Japonia" [China and Japan].
Type specimen: Not known or located.

Landemania irrorata Gray 1869a:216
Type locality: "Shanghai" [China].
Type specimen: NHMUK 1946.1.22.9 (formerly 1862.11.1.299), holotype.

Trionyx peroculatus Günther *in* Gray 1869a:216 (*nomen nudum*)

Gymnopus simonii David 1875:214 (*nomen nudum*)
Type locality: "China."
Type specimen: MNHN 835, discussed by Bour et al. (1995).

Psilognathus laevis Heude 1880:24
Type locality: "la région montagneuse au sud de la ville de Ning-kouo fou" [Ningguo Co., Anhui, China].
Type specimens: Not located, type specimens figured (pl.2).

Temnognathus mordax Heude 1880:26
Type locality: "environs de Chang-hai" [Shanghai, China].
Type specimens: Not located, type specimens figured (pl.3).

Gomphopelta officinae Heude 1880:27
Type locality: "la Houai, vers l'endroit où cette rivière sort de la province du Ho-nan" [Huai River, Henan, China].
Type specimens: Not located, type specimens figured (pl.4).

Coelognathus novemcostatus Heude 1880:29
Type locality: "l'extrémité orientale du lac Tch'ao" [Lake Chao, Anhui, China].
Type specimens: Not located, type specimens figured (pl.5).

Tortisternum novemcostatum Heude 1880:31
Type locality: "lac Tch'ao, département de Lu-tcheou" [Lake Chao, Anhui, China].
Type specimens: Not located, type specimens figured (pl.6).

Ceramopelta latirostris Heude 1880:33
Type locality: "environs de Ngan-k'ing fou" [Anqing Shi, Anhui, China].
Type specimens: Not located, type specimens figured (pl.7).

Coptopelta septemcostata Heude 1880:35
Type locality: "lacs de Tong-lieou (Ngan-houé)" [Dongliu, Anhui, China].
Type specimens: Not located, type specimens figured (pl.8).

Cinctisternum bicinctum Heude 1880:37
Type locality: "marais de Ngan-K'ing" [Anqing Shi, Anhui, China].
Type specimens: Not located, type specimens figured (pl.9).

Trionyx cartilagineus newtoni Ferreira 1897:114
Trionyx sinensis newtoni
Type locality: "Timor" [Timor-Leste] [in error, trade specimen]
Type specimen: Probably MUHNAC, holotype, not located.

Amyda schlegelii haseri Pavlov 1932:27
Type locality: Not designated. Restricted to "Tzu ya ho, the river of Sien hien (central Chili)" [Ziya He, Xian Co., Hebei, China] by Licent *in* Pavlov (1932:34).
Type specimen: TNZ s/n, holotype.

Amyda schlegelii licenti Pavlov 1932:28
Type locality: "Tientsin" [Tianjin, China].
Type specimen: TNZ 14, holotype.

Amyda schlegelii laoshanica Pavlov 1933:3
Type locality: "Chantong, Laoshan, near Tsingtao" [Qingdao Shi, Shandong, China].
Type specimen: TNZ 638, holotype.

Pelodiscus variegatus Farkas, Ziegler, Pham, Ong, and Fritz 2019 [(103)]
Vietnamese Softshell Turtle, Spotted Softshell Turtle

Peter Paul van Dijk / Vietnam / trade; Cuc Phuong Turtle Conservation Center

Thomas Ziegler / *left*: Ha Tinh Prov., *right*: Quang Binh Prov., Vietnam / juvenile

*

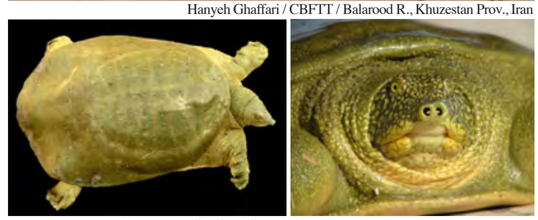
Distribution: China (Hainan), Vietnam
Presumed Historic Indigenous Range: 108,293 sq. km
Size (Max SCL): male 11.6 cm, female 23.0 cm (Farkas et al. 2019)
IUCN Red List: Not Evaluated (NE)
TFTSG Provisional Red List: Critically Endangered (CR) (2019)
CITES: Appendix II (2013), as part of *P. parviformis*
Synonymy:
Pelodiscus variegatus Farkas, Ziegler, Pham, Ong, and Fritz 2019:72
Type locality: "Thai Thinh village, Kinh Mon District, Hai Duong Province, Vietnam."
Type specimen: IEBR 4480, holotype.

Rafetus Gray 1864b

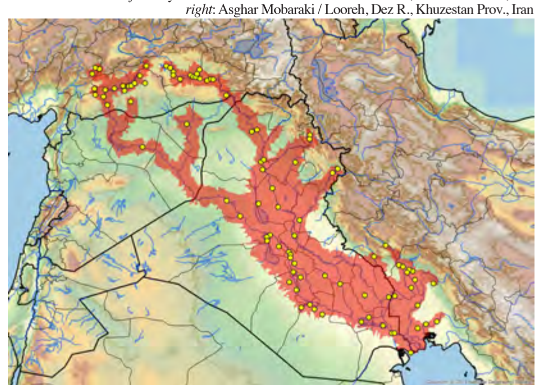
Rafetus Gray 1864b:81
Type species: *Rafetus euphraticus* [= *Testudo euphratica* Olivier *in* Daudin 1801], by original monotypy.
Oscaria Gray 1873g:157
Type species: *Oscaria swinhoei* Gray 1873g, by original monotypy.
Yuen Heude 1880:18
Type species: *Yuen leprosus* Heude 1880 [= subjective synonym of *Oscaria swinhoei* Gray 1873g], by subsequent designation by Stejneger (1907:514).

Rafetus euphraticus (Olivier *in* Daudin 1801) [(17:83, 17:84)]
Euphrates Softshell Turtle

Hanyeh Ghaffari / CBFTT / Balarood R., Khuzestan Prov., Iran



left: Hanyeh Ghaffari / CBFTT / Karkheh Lake Dam, Khuzestan Prov., Iran
right: Asghar Mobaraki / Looreh, Dez R., Khuzestan Prov., Iran



*

Distribution: Iran (Ilam, Khuzestan, Lorestan), Iraq, Syria, Turkey
Presumed Historic Indigenous Range: 263,030 sq. km
Size (Max SCL): male 53.7 cm, female 57.0 cm (Ghaffari, unpubl. data); Max CCL: male 68.0 cm (Taskavak 1998; Pritchard 2001; Taskavak et al. 2016 CBFTT)
CBFTT Account: Taskavak, Atatür, Ghaffari, and Meylan (2016)
IUCN Red List: Endangered (EN A4c) (Ghaffari et al. 2017);
Previously: Endangered (EN A1ac+2c) (ERASG 1996)
CITES: Appendix II (2017)
Synonymy:
Testudo euphratica Olivier *in* Daudin 1801:305 [(17:83)]
Trionyx euphraticus, Gymnopus euphraticus, Rafetus euphraticus, Pelodiscus euphraticus, Amyda euphratica, Tyrse euphratica
Type locality: "le Tigre et l'Euphrate" [Tigris and Euphrates rivers, Iraq]. Restricted to "Euphrates (Al Firat), vicinity of Anah, Al-Anbar, Iraq" by Bour et al. (1995:85).
Type specimen: Not located, specimen figured in Olivier (1807:pl.41), holotype, designated by Bour et al. (1995:85).

Testudo rafcht Olivier 1807:328
Type locality: "le Tigre..[&]..l'Euphrate" [Tigris and Euphrates rivers, Iraq].
Type specimen: Not located, specimen figured in Olivier (1807:pl.41), holotype, see Bour et al. (1995).
Testudo rascht Gray 1830e:19 (*nomen novum*)
Tyrse rafeht Gray 1844:49 (*nomen novum*)
Trionyx rafeht, *Testudo rafeht*

Rafetus swinhoei (Gray 1873g) (07:83, 10:33, 11:17, 17:85)
Red River Giant Softshell Turtle, Yangtze Giant Softshell Turtle, Swinhoe's Softshell Turtle, *Con Giai*


Timothy E.M. McCormack / TCC / Dong Mo Lake, Vietnam



Joel Sartore / China / captivity / Suzhou Zoo / *left*: female, *right*: male


*


*

(light red shade and red dots = extirpated)
Distribution: China (Anhui? [extirpated], Jiangsu? [extirpated], Yunnan, Zhejiang? [extirpated]), Vietnam
Presumed Historic Indigenous Range: 74,293 sq. km
Size (Max SCL): male 86.0 cm, female 109.5 cm (Le and Pritchard 2009; Pritchard 2012)
IUCN Red List: Critically Endangered (CR A2acd; D) (Fong et al. 2021); Previously: Critically Endangered (CR A1cd+2cd) (ATTWG 2000); Least Concern (LC) [Not Listed] (TFTSG 1996) [in error, was provisionally assessed as either Critically Endangered (CR) *or* Endangered (EN), but final determination was Least Concern (LC)]
CITES: Appendix II (2013); Previously: Appendix III (China) (2005)
Synonymy:
Oscaria swinhoei Gray 1873g:157
Pelodiscus swinhoei, *Trionyx swinhoei*, *Amyda swinhoei*, *Rafetus swinhoei*
Type locality: "neighbourhood of Shanghai" [China].
Type specimen: NHMUK 1946.1.22.9 and 1947.3.6.13 (shell and skull separate) (formerly 1873.7.30.125), holotype, discussed by Farkas and Fritz (1998).
Yuen leprosus Heude 1880:20
Type locality: "le Houang-p'ou, à Chang-hai" [Huangpu Jiang, Shanghai, China].
Type specimens: Not located; possibly NZMC, see Pritchard (2012).
Yuen maculatus Heude 1880:22
Pelochelys maculatus
Type locality: "le Houang-p'ou" [Huangpu Jiang, Shanghai, China].
Type specimens: Not located, possibly NZMC, see Pritchard (2012); type specimens figured (pl.1,1a).
Yuen elegans Heude 1880:23
Type locality: "Houang-p'ou" [Huangpu Jiang, Shanghai, China].
Type specimens: Not located, possibly NZMC, see Pritchard (2012).
Yuen viridis Heude 1880:23
Type locality: "Grand Lac, à Sou-tcheou" [Tai Hu, Suzhou Shi, Jiangsu, China].
Type specimens: Not located, possibly NZMC, see Pritchard (2012).
Yuen pallens Heude 1880:23
Type locality: "Grand Lac, près de Sou-tcheou" [Tai Hu, Suzhou Shi, Jiangsu, China].
Type specimens: Not known or located, possibly NZMC, see Pritchard (2012).
Trionyx swinhonis Boulenger 1889:ix (*nomen novum*)
Comment: Unjustified emendation.
Pelochelys taihuensis † Zhang 1984:71
Type locality: "Luojiajiao, Tongxiang County, Zhejiang" [China].
Type specimen: Holotype, not located, subfossil, skull and costal bone.
Geologic age: Holocene, Neolithic, Luojiajiao Relics.
Trionyx liupani † Tao 1986:23
Type locality: "Penghu Channel in the Taiwan Strait" [Taiwan, China].
Type specimen: Holotype, private collection; NTUM FR 0002–0003, plaster model, fossil, skull and hypoplastron.
Geologic age: Late Pleistocene.
Rafetus hoankiemensis Ha 1995:4 (*nomen nudum*)
Rafetus hoguomensis Ha 1995:4 (*nomen nudum*)
Rafetus leloii Ha 2000:104 (11:17)
Type locality: "Hoan Kiem Lake, Ha Noi" [Vietnam].
Type specimen: RHK 01-1967, holotype, discussed by Farkas and Webb (2003).
Rafetus vietnamensis Le, Le, Tran, Phan, Phan, Tran, Pham, Nguyen, Nong, Phan, Dinh, Truong, and Ha 2010:950 (10:33, 11:17)
Type locality: Not known; holotype from "Hung Ky Pagoda, Hanoi" [Vietnam].
Type specimen: RHK 1, holotype, same specimen as holotype of *Rafetus leloii*.

Trionyx **Geoffroy Saint-Hilaire 1809a**

Trionyx Geoffroy Saint-Hilaire 1809a:363

Type species: *Trionyx* "tortue du Nil" [= *Trionyx egyptiacus* Geoffroy Saint-Hilaire 1809a] [= subjective synonym of *Testudo triunguis* Forskål 1775], by subsequent designation by Bory de Saint-Vincent (1828:77).

Aspidonectes Wagler 1830b:134

Type species: *Aspidonectes aegyptiacus* [= *Trionyx aegyptiacus* Geoffroy Saint-Hilaire 1809b] [= subjective synonym of *Testudo triunguis* Forsskål 1775), by subsequent designation by Fitzinger (1843:30).

Gymnopus Duméril and Bibron 1835:472 (*nomen novum*)

Tyrse Gray 1844:47

Type species: *Tyrse aegyptiacus* [= *Trionyx aegyptiacus* Geoffroy Saint-Hilaire 1809b] [= subjective synonym of *Testudo triunguis* Forskål 1775], by original designation.

Fordia Gray 1869a:219

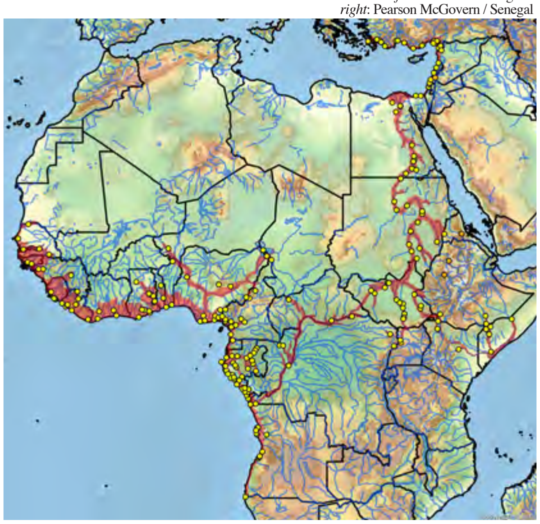
Type species: *Fordia africana* Gray 1869a [= subjective synonym of *Testudo triunguis* Forskål 1775], by original monotypy.

Trionyx triunguis (Forskål 1775) (10:29, 11:18)

African Softshell Turtle, Nile Softshell Turtle

Oguz Türkozan / Dalaman, Turkey

left: Luca Luiselli / Nigeria
right: Pearson McGovern / Senegal



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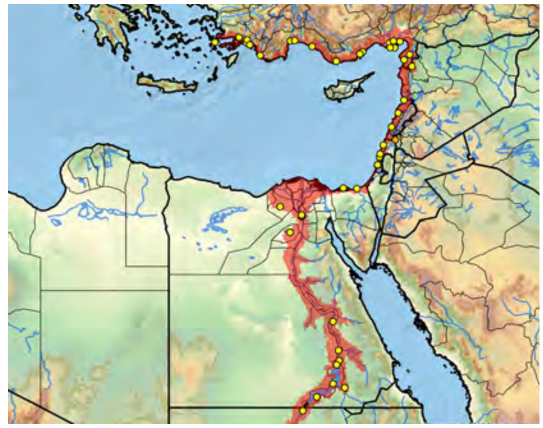

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(orange dots = introduced, probable trade, or uncertain)

Distribution: Angola, Benin, Cameroon, Central African Republic, Chad, Congo (DRC), Congo (ROC), Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Greece (vagrant), Guinea, Guinea-Bissau, Israel, Ivory Coast (Côte d'Ivoire), Kenya, Lebanon, Liberia, Mauritania, Namibia, Niger, Nigeria, Senegal, Sierra Leone, Somalia, South Sudan, Sudan, Syria, Togo, Turkey, Uganda

Introduced: Israel (inland)

Mediterranean subpopulation: Egypt (extirpated), Greece, Israel, Lebanon, Syria, Turkey

Presumed Historic Indigenous Range: 2,050,595 sq. km

Size (Max SCL): male 80.0 cm, female 120.0 cm (Herz and Rudolphi 2006; van Dijk et al. 2017 IUCN)

IUCN Red List: Vulnerable (VU A4bcd) (van Dijk et al. 2017); Regional (Europe): Not Applicable (NA) (van Dijk et al. 2004; Cox and Temple 2009); Subpopulations (Mediterranean): Critically Endangered (CR C2a) (ERASG 1996);

Previously: Least Concern (LC) [Not Listed] (TFTSG 1996)
CITES: Appendix II (2017); Previously: Appendix III (Ghana) (1976–2007)
Synonymy:
Testudo triunguis Forskål 1775:ix (10:29)
Amyda triunguis, Trionyx triunguis, Pelodiscus triunguis, Aspidonectes triunguis, Tyrse triunguis, Amyda triunguis triunguis
Type locality: "Nilo" [Nile River, Egypt].
Type specimen: Not known or located, apparently lost (Webb, pers. comm. *in* Iverson 1992).
Testudo striata Suckow 1798:37 (*partim, nomen novum*)
Comment: Unjustified replacement name for *triunguis*.
Trionyx egyptiacus Geoffroy Saint-Hilaire 1809a:366
Type locality: "l'Egypte" [Egypt]. Restricted to "the lower Nile River drainage" [Egypt] by Bour et al. (1995:77).
Type specimen: MNHN 4147, lectotype, designated by Bour et al. (1995:77).
Trionyx aegyptiacus Geoffroy Saint-Hilaire 1809b:12 (*nomen novum*)
Aspidonectes aegyptiacus, Gymnopodus aegyptiacus, Gymnopus aegyptiacus
Comment: Unjustified emendation or error for *egyptiacus*.
Trionyx niloticus Gray 1831d:46 (*nomen novum*)
Tyrse nilotica, Aspidonectes niloticus
Comment: Unjustified replacement name for *egyptiacus*.
Trionyx labiatus Bell 1835:unnumbered[text p.55]
Trionyx (Pelodiscus) labiatus
Type locality: "Africâ occidentali...Sierra Leone."
Type specimen: OUM s/n, holotype, apparently lost, not listed by Nowak-Kemp and Fritz (2010); type specimen figured (part 4,pl.2-4).
Trionyx mortoni Hallowell 1844:120
Type locality: "Africa."
Type specimen: Possibly ANSP, holotype, apparently lost, not listed by Malnate (1971).
Aspidonectes aspilus Cope 1860:295
Gymnopus aspilus
Type locality: "Rembo and Ovenga rivers, tributaries of the Fernando Vas, Equatorial West Africa" [Gabon].
Type specimen: Possibly ANSP or USNM, holotype, apparently lost, not listed by Cochran (1961), Malnate (1971), or Reynolds et al. (2007).
Fordia africana Gray 1869a:219
Type locality: "Upper Nile, Chartoum" [Sudan].
Type specimens: NHMUK 1947.3.5.42, 1947.3.5.70, 1947.3.6.12 (skull from one specimen catalogued separately) (formerly 1862.9.2.33–34), syntypes (2).
Trionyx triunguis rudolfianus Deraniyagala 1948:30
Amyda triunguis rudolfianus
Type locality: "Ferguson's Gulf, Lake Rudolf, Africa" [Kenya].
Type specimen: UPSZTY 2821 (formerly UUZM 2821), holotype (Rhodin, unpubl. data).

TESTUDINES, sp. indet.

Named modern turtle taxa that cannot currently be identified as to what family or genus they may belong, or under what species they should be synonymized.

Testudo porphyrea Daudin 1801:142 (*nomen dubium et oblitum*)
Emys porphyrea, Emys (Clemmys) porphyrea
Type locality: "nouvelle Hollande" [Australia, in error?]
Type specimen: Not known or located, possibly in MNHN.
Comment: Described as being very similar to *Testudo scripta* Thunberg *in* Schoepff 1792 (= *Trachemys scripta scripta*) (Emydidae, USA), but synonymized under *Chelodina longicollis* (Chelidae, Australia) by Gray (1844, 1856b) before disappearing from later synonymies. No mention was made in the description of a long neck nor how many plastral scutes there were, but the two anterior marginals projected a bit, the tail had a small dorsal ridge, and there were tubercules around the base of the tail. It may not even have come from Australia.
Testudo costata Thunberg 1808:4 (*nomen nudum*)
Type locality: Not designated.
Type specimen: UUZM s/n, apparently lost, not listed by Lönnberg (1896), Holm (1957), or Wallin (2001).
Comment: A specimen with this name attributed to Thunberg was donated to UUZM (Uppsala) by Thunberg (1808) from his personal collection and was still recorded as being in the collection as of Thunberg (1828), but no published description appeared and it has not been listed since. No details of its appearance are recorded, and what kind of turtle it was remains unknown.
Emys gronovii Merrem 1820:23 (*nomen dubium et oblitum*)
Emys gronouii
Type locality: Not known.
Type specimen: Not located, originally Museum Gronovianum 75.
Comment: Description cited as sourced from Gronovius (1763:17, n.75), but *E. gronovii* was never recognized or synonymized by any subsequent authors, and what kind of turtle it was remains unknown.
Emyda pugnax Rafinesque 1822:3 (*nomen nudum*)
Emyda pugnar
Type locality: "United States" [USA].
Type specimen: Not known or located.
Comment: Common name given as Fighting Tarapen.
Emyda morstans Rafinesque 1822:3 (*nomen nudum*)
Emyda mordans
Type locality: "United States" [USA].
Type specimen: Not known or located.
Comment: Common name given as Biting Tarapen.
Emyda meg lonyx Rafinesque 1822:3 (*nomen nudum*)
Emyda megalonyx
Type locality: "United States" [USA].
Type specimen: Not known or located.
Comment: Original name with a typo ("a" omitted). Common name given as Long claw Tarapen.
Emyda striata Rafinesque 1822:3 (*nomen nudum*)
Type locality: "United States" [USA].
Type specimen: Not known or located.
Comment: Common name given as Striped Tarapen.
Emyda granularis Rafinesque 1822:3 (*nomen nudum*)
Type locality: "United States" [USA].
Type specimen: Not known or located.
Comment: Common name given as Granulated Tarapen.
Lepidemy bifida Rafinesque 1822:3 (*nomen nudum*)
Lepidemys bifida
Type locality: "United States" [USA].
Type specimen: Not known or located.
Comment: Original name with a typo ("s" omitted).Common name given as Bifid Tarapen.

SUPPLEMENT

Extinct Holocene Turtles and Tortoises

We include a supplementary listing here of those taxa of turtles and tortoises that persisted into the Holocene and prehistoric times, but became extinct between ca. 10,000 BCE (ca. 12,000 ybp) and 1500 CE. This listing has been updated since our previous fossil checklist (TEWG 2015), which also included species that became extinct earlier during the Pleistocene. The species and unnamed taxa recorded here are not included in our various lists or conservation status analyses elsewhere in this checklist, which concern only modern turtles and tortoises that have existed since 1500 CE. The maps show point localities for the type and other referred specimens, but distributional ranges shown are relatively hypothetical and generalized.

We record a total of 17 extinct Holocene taxa, of which 15 are described species or subspecies and 2 are still unnamed taxa. All are terrestrial chelonians, most of them with large to giant body sizes, and most being vulnerable island forms; 15 are in the family Testudinidae (tortoises) and 2 in the extinct family Meiolaniidae (horned terrestrial turtles). Most appear to have became extinct due to direct human subsistence hunting and overexploitation, although some may have also been adversely affected by climate change (see discussion in TEWG 2015).

Meiolaniidae and Testudinidae that became Extinct during the Holocene between ca. 10,000 BCE (ca. 12,000 ybp) and 1500 CE (map shows possible Holocene ranges only)

Testudines Batsch 1788

Meiolaniformes Sterli and de la Fuente 2013

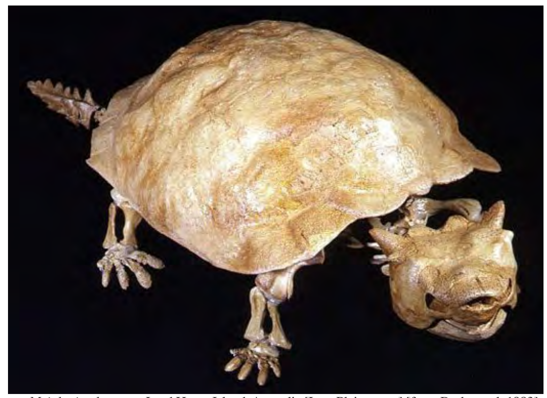
Meiolaniformes Sterli and de la Fuente 2013:839

Meiolaniidae Boulenger 1887b

Miolaniidae Boulenger 1887b:554
Meiolaniidae Simpson 1937:2

Meiolania Owen 1886

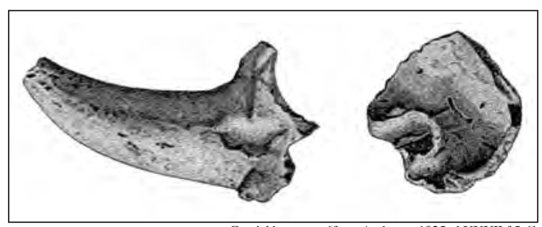
Meiolania Owen 1886:315
Ceratochelys Huxley 1887:232 (*nomen novum*)
Miolania Boulenger 1887b:554 (*nomen novum*)



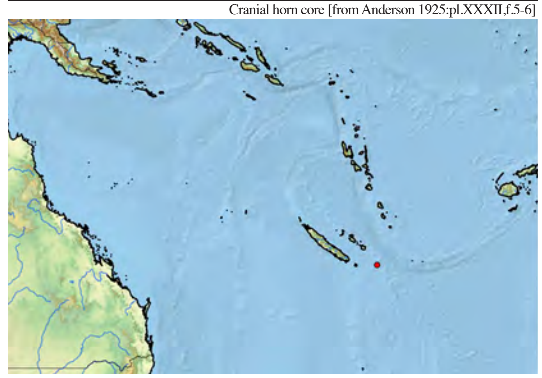
Meiolania platyceps, Lord Howe Island, Australia [Late Pleistocene] [from Burke et al. 1983]

Meiolania mackayi Anderson 1925

Walpole Giant Horned Turtle
(Extinct, Early Holocene?)



Cranial horn core [from Anderson 1925:pl.XXXII,f.5-6]

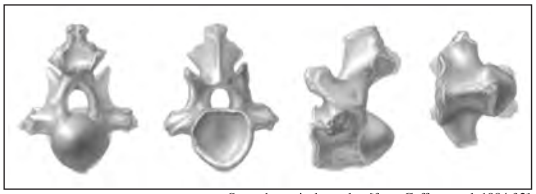


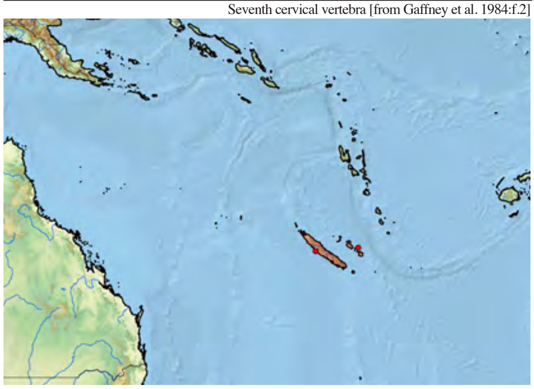
Distribution: New Caledonia (Walpole Island)
Possible Holocene Range: 4 sq. km
Size (Max SCL): ca. 70 cm [estimated] (Gaffney 1996)
Synonymy:
Meiolania mackayi † Anderson 1925:239
Type locality: "Walpole Island...about one hundred miles southeast from New Caledonia...22°38'S, 168°27'E."
Type specimen: AMF 17720, holotype, fossil, cranial horn core, figured (pl.32,f.5-6) and in Gaffney (1996:f.77c).

Geologic age: Late Pleistocene to Early Holocene (Gaffney 1996).
Comment: Specimens found in phosphatic guano deposits in crevices in coral rock, presumed to be Late Pleistocene or Early Holocene. There is no evidence of early human presence on the island, but in view of its isolated and remote occurrence, this species was possibly the last Meiolaniidae to become extinct.

Genus indet.

Meiolaniidae sp. [New Caledonia]
New Caledonia Giant Horned Turtle
(Extinct, ca. 530 CE)


Seventh cervical vertebra [from Gaffney et al. 1984:f.2]



Distribution: New Caledonia (New Caledonia Island, Tiga)
Possible Holocene Range: 19,649 sq. km
Size (Max SCL): ca. 85 cm [estimated] (Gaffney et al. 1984; Gaffney 1996)
Meiolaniidae, gen. et sp. indet. † (Gaffney et al. 1984:2)
Localities: "Main Pindai Cave, Nepoui Peninsula, New Caledonia, 21°20'12"S, 164°57'24"E." and "Tiga Island, Loyalty Group, New Caledonia, 21°8'S, 167°49'E."
Specimens: MNHN NCP 05 and NCT 01, subfossil, cervical vertebrae, figured (f.2).
Geologic age: Late Holocene; ^{14}C age: 1720 ± 70 ybp, 230 CE ± 70 (160–300 CE), see Gaffney et al. (1984); calibrated age: 1820–1419 ybp (130–531 CE), see TEWG (2015).
Comment: This appears to be one of the last known Meiolaniidae to have survived into the Holocene; it occurred in association with modern humans and was evidently extirpated by them.

Cryptodira Cope 1868b

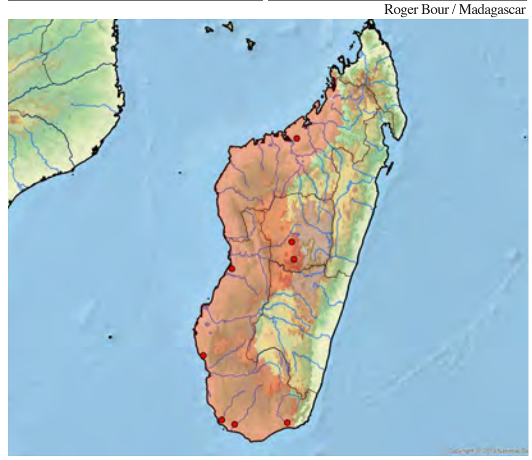
Testudinoidea Fitzinger 1826

Testudinidae Batsch 1788

Aldabrachelys Loveridge and Williams 1957

Aldabrachelys abrupta (Grandidier 1868)
Madagascar Giant Tortoise
(Extinct, ca. 1250 CE)


Roger Bour / Madagascar



Distribution: Madagascar
Possible Holocene Range: 292,101 sq. km
Size (Max SCL): ca. 125 cm [estimated], 115.0 cm [measured] (Bour 1994)
Synonymy:
Testudo abrupta † Grandidier 1868:377
Geochelone abrupta, Geochelone (Asterochelys) abrupta, Asterochelys abrupta, Dipsochelys abrupta, Aldabrachelys abrupta
Type locality: "terrain marécageux à Amboulitsate, sur la côte occidentale de Madagascar." Emended to "marais d'Amboulitsate (Ambohisatrana), canton de Maromiandra, Madagascar" by Bour (1994:136).
Type specimen: MNHN(P) MAD3500, lectotype, subfossil, incom-

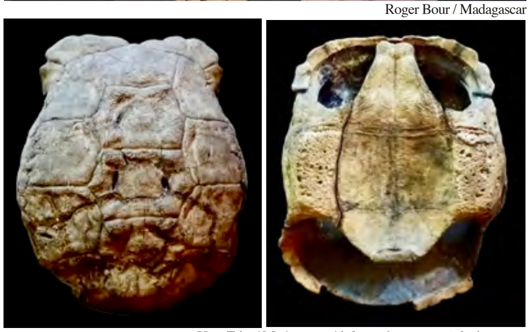
plete carapace, designated by Bour (1994:136), figured in Bour (1994:f.33-35), see also Arnold (1979) and Bour (1985).

Geologic age: Late Holocene; ^{14}C age: 750 ± 370 ybp, 1200 CE ± 370 (830–1570 CE), see Burleigh and Arnold (1986); calibrated age: 1358–55 ybp (592–1895 CE), see TEWG (2015).

Comment: This species went extinct shortly after the first arrival of humans from continental Africa, who reached Madagascar approximately 2000 years ago (Pedrono 2008). Radiocarbon dating of bones from the species indicate a range of dates that suggest possible, but unlikely, persistence of occurrence into the very earliest part of the modern era, just after 1500 CE. Three uncalibrated ^{14}C aged specimens are known: 1) the youngest, at 750 ± 370 ybp (ca. 1200 CE ± 370 yrs = 830–1570 CE; Burleigh and Arnold 1986); 2) an intermediate specimen, 1910 ± 120 ybp (ca. 40 CE ± 120 yrs = 80 BCE–160 CE; Mahé and Sourdat 1972); and 3) the oldest, at 2035 ± 35 ybp (ca. 85 BCE ± 35 yrs = 120–50 BCE; Burleigh et al. 1982). The calibrated ages for these three specimens, respectively, calculate as: 1) 592–1895 CE [less precise range due to younger age]; 2) 197 BCE–390 CE; and 3) 163 BCE–52 CE. Although it is conceivable that the youngest of these specimens was from a tortoise that actually lived in the 1500s or later, this is unlikely, and we assume that the species probably went extinct sometime between 1200 and 1300 CE. The skull was redescribed by Gerlach (2008), who noted also that this species was apparently sympatric with *A. grandidieri*.

Aldabrachelys grandidieri (Vaillant 1885b)
Grandidier's Giant Tortoise
(Extinct, ca. 800 CE)

Roger Bour / Madagascar



Uwe Fritz / Madagascar / *left*: paralectotype; *right*: lectotype

Distribution: Madagascar
Possible Holocene Range: 52,410 sq. km
Size (Max SCL): ca. 135 cm [estimated], 124.0 cm [measured] (Bour 1994); Max CCL: 152.0 cm (Vaillant 1885b)
Synonymy:

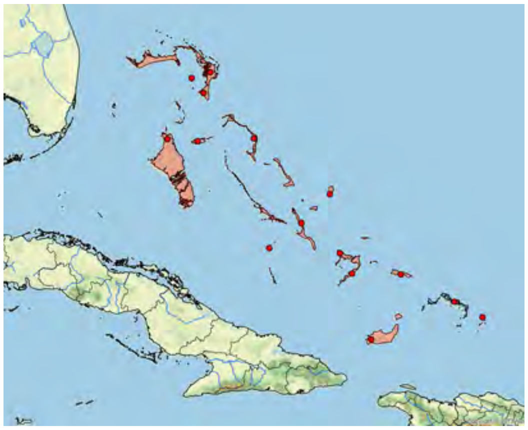
Emys gigantea † Grandidier 1868:378 (junior homonym [as *Testudo gigantea*], not *Testudo gigantea* Schweigger 1812)
Testudo gigantea
Type locality: "Etséré...Madagascar."
Type specimen: MNHN(P) MAD3501, lectotype (see below), subfossil.
Geologic age: Late Holocene.
Comment: Name published almost simultaneously by Milne-Edwards (1868), see Bour (1994).

Testudo grandidieri † Vaillant 1885b:876 (*nomen novum*)
Geochelone grandidieri, *Dipsochelys grandidieri*, *Aldabrachelys grandidieri*, *Megalochelys grandidieri*
Type locality: "Etséré...Madagascar." Emended to "Etseré (= Itsere), Belavenoka, canton de Morombe, Madagascar" by Bour (1994:137).
Type specimen: MNHN(P) MAD3501 (formerly 1884.30A), lectotype, subfoossil, complete carapace, designated by Bour (1985:51), figured by Bour (1985:f.10) and Bour (1994:f.33-35), see also Boulenger (1894) and Arnold (1979); MNHN(P) MAD3502 (formerly 1884.30B), paralectotype.
Geologic age: Late Holocene; ^{14}C age: 1250 ± 50 ybp (650–750 CE), see Burleigh and Arnold (1986), calibrated age: 1282–1066 ybp (668–884 CE), see TEWG (2015).
Comment: Justified replacement name for *Testudo gigantea* (Grandidier 1868). This species went extinct shortly after the first arrival of humans from continental Africa, who reached Madagascar approximately 2000 years ago (Pedrono 2008). The most recent dated specimen recorded was from ca. 1250 ybp (Burleigh and Arnold 1986).

Testudo madagascariensis † Vaillant *in* Rothschild 1915:pl.34 (*nomen novum*)
Comment: Unjustified replacement name for *Testudo grandidieri* † Vaillant 1885b.

Chelonoidis Fitzinger 1835

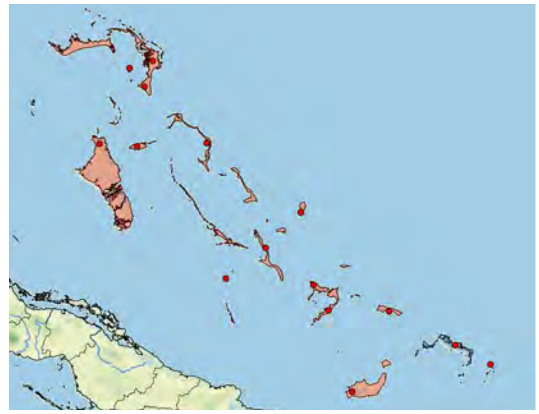
Chelonoidis alburyorum Franz and Franz 2009 [(105)]
Albury's Tortoise, Bahama Banks Tortoise
(includes 3 subspecies)



(subspecies: *alburyorum* = red; *keegani* = purple (Turks), *sementis* = blue)
Distribution: Bahamas (Acklins, Andros, Crooked Island, Eleuthera, Flamingo Cay, Great Abaco, Great Inagua, Long Island, Mayaguana, Moore's Island, New Providence, San Salvador); Turks and Caicos (Grand Turk, Middle Caicos)
Possible Holocene Range: 16,574 sq. km
Size (Max SCL): male 71.0 cm, female 44.7 cm (see subspp.)

Chelonoidis alburyorum alburyorum Franz and Franz 2009 [(105)]
Abaco Tortoise
(**Extinct**, ca. 1200 CE)

Nancy Albury / Great Abaco Island, Bahamas [Albury et al. 2018:f.6,B,D,F]



(subspecies: *alburyorum* = red; *keegani* = purple (Turks), *sementis* = blue)
Distribution: Bahamas (Acklins, Andros, Crooked Island, Eleuthera, Flamingo Cay, Great Abaco, Great Inagua, Long Island, Mayaguana, Moore's Island, New Providence, San Salvador)
Possible Holocene Range: 15,814 sq. km
Size (Max SCL): male 46.6 cm, female 42.8 cm; Max CCL: male 61.0 cm, female 55.0 cm (Franz and Franz 2009; Albury et al. 2018)
Synonymy:
Chelonoidis alburyorum † Franz and Franz 2009:5
Chelonoidis alburyorum alburyorum

Type locality: "Sawmill Sink (BNM Site Number AB-50), north of Cornwall Point, 37 km (23 mi) S of Marsh Harbour, Great Abaco Island, Little Bahamas Bank, The Bahamas (26°17' N, 77°12' W)."

Type specimen: UF 225400, holotype, subfossil, skull, shell, and associated appendicular elements, figured (f.2-15); topotypic material genotyped by Kehlmaier et al. (2021a).

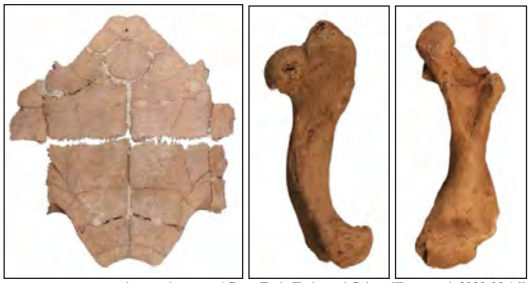
Geologic age: Late Holocene; ^{14}C cal age: ca. 930 BCE–1110 CE (Steadman et al. 2020).

Comment: Described from remarkably intact shells from an underwater sinkhole, with ^{14}C age of 2720–2580 ± 50 ybp (820–580 BCE); calibrated age: 2770–2500 ybp (820–550 BCE). Recent finds of charred fragments of this species from Lucayan Taíno culture middens in peat deposits at Gilpin Point, Abaco Island (Steadman et al. 2014; Hastings et al. 2014), are calculated to ^{14}C age of 960–910 ybp and 920–780 cal. ybp (ca. 1170 CE), shortly after the arrival of humans on Abaco at ca. 950 ybp. Other tortoise fragments from the Pleistocene or Holocene of Bahamas (Banana Hole on New Providence and on Andros), described by Auffenberg (1967) as *Geochelone* sp., may represent the same species. Discussed also by Franz and Franz (2009), Vlachos (2018), Albury et al. (2018, 2020), Steadman et al. (2020), and Franz et al. (2020). Successful extraction of ancient mitochondrial DNA from bones of this species by Kehlmaier et al. (2017) demonstrated its close phylogenetic relationship with modern *C. chilensis* and the *C. niger* complex from the Galápagos, and more distant relationship to the other modern South American *Chelonoidis* species, *C. carbonarius* and *C. denticulatus*.

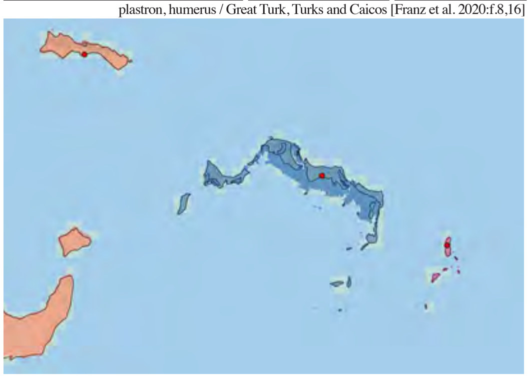
Chelonoidis alburyorum keegani Franz, Albury, and Steadman 2020 [105]

Turks Tortoise, Keegan's Tortoise

(Extinct, ca. 1200 CE)



plastron, humerus / Great Turk, Turks and Caicos [Franz et al. 2020:f.8,16]



(subspecies: *alburyorum* = red; *keegani* = purple (Turks), *sementis* = blue)

Distribution: Turks and Caicos (Grand Turk Island)

Possible Holocene Range: 50 sq. km

Size (Max SCL): male 71.0 cm, female 44.7 cm [estimated] (Franz et al. 2020)

Synonymy:

Geochelone alburyorum keegani † Franz, Albury, and Steadman 2020:13)

Type locality: "Coralie Archaeological Site (GT-3)...21°30'N, 71°08'W...west shore of North Creek...northern end of Grand Turk Island, Turks and Caicos Islands, British Overseas Territory."

Type specimen: UF 453000, holotype, subfossil, complete plastron, figured (f.8A,C); topotypic material genotyped by Kehlmaier et al. (2021a).

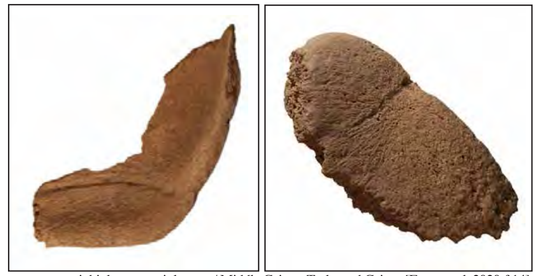
Geologic age: Late Holocene, ^{14}C cal age: ca. 700–1200 CE (Carlson 1999; Steadman et al. 2020).

Comment: Charred tortoise bones found in conjunction with an early Taíno habitation site at Coralie that was occupied from ca. 700 to 1200 CE (Carlson 1999; Franz et al. 2001, 2020). No tortoise bones have been found in later habitation sites on the island (Carlson 1999). The Turks Islands are separated from the Caicos Islands by a deep strait and were never connected, even during the last glacial maximum at the end of the Pleistocene.

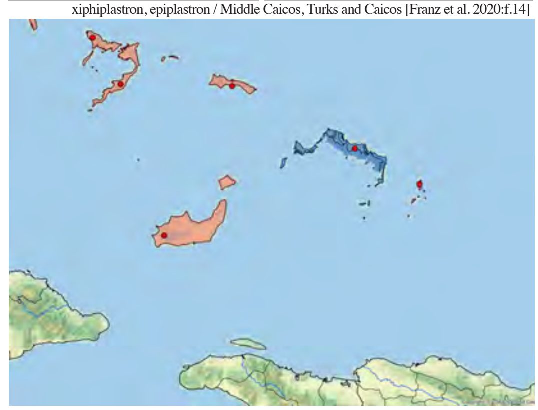
Chelonoidis alburyorum sementis Franz, Albury, and Steadman 2020 [105]

Caicos Tortoise

(Extinct, ca. 1100 CE)



xiphiplastron, epiplastron / Middle Caicos, Turks and Caicos [Franz et al. 2020:f.14]



(subspecies: *alburyorum* = red; *keegani* = purple (Turks), *sementis* = blue)

Distribution: Turks and Caicos (Middle Caicos Island)

Possible Holocene Range: 710 sq. km

Size (Max SCL): male 60.0 cm [estimated] (Franz et al. 2020)

Synonymy:

Geochelone alburyorum sementis † (Franz et al. 2020:19)

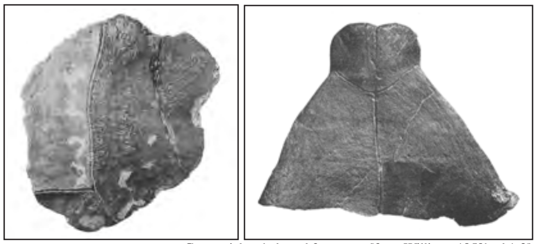
Type locality: "Indian (Head) Cave (site MC-37), 3 km west of the airport and Conch Bar Settlement, Middle Caicos Island, Turks and Caicos Islands, British Overseas Territory...21°49'N, 71°48'W."

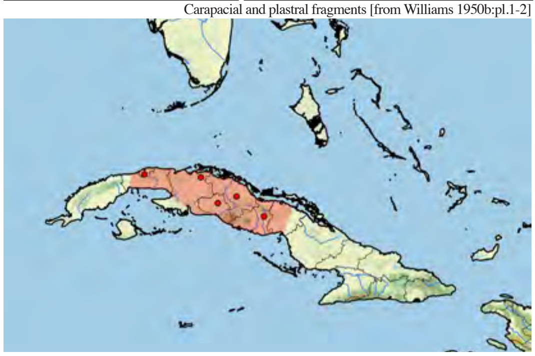
Type specimen: UF 432441, holotype, subfossil, xiphiplastron, figured (f.14A,B); topotypic material genotyped by Kehlmaier et al. (2021a).

Geologic age: Late Holocene, from ca. 10–770 CE until ca. 890–1020 CE (Franz et al. 2020; Steadman et al. 2020).

Comment: The Caicos tortoise bones were associated with human habitation, including Meillac style pottery dated to ca. 1200–500 ybp. Many of the bones were charred, indicating they had been consumed. Franz et al. (2001) hypothesized that the species had been extirpated by human predation in the late pre-Columbian historic period. The Caicos Islands are separated from the Turks Islands by a deep strait and were never connected, even during the last glacial maximum at the end of the Pleistocene.

Chelonoidis cubensis (Leidy 1868b)
Cuban Giant Tortoise
(Extinct, ca. 9000 BCE?)


Carapacial and plastral fragments [from Williams 1950b:pl.1-2]



Distribution: Cuba
Possible Holocene Range: 58,349 sq. km
Size (Max SCL): ca. 90 cm [estimated] (TEWG 2015)
Synonymy:
Testudo cubensis † Leidy 1868b:179
Testudo (Chelonoidis) cubensis, Geochelone cubensis, Hesperotestudo cubensis, Chelonoidis cubensis

Type locality: "Ciego-Montero, Cienfuegos, Cuba." Emended to "Chapepote spring at Baños de Ciego Montero, Santa Clara Province, Cuba" by Williams (1950b:9) and to "Chapapote (= Chapepote) spring, Baños de Ciego Montero, Cienfuegos (formerly Santa Clara) Province, Cuba" by Vlachos (2018:33).

Type specimen: ANSP 8923, holotype, subfossil, partial costal, figured in Williams (1950b:pl.1), see Gillette (1977) and Vlachos (2018).

Geologic age: Pleistocene to Early Holocene.

Comment: Redescribed by Williams (1950b). Auffenberg (1967) discussed this species; Meylan and Sterrer (2000) treated it as *Chelonoidis*. Karl (1995) described fosssils of smaller (CL ca. 40 cm) individuals of what might be this species from Late Pleistocene to Early Holocene deposits in San José de la Lamas, La Habana; this population apparently went extinct through human exploitation.

Chelonoidis dominicensis Albury, Franz, Rimoli, Lehman, and Rosenberger 2018
Northern Hispaniola Tortoise
(Extinct, ca. 8000 BCE?)


Nancy Albury / Dominican Republic [Albury et al. 2018:f.6,A,C,E]

Distribution: Dominican Republic, Haiti (?)
Possible Holocene Range: 34,555 sq. km
Size (Max SCL): male ca. 60.0 cm [estimated] (Franz and Woods 1983), male 42.1 cm [measured]; Max CCL: male 54.6 cm [measured] (Albury et al. 2018)
Synonymy:
Chelonoidis dominicensis † Albury, Franz, Rimoli, Lehman, and Rosenberger 2018

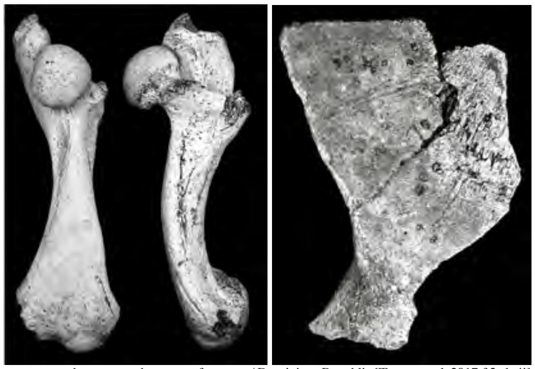
Type locality: "Oleg's Bat Cave (= Oleg's Bat House), 7 km west and inland of Bavaro...La Altagracia Province...southeastern coast...Dominican Republic...N18°42', W68°32'...elev. 22 m."

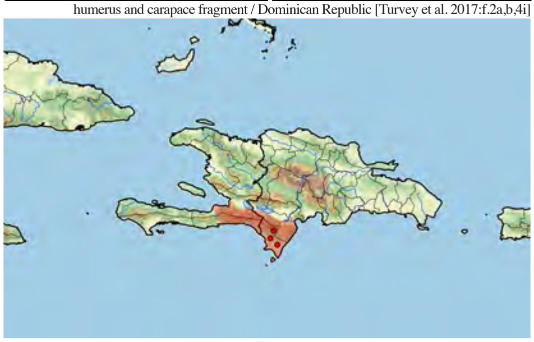
Type specimen: MHD 1000, holotype, subfossil, complete carapace and plastron, skull, cervical vertebrae, and appendicular bones, figured (f.2-8).

Geologic age: Late Pleistocene to Early Holocene

Comment: This species was listed in TEWG (2015) as "*Chelonoidis* sp. [Hispaniola]" based on Franz and Woods (1983). ^{14}C dating of a specimen by Turvey et al. (2017) was unsuccessful. Similar deposits on Hispaniola have been dated from ca. 20,000 to less than 10,000 ybp (Franz and Woods 1983).

Chelonoidis marcanoi Turvey, Almonte, Hansford, Scofield, Brocca, and Chapman 2017
Southern Hispaniola Tortoise
(Extinct, ca. 8000 BCE?)

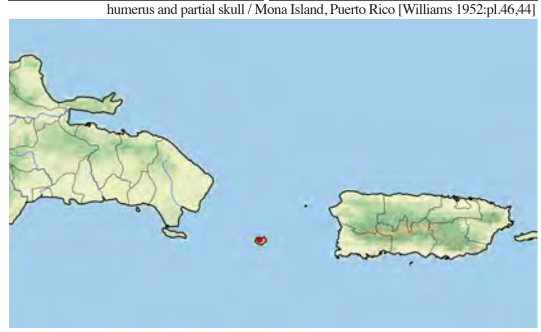

humerus and carapace fragment / Dominican Republic [Turvey et al. 2017:f.2a,b,4i]



Distribution: Dominican Republic, Haiti (?)
Possible Holocene Range: 7,323 sq. km
Size (Max SCL): ca. 52.5 cm [estimated] (based on Albury et al. 2018)
Synonymy:
Chelonoidis marcanoi † Turvey, Almonte, Hansford, Scofield, Brocca, and Chapman 2017
Type locality: "Cueva del Papayo, Pedernales Province, Dominican Republic."
Type specimen: NHM(P) 36954, holotype, subfossil, humerus, figured (f.2a,b).
Geologic age: Late Pleistocene to Early Holocene
Comment: This species was listed in TEWG (2015) as "*Chelonoidis* sp. [Hispaniola]" based on Franz and Woods (1983). ^{14}C dating of a specimen by Turvey et al. (2017) was unsuccessful. Similar deposits on Hispaniola have been dated from ca. 20,000 to less than 10,000 ybp (Franz and Woods 1983). Vlachos (2018) considered this taxon to be undefinable and a *nomen dubium*.

Chelonoidis monensis (Williams 1952)
Mona Tortoise
(Extinct, ca. 1000 BCE?)


humerus and partial skull / Mona Island, Puerto Rico [Williams 1952:pl.46,44]

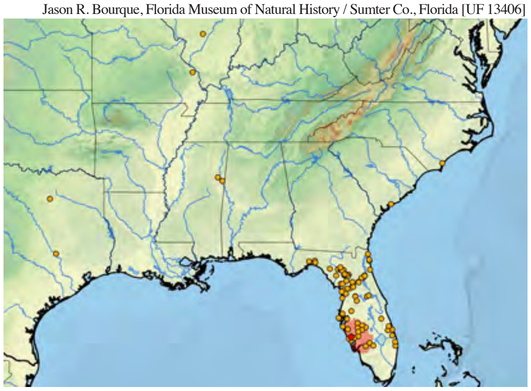


Distribution: Puerto Rico (Mona Island)
Possible Holocene Range: 66 sq. km
Size (Max SCL): ca. 50 cm [estimated] (Hansen et al. 2010)
Synonymy:
Testudo (Monachelys) monensis † Williams 1952:547
Testudo monensis, Geochelone (Monachelys) monensis, Geochelone monensis, Monachelys monensis, Chelonoidis monensis, Chelonoidis (Monachelys) monensis
Type locality: "Lirio Cave, Mona Island, West Indies" [Puerto Rico, USA].
Type specimen: AMNH 1969, holotype, subfossil, a first dorsal vertebra, figured (f.1e,pl.44,f.4).
Geologic age: Late Pleistocene to Late Holocene, possibly until ca. 1050 BCE, 3000 ybp.
Comment: Mona Island is small and isolated, halfway between the larger islands of Hispaniola and Puerto Rico. Stone tools found on Mona date to ca. 3000 ybp, and an ancient cave drawing representing what appears to be a tortoise suggests the possibility that the species may have survived until early humans arrived (see http://blog.britishmuseum.org/2013/07/09/new-discoveries-of-cave-art-in-the-caribbean/; Jago Cooper, unpubl. data). See also Vlachos (2018).

Hesperotestudo Williams 1950b
Eupachemys Leidy 1877:232 (*nomen oblitum*)
Hesperotestudo Williams 1950b:25
Caudochelys Auffenberg 1963b:69

Hesperotestudo crassiscutata (Leidy 1889b)
Southeastern Giant Tortoise
(Extinct, ca. 9500 BCE)

Jason R. Bourque, Florida Museum of Natural History / Sumter Co., Florida [UF 13406]



(red dot = Holocene locality; orange dots = Pleistocene localities)

Distribution (Holocene): USA (Florida)
Possible Holocene Range: 15,160 sq. km
Size (Max SCL): ca. 152 cm [estimated] (Auffenberg 1963b); 94.0 cm [measured] (Holman and Clausen 1984)
Synonymy:

Eupachemys obtusus † Leidy 1877:232 (*nomen oblitum*)
Eupachemys obtusa, Testudo obtusa
Type locality: "South Carolina...Ashley River, in the vicinity of Charleston" [USA].
Type specimen: ANSP 10197, holotype, subfossil, a single peripheral, figured (pl.34,f.4-5) and in Hay (1908b:f.614-615), see also Gillette (1977).
Geologic age: Phosphate beds, exact age unknown, Cenozoic (Hay 1908b).
Comment: Hay (1908b) noted that *Eupachemys obtusus* was most similar to *Testudo crassiscutata*, and possibly synonymous and that *E. rugosus* Leidy 1889b was an erroneous name for *E. obtusus*; the names were subsequently synonymized by Auffenberg (1963b, 1974). The specific name *obtusus* is a *nomen oblitum*, not having been used since 1908, and should not replace the name *crassiscutata* through priority. Identification doubted by Vlachos (2018), who assigned it to Testudinidae sp. indet.

Eupachemys rugosus † Leidy 1889b:29 (*nomen novum et oblitum*)
Type locality: "Peace Creek, Florida" [USA].
Type specimen: Unknown.
Geologic age: Late Pleistocene–Early Holocene, Rancholabrean.
Comment: Error for *Eupachemys obtusus* Leidy 1877. Vlachos (2018) suggested this may have been a new combination for a Recent *Emys rugosa*. However, Leidy simply cited the shape of the peripheral bones of "Red-leg Terrapin, *Emys rugosa*" as a comparison for the very large peripheral fossil bones he was describing, and stated that they were similar to the peripheral bone figured in Leidy (1877:pl.34,f.4-5) which he erroneously then referred to as *Eupachemys rugosus* rather than *E. obtusus*. The term "Red-leg Terrapin" in Pennsylvania during Leidy's time referred to a small freshwater turtle common in the local trade as a culinary substitute for the Diamondback Terrapin (*Malaclemys terrapin*), possibly the Wood Turtle, *Glyptemys insculpta*.

Testudo crassiscutata † Leidy 1889b:31
Geochelone crassiscutata, Geochelone (Caudochelys) crassiscutata, Caudochelys crassiscutata, Hesperotestudo crassiscutata, Hesperotestudo (Caudochelys) crassiscutata
Type locality: "Peace Creek, Florida" [USA]. Emended to "Peace River, near Arcadia, Hardee County, Florida, USA" by Vlachos (2018:39).
Type specimen: USNM 983, holotype, subfossil, partial plastron, figured (pl.6,f.4-7) and in Hay (1908b:f.616-617) and Auffenberg (1963b:f.10).
Geologic age: Middle Pleistocene to Early Holocene, Rancholabrean, until ca. 9515 BCE, 11,465 ybp; ^{14}C age: 12,030 ± 200 ybp, see Clausen et al. (1979), calibrated age: 12,896–11,465 ybp (10,946–9515 BCE), see TEWG (2015).
Comment: The species *T. crassiscutata* was well redescribed by Loomis (1927) and Auffenberg (1963b), who synonymized *T. sellardsi, T. luciae, T. ocalana,* and *T. distans* with *T. crassiscutata*. Clausen et al. (1979) and Holman and Clausen (1984) reported the find of a large specimen of *H. crassiscutata* from a Paleo-Indian site in Florida aged ca. 12,030 ybp that had been killed by humans. The specimen was associated with a large wooden stake that was still inside the body cavity and was radiocarbon-dated by Clausen et al. (1979).

Testudo ocalana † Hay 1916a:45
Gopherus ocalana, Geochelone ocalana
Type locality: "Ocala, Florida" [USA]. Emended to "Ocala, Marion County, Florida, USA" by Vlachos (2018:69).
Type specimen: USNM 8822, holotype, subfossil, an epiplastron, figured (pl.3,f.1) and in Auffenberg (1963b:f.18).
Geologic age: Late Pleistocene.

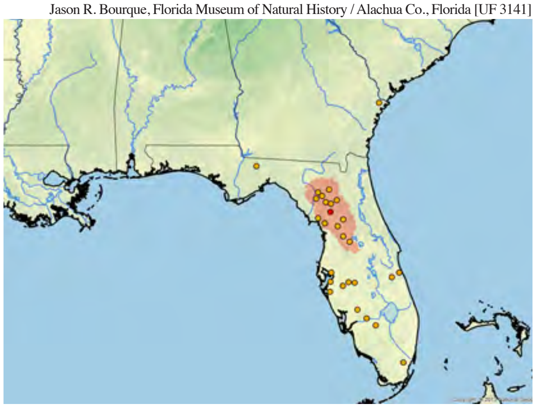
Testudo distans † Hay 1916a:48
Geochelone distans
Type locality: "Ocala, Florida" [USA]. Emended to "Ocala, Marion County, Florida, USA" by Vlachos (2018:66).
Type specimen: USNM 8819 (formerly FGS 4289), holotype, subfossil, an entoplastron, figured (pl.3,f.9) and in Auffenberg (1963b:f.19).
Geologic age: Late Pleistocene.

Testudo sellardsi † Hay 1916a:49
Geochelone sellardsi
Type locality: "Vero, St. Lucie County, Florida" [USA].
Type specimen: USNM 8817, holotype, subfossil, a xiphiplastron, figured (pl.8, f.6-8) and in Auffenberg (1963b:f.17).
Geologic age: Late Pleistocene.

Testudo luciae † Hay 1916a:52
Geochelone luciae
Type locality: "Vero, St. Lucie County, Florida" [USA].
Type specimen: USNM 8818, holotype, subfossil, a hypoplastron, figured (pl.9,f.5) and iin Auffenberg (1963b:f.17).
Geologic age: Late Pleistocene.

Hesperotestudo incisa (Hay 1916a)
Dwarf Tortoise
(Extinct, ca. 6000 BCE)

Jason R. Bourque, Florida Museum of Natural History / Alachua Co., Florida [UF 3141]



(red dot = Holocene locality;
orange dots = Pliocene and Pleistocene localities)

Distribution (Holocene): USA (Florida)
Possible Holocene Range: 15,687 sq. km
Size (Max SCL): ca. 26 cm [*H. incisa*, estimated] (Bourque et al. 2012); 23.1 cm [*H. incisa*, measured] (Auffenberg 1963); ca. 20 cm [*H. mlynarskii*, estimated] (Auffenberg 1988); ca. 18 cm [*H. alleni*, estimated] (Auffenberg 1966)
Synonymy:

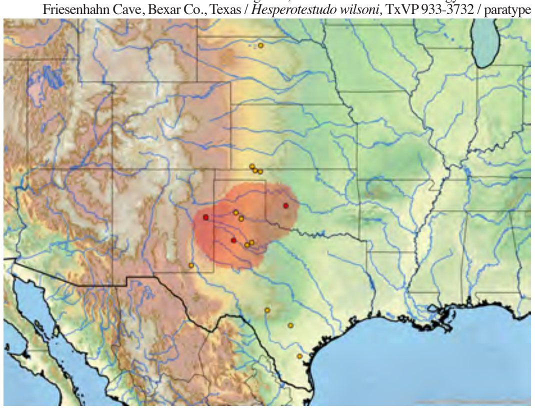
Testudo incisa † Hay 1916a:46
Gopherus incisa, Geochelone incisa, Geochelone (Hesperotestudo) incisa, Hesperotestudo incisa
Type locality: “Ocala, Marion county, Florida” [USA].
Type specimen: USNM (formerly FGS 4287), holotype, subfossil, a xiphiplastron, figured (pl.3,f.5).
Geologic age: Rancholabrean, Sangamonian, Late Pleistocene.
Comment: Holman (1978) recorded specimens of this species from a sinkhole in Florida dated to approximately 7000–8000 ybp (although possibly older), during the Late Pleistocene or Early Holocene. The species was synonymized with *Hesperotestudo turgida* (Cope 1892a) by Vlachos (2018), but in view of its markedly disjunct distribution from that species, and that its synonymization has not been universally accepted in the paleontological community, we continue to recognize it and the other synonymized taxa from Florida under *H. incisa* as distinct from *H. turgida*. In a preliminary study, Bourque et al. (2012) recognized *H. incisa, H. alleni*, and *H. mlynarskii* as a separate clade of small tortoises from Florida with a unique bony tail-shield buckler. Additionally, the shell shape of *H. incisa* differs markedly from that of *H. wilsoni* of the *H. turgida* clade.

Geochelone alleni † Auffenberg 1966:877
Geochelone (Hesperotestudo) alleni, Hesperotestudo alleni
Type locality: “McGehee Site, McGehee farm, T. 9 S., R. 17 E., S½NW¼ sec. 22, approximately 120 yards east of Florida Highway 45 and almost exactly 3 miles due north of Newberry, Alachua County, Florida” [USA].
Type specimen: UF 9370, holotype, fossil, partial carapace and complete plastron, figured (pl.102).
Geologic age: Hemphillian faunal age, Middle Pliocene.
Comment: This species was synonymized with *Hesperotestudo turgida* (Cope 1892a) by Vlachos (2018), but is more likely synonymous with *H. incisa*.

Geochelone mlynarskii † Auffenberg 1988:592
Geochelone (Hesperotestudo) mlynarskii, Hesperotestudo mlynarskii
Type locality: “Coleman IIA site (SE 1/4, NW 1/4, Sec 7, T 20 S, R 23 E) near Coleman, Sumter County, Florida, U.S.A.”
Type specimen: UF 18960, holotype, fossil, plastron, figured (pl.29).
Geologic age: Late Irvingtonian mammal age, Middle Pleistocene.
Comment: This species was synonymized with *Hesperotestudo turgida* (Cope 1892a) by Vlachos (2018), but is more likely synonymous with *H. incisa*.

Hesperotestudo turgida (Cope 1892a)
Plains Tortoise
(Extinct, ca. 9000 BCE)

Chris Sagebiel, Texas Vertebrate Paleontology Collections / Friesenhahn Cave, Bexar Co., Texas / *Hesperotestudo wilsoni*, TxVP 933-3732 / paratype



(red dots = Holocene localities;
orange dots = Pliocene and Pleistocene localities)

Distribution (Holocene): USA (New Mexico, Oklahoma, Texas)
Possible Holocene Range: 191,132 sq. km
Size (Max SCL): ca. 28 cm [*H. oelrichi*, estimated] (Holman 1972); ca. 24 cm [*H. turgida*, estimated] (Oelrich 1957); 23.5 cm [*H. johnstoni*, measured] (Auffenberg 1962); 22.6 cm [*H. wilsoni*, measured] (Milstead 1956); 17.0 cm [*H. riggsi*, measured] (Holman 1972)
Synonymy:

Testudo turgida † Cope 1892a:127
Gopherus turgida, Geochelone turgida, Geochelone (Hesperotestudo) turgida, Hesperotestudo turgida
Type locality: "Espuella near Dockum, from the same horizon as that of Crosby county, or the Blanco Canyon bed" [Texas, USA]. Corrected to "Three mi. N Dockum, near Esquella, Dickens County, Texas" [USA] by Auffenberg (1962:630).
Type specimen: ANSP 14689, holotype, fossil, fragments of a carapace, plastron, and mandible, figured in Oelrich (1957:f.1).
Geologic age: Blanco beds, Blancan mammal age, Piacenzian, Late Pliocene.
Comment: Both Kuhn (1964) and Auffenberg (1974) erroneously cited *Emys turgidus* Cope 1870b as the original name for this tortoise, but that name described a Cretaceous dermatemyid turtle from New Jersey, now synonymized under *Agomphus* (Hutchison and Weems 1998; Knauss et al. 2011). *Hesperotestudo turgida* was evaluated by Vlachos (2018) who synonymized the other taxa listed below and the taxa that we synonymize under *H. incisa*, but his synonymizations have not been universally accepted in the paleontological community. Based on the markedly disjunct distribution it is likely that *H. turgida* (including the synonymized taxa *riggsi, wilsoni, johnstoni*, and *oelrichi*) is restricted to the west and the Great Plains, and that *H. incisa* (including the synonymized taxa *alleni* and *mlynarskii*) is restricted to the east (Florida and Georgia).

Testudo riggsi † Hibbard 1944:72
Gopherus riggsi, Geochelone riggsi, Geochelone (Hesperotestudo) riggsi, Hesperotestudo riggsi
Type locality: "Locality No. 6, Seward county, Kansas" [USA]. Emended to "Univ. Kansas locality 6, Seward Co., Kansas, Sec. 36, T. 34 S., R. 31 W., XI Ranch, S side of Cimarron River" [USA] by Oelrich (1957:230).
Type specimen: KU 6789, holotype, fossil, nearly complete carapace and plastron, figured (f.1-2) and in Oelrich (1957:f.2-3).
Geologic age: Saw Rock Canyon fauna, Middle Pliocene.
Comment: This species was synonymized with *Hesperotestudo turgida* (Cope 1892a) by Vlachos (2018).

Testudo wilsoni † Milstead 1956:168
Geochelone wilsoni, Geochelone (Hesperotestudo) wilsoni, Hesperotestudo wilsoni
Type locality: "Friesenhahn Cave in northern Bexar County, Texas" [USA].
Type specimen: TMM 933-3585, holotype, subfossil, an almost complete shell, lost; TxVP 933-3732 (formerly TMM), paratype, subfossil, complete shell, figured in Moodie and Van Devender (1979:f.1).
Geologic age: Rancholabrean, Late Pleistocene, Late Wisconsinan to Early Holocene; ^{14}C age: ca. 11,040 ybp, 9090 BCE, see Auffenberg (1974) and Moodie and Van Devender (1979).
Comment: Discussed by Moodie and Van Devender (1979) who noted radiocarbon dating of specimens up to ca. 11,000–10,000 ybp in the Early Holocene of Oklahoma, New Mexico, and Texas, between Clovis and Folsom cultural horizons (Early Archaic). Preston (1979) noted specimens found associated with early man from the Plano Culture of Oklahoma at ca. 11,000 ybp. This species was synonymized with *Hesperotestudo turgida* (Cope 1892a) by Vlachos (2018), but the synonymization has not been universally accepted in the paleontological community.

Testudo rugosa † Johnston *in* Auffenberg 1962:627 (*nomen nudum*)

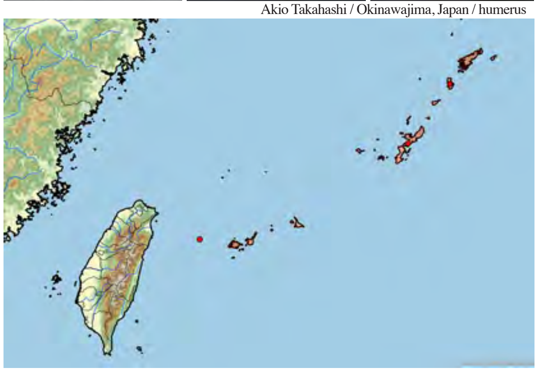
Geochelone johnstoni † Auffenberg 1962:627
Geochelone (Hesperotestudo) johnstoni, Hesperotestudo johnstoni
Type locality: "Cita Canyon, Tule County, Texas" [USA]. Corrected to "Randal County, Texas" [USA] by Holman (1972:66).
Type specimen: PPHM 1540, holotype, fossil, shell, figured (f.1).
Geologic age: Cita Canyon series, Early Pleistocene, probably between Nebraskan and early Kansan in age (Aftonian?).
Comment: This species was synonymized with *Hesperotestudo turgida* (Cope 1892a) by Vlachos (2018).

Geochelone (Hesperotestudo) oelrichi † Holman 1972:59
Geochelone oelrichi, Hesperotestudo oelrichi
Type locality: "northwest corner of the Wilbur Magill pasture on the north side of a short reentrant of the main draw in the NW. 1/4, SE. 1/4, sect. 12, T. 30 N., R. 21 W., Brown County, Nebraska, Long Pine Quadrangle." [USA].
Type specimen: UMMP V56298, holotype, fossil, nearly complete carapace and plastron and appendicular bones, figured (f.20-24).
Geologic age: Long Pine Formation, Early Pleistocene.
Comment: This species was synonymized with *Hesperotestudo turgida* (Cope 1892a) by Vlachos (2018).

Manouria Gray 1854

Manouria oyamai Takahashi, Otsuka, and Hirayama 2003
Ryukyus Tortoise
(Extinct, ca. 7800 BCE)

Akio Takahashi / Okinawajima, Japan / humerus

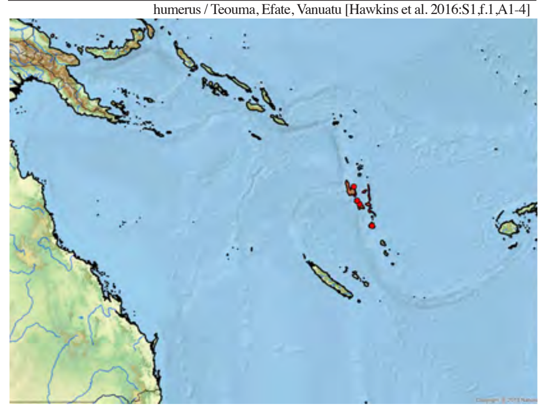


Distribution: Japan (Ryukyu Archipelago)
Possible Holocene Range: 23,779 sq. km
Size (Max SCL): ca. 45 cm [estimated] (Takahashi 2012; TEWG 2015; Takahashi et al. 2018)
Synonymy:
Manouria oyamai † Takahashi, Otsuka, and Hirayama 2003:198
Type locality: "Kamikurukubaru, Chinen village, Shimajiri District, Okinawa Island, Ryukyu Islands, Japan."
Type specimen: ESK 6150, holotype, fossil, incomplete skull, carapace, and appendicular bones, figured (f.4-9a).
Geologic age: Late Pleistocene to Early Holocene, from ca. 28,160–23,050 ybp, until ca. 9865 ± 35 ybp, = ca. 7950–7880 BCE), see Otsuka et al. (2008) and Takahashi et al (2003).
Comment: Recorded from Okinawajima, Tokunoshima, Iejima, Miyakojima, and Yonagunijima islands in the Ryukyus. Migration patterns into the Ryukyu Archipelago of this and other Pleistocene taxa has been documented by Otsuka and Takahashi (2000) and Takahashi et al. (2008). Redescribed by Takahashi et al. (2018).

Testudinidae Genus indet.

"?Meiolania" damelipi White, Worthy, Hawkins, Bedford, and Spriggs 2010
Vanuatu Giant Tortoise
(Extinct, ca. 800 BCE)

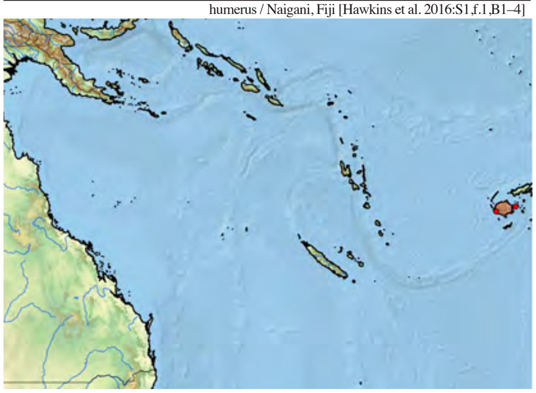
humerus / Teouma, Efate, Vanuatu [Hawkins et al. 2016:S1,f.1,A1-4]



Distribution: Vanuatu (Efate, Malakula, Santo)
Possible Holocene Range: 10,459 sq. km
Size (Max SCL): ca. >100 cm [estimated] (White et al. 2010)
?*Meiolania damelipi* † White, Worthy, Hawkins, Bedford, and Spriggs 2010:15512
Type locality: "Teouma Lapita site, Efate, Vanuatu."
Type specimen: AMF 136641, holotype, subfossil, humerus, figured (f.3A).
Geologic age: Late Holocene; ^{14}C age: 2733–2741 ± 30 ybp, calibrated age: 2890–2760 ybp (940–810 BCE), see White et al. (2010).
Comment: Originally described by White et al. (2010) as possibly belonging to the extinct genus *Meiolania* (Meiolaniidae) with a question mark, Sterli (2015) questioned its identification as a Meiolaniidae, suggesting it might instead be a Testudinidae; this was subsequently corroborated by Rabi et al. (2019). However, the species has not yet been reassigned to a non-meiolaniid genus. The species was extirpated by modern humans of the Melanesian Lapita culture; archaeological midden specimens have consisted primarily of limb elements with direct evidence of butchering by humans (White et al. 2010; Hawkins et al. 2016).

Testudinidae sp. [Fiji]
Fiji Giant Tortoise
(Extinct, ca. 1000 BCE?)

humerus / Naigani, Fiji [Hawkins et al. 2016:S1,f.1,B1–4]



Distribution: Fiji (Viti Levu, Naigani)
Possible Holocene Range: 11,156 sq. km
Size (Max SCL): undetermined
?Meiolaniidae sp. † (Worthy, Anderson, and Molnar 1999:239)
Localities: "Voli Voli, Viti Levu, Fiji."
Specimens: NMNZ s/n, subfossil, ungual bone and humerus, figured in White et al. (2016:S1,f.1,B1-4).
Geologic age: Late Holocene, ca. >2000–3000 ybp, see Worthy et al. (1999).
Comment: A subfossil ungual bone (age ca. > 2000–3000 ybp) from Viti Levu in Fiji from prior to human occupation was described by Worthy et al. (1999) as possibly being a tortoise and questionably compared to *Meiolania*. It was treated as an indeterminate taxon of Meiolaniidae by White et al. (2010), TEWG (2015), and Hawkins et al. (2016), but considered to be a Testudinidae by Rabi et al. (2019) and possibly the same taxon as ?*Meiolania damelipi*. Tortoise bones of what is presumably the same taxon were also documented from Naigani Island, Fiji, by Hawkins et al. (2016).

APPENDIX

Rejected Names Proposed by Hoser

We include a listing here of the 86 names proposed by Hoser (2013, 2014a,b, 2018a,b, 2021) for turtles and tortoises that we consider to be *nomina rejecta* and unacceptable for the purposes of scientific nomenclature for the reasons outlined in our various annotations on the subject (see TTWG Annotations 14:1, 17:3, 17:4, 17:79, 17:93, and current Annotations 5, 29, and 38). His latest self-produced outputs since our previous checklist included 81 proposed new names that we have not inserted into the synonymies in the main text, as the previous five were originally. Most of these new *nomina* seem to have been proposed in an attempt to place names on disjunct populations depicted on our detailed distribution maps in our previous checklist (TTWG 2017), or on unnamed phylogenetically distinct clades depicted in published research papers by others. Hoser's output, which in our opinion consists of little more than intellectual plagiarism and unconscionable preemptive unscientific appropriation of others' detailed and careful scientific work, is an open affront to all ethical practioners of contemporary taxonomy, whether academic or otherwise. Several papers have criticized these unethical practices and have recommended various ways to limit or bypass his output (Kaiser et al. 2013; Kaiser 2014; Rhodin et al. 2015; Krell 2021; Wüster et al. 2021). Various forms of community governance efforts to resolve this kind of unscientific and disruptive behavior in taxonomy have also been proposed and deliberated (Thomson et al. 2018; Thiele et al. 2021; Conix et al. 2021; Lien et al. 2021).

The following list of names proposed by Hoser is organized by the recognized taxa, as per our checklist, that his 86 rejected names would appear to need to be synonymized under if they had nomenclatural validity. However, we consider them all unacceptable *nomina rejecta* and will not use them.

Pleurodira

Chelidae

Acanthochelys
Sloppchelys Hoser 2021:26
Chelodina (Chelydera)
Supremechelys Hoser 2014b:8 [17:4, 17:93][5]
Chelodina (Chelydera) expansa
Chelodina (Supremechelys) duboisi Hoser 2014b:9 [17:4, 17:93][5]
Chelodina (Supremechelys) expansa brisbaneensis Hoser 2014b:9 [17:4, 17:93][5]
Elseya (Pelocomastes)
Fitzroychelys Hoser 2018a:29 [29]
Elseya (Pelocomastes) albagula
Elseya albagula fitzroyi Hoser 2018a:30 [29]
Elseya (Pelocomastes) irwini
Elseya shireenhoserae Hoser 2018a:29 [29]
Emydura victoriae
Emydura (Tropicochelymys) hawkeswoodi Hoser 2021:83
Emydura (Tropicochelymys) wellingtoni Hoser 2021:81
Emydura (Tropicochelymys) wellsi Hoser 2021:82
Hydromedusa
Lovelinaychelys Hoser 2021:90
Wittchelys Hoser 2021:88
Hydromedusa maximiliani
Hydromedusa meyeyouchelys Hoser 2021:87
Hydromedusa tectifera
Wittchelys tectifera wittorum Hoser 2021:89
Myuchelys latisternum
Wollumbinia darnellafrazierae Hoser 2021:86
Wollumbinia georgefloydi Hoser 2021:84

Pelomedusidae

Pelomedusa
Keillerchelys Hoser 2021:76
***Pelomedusa* sp. indet. [Cameroon]**
Pelomedusa (Keillerchelys) darrenkeilleri Hoser 2021:77
***Pelomedusa* sp. indet. [DR Congo]**
Pelomedusa (Keillerchelys) shannonmcgrathi Hoser 2021:79
***Pelomedusa* sp. indet. [Somalia]**
Pelomedusa (Keillerchelys) dannygoodwini Hoser 2021:78
***Pelomedusa* sp. indet. [Sudan]**
Pelomedusa (Keillerchelys) alexstaszewskii Hoser 2021:77
Pelusios rhodesianus
Pelusios lynnrawi Hoser 2021:79
Pelusios rhodesianus divergentans Hoser 2021:80

Podocnemididae

Podocnemis
Erythrocephalachelys Hoser 2018b:33 [38]
Magdelenachelys Hoser 2018b:33 [38]
Novamyuchelys Hoser 2018b:33 [38]
Wellsandwellingtonchelys Hoser 2018b:33 [38]

Cryptodira

Chelydridae

Chelydra acutirostris
Chelydra haydnmcphiei Hoser 2021:21
Macrochelys suwanniensis
Macrochelys maxhoseri Hoser 2013:56 [14:1, 17:3, 17:4][5]
Macrochelys temminckii
Macrochelys temminckii muscati Hoser 2013:55 [14:1, 17:3, 17:4][5]

Emydidae

Actinemys pallida
Actinemys maxinehoserae Hoser 2021:28
Clemmys guttata
Clemmys guttata maximus Hoser 2021:26
Clemmys guttata praetortus Hoser 2021:27
***Emys orbicularis* ssp. indet. [Tunisia]**
Emys orbicularis repens Hoser 2021:43
Graptemys caglei
Graptemys caglei flavooculus Hoser 2021:41
Graptemys geographica
Graptemys geographica aurantiacooculus Hoser 2021:42
Graptemys pseudogeographica kohnii
Graptemys pseudogeographica brunneisoculus Hoser 2021:42

Geoemydidae

Cuora amboinensis amboinensis
Cuora boxboyi Hoser 2021:48
Cuora oxyslopp Hoser 2021:46
Cuora rosswellingtoni Hoser 2021:55
Cuora amboinensis couro
Cuora richardwellsi Hoser 2021:52
Cuora amboinensis kamaroma
Cuora elfakhariorum Hoser 2021:50
Cuora jackyhoserae Hoser 2021:44
Cuora mouhotii mouhotii

Cuora adelynhoserae Hoser 2021:44
Cyclemys oldhami
Cyclemys mcdermottorum Hoser 2021:41
Geoemyda
Parageoemyda Hoser 2021:33
Geoemyda spengleri
Geoemyda daranini Hoser 2021:34
Heosemys annandalii
Hieremys annandalii mekongensis Hoser 2021:32
Heosemys grandis
Hieremys grandis malayensis Hoser 2021:31
Heosemys spinosa
Heosemys turneri Hoser 2021:29
Orlitia borneensis
Orlitia borneensis perakensis Hoser 2021:81
Rhinoclemmys
Crottychelys Hoser 2021:22
Oxychelys Hoser 2021:24
Rhinoclemmys nasuta
Oxychelys oxyi Hoser 2021:24
Rhinoclemmys perixantha perixantha
Crottychelys perixantha ipsumtenebris Hoser 2021:23
Vijayachelys silvatica
Vijayachelys silvatica whittoni Hoser 2021:32

Kinosternidae

Kinosternon
Martinekchelys Hoser 2021:22
Kinosternon baurii
Kinosternon (Platythyra) baurii grantturneri Hoser 2021:25
Sternotherus
Parasternotherus Hoser 2021:22

Testudinidae

Chelonoidis
Parachelonoidis Hoser 2021:39
Chelonoidis carbonarius
Chelonoidis fiacummingae Hoser 2021:38
Chelonoidis hoserae Hoser 2021:35
Chelonoidis woolfi Hoser 2021:36
Chersina angulata
Chersina swileorum Hoser 2021:57
Chersobius signatus
Chersobius mandela Hoser 2021:58
Homopus
Funkichelys Hoser 2021:58
Homopus areolatus
Homopus trevorhawkeswoodi Hoser 2021:60
Homopus trevorhawkeswoodi bloemfontainensis Hoser 2021:69
Homopus trevorhawkeswoodi knysaensis Hoser 2021:67
Homopus femoralis
Funkichelys funki Hoser 2021:59
Kinixys erosa
Kinixys erosa divergentens Hoser 2021:40
Kinixys homeana
Kinixys homeana varians Hoser 2021:40
Manouria
Freudchelys Hoser 2021:34
Manouria impressa
Freudchelys freudi Hoser 2021:35

Trionychidae

Amyda cartilaginea maculosa
Amyda ashphillipsi Hoser 2021:74
***Amyda ornata* ssp. indet. [Bangladesh]**
Amyda ornata magnapapulae Hoser 2021:75
Chitra indica
Chitra indica indusensis Hoser 2021:33
Cyclanorbis senegalensis
Cyclanorbis senegalensis nileensis Hoser 2021:71
Cyclanorbis senegalensis occultatum Hoser 2021:71
Cycloderma aubryi
Heptathyra marcdorsei Hoser 2021:72
Cycloderma frenatum
Cycloderma tismorum Hoser 2021:72
Lissemys
Piersonchelys Hoser 2021:73
Pelochelys
Ferepelochelys Hoser 2014a:62 [(17:4, 17:79) (**5**)]
Pelochelys cantorii
Pelochelys clivepalmeri Hoser 2014a:62 [(17:4, 17:79) (**5**)]
Pelochelys telstraorum Hoser 2014a:62 [(17:4, 17:79) (**5**)]
Pelodiscus
Parapelodiscus Hoser 2021:74

ANNOTATIONS

Comments on taxonomic change or other annotations in this checklist and previous checklists are indicated by superscripts. New annotations in each new checklist are simple bold numbers in separate parentheses, e.g.,**(35)**. Earlier annotations from any of the previous checklists are indicated in subsequent checklists by two-part non-bold superscripts in separate parentheses that indicate the year of publication and the annotation number from that year, e.g.,(07:105, 17:50). All annotations from previous checklists are listed at the end of this section, and all checklists are available as open-access publications online at **www.iucn-tftsg.org/checklist/**.

CURRENT 2021 CHECKLIST

1. **New Distributional Data**: We have updated almost all our distributional maps, including adding separate maps for all subspecies; this checklist includes 492 new or revised maps with additional locality dots and/or adjusted distributional ranges. New or significantly revised maps (468) are marked with an asterisk (*); those with very minimal changes (24) are marked with a bullet (•).

We have utilized multiple sources for these updates, including expert input based on field data, localities from taxonomic literature cited in the new annotations below, new CBFTT species accounts, and IUCN Red List and TFTSG Provisional Red List assessments. We have also added several geographic distribution and range extension records from short notes or accounts in *Herpetological Review, Herpetology Notes, Check List, Mesoamerican Herpetology, Herpetozoa, Journal of Threatened Taxa, Catalogue of American Amphibians and Reptiles,* and other similar publications, including selected verified records from *iNaturalist.org*, but have not cited most of these individually.

In addition, we have added new or previously unrecorded locality records from several articles and books, both older and more recent (Said-Aliev 1979; Iverson 1992; Das 1995; Devaux 2000; Mitrus and Zemanek 2000; Bour et al. 2001; Bringsøe et al. 2001; Lee and Carey 2001; Lee and Ross 2001; Savage 2002; Spawls et al. 2002; Stebbins 2003; Zavialov et al. 2003; Khabibullin 2004; Široký et al. 2004; Chirio and Ineich 2006; Gong et al. 2006, 2009b, 2012; Rosen et al. 2006, Diesmos et al. 2008; Gramentz 2008; Schneider and Schneider 2008; Valakos et al. 2008; Avila-Pires et al. 2010; Fong and Qiao 2010; Largen and Spawls 2010; Auer 2011; Li et al. 2011; Bondarenko and Dujsebayeva 2012; Buckner et al. 2012; Trape et al. 2012; Ferri and Diagne 2013; Rodríguez Schettino et al. 2013; Safi and Khan 2014; Khan et al. 2015; Lemos-Espinal et al. 2015, 2017, 2019; Ramírez-González and Canseco-Márquez 2015; Sethy et al. 2015; Htun and Platt 2016; Keller et al. 2016; Powell et al. 2016; Trebbau and Pritchard 2016; Valdez-Villavicencio et al. 2016a,b; Alqahtani 2017; Bondarenko and Peregontsev 2017; Bury 2017; Cann and Sadlier 2017; Dujsebayeva et al. 2017; Ferrara et al. 2017; Ge et al. 2018; Kunz et al. 2018; Macip-Ríos et al. 2018; McCranie 2018; Jadhav et al. 2018; Murphy 2018; Platt et al. 2018; Rodrigues and Lima-Ribeiro 2018; Yang et al. 2018; Brito et al. 2019; Forero-Medina et al. 2019; Ihlow et al. 2019; Krysko et al. 2019; Nekrasova et al. 2019; Petrozzi et al. 2019; Sánchez et al. 2019; Vamberger et al. 2019b; Xiaoyou et al. 2019; Yudha et al. 2019; Berry et al. 2020; Brown et al. 2020; Ihlow et al. 2020; Kagayama et al. 2020; Le Duc et al. 2020; Mital et al. 2020; Nguyen et al. 2020; Smith et al. 2020; Ayaz et al. 2021; Brown et al. 2021; Cunha et al. 2021; Eustace et al. 2021; Jain et al. 2021; Thapa et al. 2021; Vásquez-Cruz et al. 2021; Weitzman et al. 2021; Xiao et al. 2021).

2. **Testudines**: Joyce et al. (2021) provided a detailed phylogenetic nomenclature (PhyloCode) for all fossil and living turtles, in which they largely followed our TTWG (2017) nomenclature for the higher categories of all living turtles. However, they did not recognize the clades of Cheloniinae, Carettinae, Geoemydinae, or Rhinoclemmydinae that we accept as subfamilies, but recognized Testudininae, Podocnemidinae, and Erymnochelyinae, and named the new clades Peltocephalinae and Emydurinae. We continue to use traditional ICZN-compliant Linnaean ranking categories and nomenclature, but recognize the hierarchical value and utility of the PhyloCode system, and have now recognized both Peltocephalinae and Emydurinae as valid subfamily names in our Linnaean hierarchy (see next Annotation).

3. **Testudines**: Thomson et al. (2021) published a comprehensive global phylogeny with estimated divergence times for nearly all turtle lineages, based on new nuclear DNA sequence data from 15 nuclear loci for 591 individual turtles, covering all 14 extant families, nearly all extant genera (lacking only *Pseudemydura, Rhinemys,* and *Natator*), and 279 of the 348 (80%) extant species of turtles recognized by TTWG (2017). Thomson and colleagues demonstrated that both suborders Cryptodira and Pleurodira are monophyletic and strongly supported; they additionally noted deeply divergent monophyletic separation of all hardshelled Cryptodira, for which they used the PhyloCode name Durocryptodira, from the softshelled Trionychoidea, for which they used the PhyloCode name Trionychia. Since neither PhyloCode names nor Linnaean names above the family-group level are regulated by the ICZN, we now use these terms to represent infraorders of Cryptodira to reflect this deep phylogenetic divergence. We have also changed the order in which we place these suborders within our checklist, now placing Pleurodira first and Cryptodira second.

In the pleurodiran Podocnemididae, Thomson et al. (2021) recovered three recognized subfamilies—Erymnochelyinae, Peltocephalinae, and Podocnemidinae—we have therefore now also incorporated these into our checklist. They also recovered a monophyletic clade for Podocnemididae and Pelomedusidae as sister to the Chelidae and referred to it as Pelomedusoides, the hyperfamily name proposed by Broin (1988); we instead utilize the superfamily name Pelomedusoidea for that clade. In addition, we use the adjusted superfamily name Cheloidea for its sister clade containing the Chelidae, instead of the hyperfamily name Cheloides proposed by Gaffney et al. (2006).

Thomson et al. (2021) demonstrated the monophyly of the clade containing Chelydridae, Dermatemydidae, and Kinosternidae, supportive of an expanded Chelydroidea, as previously recommended by Crawford et al. (2015), which we now adopt, removing the previous concept of a more restricted Kinosternoidea, as recommended by Joyce et al. (2004) and others.

Thomson et al. (2021) also demonstrated that all currently defined extant families are monophyletic and strongly supported, including well-supported subfamilial diversification within several families. In the Geoemydidae they recovered three strongly supported separate clades, including the previously recognized subfamily Rhinoclemmydinae, but their results separated the old concept of Geoemydinae into two reciprocally monophyletic clades corresponding to the subfamilies Batagurinae and a restricted Geoemydinae. We have therefore incorporated these subfamilies into the checklist and rearranged the respective genus and species placements accordingly.

In the Testudinidae, Thomson et al. (2021) recovered three reciprocally monophyletic clades corresponding to the core Testudininae plus a separate clade for *Gopherus*, which we allocate to the previously recognized subfamily clade Xerobatinae, and a clade for *Manouria*, which we designate as the subfamily Manouriinae (type genus *Manouria* Gray 1854a), based on the previous family-group level concepts of Manourina Gray 1869a and Manouriina Baur 1888b.

At the genus level, Thomson et al. (2021) found several cases of non-monophyly that warrant further discussion. They confirmed that *Chersina* rendered the older concept of a broad *Homopus* (with five included species) paraphyletic, corroborating the results of Hofmeyr et al. (2017), but recommended combining these two genera into a broader *Chersina*. However, we note the strong evidence of divergence within *Homopus* presented by Hofmeyr et al. (2017) and Hofmeyr and Branch (2018), and instead accept their recommended split of *Chersobius* from *Homopus* and the recognition of a monotypic *Chersina* (see also TTWG Annotations 88 and 17:64).

Similarly, Thomson and colleagues confirmed that the monotypic *Stigmochelys* is sister to a monophyletic *Psammobates*. They recommended combining these two genera into a broader *Psammobates* to convey their close evolutionary relatedness. However, in view of the marked morphological differences between *Stigmochelys* and *Psammobates*, we continue to recognize them as separate genera, as per our previous TTWG Annotations (07:71 and 10:26).

In addition, the analysis by Thomson and colleagues rendered the South American chelid genus *Mesoclemmys* paraphyletic with respect to *Phrynops* by the recovery of *M. hogei* as sister to the remaining species of *Mesoclemmys* and *Phrynops*. The divergence of *M. hogei* had previously been suggested by McCord et al. (2001) who established *Ranacephala* as a monotypic genus for the species, separating it from *Phrynops*; however, that action was not accepted by Joyce et al. (2004) or Bour and Zaher (2005), who instead assigned *hogei* to *Mesoclemmys,* which we accepted (TTWG 2007b, TTWG Annotation 07:100). However, in view of the strong nuclear genomic data recovered by Thomson et al. demonstrating the deep divergence of *hogei* from both *Mesoclemmys* and *Phrynops*, as well as the morphological details recorded by McCord et al. (2001), the combined morphological and genetic results of Holley et al. (2020), and the osteological distinctiveness preliminarily noted in Reed et al. (1991), we have now re-assessed our position and restore the allocation of *hogei* to *Ranacephala*.

We note also that Thomson et al. recognized broader concepts of the genera *Emys* and *Geochelone* than we do, and that they did not recognize the genera *Actinemys*, *Emydoidea*, and *Centrochelys*, which we recognize either fully or provisionally, but they included species from all three in their analysis.

Thomson et al. (2021) favored the use of an inclusive generic concept of *Emys* including *marmorata+pallida*, *blandingii*, and *orbicularis+trinacris*. However, they recovered an apparent non-monophyly of *Emys* with respect to *Terrapene*, with *marmorata+pallida* (= *Actinemys*) as a monophyletic sister group to a clade containing two reciprocally monophyletic subgroups: *blandingii* (= *Emydoidea*) plus *orbicularis+trinacris* (= *Emys*), and *Terrapene*. In contrast, earlier work by Spinks and Shaffer (2009) and Spinks et al. (2009b, 2016) recovered *marmorata+pallida*, *blandingii*, and *orbicularis+trinacris* as a clade sister to *Terrapene*. Based on sequence data from 30 nuclear genes, 4 mitochondrial genes, and the combined data set, Spinks et al. (2016) provided the largest molecular data set concerning these taxa, and found strong statistical support for the monophyly of the inclusive *Emys* clade, as well as the three contained lineages (*marmorata+pallida*, *blandingii*, and *orbicularis+trinacris*). Wiens et al. (2010) and Fritz et al. (2011b) found evidence for separate generic status for these three lineages and treated them as such (see also TTWG Annotations 07:21, 09:16, 10:12, and 11:7). In view of these mixed results, and the continuing use in the wider herpetological community of the separation of these lineages as genera, our checklist now treats *Actinemys* as a separate genus without equivocation as to its possible congeneric status with *Emys*. Most of us also favor the use of *Emydoidea* as separate from *Emys,* but note that some prefer to use *Emys* for the Blanding's Turtle.

4. **Testudines**: McCranie (2018) recommended that the group name Testudinata Behn 1760 be used for the order of all turtles, as opposed to Testudines Batsch 1788, based on Behn's use of the name Testudinata in his Tabula Generalis as an "Ordo". However, Behn's (1760) work was a direct translation of Klein (1751), a pre-1758 publication with no nomenclatural standing, and Behn's Table is simply a copy with German translation of the Table presented by Klein (1751). Additionally, the name that both Klein and Behn used for their "Ordo III" of Quadrupedia was actually Depilata, which included the "Familias" of Testudinata (for the sole genus *Testudo*), Cataphracta (for the genera *Crocodilus*, *Caimanus*, and *Lacerta*), and Nuda (for various amphibian and reptilian genera, including *Salamandra*, *Gecko*, *Cordylus*, *Scincus*, *Chamaeleo*, and *Batrachus*). We have for a long time listed Testudinata Klein *in* Behn 1760 in our checklist as a synonym of Testudines Batsch 1788, but since the Principle of Priority of the ICZN (Art. 23) does not pertain to suprafamily names (see ICZN Art. 1.2.2 and TTWG Annotation 10:4), and as no one else has ever used this name and authorship for the order of all turtles, we consider it a virtual *nomen oblitum*, and continue to use Testudines Batsch 1788 as the preferred ordinal name for all turtles and tortoises, as do most recent authors.

Furthermore, Savage (2020) argued that because the name Testudines Batsch 1788 was originally proposed as a family name, it should be excluded from applying to an order. He also argued that the name Chelonia Macartney and Ross 1802 was applied to a genus, and is similarly unavailable as an order name. His resolution was to use Testudinata Oppel 1811 for the order of turtles. However, we disagree and continue to use the older name Testudines Batsch 1788, as do most recent authors.

5. **Names proposed by Hoser**: The nomenclatural chaos and taxonomic destabilization perpetrated by Hoser (2013, 2014a,b, 2018a,b, 2021, and multiple other works) over the last couple of decades has recently been addressed by Wüster et al. (2021). Though only coining 15 new turtle *nomina* prior to 2021, Hoser also attempted to promulgate a total of 1795 new taxon names (1453 reptiles, 290 amphibians, 46 mammals, 4 spiders, and 2 fish) from 2000 through January 2021 (Wüster et al. 2021). In 2021 he proposed an additional 86 turtle names. He has repeatedly and continuously circumvented conventional and acceptable standards of scientific analysis and peer-review in his broadly sweeping and extensive self-produced taxonomies and nomenclatures. Worse, he has committed frequent nomenclatural preemption by naming evolutionary lineages and tentative new taxa identified in various publications and presentations by others, potentially depriving these research scientists of their ability to eventually name their own discovered lineages when accumulated data-based evidence becomes compelling.

Among his turtle writings, this nomenclatural claim-jumping is exemplified by: 1) Hoser (2013) proposing names for the *Macrochelys* taxa provisionally identified by Roman et al. (1999) and Echelle et al. (2009) while under final description preparation by Thomas et al. (2014); 2) Hoser (2014b) proposing names for the *Chelodina expansa* lineages identified by Hodges et al. (2014); 3) Hoser (2018a) proposing subspecies, species, and subgenus names for lineages and phylogenetic nodes documented by Todd et al.

(2014b); and 4) Hoser (2018b) proposing names for the higher-taxon clades identified by Vargas-Ramirez et al. (2008). More recently, Hoser (2021) proposed 71 new names for turtles and tortoises based largely on the detailed distribution maps and annotations in TTWG (2017). These and other instances of unethical practices and nomenclatural one-upmanship have led to unprecedented scientific community reaction and rejection of the output in question.

We regard Hoser's works as disruptive and unwarranted acts of nomenclatural destabilization in defiance of the guiding principles of the International Code of Zoological Nomenclature to promote nomenclatural stability (ICZN 1999), and also in contravention of its own recommended Code of Ethics. Further, we do not regard the self-produced documents circulated under the name *Australasian Journal of Herpetology* as objective scientific publications (Kaiser et al. 2013; Kaiser 2014; Rhodin et al. 2015; Wüster et al. 2021).

In collaboration with a wide leadership group representing the global herpetological and zoological communities, we petitioned the International Commission on Zoological Nomenclature (ICZN) to use its plenary power to declare and treat Hoser's works as nomenclaturally unavailable (Rhodin et al. 2015). In response, the ICZN (2021) has now issued an opinion on this and related petitions, in which the Commissioners declined to either formally confirm or reject the availability of Hoser's names and self-produced works, and also indicated that they had no authority to uphold their own Code of Ethics.

As a result of this opinion by ICZN, and in view of Hoser's numerous nomenclaturally destabilizing novelties and confrontational unethical practices, we therefore now agree with and follow the recommendation by Wüster et al. (2021), including their 464 supportive zoologist signatories, to follow the scientific community's outright rejection of Hoser's work as lying outside the permanent scientific record and as being disruptive, and the community's acceptance of the recommendation to reject and overwrite them with replacement names (aspidonyms). This is also the publicly stated position of the Australian Society of Herpetologists (since 2013) and the Taxonomic Committee of the Australian Academy of Science. We also agree with the analysis and recommendations by Krell (2021), who suggested that prevailing usage within the scientific community could serve as a potential solution to the problems created by Hoser's approach. We therefore now regard all of Hoser's proposed turtle names as unacceptable *nomina rejecta* and instead accept such replacement names (aspidonyms) as are validly published, available, and scientifically justified based on best available objective analysis and adequate peer-review. We list all unacceptable *nomina rejecta* proposed by Hoser for turtles and tortoises in the attached Appendix.

6. **Publications by Cope**: Two dates of publication for papers by Edward D. Cope have been corrected: Cope 1868b was actually published in 1869 (on Feb. 6), and Cope 1876 was actually published as a separate in 1875 (on Nov. 26); these dates were confirmed by Osborn (1929), but had been overlooked.

7. **Publications by Rafinesque**: Bell and Bauer (2020) evaluated a previously overlooked publication by Rafinesque (1818), in which he published three new turtle names based on animals captured along the Ohio River and in Kentucky: *Testudo bigibbosa*, *Testudo chlorops*, and *Trionyx ohiensis*. Bell and Bauer (2020) also accessed and published part of Rafinesque's archived field notes from that expedition, including his original drawings of the three new turtle species.

Testudo bigibbosa from the Ohio River, also referred to alternatively as *Testudo nodosa* in Rafinesque's notes, and then later also published by Rafinesque (1822) as *Emyda nodosa* (as a *nomen nudum*) is certainly a *Graptemys*, most likely *G. ouachitensis*, although possibly *G. pseudogeographica*, with the drawing of a male specimen with a narrow and markedly serrated shell with clear dark vertebral knobs and dark costal spots.

Testudo chlorops, also referred to alternatively as *Testudo radiata* in Rafinesque's notes, and then later published by Rafinesque (1822) as *Emyda semiradiata* (as a *nomen nudum*), and noted to come from Kentucky and incorrectly referred to as being terrestrial, is clearly a *Trachemys scripta elegans* based on the detailed drawings of the carapace and plastron with their characteristic markings.

Trionyx ohiensis was questionably allocated by Bell and Bauer (2020) to *A. spinifera* (as opposed to the smaller *A. mutica*), but the fact that Rafinesque described it as "*the* [emphasis ours] large softshell of the Ohio," and the clear depiction on his drawing of many small spiny tubercles on the anterior margin of the carapace, clearly refers it to *A. spinifera spinifera*. Thus, Rafinesque's *ohiensis* preceded the description of *spinifera* by LeSueur (1827), but it was declared a *nomen oblitum* by Bell and Bauer (2020), with which we agree. The other overlooked Rafinesque names are clearly *nomina nuda*, as also determined by Bell and Bauer (2020).

8. **Pleurodera and Cryptodera**: McCranie (2018), referencing Gutsche (2016), stated that the authorship of Pleurodera and Cryptodera was not solely by Lichtenstein (1856), as we and other authors had previously recorded it, but by Lichtenstein and von Martens (1856). A review of the work in question indicates that, in fact, Lichtenstein acknowledged both Weinland and von Martens for their editorial help and work, but not that he considered either a co-author. However, Lichtenstein did note that he worked closely together with von Martens to coin some of the new names used, so we have now updated the citation accordingly.

In addition, we had previously considered this work to be an unpublished catalogue (as stated by Lichtenstein himself in his introduction) and therefore "perhaps not nomenclaturally available" (Rhodin et al. 2008, TTWG Annotation 08:20). McCranie (2018) criticized our position and selectively quoted us (eliminating our modifying word "perhaps") and instead considered the work and the names available and implied their nomenclatural priority over Cryptodira Cope 1869 and Pleurodira Cope 1864. However, once again, since the Principle of Priority of the ICZN (Art. 23) does not pertain to suprafamily names (see ICZN Art. 1.2.2 and TTWG Annotation 10:4), the names Pleurodera and Cryptodera (Lichtenstein and von Martens 1856) do not have priority and we continue the use of the names authored by Cope, as do most authors.

9. **Pleurodira, Chelidae, and Podocnemididae**: Ferreira et al. (2018) performed an extensive morphologic analysis of the Pleurodira, using 245 characters in 77 fossil taxa and 24 living species. Their interpretation of relationships among the Chelidae suggested that the long-necked South American and Australian taxa (*Chelodina, Hydromedusa,* and *Chelus*) were monophyletic, and placed them in the clade Chelina, whereas all the shorter-necked South American and Australian taxa (except for *Pseudemydura*) were placed in the clade Chelini. They acknowledged that their results did not corroborate most phylogenetic analyses that regard South American and Australian chelids as divergent and in separate subfamilies, but they did not recommend choosing one alternative interpretation over the other. For the Podocnemididae, they placed *Erymnochelys* and *Peltocephalus* in the subfamily Erymnochelyinae and *Podocnemis* in the Podocnemidinae.

10. ***Chelus fimbriata***: Ceríaco and Bauer (2017) documented and published the entire previously unpublished manuscript description by Alexandre Rodrigues Ferreira from 1784 of the Matamata Turtle as *Testudo torticollis*. Since the name was published as a junior synonym of *Chelus fimbriatus* (= *Chelus fimbriata*), it has no nomenclatural validity under ICZN Article 11.6, and is therefore

considered a *nomen nudum*. The same unpublished name by Ferreira was previously inaccurately referred to by Carvalho (1972) as *Testudo corticolis,* also a *nomen nudum*.

11. ***Chelus fimbriata* and *Chelus orinocensis***: Vargas-Ramírez et al. (2020) examined phylogeographic differentiation of the Matamata across its range using mitochondrial DNA and nuclear intron sequences and 1905 ddRAD loci corresponding to 685,247 bp. Their analysis revealed the existence of two morphologically distinct and genetically deeply divergent evolutionary lineages that apparently separated in the late Miocene, corresponding to the approximate time when the Orinoco Basin was established. They described the Matamata from the Orinoco, Río Negro, Rio Branco, and Rio Essequibo basins as the new species *Chelus orinocensis*, restricting *C. fimbriata* to the Amazon and the eastern Guianas. Two specimens, one each from the Rio Branco of northern Brazil and the Rio Essequibo of Guyana, showed conflicting mitochondrial and nuclear results suggestive of past gene flow and old mitochondrial introgression from the Amazon lineage into the Orinoco lineage, and the authors assigned these specimens only tentatively to *C. orinocensis*, pending further study. We agree with the specific separation of *C. orinocensis* from *C. fimbriata*, noting that the Rio Branco and Essequibo specimens are morphologically most similar to Orinoco specimens, as previously pointed out by Pritchard and Trebbau (1984), Sánchez-Villagra et al. (1995), and Pritchard (2008 CBFTT). Cunha et al. (2021) documented many new localities for both species.

12. ***Mesoclemmys***: In a paper aimed primarily at dating the diversification of chelid turtles, Holley et al. (2020) combined molecular and morphological analyses (see TTWG Annotation 33 for *Myuchelys purvisi*) and found that the genus *Mesoclemmys*, as currently recognized, emerged as paraphyletic. However, as this was likely a by-product of their analytical process, and without deeper taxonomic and genetic sampling in their dataset, the authors themselves did not advocate changing the taxonomy of *Mesoclemmys*.

Nevertheless, based on subsequent work by Thomson et al. (2021) we acknowledge that *Mesoclemmys* is indeed paraphyletic and in need of revision, including recognition that the included species *M. hogei* is best separated and placed into the previously described monotypic genus *Ranacephala* (see TTWG Annotation 3 for Testudines).

13. ***Mesoclemmys dahli***: Gallego-García et al. (2018) investigated genetic structure of the critically endangered endemic *M. dahli* across its complete geographic range in Colombia, using 3211 neutral and adaptive-loci associated SNPs. They documented significant genetic structuring, with at least four subpopulations with surprisingly moderate to high levels of genetic diversity. However, extant subpopulations are severely fragmented, isolated, and very small (effective population sizes < 50), with significant inbreeding and little to no contemporary gene flow among them. They made no taxonomic recommendations (see also Vargas-Ramírez et al. 2012a and TTWG Annotation 12:40), but noted the increased conservation risk associated with these population parameters and recommended the implementation of a genetic rescue strategy in order to reduce inbreeding.

In a subsequent paper, Gallego-García et al. (2019) employed Restriction-site Associated DNA sequencing (RADseq) to examine fragmentation and gene flow among populations of *M. dahli*. They identified six genetically isolated populations divided among three higher level genetic clusters. Given the results of both papers, they hypothesized that these divergences might be the result of geographic (and hence genetic) fragmentation and strong natural selection for adaptation to anthropogenic landscape changes, particulary forest clearing. They made no taxonomic recommendations and did not suggest managing those clusters independently, but rather supported restoring gene flow via habitat corridors or translocation among ecologically similar forest and grassland habitats to increase genetic diversity.

14. ***Mesoclemmys gibba***: Ettmar (2019:152), citing previous observations by Bour and Pauler (1987) and Bour and Zaher (2005), noted that western Amazonian populations of this species, corresponding to the *Emys stenops* morphotype, appear to be differentiated from the eastern morphotypes, corresponding to *Emys gibba*. Whether these differences warrant recognition of *stenops* as a separate taxon will require further evaluation.

15. ***Mesoclemmys heliostemma, M. raniceps,* and *M. wermuthi***: Cunha et al. (2019) incubated eggs of *M. raniceps* and produced clutches of hatchlings matching the phenotypic appearance of both *M. raniceps* and *M. heliostemma* in the same clutch, demonstrating that these two "species" are color morphs of the same taxon, and synonymized *heliostemma* under *raniceps*. This was further confirmed by Vogt et al. (2020). We agree with this synonymization.

Cunha et al. further demonstrated, based on the presence of prominent dark head stripes and lack of white pretibial skin flaps, that the previously described species *Phrynops wermuthi* Mertens 1969 (= *Mesoclemmys wermuthi*) was distinct from *M. raniceps* / *M. heliostemma* and a separate species. They also noted that the holotype of *Hydraspis maculata* Gray 1873c, previously considered a synonym of *M. raniceps*, had head stripes and appeared to be the same taxon as *wermuthi*, but that it was of unknown provenance, as previously noted by Rivas et al. (2015). They suggested that the name *H. maculata* was available (as *Mesoclemmys maculata*) and that *P. wermuthi* was its synonym. However, Ettmar (2019) concurrently synonymized *H. maculata* with *M. zuliae* (Pritchard and Trebbau 1984), which also has dark head stripes, lending further uncertainty to its allocation.

Since the identity and provenance of the single type specimen of *H. maculata* are both problematic, and the species has not been recognized as valid since initially being synonymized with *Mesoclemmys nasuta* by Boulenger (1889), and *P. wermuthi* was considered to be distinct as either a valid species or subspecies by many authors in multiple publications for about 20 years after its description in 1969, in accordance with the criteria of ICZN article 23.9.1, we interpret *Hydraspis maculata* Gray 1873c to be a *nomen oblitum*. We therefore recognize *Mesoclemmys wermuthi* (Mertens 1969) as valid and distinct from *M. raniceps* / *M. heliostemma*.

Cunha et al. (2019) also noted that Molina et al. (2012), who had demonstrated morphological differences between *M. heliostemma* and *M. raniceps*, had in fact interpreted specimens with head stripes and black pretibial flaps (actually *M. wermuthi*) as instead being *M. raniceps*, thereby further confirming the difference between *M. wermuthi* and their *M. heliostemma*, which was actually the true *M. raniceps*. Range-wide genetic analysis of these two confusing Amazonian species is badly needed.

16. ***Phrynops geoffroanus***: The junior synonym *Emys depressa*, historically attributed to Merrem (1820), should actually be attributed to Wied-Neuwied *in* Merrem (1820), as previously noted by Bour (2008c), since Merrem specifically credited Wied-Neuwied as having sent him the description of *Emys depressa*.

17. **Chelodininae**: Cann and Sadlier (2017; hereafter C&S), in their beautifully illustrated and richly detailed volume on Australian and New Guinean turtles, used a taxonomy not currently accepted by most authorities or TTWG, based only on qualitative morphological distinctions. Their taxonomic arrangements included the following disagreements with our previous TTWG checklists

(TTWG 2007b, 2009, 2010, 2011, 2012, 2014, 2017) and other recently published scientific literature (e.g., Iverson et al. 2001; Georges 2002; Fritz and Havas 2007; Rhodin et al. 2008; Thomson and Georges 2009; Georges and Thomson 2010; Todd et al. 2014a; Georges and Thomson 2016; Georges et al. 2018a; Rhodin et al. 2018; and many others, but see Cogger 2018 for a supportive view).

C&S recognized two subspecies under *Chelodina (Chelodina) canni*: *C. (C.) canni canni* (western populations) and *C. (C.) canni rankini* (eastern populations). Although future research may support the recognition of these two populations as separate taxa, the name *rankini* is unavailable (Iverson et al. 2001; TTWG Annotation 07:86), and hence not recognized by us.

C&S elevated *C. (C.) mccordi timorensis* from a subspecies to a full species, without any justification, but based on Kuchling et al. (2007; TTWG Annotations 07:89 and 10:36), we retain it as a subspecies. Subspecies status is further supported by the results of Kehlmaier et al. (2019a), that revealed shallow mitogenomic divergence between *C. m. mccordi* and *C. m. timorensis* (see Annotation 19 below).

C&S recognized four subspecies under *Chelodina (Macrochelodina) oblonga* (=*rugosa*): *C. (M.) oblonga oblonga*, *C. (M.) oblonga rugosa*, *C. (M.) oblonga burrungandjii*, and *C. (M.) oblonga walloyarrina*. Following the work of previous authors and TTWG, we recognize *C. (M.) oblonga* (=*rugosa*), *burrungandjii*, and *walloyarrina* as full species (TTWG Annotations 08:94-95, 10:38, and 14:42-43), and *rugosa* as a synonym of *oblonga* (Annotations 07:88, 08:29, 10:39, and 14:42-43).

Without any analysis to support their usage, C&S elevated *C. (M.) siebenrocki* from the synonymy of *C. (M.) oblonga* (=*rugosa*) and recognized it as a distinct species, although they acknowledged that it was indistinguishable from their *C. (M.) oblonga rugosa*. Based on previous work by Georges (2002) and Georges and Thomson (2010; see also TTWG Annotation 07:91), we retain *siebenrocki* as a synonym of *rugosa*, but see Annotations 22 and 24 below regarding genotyping of these and other taxa of *Chelodina* by Kehlmaier et al. (2019a).

C&S recognized and used the name *Elseya jukesi*, although they acknowledged that the validity of the name is in question. The name *jukesi* is unavailable (Iverson et al. 2001; see also TTWG Annotation 07:94) and we use the available name *flaviventralis* (Georges and Thomson 2016) for this taxon.

C&S recognized *Elseya stirlingi* (from the Johnstone River in Queensland) as distinct from the nearby disjunct population of *Elseya irwini* (restricted by them to the Burdekin River), although they acknowledged that the validity of the name *stirlingi* is in question. Because Thomson and Georges (2009) rendered *stirlingi* an unavailable name, we continue to include both populations under *Elseya irwini* pending future analyses evaluating the potential divergence of these disjunct river populations.

C&S used the generic name *Wollumbinia* Wells and Wellington for the Saw-Shelled Turtles, instead of *Myuchelys* Thomson and Georges, although they acknowledged that its validity was in question. Georges and Thomson (2010) indicated that *Wollumbinia* was an unavailable name (see also Iverson et al. 2001, Fritz and Havas 2007, and TTWG Annotations 07:92, 09:45, and 10:43 for discussions of taxonomic names proposed by Wells and Wellington), and we recognize this genus with the available name *Myuchelys*.

C&S recognized several subspecies of *Emydura macquarii* that were synonymized under *E. m. macquarii* by Georges and Thomson (2010; see TTWG Annotations 07:98 and 10:42): *E. m. signata*, *E. m. binjing*, *E. m. dharra*, *E. m. gunabarra*, and *E. m. dharuk*. We follow Georges and Thomson (2010) in synonymizing these taxa under *E. m. macquarii*. In addition, C&S transferred the currently recognized subspecific taxa *E. m. emmotti*, *E. m. krefftii*, and *E. m. nigra* (see Todd et al. 2014a) from *E. macquarii* to *E. krefftii*, justifying the establishment of *E. krefftii* as a distinct species based solely on head color and its exceptionally deep shell. There is no support for the species *E. krefftii* as defined by C&S in the recent range-wide phylogeographic analysis of the genus *Emydura* elucidated by Georges et al. (2018a). We follow Todd et al. (2014a) in retaining these three taxa as subspecies of *E. macquarii*. However, using dense genomic sampling of single-nucleotide polymorphisms (SNPs), Georges et al. (2018a) identified at least five distinct evolutionary units within this complex, but declined from making any taxonomic recommendations, pending further studies, including morphology: 1) the Murray-Darling Basin (to which the name *macquarii* could be restricted), 2) the Lake Eyre Basin (to which the name *emmotti* applies), 3) the Hunter River Basin (to which the name *gunabarra* applies), 4) and a single coastal form (to which the name *krefftii* applies) that might be divisible into four geographic variants that correspond to the three available names *krefftii*, *signata*, *nigra*, and one unnamed variant.

C&S recognized both *Emydura australis* and *E. victoriae* as distinct species; however, *E. australis* was synonymized with *E. m. macquarii* by Cogger et al. (1983) and Georges and Thomson (2010) (see TTWG Annotation 10:41). C&S argued that *E. australis* is most similar to *E. victoriae*, and that they might even be synonymous, in which case *E. australis* Gray 1841 would have nomenclatural priority over *E. victoriae* Gray 1842. Pending further study, we follow Georges and Thomson (2010) and retain *australis* as a *nomen dubium* under the synonymy of *E. m. macquarii*.

C&S elevated *Emydura worrelli* to a distinct species separate from its previous recognition as a subspecies of *E. subglobosa*, based on the degree of reddish color differences between these two taxa. However, Georges and Adams (1996) previously demonstrated a lack of genetic differentiation between them and we continue to retain *worrelli* as a subspecies of *subglobosa* (e.g., Georges and Thomson 2010; TTWG Annotation 07:99).

C&S also recognized and described, but did not name, an alleged new species of *Elseya* from the Daintree River in Queensland, and an alleged new subspecies of *Emydura macquarii* from the Tweed and Richmond Rivers in New South Wales.

Reviews of this book by Georges (2018) and Spencer (2019) provided additional critique of the taxonomy used by C&S, and Sadlier and Cann (2018) provided a defense of their positions.

18. ***Chelodina gunaleni***: Kehlmaier et al. (2019a) demonstrated that the mitogenome of the holotype of *C. gunaleni* differed from that of its closest sister lineage, *C. novaeguineae*/*reimanni*, supporting its distinctness, but at a low divergence level consistent more with subspecific rather than specific separation. However, they made no recommendation to change the current taxonomy.

19. ***Chelodina mccordi***: Kehlmaier et al. (2019a) demonstrated that the mitogenome of the holotype of *C. mccordi roteensis* (McCord et al. 2007b) did not differ significantly from the paratype of *C. mccordi* (Rhodin 1994a), and therefore synonymized *roteensis* under *mccordi*, which we accept. They also found that the holotypes of *C. timorlestensis* (Kuchling et al. 2007) and *C. timorensis* (McCord et al. 2007a) were identical to each other and sister to *C. mccordi*, and concluded that the differences between *mccordi* and *timorensis* were consistent with subspecific separation.

20. ***Chelodina reimanni* and *C. novaeguineae***: Kehlmaier et al. (2019a) demonstrated that the mitogenome of the holotype and paratype of *C. reimanni* (Philippen and Grossmann 1990) showed negligible divergence from that of the lectotype of *C. novaeguineae* (Boulenger 1888), and at a low level consistent more with subspecific

rather than specific separation, but retained both as distinct species and made no taxonomic changes.

21. ***Chelodina (Chelydera)* and *Chelodina (Macrochelodina)***: Shea et al. (2020) noted that the previous designation by McCord and Joseph-Ouni (2007a) of a neotype for the Southwestern Snake-necked Turtle, *Chelodina oblonga* Gray 1841, and their creation of the new subgenus *Macrodiremys* for *C. colliei* Gray 1856a (= *C. oblonga*) was invalid. Instead, Shea et al. (2020) restored the subgeneric name *Macrochelodina* Wells and Wellington 1985 for *C. oblonga* (as it had been originally designated), and synonymized *C. colliei* under *C. oblonga*. Further, since *Macrodiremys* was designated a junior synonym of *Macrochelodina*, this left the previous concept of *Macrochelodina* without a valid name, therefore Thomson and Georges (in Shea et al. 2020) proposed *Chelydera* as the necessary new subgeneric name for the Northern Snake-necked Turtle, *C. rugosa* Ogilby 1890, and the other broad-shelled long-necked species (such as *C. expansa*), with *C. parkeri* Rhodin and Mittermeier 1976 designated as its type species.

22. ***Chelodina rugosa* (previously *C. oblonga*) and *Chelodina oblonga* (previously *C. colliei*)**: Kehlmaier et al. (2019a) genotyped the holotype of *Chelodina oblonga*, which had previously been interpreted by Thomson (2000), based on morphology, as representing a Northern Snake-necked Turtle, *C. rugosa* (see also Kennett et al. 2014 CBFTT and TTWG Annotation 14:43). Instead, Kehlmaier et al. (2019a) demonstrated genetically that the specimen was referable to the Southwestern Snake-necked Turtle, as originally allocated, and therefore returned the name *C. oblonga* to that species, but considered it a *nomen dubium* (with which we do not agree), suggesting that *C. colliei* Gray 1856a should be used as the name for that species. They also recommended that *C. rugosa* be resurrected as the correct name for the Northern Snake-necked Turtle. Subsequently, as noted in the previous annotation, Shea et al. (2020) invalidated the subgeneric name *Macrodiremys* for *C. oblonga*, returning it to its originally intended subgenus *Macrochelodina*, synonymized *C. colliei* under *C. oblonga*, and Thomson and Georges (in Shea et al.) created the new subgenus *Chelydera* for a resurrected *C. rugosa* and the other broad-shelled long-necked species.

23. ***Chelodina kuchlingi***: Kehlmaier et al. (2019a) demonstrated that the mitogenome of the holotype of *C. kuchlingi* differs significantly from Northern Territory *C. rugosa* [= *C. kurrichalpongo*] and other *Chelodina* species, including the holotype of *C. siebenrocki* [= *C. rugosa*] from Papua New Guinea, validating its status as a separate lineage.

Kuchling (2020) subsequently documented that the originally-designated type locality of "Kalumburu" for the holotype of this species was incorrectly recorded when it was accessioned into the Western Australian Museum, and that instead, it was likely collected in Parry Creek in the Ord River floodplain. As such, he restricted the known range of the species to the limited Ord River basin and the type locality to "Parry Creek." He also noted that the species had not been collected since 1974 and that *C. rugosa* [= *C. kurrichalpongo*] had recently invaded the Ord River floodplain as a result of anthropogenic habitat disturbance, possibly leading to hybridization or introgression with *C. kuchlingi* and its possible gradual replacement, although focused surveys would be needed to ascertain its conservation status and possible persistence.

24. ***Chelodina kurrichalpongo***: Joseph-Ouni et al. (2019a) described this species from the lowlands of the Northern Territory as *Macrochelodina kurrichalpongo*, recognizing the western populations of the Northern Snake-necked Turtle (*C. rugosa*, previously *C. oblonga*) as a separate species from the eastern populations, based on morphological differences of shell shape, coloration of the body and iris, and referring to previously described mtDNA differences between these populations elucidated by Alacs (2008) in an unpublished thesis and Kehlmaier et al. (2019). They also recognized *C. siebenrocki* as a valid subspecies of *C. rugosa*. Following their previous works, they recognized *Macrochelodina* as a genus as opposed to a subgenus of *Chelodina*. They recognized the eastern Gulf of Carpentaria and Cape York populations as *M. rugosa*, reverting to the name previously used before the origin and identity of the holotype of *M. oblonga* was questioned by Thomson (2000), but clarified by Kehlmaier et al. (2019a) and since by Shea et al. (2020).

Georges et al. (2002) examined variation in 24 allozyme loci for 7 populations (60 individuals) of *Chelodina rugosa* and related taxa across their range. Despite documenting some fixed allelic differences between populations of *C. rugosa* from the Northern Territory vs. *C. rugosa* from Queensland and *C. siebenrocki* from New Guinea, they concluded that these populations comprised a single species based on their exceptionally low level of genetic differentiation, less than would be expected by chance given the sample sizes and less than would be expected from isolation by distance within a single species. However, Kehlmaier et al. (2019) demonstrated deep genetic divergence between *C. rugosa* populations from the Darwin area of Northern Territory vs. those from New Guinea (the holotype of *C. siebenrocki*) and *C. rugosa* of unknown origin and suggested that the group comprised more than one species. They also suggested that the name *C. intergularis* might be applicable to one of these species.

Pending further genetic analysis of these populations and the holotypes of *C. rugosa*, *C. intergularis*, and *C. kurrichalpongo*, and further assessment of the diagnostic characters to demonstrate their consistency or variation among individuals from across the range of *C. kurrichalpongo* and *C. rugosa*, we tentatively recognize *C. kurrichalpongo* from the Northern Territory as a valid taxon, although some of us consider it a synonym of *C. rugosa*. We also retain *C. siebenrocki* in the synonymy of *C. rugosa* until additional data are available to resolve the incompatibility of the nuclear and mtDNA evidence.

25. ***Chelodina rugosa* and *C. siebenrocki***: In addition to their description of *Macrochelodina* [*Chelodina*] *kurrichalpongo*, Joseph-Ouni et al. (2019a) recognized two subspecies of *M.* [*C.*] *rugosa*: the nominate form, *M.* [*C.*] *r. rugosa* from Australia, and *M.* [*C.*] *r. siebenrocki* from New Guinea, based on their morphological assessment, although they provided no quantitative data to support their assertion. They also synonymized *Chelodina intergularis* Fry 1915 with *M.* [*C.*] *r. rugosa* from Cape York, although it is possible that the holotype, lacking a specific type locality, may conceivably have come from the Northern Territory, and as such might have nomenclatural priority over *M. kurrichalpongo*.

Kehlmaier et al. (2019a) demonstrated that the mitogenome of the holotype of *C. siebenrocki* differed only slightly from a *C. rugosa* of unknown origin (but possibly Queensland), agreeing with the prior characterization of the minor differences between these taxa as noted by Rhodin and Mittermeier (1976) and Georges et al. (2002), and chose to retain *siebenrocki* in the synonymy of *rugosa*. They also found that this *C. rugosa/siebenrocki* lineage was markedly different from *C. rugosa* from the Northern Territory, a taxon subsequently described by Joseph-Ouni et al. (2019a) as *M. kurrichalpongo*.

26. **Emydurinae**: Joyce et al. (2021) provided a detailed phylogenetic nomenclature (PhyloCode) for all fossil and living turtles, in which they largely followed our TTWG (2017) nomenclature for the higher categories of all living turtles. However, they established and defined the new suprageneric clade Emydurinae for

the short-necked Chelidae from the Australia-New Guinea region as sister to the Pseudemydurinae. Gaffney (1977) had previously erected and named this clade as the infrafamily Emydurodd. Based on subsequent work on the phylogenetic relationships of the Chelidae by Seddon et al. (1997), Georges et al. (1998), Guillon et al. (2012), Pereira et al. (2017), and Zhang et al. (2017), we had previously recognized the subfamilies Chelodininae (see TTWG Annotation 12:39) and Pseudemydurinae (see TTWG Annotation 17:100) for the Australasian Chelidae. Thomson et al. (2021) recently corroborated this clade of *Emydura*, *Elseya*, *Elusor*, *Myuchelys*, and *Rheodytes* as a monophyletic group sister to the Chelodininae. We therefore now also recognize the subfamily Emydurinae.

27. ***Elseya novaeguineae* (*Elseya caelatus*)**: Based on phenotypic differences of shell shape, color, size, and carapacial serrations, Joseph-Ouni and McCord (2019a) described a new species with two subspecies (*E. caelatus caelatus* and *E. c. ayamaru*) from the western Vogelkop peninsula and the Raja Ampat Islands of West Papua, Indonesia, separating these taxa from *E. novaeguineae* from the eastern Vogelkop and southern Bomberai peninsulas. They did not consider or discuss previously published molecular evidence of mitochondrial haplotype diversity in these populations as delineated by Georges et al. (2014). Both the molecular and morphological data suggest that there is substantial variation within *E. novaeguineae* distributed across the Vogelkop and Bomberai peninsulas (Georges et al. 2014; Thomson et al. 2015). However, neither data set is sufficiently complete or internally consistent enough to resolve the question of whether this is lineage diversity within a single species or an indication of a species complex with multiple taxa. The molecular data (Georges et al. 2014) indicate two substantive mitochondrial clades within Vogelkop and Bomberai *E. novaeguineae*, but the distribution of haplotypes conflicts with a clear split between the populations assigned by Joseph-Ouni and McCord (2019a) to their western species, *E. caelatus,* vs. those they assigned to eastern and southern *E. novaeguineae*. The holotype and western type locality site they selected for *E. caelatus,* Salawati Island, actually has an eastern *E. novaeguineae* haplotype (Georges et al. 2014). Given our preference for only changing taxonomy when the data are compelling and corroborative, most of us recognize neither *Elseya caelatus* nor its subspecies *E. c. ayamaru* at this time and place both names in the synonymy of *Elseya (Hanwarachelys) novaeguineae*.

We note additionally that the genus name *Elseya* is feminine, and therefore the specific epithet *caelatus* (= past participle, from the verb *caelare*: I carve, to carve) needs to be rendered in the Latin feminine, *caelata*, rather than in the masculine *caelatus*, as originally written. Gray (1867) proposed the generic name *Elseya* to honor Dr. Elsey, the collector, by adding an "*a*", which most often indicates feminine gender, though not always. He included two species in his new genus: *dentata* (a feminine adjective) and *latisternum* (*sternum* = a neutral noun), thereby choosing the feminine gender for *Elseya*. As such, the epithet needs to be *caelata* instead of *caelatus*. The epithet *ayamaru* was established as a noun in apposition and therefore does not need to agree with the gender of the genus.

28. ***Elseya schultzei* (*Elseya orestiad*)**: Based on phenotypic differences of shell shape, color, small size, and other morphological features, Joseph-Ouni and McCord (2019b) described *Elseya orestiad* as a new species based on eight specimens from a very limited distribution around Lake Sentani in the Cyclops Mountains of northeastern Papua, Indonesia, differentiating it from the larger, widespread, and sympatric *E. schultzei* which also occurs in the Tami River catchment. However, no quantitative analyses of morphological differences were performed, nor any indication of the extent of variation in *E. schultzei,* nor was any genetic analysis done. Although it is possible that *E. orestiad* may represent a distinct taxon, we refrain from recognizing it at this time, and most of us regard it as a junior synonym of *E. schultzei,* pending genetic analysis.

29. ***Elseya albagula* and *E. irwini***: Todd et al. (2014b) analyzed the phylogenetic relationships of nearly all major populations and taxa of Australian and New Guinean *Elseya* based on molecular data comprising both mitochondrial and nuclear loci. They identified the Daintree River population in northern Queensland as a putative undescribed species, *Elseya* sp. [Daintree], and sister to *E. irwini*. They also documented shallow genetic differentiation of *E. albagula* from the Fitzroy River as compared to the rest of its range, but did not suggest the need for nomenclatural distinction. However, Hoser (2018a) proposed novel subgeneric, specific, and subspecific names for these clades that had been identified by Todd et al. (2014b). We treat these names as *nomina rejecta* (see Annotation 5 and the Appendix for further discussion).

30. ***Elseya lavarackorum* (*Elseya oneiros*)**: Joseph-Ouni et al. (2021) described apparent shell scutellation differences between two Late Pleistocene fossils (one partial carapace and one plastron) of *E. lavarackorum* from the Riversleigh site and several living specimens of *E. lavarackorum* from the Nicholson and Gregory River drainages, and concluded that the living specimens were not the same species as the fossils, in contradiction to the earlier conclusion by Thomson et al. (1997) that the fossil and living specimens belonged to the same species. Joseph-Ouni et al. (2021) re-named the living form as a new species, *Elseya (Pelocomastes) oneiros,* but also assigned a third Late Pleistocene fossil (plastron only) from Riversleigh to their new species.

Thomson et al. (1997) had based their conclusions of conspecificity on several skeletal characters and a single scutellation character that demonstrated a close relationship between the fossil and living specimens, yet Joseph-Ouni et al. (2021) did not address or describe any of the skeletal characters, focusing instead on a variety of other apparently variable scutellation differences. However, basing these variable differences on only single carapacial and plastral fossil specimens without regard to the extent of variation in living specimens does not, in our opinion, constitute adequate demonstration of significant enough specific differences to warrant recognition of separate taxa, and as such, most of us consider *E. oneiros* to be a junior synonym of *E. lavarackorum*. In addition, Joseph-Ouni et al. (2021) erroneously placed *E. lavarackorum* in the subgenus *Elseya*, despite the clear allocation of that species to the subgenus *Pelocomastes,* as demonstrated by its skeletal morphology (Thomson et al. 1997, 2015).

The known distribution of *E. lavarackorum* has recently been extended markedly westward through the work of Georges (2021), who genotyped specimens of what appeared phenotypically to be *E. dentata* from the Roper River in the Northern Territory, but identified them as E. *lavarackorum*.

31. ***Emydura gunaleni***: Smales et al. (2019a) described this isolated new species of *Emydura* from the western Vogelkop peninsula in West Papua, Indonesia, differentiating it morphologically from the widespread *E. subglobosa* occurring more than 500 km to the southeast and other more distant members of the genus. *Emydura gunaleni* is characterized by unambiguous discrete diagnostic characters (e.g., intergular completely separates the pectorals, distinctive pencil thin light stripe behind the eye) in addition to qualitative diagnostic characters of color and shell shape, and we therefore recognize this taxon as distinct.

32. ***Emydura subglobosa angkibaanya***: Joseph-Ouni et al. (2019b) described this taxon from a very limited distribution

in the Jardine River at the northern tip of Cape York, Australia, distinguished from *E. s. subglobosa* from New Guinea by some morphological and color differences. However, only limited quantitative analyses of differences between these taxa were performed, and no analysis was done of the extent of variation in rangewide populations of *E. subglobosa,* including *E. s. worrelli* from Australia. Furthermore, genetic analysis was not performed, and the Jardine River population has only been separated from mainland New Guinea populations for about 12,000 years, a time frame relatively unlikely to have led to subspecific separation. Although it is possible that *E. s. angkibaanya* may represent a diagnosable population, perhaps at an ESU level, we refrain from recognizing it as a named subspecies at this time, and most of us regard it as a junior synonym of *E. s. subglobosa,* pending genetic analysis.

33. ***Myuchelys purvisi***: Kehlmaier et al. (2019a) demonstrated that the mitochondrial genome of *M. purvisi* differed markedly from other *Myuchelys* species, and clustered instead with those of *Elusor* and *Rheodytes,* which partially corroborated the previous findings of Le at al. (2013), who had noted the paraphyly of *Myuchelys* and erected the genus *Flaviemys* for *purvisi* to resolve this situation. However, Kehlmaier et al. agreed with Spinks et al. (2015) that the nuclear genomic analysis supported *purvisi* as a member of *Myuchelys*, corroborated earlier by nuclear allozyme data (Georges and Adams 1992), and suggested that the discordance between the nuclear and mitochondrial data was evidence for ancient mitochondrial introgression.

In a paper aimed primarily at dating the diversification of chelid turtles, Holley et al. (2020) generated phylogenetic trees based on: 1) mitochondrial and nuclear DNA data downloaded from GenBank, 2) previously published (but slightly modified) morphological data, and 3) the combined morphological and molecular data (largely driven by the more inclusive molecular data set). The morphological analysis was hampered by incomplete sampling of extant taxa (and did not include *M. purvisi*). However, the molecular and combined analyses produced trees with potential taxonomic implications. The latter trees both supported the recognition of *Flaviemys purvisi* as sister to *Elusor* rather than *Myuchelys*, contrary to Spinks et al. (2015) and Kehlmaier et al. (2019a), most likely caused by the mitochondrial signal in the data set. In view of the vagaries of mitochondrial genomic relationships and the more robust nuclear genomic evidence, we follow Georges and Adams (1992), Spinks et al. (2015), and Kehlmaier et al. (2019a) in continuing to recognize *purvisi* as a member of *Myuchelys* rather than a monotypic *Flaviemys*.

34. ***Pelomedusa galeata***: Vamberger et al. (2018) analyzed phylogeographic patterns of mitochondrial and nuclear DNA in *Pelomedusa galeata* and *P. subrufa* (sensu stricto) and inferred shifts of climatically suitable refugia since the Last Glacial Maximum using a modeling approach. Their data demonstrated distinct intraspecific genetic structuring in South African *P. galeata*, indicative of speciation between the southwestern and southeastern populations (for which existing names are available), but no evidence of genetic structuring in the more widespread *P. subrufa*. They made no specific taxonomic or nomenclatural recommendations.

35. ***Pelusios castaneus seychellensis***: After further review of papers by Bour (1983, 2013a), Stuckas et al. (2013), Kindler et al. (2016), and Bour et al. (2016 CBFTT) (see also TTWG Annotations 14:47 and 17:103), we acknowledge that: 1) differences in shell coloration (black plastron) and head morphology apparently differentiate *seychellensis* from typical western African *P. castaneus*, 2) but genetic findings support its close sister relationship to *P. castaneus* from coastal Republic of Congo, and 3) there is a distinct possibility that the only three known museum specimens of *seychellensis* may well have been mislabeled when collected or accessioned, or even brought to the Seychelles as part of historic trade routes, similar to specimens of *P. castaneus* recorded from Guadeloupe, Cape Verde, and São Tomé.

Combined, these considerations now lead us to conclude that it is unlikely that *seychellensis* was introduced prehistorically to the Seychelles and then became extinct. It is more likely that the population of *P. castaneus* from which the three type specimens of *seychellensis* originated has not yet been located, and it is highly unlikely to have been the Seychelles. No specimens of *P. castaneus* from the western Central African coast either south or north of the Republic of Congo were genetically sampled by Kindler et al. (2016), so it is entirely possible that the *seychellensis* genotype may have originated from an unsampled area along that coast. In addition, the geographic distribution of *P. castaneus* is discontinuous, with three apparently allopatric populations (Bour et al. 2016 CBFTT): 1) coastal West Africa, 2) inland Cameroon and Central African Republic, and 3) coastal western Central Africa. Genomic analysis by Kindler et al. (2016) also suggests that these three regions may represent separate lineages. As a result, we now accept the earlier recommendations by Stuckas et al. (2013) and Kindler et al. (2016) and synonymize *P. c. seychellensis* under *P. castaneus*. In doing so, we also remove it from the list of turtle taxa that have gone extinct since 1500.

If the actual population from which the three specimens of *seychellensis* originated is positively identified genetically, and if the morphological features present in them are also present in that population, then the epithet *seychellensis* would still be available for it, if taxonomically warranted. Specimens of *P. castaneus* from forested regions of Nigeria often have dark plastra similar to *seychellensis* (Bour et al. 2016 CBFTT:f.4), and other populations with dark plastra may occur elsewhere.

36. ***Pelusios sinuatus***: Vamberger et al. (2019a) performed a phylogeographic analysis of this widespread species using mtDNA and nuclear DNA and noted deep division between northern clades and southern clades with a boundary along roughly the northern border of South Africa. They acknowledged the southern clade as the nominotypical subspecies *Pelusios sinuatus sinuatus* and recognized the northern taxon as a distinct subspecies, *Pelusios sinuatus bottegi* (Boulenger 1895a), which we accept.

37. ***Pelusios williamsi***: In a previous paper not included for annotation in our previous checklists, Fritz et al. (2012b) combined analyses of mitochondrial and nuclear DNA of all species of *Pelusios* and demonstrated that *P. williamsi* is sister to *P. castanoides*. Further, they noted that some DNA sequences stored in GenBank, specifically earlier submitted samples of "*P. williamsi*," were misidentified as to what species they represented. They did not suggest any novel taxonomic rearrangements, but offered an important critique of how identification procedures at GenBank could be improved, which in view of how critical genetic analyses have become in taxonomy, are hopefully being addressed and resolved.

38. ***Podocnemis***: Based on genetic work by Vargas-Ramírez et al. (2008) (see TTWG Annotation 09:48), who performed mitochondrial and nuclear DNA analyses of all eight extant species of Podocnemididae, and documented the phylogenetic relationships among them, Hoser (2018b) attempted to revise the six extant South American species of *Podocnemis*. He proposed splitting *Podocnemis* into three monotypic genera, *Podocnemis*, *Bartlettia*, and *Novamyuchelys*, and a fourth polytypic genus, *Wellsandwellingtonchelys*, with three monotypic subgenera: *Wellsandwellingtonchelys*, *Magdelenachelys*, and *Erythrocephalachelys*. He restricted *Podocnemis* to *P. expansa*, allocated *P. sextuberculata* to the resurrected genus *Bartlettia* (an unavailable junior homonym), proposed a new generic

name, *Novamyuchelys*, for *P. vogli*, another new generic and subgeneric name, *Wellsandwellingtonchelys,* for *P. unifilis*, and two new subgeneric names under *Wellsandwellingtonchelys*: *Magdelenachelys* and *Erythrocephalachelys*, for *P. lewyana* and *P. erythrocephala*, respectively. We treat all these names as *nomina rejecta* (see Annotation 5 and the Appendix for further discussion).

39. ***Podocnemis erythrocephala***: Based on mitochondrial and microsatellite markers, Michels and Vargas-Ramírez (2018) demonstrated significant differences between Amazon and Orinoco river basin populations of the species, that may have diverged during the Last Glacial Maximum, ca. 25,000 to 38,000 yrs ago. They recommended no taxonomic changes, but considered these divergent populations as distinct Management Units.

40. ***Podocnemis sextuberculata***: Viana et al. (2017) examined variation in the mitochondrial control region, which revealed that populations of this species in the Xingu River were divergent from those across the rest of the range in the main Amazon basin. The authors recommended them as two separate Management Units, with no taxonomic implications.

41. ***Podocnemis unifilis***: Confusion over the identity of the type specimen of *Emys cayennensis* (see TTWG Annotation 14:50) led Vogt et al. (2013) to petition the ICZN to conserve the name *Podocnemis unifilis* Troschel 1848 for the Yellow-spotted Amazon Turtle, giving it precedence over *Emys cayennensis* (an older name previously used erroneously as a senior synonym of *Podocnemis erythrocephala*). This petition was accepted and the ICZN (2019) has used its plenary power to give the name *unifilis* Troschel 1848, as published in the binomen *Podocnemis unifilis*, precedence over the name *cayennensis* Schweigger 1812, as published in the binomen *Emys cayennensis*, whenever the two are considered to be synonyms. This means that *Podocnemis unifilis* is a protected name and that the name *E. cayennensis* is still an available name and will appear in the synonymy of *P. unifilis* whenever they are considered to be the same species.

42. ***Caretta caretta***: The question of the availability of the name *Testudo caretta* Linnaeus 1758 for the Loggerhead Turtle, as originally discussed by Wallin (1985), was reopened by McCranie (2018). Wallin had suggested that since Linnaeus did not personally examine any specimens of what he called *T. caretta*, basing his description of that species only on literature citations, and since his concept of *T. mydas* (also described in 1758), was based on a composite of specimens of *T. mydas* and actual *T. caretta*, that *Testudo caretta* Linnaeus 1758 was therefore an invalid name. Instead, Wallin (1985) had suggested that the name *T. caretta* was available as *Testudo caretta* Walbaum 1782. This recommendation was again noted by McCranie (2018), who also remarked that Wallin's suggestion had not been followed in the recent literature.

However, neither author addressed the fact that Walbaum (1782) is a non-binomial work, as originally noted by Wermuth (1956), and that all new turtle names in that work (*T. verrucosa*, *T. macropus*, *T. tabulata*, *T. tabulata campanulata*, and *T. signata*) are considered unavailable *nomen illegitimum* names (e.g., Wermuth and Mertens 1961, 1977; Fritz and Havaš 2007; Rhodin et al. 2008; TTWG 2009, 2017, etc.). A review of Walbaum (1782) confirms that he did not employ binomial Linnaean nomenclature for any of his species descriptions, e.g., referring to the Loggerhead Turtle by the full original Linnaean descriptor: "*Testudo (Caretta) pedibus pinniformibus, unguibus, palmarum plantarumque binis, testa ovata, acute serrata*. L." Furthermore, we note that there is no requirement by ICZN that for a name to be available it needs to be based on actual examined specimens (see also Annotation 65). We therefore reject the suggestion that "*Testudo caretta* Walbaum 1782" replace *Testudo caretta* Linnaeus 1758, agreeing with all other recent authors.

43. ***Chelonia mydas***: Shamblin et al. (2018) examined variation in the mitochondrial control region for nesting *C. mydas* along the east coast of the United States, and compared their results with previously published data from the southeastern USA and the northern Caribbean. They found that haplotype frequencies from populations in South Carolina and North Carolina were significantly different from those from the other populations, and considered them as a distinct subpopulation of *C. mydas*. They made no taxonomic recommendations but suggested Management Unit status for these northern populations.

Jensen et al. (2019) examined variation in the mitochondrial control region across 127 rookeries of *C. mydas* distributed globally. They found strong phylogenetic structure and recognized 11 lineages, along with the geographically isolated Mediterranean population, as 12 Management Units, but made no taxonomic recommendations. They concluded that the greatest lineage diversity was in the western Pacific and hence was likely the center of origin for the species, and that the species likely colonized the Atlantic basin in a single event.

44. **Chelydroidea**: As per Crawford et al. (2015) and Thomson et al. (2021), we now also recognize the expanded superfamily Chelydroidea that includes the three families Chelydridae, Dermatemydidae, and Kinosternidae, removing the previous concept of a more restricted Kinosternoidea (which excluded Chelydridae), as per Joyce et al. (2004) and others.

45. ***Kinosternon***: In our previous two checklists we listed the alternative header designations of "*Kinosternon* or *Cryptochelys*" for those species of *Kinosternon* that were included in *Cryptochelys* by Iverson et al. (2013). We deferred a decision at that time as to which generic name best reflected the underlying phylogeny, as outlined in our TTWG Annotations 14:9 and 17:11, based on work by Spinks et al. (2014b). However, since then, community usage has not generally adopted *Cryptochelys*, and we have therefore now synonymized it with *Kinosternon*.

46. ***Kinosternon chimalhuaca***: In previous TTWG Annotations (07:7 and 14:11) we discussed the inadvertent early publication of this name in a book by Rogner (1996), and our first request to the ICZN to validate that error (Rogner et al. 2013), but since then the ICZN has recommended that we instead request suppression of the earlier name, and we have therefore done so (Rogner et al. 2016). A final determination by the ICZN is still pending, but we now revert to using the Berry et al. (1997) date of publication for this species.

47. ***Kinosternon cora***: Loc-Barragán et al. (2020) described this range-restricted mud turtle from the coastal plain of extreme southern Sinaloa and Nayarit, Mexico, based on morphologic and phylogenetic analysis (two mitochondrial and four nuclear loci) comparing and differentiating it from *K. sonoriense* and *hirtipes* and its sister species, *K. vogti,* as well as all other Kinosternidae. The species is distinctive and we accept it as valid.

48. ***Kinosternon vogti***: López-Luna et al. (2018) described this range-restricted mud turtle from the coastal Bahía de Banderas region of Jalisco, Mexico, based on a morphologic analysis comparing and differentiating it from *K. integrum* and *K. chimalhuaca*. Males have an unusual distinctive and bright yellow snout not known in other *Kinosternon* species. Genetic analysis was not done in the original description, but Loc-Barragán et al. (2020) performed a phylogenetic analysis of their new species, *K. cora*, comparing its mitochondrial DNA to *K. vogti* and most other Kinosternidae, and demonstrated that *K. vogti* and *K. cora* are sister species most

closely related to *K. sonoriense*, *hirtipes,* and *chimalhuaca,* and significantly differentiated from other *Kinosternon*. Subsequently, López-Luna et al. (2021) analyzed a broader sampling of mitochondrial DNA of *K. vogti* and demonstrated its close sister relationship to *K. hirtipes* and *K. chimalhuaca*. The species is distinctive and we accept it as valid.

49. ***Sternotherus intermedius, Sternotherus minor,* and *Sternotherus peltifer***: Scott et al. (2018) analyzed range-wide phylogeography of *Sternotherus minor* and *S. depressus* based on 4430 RAD loci (48,207 polymorphic SNPs) scored for 193 ingroup and 12 outgroup specimens. Based on phylogenetic analysis, Bayesian clustering, and the near-absence of hybrid or significantly admixed genotypes, they concluded that what had previously been interpreted as a zone of intergradation between the subspecies *S. m. minor* and *S. m. peltifer* actually represents a new species, *S. intermedius*, and that *S. peltifer* and *S. minor* are shallowly diverged, but specifically distinct. We are uncertain as to whether *S. intermedius* is valid or not, and whether *S. peltifer* is distinct enough to warrant species rank, but accept both for now, pending further analysis.

50. ***Sternotherus odoratus***: Legler and Vogt (2013) discussed two museum specimens of this species collected in El Sauz, Chihuahua, Mexico, in 1903, about 300 km southwest of the nearest confirmed record in Texas, USA. They maintained that the provenance of the specimens was unequivocal (as opposed to being mislabeled), and that further collecting efforts in the same area since that time have failed to find any more; they concluded that the species once occurred in Mexico, but has since been extirpated.

51. **Staurotypinae**: In our previous two checklists we listed the alternative designation of "Staurotypinae or Staurotypidae" for the monophyletic grouping of *Claudius* and *Staurotypus*. There is broad agreement concerning the reciprocal monophyly of these two genera and the remainder of the Kinosternidae (*Kinosternon* and *Sternotherus*), but we deferred a decision as to which supra-generic category (subfamily or family) best reflected the level of differentiation between the two lineages, as outlined in our previous TTWG Annotation (14:13), based on recommendations for the use of Staurotypidae by Bickham and Carr (1983) and Iverson et al. (2013). Additional data and discussions since then (Joyce et al. 2013; Spinks et al. 2014b; Joyce and Bourque 2016) have supported usage favoring Staurotypinae, and since we prefer to maintain stability in suprageneric categories (see TTWG Guidelines for Taxonomic Changes in the introduction), we have decided to continue use of the subfamily designation Staurotypinae.

52. **Fossil North American Testudinoidea**: Vlachos (2018) reviewed and analyzed published morphological features of all described North American fossil Testudinoidea (Testudinidae, Emydidae, and Geoemydidae [Rhinoclemmydinae]) and made many taxonomic recommendations. Most of the Pleistocene fossil taxa that were included as synonyms of Recent taxa in our previous TTWG checklists, or as extinct species in our TEWG (2015) checklist, have as a result been reassessed and taxonomically reassigned. Vlachos unfortunately labeled his synonymized or undiagnosable species as *nomen invalidum* taxa; however, the names are not nomenclaturally invalid or unavailable, but simply taxonomically synonymized.

Chrysemys: Based on what Vlachos considered to be diagnostic features of vertebral-marginal scute contacts in *Chrysemys timida* † Hay 1908b from Nebraska, he recognized it as separate and distinct from Recent *Chrysemys picta bellii,* disagreeing with the previous synonymization by Preston (1979). We acknowledge this new assessment and have therefore removed *C. timida* from the synonymy of *C. p. bellii* and from this checklist and will incorporate it in our next updated edition of TEWG (2015).

Pseudemys: Based on review of the type specimen of *Deirochelys floridana* † Hay 1908b (listed as a synonym of Recent *Pseudemys nelsoni* in TTWG 2017), with comparison to extant *Pseudemys* and *Deirochelys*, Vlachos concluded that *D. floridana* was a *nomen dubium* undiagnosable beyond *Deirochelys* sp. indet., disagreeing with Jackson (1964, 1974), who had identified it as a *Pseudemys* with closest affinities to Recent *P. nelsoni*. In view of the taxonomic disagreement and lack of a clear diagnosis, we have removed it from the synonymy of *P. nelsoni*. Vlachos also evaluated the type of *Trachemys jarmani* † Hay 1908b and felt that it was undiagnosable; therefore, since Jackson (1974) was also uncertain about its identity and had referred it to *Chrysemys* (= *Pseudemys*) sp. indet., we have also removed this taxon from the synonymy of *P. nelsoni*. Additionally, the single nuchal of *Pseudemys extincta* † Hay 1908b was determined by Vlachos to be undiagnosable, disagreeing with Preston (1979), and he removed *P. extincta* from the synonymy of Recent *Pseudemys rubriventris,* with which we also agree.

Trachemys: Vlachos examined the type series and other collected material of *Trachemys sculpta* † Hay 1908b from Florida and concluded that the species is distinct and separate from Recent *Trachemys scripta scripta,* based on wedge-shaped costals and hexagonal neural plates. We have therefore removed *T. sculpta* from the synonymy of *T. s. scripta* and from this checklist. He also examined type figures of *Emys euglypha* † Leidy 1889a (type specimens apparently lost) and *Trachemys delicata* † Hay 1916a (a single costal bone), and interpreted both as being undiagnosable. We have therefore also removed *E. euglypha* and *T. delicata* from the synonymy of *T. s. scripta*. He found *Emys petrolei* † Leidy 1868a, *Pseudemys bisornatus* † Cope 1878, and *Trachemys trulla* † Hay 1908b to be undiagnosable as well, and we have therefore removed all three from the synonymy of Recent *Trachemys scripta elegans*.

Actinemys: Based on a review of *Clemmys hesperia* † Hay 1903, which had recently been determined to be Late Miocene instead of Pliocene, Vlachos was unable to identify the plastral fragment as anything but a Testudinoidea sp. indet., and therefore removed it from the synonymy of *Actinemys marmorata*, as we have done as well.

Terrapene: Vlachos also provided extensive taxonomic re-evaluations of all fossil Pleistocene taxa of Box Turtles. We acknowledge these and have generally followed his recommendations; removing most of them from the synonymy of *T. carolina* and from this checklist and incorporating them in our next updated edition of TEWG (2015). A few are retained as junior synonyms of Recent taxa based on his recommendations.

Cistudo eurypygia † Cope 1870b from Maryland and *Toxaspis anguillulatus* † Cope 1899 from Pennsylvania were synonymized with each other, and *Terrapene eurypygia* recognized as a separate and distinct species from Recent *Terrapene carolina carolina*. *Terrapene antipex* † Hay 1916 from Florida and *Terrapene bulverda* † Hay 1921 from Texas were placed in the synonymy of *Terrapene canaliculata* Hay 1907 from Georgia and *T. canaliculata* in the synonymy of *Terrapene putnami* † Hay 1906 from Florida, which was itself separated out as a diagnosable extinct species and removed from the synonymy of either Recent *Terrapene carolina bauri* or *Terrapene carolina major.* This is in agreement with Ehret et al. (2013), but disagrees with Butler et al. (2011), who synonymized *T. putnami* under Recent *T. c. major,* and Martin et al. (2013), who recognized it as a separate extinct subspecies, *T. carolina putnami* (see TTWG Annotations 11:8 and 14:28).

Terrapene llanensis † Oelrich 1953 from Kansas, previously synonymized under Recent *Terrapene carolina triunguis*, was considered indistinguishable from *T. canaliculata* and was therefore synonymized under the extinct species *T. putnami*. *Cistudo marnochii* † Cope 1878 from Texas, *Testudo munda* † Hay 1921 from Tennessee, and *Terrapene impressa* † Hay 1924 from Texas were determined to be *nomina dubia*, only identifiable as *Terrapene* sp. indet., and have been removed from this checklist.

Terrapene formosa † Hay 1916a and *Terrapene innoxia* † Hay 1916a, both from the Pleistocene of Florida, were synonymized with Recent *T. carolina*. In view of the provenance of *T. formosa* from mid-peninsular Florida, we have tentatively synonymized it under *T. c. bauri* rather than *T. c. major,* where it was previously placed; *T. innoxia* stays under *T. c. bauri*.

Terrapene singletoni † Gilmore 1927 from Florida was determined to be a separate and distinct species, following Auffenberg (1958), and has been removed from its synonymy with *T. c. bauri*. *Trachemys nuchocarinata* † Hay 1916a, based on only a partial nuchal, was considered an undiagnosable Testudinoidea and removed from the synonymy of *Terrapene c. bauri*, where Auffenberg (1958) had placed it. *Terrapene whitneyi* † Hay 1916b from Texas was considered synonymous with Recent *Terrapene ornata ornata* instead of *T. c. triunguis*, and we have therefore reallocated it.

Gopherus: Based on what he considered to be diagnostic features of pleural-peripheral bone contacts and gular-entoplastron relationships in the Mexican Pleistocene species *Gopherus auffenbergi* † Mooser 1972 and *Gopherus pargensis* † Mooser 1980, Vlachos synonymized *G. pargensis* (see TTWG 2015) with *G. auffenbergi*, but recognized *G. auffenbergi* as a separate and distinct species from Recent *Gopherus berlandieri*. We agree with this assessment and have therefore now removed *G. auffenbergi* from the synonymy of *G. berlandieri* and from this checklist and will incorporate it in our next updated edition of TEWG (2015). He also removed *Gopherus huecoensis* † Strain 1966 from the Pleistocene of Texas from the synonymy of Recent *Gopherus flavomarginatus*, based on a more elongated medial carpal centrale and possible separation between the distal radius and the distal carpals in the drawings of the species. Instead, he synonymized it with the larger-bodied Pleistocene species *Testudo hexagonata* † Cope 1893, a synonym of *Testudo laticaudata* † Cope 1893, as discussed in TEWG (2015). We do not agree that these findings are necessarily differentially diagnostic of separate species status for the single specimen of *G. huecoensis*, and therefore tentatively retain it in the synonymy of *G. flavomarginatus,* as previously concluded by Bramble (1982) and Reynoso and Montellano-Ballesteros (2004). Additionally, Vlachos considered the Pleistocene taxa *Testudo atascosae* † Hay 1902 from Texas and *Gopherus praecedens* † Hay 1916a from Florida as undiagnosable *nomina dubia* of Testudinidae, sp. indet., and did not synonymize them under any other species, and we agree, removing them from the synonymy of *G. polyphemus*.

53. ***Graptemys***: Thomson et al. (2018) performed a range-wide phylogeographic time-calibrated divergence analysis of all *Graptemys* taxa using 18 nuclear and 2 mitochondrial genes from 55 individuals representing all Recent taxa. Their phylogeny and divergence time estimates suggested that diversification within the genus has been both more recent and more rapid than has so far been suspected. Their results confirmed the existence of three reciprocally monophyletic clades of map turtles: 1) a deeply divergent clade corresponding to *geographica*, 2) a distinct megacephalic clade for *barbouri, ernsti, pulchra, gibbonsi*, and *pearlensis,* with each species distinctive at a shallow level, and 3) a distinct western clade comprised of a monophyletic sawback clade (*flavimaculata, oculifera*, and *nigrinoda*) and a monophyletic Texas clade (*versa* and *caglei*), but with a paraphyletic and unresolved narrow-headed false map turtle complex (*pseudogeographica, kohnii, ouachitensis*, and *sabinensis*) within the western clade that may require taxonomic revision. They made no specific recommendations for taxonomic changes, but did not agree with Praschag et al. (2017), who had suggested that all of the megacephalic taxa except *barbouri* were conspecific, and that among the sawbacks *flavimaculata* and *nigrinoda* should be treated as subspecies of *oculifera* (see TTWG Annotation 17:19). However, Thomson et al. supported the view previously affirmed by Lindeman (2013) that the narrow-headed *sabinensis* is a distinct species (see TTWG Annotation 14:18), as also supported by Praschag et al. (2017).

54. ***Malaclemys terrapin***: Lovich and Hart (2018) reviewed the previously published taxonomic literature on this species and concluded that it is oversplit, and that there are only four discrete genetic lineages, or Management Units, that do not match the current taxonomy of seven subspecies (following Hart et al. 2014; see TTWG Annotation 17:24). They made no taxonomic recommendations other than recommending further phylogeographic studies based on more complete distributional sampling and more robust genetic analyses, which are currently underway.

55. ***Trachemys grayi emolli***: The taxonomic status of the old unused name *Emys valida* Le Conte 1860 has been uncertain for a long time. In our previous checklists we listed it as a synonym of *Trachemys venusta venusta,* in accordance with the checklist by Fritz and Havas (2007). It was originally synonymized with question marks under *Chrysemys ornata* by Boulenger (1889) and under *Pseudemys ornata ornata* by Wermuth and Mertens (1961), and then without a question mark under the synonymy of *Pseudemys scripta venusta* by Smith and Smith (1980). The taxon was based on a single specimen collected in "Honduras" (no precise locality given) by Le Conte's son, and was described as having a shell length "nearly two feet long" (= nearly 60 cm, but possibly representing curved carapace length). The shell has since been lost, but the head and soft parts of the holotype remain (Malnate 1971; McCranie 2018).

McCord et al. (2010), based on the stated shell size and an examination of the head markings and tomial morphology of the type specimen, synonymized *E. valida* with what they defined as the Pacific versant taxon *Trachemys venusta grayi* (= *T. grayi grayi*), which they stated reaches a maximum shell length of 60 cm. They also restricted the type locality of *E. valida* to the "Pacific coastal drainages of Honduras" and declared the name *Emys valida* Le Conte 1860 a *nomen oblitum*. We agree with them and Smith and Smith (1980) that the name has not been recognized as a valid species since its description, but in our opinion, it should not be synonymized with *T. grayi grayi* (as currently defined), which occurs along the Pacific versant of southern Mexico, Guatemala, and El Salvador, but not in Honduras, and is smaller, with a maximum shell length to about 40 cm (McCranie et al. 2013; Legler and Vogt 2013). Nor should it be synonymized with *T. venusta venusta*, which is a Caribbean versant taxon that does not occur in Honduras and only reaches a maximum shell length of about 42 cm, nor with *T. venusta uhrigi* from the Caribbean versant of Honduras, which only reaches a CL of about 44 cm (McCord et al. 2010; Legler and Vogt 2013). McCranie (2018) also disagreed with McCord et al. (2010) and stated that *E. valida* should not be synonymized with *T. grayi* (= *T. grayi grayi*), and left it in the synonymy of Caribbean versant *T. venusta* (= *T. venusta venusta*).

Where in Honduras the type specimen was collected is therefore of relevance. Le Conte's son, John Lawrence LeConte [1825–1883], who collected the specimen, was a physician and well-known entomologist who explored Honduras in 1857 as the surgeon for the survey team working on the Honduras Interoceanic Railway that transversed the country from Port Caballos (now

Puerto Cortes) on the Caribbean coast to the Gulf of Fonseca on the Pacific coast (Squire 1870). It is therefore reasonable that he may have collected the type specimen in the Pacific versant of Honduras, and we agree with the restricted type locality by McCord et al. (2010). However, instead of agreeing with their synonymization, we instead provisionally synonymize *E. valida* Le Conte 1860 with *T. grayi emolli*, which does occur along Pacific coastal Honduras (McCranie et al. 2013), and reaches a carapace length of at least about 54 cm (Ernst 2008). Since *E. valida* is a *nomen oblitum*, it should not take nomenclatural precedence over *T. grayi emolli* (Legler 1990). This provisional synonymization may be resolved through genetic analysis of the remaining soft tissue parts of the holotype of *E. valida,* as suggested by McCranie (2018).

56. ***Trachemys hartwegi***: Forstner et al. (2014) and Parham et al. (2015) elevated the subspecies *Trachemys gaigeae hartwegi* to species status based on mitochondrial and nuclear DNA differences between it and *T. g. gaigeae*. Parham et al. (2015) also demonstrated its close relatedness to *T. taylori* and *T. venusta*. We overlooked these findings regarding *hartwegi* in our last checklist (although we noted other taxonomic updates by Parham et al. in TTWG Annotation 17:26), and accept *T. hartwegi* as a full species at this time.

57. ***Trachemys medemi***: Vargas-Ramírez et al. (2017) analyzed mtDNA and nuclear DNA sequences of *Trachemys* from the isolated Río Atrato basin of northwestern Colombia and compared them with data from many other *Trachemys* (including taxa variously classified by them or others as species or subspecies of *T. grayi*, *T. venusta, T. callirostris*, and *T. dorbigni*). They concluded that the Río Atrato lineage was distinctive, and described it as a new species, *T. medemi*, more closely related to *T. dorbigni*, the more distant and older radiation of *Trachemys* into South America, than to any of the more geographically proximate taxa. We accept their interpretation and also recognize this new species. In our previous checklist we had included these populations under *Trachemys venusta uhrigi*.

58. ***Trachemys scripta* and *T. gaigeae***: Two recent papers (Vamberger et al. 2020a; Parham et al. 2020) have investigated the genetics and phylogeography of the three recognized subspecies of the widespread species *Trachemys scripta*, with Parham et al. (2020) also examining the relationships of western *T. scripta elegans* with *T. gaigeae*.

Vamberger et al. (2020a) sampled mitochondrial and nuclear DNA sequences and microsatellite loci of several populations of *T. s. scripta,* western and eastern *T. s. elegans,* and *T. s. troostii*. They found that only the quickly evolving microsatellite loci discriminated *T. s. troostii* and western *T. s. elegans* from eastern *T. s. elegans* and *T. s. scripta*, while eastern *T. s. elegans* and *T. s. scripta* were not distinct from each other in any sampled marker system. They also found that western *T. s. elegans* is morphologically distinct and differs from eastern *T. s. elegans* and *T. s. scripta* with respect to microsatellites as much as *T. s. troostii* does, and concluded that the currently recognized subspecies are weakly differentiated. However, if subspecies within *T. scripta* are continued to be recognized, they recommended that distinct subspecies status should be considered for western *T. s. elegans*. They did not examine specimens of *T. gaigeae* from the Rio Grande drainage to determine how closely related that taxon is to western *T. s. elegans*. Their findings challenged the current intraspecific systematics of *T. scripta,* but they refrained from synonymizing any taxa, since abandoning the well-established and morphologically distinct subspecies of *T. scripta* was not deemed desirable.

Parham et al. (2020) sampled mitochondrial DNA sequences and SNPs from ddRAD libraries of several populations of *T. s. scripta*, western and eastern *T. s. elegans, T. s. troostii*, and *T. gaigeae* from the Rio Grande drainage. They found that some samples of *T. s. troostii* were not genetically distinct from *T. s. elegans* and some shared morphological affinities with *T. s. scripta*. They also found genetic admixture and morphological intergrades suggesting introgression between *T. gaigeae* and *T. s. elegans* in the Pecos and lower Rio Grande rivers of Texas and New Mexico, but recommended that these populations continue to be considered *T. s. elegans*.

The taxonomic status of *T. s. troostii* is particularly complicated: Vamberger et al. (2020a) recovered it as distinct in their microsatellite data, whereas Parham et al. (2020) concluded that it represents an intergrade between *T. s. elegans* and *T. s. scripta* and recommended that it should be synonymized. Unfortunately, neither study sampled the lower Tennessee River basin and the sampling and analysis of *T. s. troostii* in the Cumberland River basin was not very robust; hence, it appears premature to make any conclusions about its taxonomic status.

In our opinion, more data based on thorough geographic sampling across the range of *T. s. elegans,* and especially in the areas of potential intergradation among *T. s. scripta, T. s. elegans,* and *T. s. troostii* in eastern Tennessee, are needed before we are comfortable making any definitive taxonomic decisions or changes affecting any of these taxa.

Although it appears possible based on Parham et al. (2020) that *T. gaigeae* and *T. s. elegans* could potentially be considered conspecific, with the Pecos and lower Rio Grande rivers the areas of intergradation and co-occurrence, further sampling and analysis is strongly recommended to evaluate their relationships with each other and other closely related *Trachemys* taxa.

59. ***Trachemys terrapen***: The currently prevailing hypothesis that this taxon is native to Jamaica and possibly prehistorically introduced to the Bahamas remains unresolved and problematic. Seidel and Ernst (2017) postulated that the presence of *T. terrapen* in the Bahamas might have been the result of introduction by British trade from Jamaica, but also noted that fossil evidence suggested a natural origin of the species in the Bahamas. Indeed, Olson et al. (1990) documented the presence of *Trachemys* fossils from a possibly Late Pleistocene site at the southern tip of San Salvador island just northeast of Great Bahama Bank, and Berman (1994) excavated subfossils of *Trachemys* from the same island from a Lucayan archeological site dated to the Late Holocene (660–860 CE). A few Pleistocene fossils of *Trachemys,* identified as *T. terrapen,* have also been found in breccia cave deposits on Jamaica, dated as being up to about 100,000 yrs old (Morgan 1993).

Recent specimens of apparently native *T. terrapen* have only been found on the islands of Great Bahama Bank (Cat, Eleuthera, Exuma, Long, and South Andros), all of which would have been emergent as a single large palaeoisland during the last glacial maximum ca. 17,000 yrs ago. Populations of *Trachemys* sp. found on Little Bahama Bank and the developed island of New Providence (Nassau) on Great Bahama Bank all appear to be hybrids of various *Trachemys* species: *terrapen, decussata, stejnegeri*, and *scripta*, notably *T. s. elegans*. Comparative genetic analysis of Jamaican and native Bahamian populations of *T. terrapen* is needed to ascertain whether they possibly represent separate evolutionary lineages or Management Units, but based on fossil evidence, and the previous widespread presence of the extinct Holocene tortoise *Chelonoidis alburyorum* in the Bahamian Archipelago (Franz et al. 2020; Steadman et al. 2020; Kehlmaier et al. 2021a), there is a possibility that the Bahamian population of *T. terrapen* is native, as previously suggested by Seidel (1996) and Lee and Ross (2001). Based on the age of *Trachemys* fossils from the Bahamas and

Jamaica, it appears possible that natural dispersal of the species may have occurred from Jamaica to the Bahamas during the Late Pleistocene, although prehistoric human-mediated introduction by the indigenous Lucayan people who arrived in the Bahamas Archipelago from the south at about 600 to 750 CE (Fall et al. 2021) is also a distinct possibility. In either case, *T. terrapen* has been present in the Bahamas since about that time or even earlier.

60. ***Emydoidea blandingii***: Jordan et al. (2019) examined variation in two mitochondrial and three nuclear genes across the range of *E. blandingii*. Although they found relatively low levels of genetic variation in either data set, both supported two divergent lineages: one in eastern Ontario, eastern New York, and Nova Scotia, and another across the rest of the species' range (from central Ontario and western New York to Nebraska). They theorized that this divergence was likely reflective of previous refugial isolation of populations on either side of the Appalachian Mountains. In addition, the mitochondrial data set alone suggested a divergence between populations in Nebraska from those across the rest of the western genetic cluster. However, all of these divergences were shallow and they did not suggest any taxonomic recognition, but highlighted the need for appropriate conservation management.

61. ***Emys orbicularis***: Based on dense sampling across the Iberian Peninsula and adjacent regions, Pöschel et al. (2018) examined genetic differentiation and gene flow in *E. orbicularis* using 15 microsatellite loci and 1031 bp of the mitochondrial cytochrome b gene. Their results confirmed the presence of three distinct taxa (*E. o. orbicularis*, *E. o. galloitalica*, *E. o. occidentalis*). According to simulations using Approximate Bayesian Computing, *E. o. orbicularis* circumvented the Pyrenees in the Holocene and invaded the northern Iberian Peninsula, leading to local hybridization with *E. o. galloitalica* along the northern Mediterranean coast of the peninsula, and with *E. o. occidentalis* south of the Pyrenees. Pure populations of *E. o. occidentalis* occur in most of the Iberian Peninsula; however, the population along the inland course of the Ebro River has introgressed mitochondrial haplotypes of *E. o. orbicularis*. Hybridization between the three subspecies was found to be surprisingly low, with steep genetic clines typically seen in distinct species. Yet, the authors recommended no taxonomic changes, pending more comprehensive analyses involving unstudied populations from outside the study region.

62. ***Emys trinacris***: Speybroeck et al. (2020), representing the Taxonomic Committee of the Societas Europaea Herpetologica, reviewed several studies concerning the relationships between *Emys trinacris* and *E. orbicularis* (e.g., Fritz et al. 2005a, 2007b; Spinks and Shaffer 2009; Vamberger et al. 2015; Vamberger and Fritz 2018). Although without full consensus, they took a conservative stance and decided to treat *trinacris* as a subspecies of *E. orbicularis*, pending further studies resolving the complicated relationships of this complex. However, we continue to treat *E. trinacris* as a separate species because of its allopatry and morphologic and genetic distinction.

Vecchioni et al. (2020) studied the phylogeography of *E. trinacris* across its range, using 16 microsatellite loci. Analysis of 245 specimens demonstrated geographically based structuring into five well-characterized clusters; the authors recommended that they be considered as independent Management Units.

63. ***Glyptemys insculpta***: Based on variation in nine microsatellite loci across the range of *G. insculpta* in Canada, Bouchard et al. (2019) observed low-level divergence between watershed populations on the northern versus southern sides of the St. Lawrence River, and a tendency for divergence among individual subdrainage systems. Their results confirmed isolation-by-watershed for wood turtle genetic structure, with implications for population management, but they did not recommend that individual watershed-based populations warranted recognition as Evolutionarily Significant Units or even as Management Units. However, they did recommend that separate watershed populations be considered as potential Designatable Units under Canadian conservation laws.

64. ***Terrapene***: The North American box turtles have continued to receive taxonomic attention, with some improved resolution; see also previous TTWG Annotations 11:8, 14:27, and 17:37. However, the genus remains one of the most troubling among chelonian taxa.

Vitek (2018) quantified shell morphology of fossil and extant USA *Terrapene carolina*-group populations based on geometric morphometrics of 156 carapacial landmarks. In her PCA analysis, *T. c. carolina, T. c. bauri, T. c. major*, and *T. c. triunguis* all overlapped extensively in carapacial morphospace and jackknife assignment of individuals to subspecies returned relatively low classification accuracy (*carolina*, 42–60%; *major* 40–58%; *bauri*, 59–65%; *triunguis*, 63–74%). Based on this morphometric overlap, Vitek could not identify diagnosable differences among the four taxa, and concluded that there was clinal variation in size-corrected shell shape, rather than distinct groups corresponding to recognized subspecies.

Based on sequencing data from > 11,000 ddRADseq loci sampled for 320 individuals, Martin et al. (2020) investigated levels of introgression among eastern USA populations of *Terrapene* (*carolina, triunguis, major, ornata*), but excluding *bauri*. They found support for five groups: *carolina* across much of the eastern USA, two groups of *major*, one in Alabama and Mississippi and another in the Florida Panhandle, *triunguis* across central USA, and *ornata* in the western prairie states, with weaker support for an additional split between northeastern (Illinois, Wisconsin, Iowa) and southwestern (Kansas, Texas, Colorado, Nebraska) populations of *ornata*. They also recovered variable genetic admixture between *carolina* and *major* across Alabama and the Florida Panhandle, *carolina* and *triunguis* in Georgia and South Carolina, and *major* and *triunguis* in Mississippi and southern Alabama, but a lack of admixture between the two populations of *major*. The authors made no taxonomic recommendations, but did recommend the recognition of the two populations of *major* as Evolutionarily Significant Units (ESUs) or Management Units (MUs). In addition, despite the admixture between *carolina–major* and *triunguis*, they argued that the genomic clines between these taxa were steep enough to support their recognition as separate species.

In a follow-up study employing ddRADseq analysis of nearly 15,000 SNPs, Martin et al. (2021) generated phylogenetic trees by three methods for all taxa of *Terrapene* except *klauberi*. They also employed species delimitation and machine learning protocols to further examine possible species limits in the genus. Sampling levels varied, but notably were either a single or at most a few individuals for *nelsoni, bauri, yucatana, mexicana*, and *coahuila*, often with large sampling gaps. A time-calibrated tree (IQ-TREE) recovered the strongest statistical support for clades containing *T. ornata* (with variable support for reciprocally monophyletic subspecies *T. o. ornata* and *T. o. luteola*), *T. nelsoni, T. bauri*, and a large clade with all remaining taxa. Their SVDquartets species tree resolved *T. ornata* sister to *nelsoni*, and that clade was sister to the remaining taxa, which comprised a monophyletic group with limited statistical support for most contained subclades. Their PoMo tree was more highly resolved, and returned *T. ornata* as sister to *nelsoni*, and that clade as sister to the remaining taxa. Within that larger group, *mexicana* + *yucatana* were recovered as a clade sister to the rest, followed by *triunguis* as sister to the remaining taxa; in addition, *bauri* was resolved as sister to *carolina*. In all of these analyses, *coahuila* was resolved as sister to or nested within the clade of the western (Mississippi and southern Alabama) population of *major*.

The species delimitation analyses of Martin et al. (2021) returned a variety of results, depending on the method and data sets used. The consistently recovered species were *ornata* (but not the subspecies within it), *bauri, triunguis, carolina* and *major*. Based on these results, the authors concluded that recognition of *T. ornata* as a full species was strongly supported, although the evidence for the recognition of *luteola* as a subspecies was weak (see also TTWG Annotation 14:27). They also supported the recognition of *T. nelsoni* as a full species. The most consistent divergence among the remaining samples was between the *mexicana–yucatana–triunguis* and *carolina–bauri–major–coahuila* clades.

Given these results and the morphological distinctions previously noted by Minx (1996), the authors argued for species recognition for *T. mexicana* (including *triunguis* and *yucatana* as subspecies), as they did in 2013 (see TTWG Annotation 17:37). The authors also noted the enigmatic position of *T. coahuila* as a full species deep within the carolina clade, most closely related to the western population of *major*, but did not suggest taxonomic revision. Finally, because the boundaries of, and relationships among *carolina, bauri*, and *major* were inconsistently resolved, the authors recommended they be retained as subspecies of *T. carolina*.

Although the work of Martin et al. is a major step forward, there is still very considerable uncertainty about the lineages within *Terrapene*, their interrelationships, and the resolution of a consistent, lasting taxonomy. *Terrapene ornata* and *T. nelsoni* are almost universally well supported, and we agree that they should be considered full species. In addition, barring any new evidence, we retain within *nelsoni* its two contained subspecies, *nelsoni* and *klauberi*, but place *luteola* in the synonymy of *ornata* rather than retain it as a separate subspecies.

In view of the marked discrepancies among the various trees and delimitation models, we consider four possibilities for the remaining taxa *carolina, bauri, major, triunguis, mexicana*, and *yucatana*: 1) that all should continue to be recognized as subspecies of *carolina*, 2) that all should be recognized as separate species, 3) that they should be recognized as two species (*carolina* and *mexicana*) with three subspecies each, or 4) that *triunguis, mexicana*, and *yucatana* should be considered as separate species (especially in view of their widely allopatric distributions), and that *carolina* should include either both subspecies *major* and *bauri*, or possibly only *major*, with *bauri* possibly recognized as a separate species. We anticipate more genomic work, and especially more detailed field sampling, to be necessary to further clarify these complex relationships.

Despite these uncertainties and multiple possibilities, and in light of the results of these most recent genetic analyses by Martin et al. (2020, 2021) and the morphologic data provided by Minx (1996), most of us are reasonably confident in 1) recognizing *T. nelsoni, T. ornata, T. carolina, T. mexicana, T. yucatana*, and *T. coahuila* as separate species, 2) sinking *luteola* as a subspecies of *T. ornata*, with the recognition that more complete genetic sampling may revise this decision, and 3) retaining *major* and (with less certainty) *bauri* as subspecies of *T. carolina*. As for *triunguis*, which Martin and colleagues view as a subspecies of *T. mexicana*, we agree that it resolves as a separate lineage in most analyses, but do not agree that there is strong enough support for its phylogenetic position to place it unambiguously within, or sister to, *mexicana*. Combined with its unique color pattern and restricted, primarily first and second generation-restricted hybridization (Martin et al. 2020), and in view of its genetic distinctiveness, we tentatively recognize the Three-toed Box Turtle as a separate species, *T. triunguis*, rather than as a subspecies of either *carolina* or *mexicana*.

65. ***Terrapene carolina carolina***: Linnaeus (1758) cited his description of *Testudo carolina* as being sourced only from Edwards (1751:pl.205). He did not cite any of his own previous publications on turtle specimens that he had examined (Linnaeus 1749a, 1749b, 1754), as he did for three other species he described (*Testudo mydas, Testudo lutaria,* and *Testudo geometrica*), nor any museum specimens, as he did later (Linnaeus 1766) for *Testudo denticulata* (Museum De Geer), when he also cited his own previous work (Linnaeus 1764) as the source for *Testudo serpentina*. It therefore appears that he did not examine any actual specimens of *T. carolina* in his or others' collections, nor have any been identified or listed since (Linné and Thunberg 1780; Thunberg 1828; Lönnberg 1896; Andersson 1900; Holm 1957; Ernst and McBreen 1991; Dodd 2001; Wallin 2001). As such, the specimen figured in Edwards (1751:pl.205) should be recognized as the holotype of *Testudo carolina* Linnaeus 1758, and we formally recognize it as such. This is also consistent with and similarly reasoned as for the other plate by Edwards (1751:pl.204), where the specimen figured there was recognized by Bour (1987a) as the holotype for *Testudo graeca* Linnaeus 1758, a species also cited as being sourced only from Edwards (1751:pl.204).

66. ***Testudo carinata***: There has been considerable long-standing confusion surrounding the identity of *Testudo carinata* Linnaeus 1758, which was not described as being based on any known specimens or previously cited references. Its brief original diagnosis (*Testudo pedibus digitatis, testa gibbosa, scutellis dorsalibus quatuor anterioribus carinatis, sterna integro* [Tortoise with digitated feet, gibbose shell, four anterior dorsal scutes carinated, plastron entire]) did not change in subsequent publications by Linnaeus (1766) or Gmelin (1789), and Linné and Thunberg (1780) did not list the species as being present in the Linnaean collection in Uppsala (UUZM). However, Lacepède (1788:164) described a ca. 15 cm specimen in the collection of Lamarck in Paris that he suggested was possibly the same species as *T. carinata* Linnaeus 1758, calling it La Bombée, a reference to its high-domed shell (shell depth measured ca. 43% of its length). Subsequently, Shaw (1802:35) described a smaller, ca. 7.6 cm specimen, in the Leverian Museum in London as also questionably representing *T. carinata*, based on its moderately convex shell and prominent yellow vertebral carina. Both of these specimens were probably *Terrapene* spp. (in which shell depth typically measures ca. 39–50% of shell length) and Merrem (1820:28) synonymized *T. carinata* Linnaeus 1758 and the Lacepède and Shaw descriptions under *Terrapene clausa* (= *Terrapene carolina*). Subsequently, Gray (1831d:18), who may have seen the actual Lacepède and Shaw specimens, synonymized *T. carinata* Linnaeus 1758 under *Cistudo carolina = Terrapene carolina carolina* (Linnaeus 1758), where it has stayed ever since, although without clarity, in essence a *nomen dubium*.

However, Holm (1957) and Wallin (2001) noted that a Linnaean-era specimen in the UUZM collection (from Museum Gustavi Adolphi, MGA) labeled *T. carinata* by Thunberg (1810, 1828) and possibly representing the type specimen of *Testudo carinata* Linnaeus 1758, was not a *Terrapene carolina*, but a *Nicoria spengleri* (= *Geoemyda spengleri*), potentially threatening the nomenclatural priority of *Testudo spengleri* Gmelin 1789. This specimen (UUZM 277, formerly MGA 46), labeled by Thunberg, is a typical *G. spengleri* with a relatively flat (depth ca. 35% of length) markedly tricarinate shell with a prominent plastral anal notch, clearly not conforming to the initial diagnosis of *T. carinata* Linnaeus 1758. The specimen was accessioned into the Uppsala collection by Thunberg (1810) at the same time as the type of *Testudo tricarinata* Retzius *in* Schoepff 1792 (= *Kinosternon scorpioides*), and possibly identified initially by Thunberg as a *Testudo tricarinata* Bory de

Saint-Vincent 1804 (a junior synonym of *Testudo spengleri*), but then replacing the specific epithet *tricarinata* with *carinata* in order to avoid confusion with the Retzius specimen with the same name. In conclusion, *Testudo carinata* Thunberg 1810 is a *nomen nudum* and = *Geoemyda spengleri*, *Testudo carinata* Linnaeus 1758 is a *nomen dubium* and most likely = *Terrapene carolina carolina*. The specimen UUZM 277 (MGA 46) has no status as a type specimen of *T. carinata* Linnaeus, and the nomenclatural priority of *Geoemyda spengleri* is not affected.

67. ***Batagur baska*** **and** ***B. kachuga***: Vyas (2017) reported on a specimen of "*Batagur baska*" recently collected from Rudramata Dam, Kutch, Gujarat, western India, but the photo of the large female specimen is that of a *Batagur kachuga* (P. Praschag, S. Singh, and P.P. van Dijk, pers. comm.), and most likely represents a released trade specimen. However, previous records of *B. baska* from the nearby Indus River drainage of Pakistan are known and are reviewed by Vyas (2017). Murray (1884a) reported *B. baska* to occur in the Indus River, Sindh, Pakistan, and a specimen in the Vienna museum (NHMW 1841) labeled as having been collected in the 1850s in the Indus River Delta of Sindh was genotyped by Praschag et al. (2008) and shown to be *B. baska*. In addition, archeological specimens of *B. baska* have been described from Mohenjo-daro, Indus River, Pakistan (Seymour Sewell and Guha 1931), as well as from Sarnath, Ganges River, Uttar Pradesh, India (Nath 1959), both sites far inland from the typical coastal habitat of the species and are either representative of previous trade in the species or misidentified specimens. It remains possible, however, that a disjunct population of *B. baska* once existed in the Indus River Delta and the coastal mangrove wetlands extending east to the Gulf of Kutch in westernmost Gujarat, India.

68. ***Cuora galbinifrons*** **complex**: Liu et al. (2019) examined the concordance of morphometric and molecular data for specimens in the *C. galbinifrons* / *bourreti* / *picturata* complex from a turtle farm (i.e., without locality data). Although their morphometric data showed some differences among the three taxa, they failed to standardize their data for body size in their multivariate analysis. Hence, those results likely reflect differences in body size rather than relative morphometrics. Their phylogenetic analysis of sequence data from a single nuclear gene (Rag1) was poorly resolved, and employed a distantly related outgroup rather than a congener. Their phylogenetic analysis of the entire mitogenome for ten *Cuora* species employed only a distantly related trionychid outgroup, but nevertheless fully resolved all ten taxa, with *picturata* sister to the *bourreti-galbinfrons* clade. Finally, they repeated the latter analysis focusing only on partial COI mitochondrial DNA gene sequences. That analysis also employed a distant outgroup, and the resulting tree was poorly resolved, with no evidence of repicrocal monophyly for any of the three taxa. However, despite these inconclusive results, the authors argued that *picturata* should be recognized as a full species but that *bourreti* should be relegated to a subspecies of *galbinifrons*. Pending more complete and appropriate morphometric and molecular analyses, we continue to recognize the three taxa as full species.

69. ***Mauremys annamensis*** **and** ***M. mutica***: In a follow-up to their earlier preliminary study (Fong et al. 2007) that had suggested that *M. mutica* was paraphyletic to *M. annamensis*, Fong et al. (2019) examined variation in the ND4 mitochondrial gene and the R35 nuclear gene from a wider sampling of wild-caught, captive, and museum specimens of *M. annamensis* and *M. mutica* across Vietnam, China, and Taiwan (see also Zhou et al. 2015 and Zhao et al. 2016a,b; TTWG Annotation 17:49).

The mitochondrial phylogeny identified two well-supported clades: a "true" *mutica* clade including topotypic specimens from eastern China and samples from Taiwan; and a clade including *mutica* from Hainan Island and Vietnam and *annamensis* from Vietnam. The latter clade included three subclades: one for *mutica* specimens from Hainan, a second including *annamensis* from turtle farms and seizures in Vietnam, and a third including known-locality *annamensis*, GenBank sequences from controversial "*M. guangxiensis*" specimens, and Vietnamese *mutica* specimens.

The nuclear phylogeny also identified two major clades, one including Hainan *mutica* specimens and the other including a monophyletic *annamensis* clade nested within the Chinese and Taiwanese *mutica* specimens. Both analyses were hampered by the inclusion of samples of questionable provenance and original identification, but it is clear that there are at least two distinct clades within *mutica*: eastern China and Taiwan (nominotypic material) and Hainan and Vietnam (for which the name *schmackeri* Boettger 1894 may be applicable). However, the relationship between *mutica* and *annamensis* remains unclear based on the discordance between the mitochondrial and nuclear DNA trees. Broader nuclear sampling, including material from southern China and the Ryukyu Islands (*M. mutica kami*) will be necessary to resolve the taxonomic relationships among these various taxa; in the meantime we continue to recognize *mutica* and *annamensis* as full species.

70. ***Mauremys japonica***: Suzuki and Hikida (2011) analyzed the phylogeography of this endemic Japanese species using mtDNA sequences (cytochrome b gene and control region). They analyzed 238 wild-caught specimens from 43 localities and determined that there were two major haplotype groups: a western one from Kyushu and western Honshu, and an eastern one from Shikoku and eastern Honshu, representing the result of previous isolation of the two lineages in separate glacial refugia, with a secondary postglacial contact zone in Chugoku District of western Honshu. They made no taxonomic recommendations.

71. ***Mauremys reevesii***: Bu et al. (2019) examined variation in 12 microsatellite markers for five captive populations of *M. reevesii* in China, and found two genetic clusters: one from Anhui Province in the north and the other from southern China and Hainan Island. Since the samples represented long-term captive-breeding populations, and were not necessarily representative of local, natural populations, the authors made no taxonomic judgments. However, given the evidence of significant geographic variation in *M. reevesii* (see Iverson et al. 1989 and TTWG Annotation 17:52), range-wide molecular studies of known-locality specimens are sorely needed.

72. ***Melanochelys trijuga***: Schweigger (1812) described *Emys trijuga* based on a specimen collected by Leschenault [Lechenault] on the island of Java, Indonesia, far from the native range of *Melanochelys trijuga* in India. The holotype specimen was deposited in MNHN, but has been lost (Bour and Schmidtler 2014). Fortunately, Nikolaus Michael Oppel [1782–1820], who also worked for a while at MNHN (Oppel 1811) and was friendly with Schweigger, painted many MNHN turtle specimens between 1807 and 1810, including the type of *Emys trijuga* Schweigger, and these paintings have been made accessible by Bour and Schmidtler (2014). The holotype of *Emys trijuga* (shown in their Fig. 9 and Oppel's Plates 15–16), labeled by Oppel as "*Testudo trijuga* Schweiger," appears to be a Southeast Asian *Malayemys subtrijuga* (or *M. macrocephala*), instead of *trijuga,* which has been recognized as an Indian species since Duméril and Bibron (1835) and as *Melanochelys trijuga* since Gray (1869a). Bour and Schmidtler (2014) also pointed out that original illustrations of the type specimens of both *Emys herrmanni* Schweigger 1812 and *Emys belangeri* Lesson 1831b represent specimens of what is now considered to be the polytypic species *Melanochelys trijuga*, but that recognizing either of these names, or recognizing *Emys trijuga* Schweigger 1812 as having

nomenclatural priority over *Emys subtrijuga* Temminck and Schlegel 1845, would create widespread nomenclatural chaos, affecting the names of several taxa and genera. Instead, they recommended maintenance of nomenclatural stability through the designation of a neotype for *Emys trijuga* Schweigger 1812. Reflecting these findings, we have now moved *Emys herrmanni* Schweigger 1812 from the synonymy of *Malayemys subtrijuga* to the synonymy of *Melanochely trijuga,* but we leave *Emys trijuga* as the type species for *Melanochelys,* pending a neotype designation.

73. ***Sacalia quadriocellata***: Lin et al. (2018a) recognized the population of this species from Hainan as specifically distinct from mainland Guangdong populations, based on differences in coloration pattern and previously-reported mtDNA variation, and resurrected the name *Clemmys quadriocellata insulensis* Adler 1962 for it, elevating it to species status as *Sacalia insulensis*. This had previously been preliminarily recommended by Shi et al. (2008) based on genetics (see TTWG Annotation 08:24). Subsequently, Lin et al. (2020) compared the nearly complete mitogenome of a single specimen each of *S. quadriocellata*, *S. bealei*, and *S. insulensis* from Hainan with three *Sacalia* sequences from GenBank. They found that *S. bealei* was 7.8% divergent from the other samples, and that their single Hainan sample differed from mainland *S. quadriocellata* by 2.8%. However, in a range-wide phylogeographic study of mtDNA variation in *S. quadriocellata*, Le et al. (2020) identified three distinct geographic clades, one from southern Vietnam and central Laos, a second from northern Vietnam and northeastern Laos, and a third from southern Guangdong and Hainan, but did not consider any of them distinctive enough to warrant taxonomic recognition and specifically did not recognize *S. insulensis* as separate. As such, we continue to retain *S. insulensis* in the synonymy of *S. quadriocellata*.

The type locality of *Sacalia quadriocellata* Siebenrock 1903, originally designated only as "Annam," was subsequently restricted by Siebenrock (1909) to "Annam, Phuc Son" [= Phuoc Son, Quang Nam, Vietnam], which would suggest that the name *quadriocellata* should, if warranted, be applied to the southern Vietnam clade. However, the type (NMW 23393) should be examined genetically to confirm or reject the type locality restriction. That determination is essential if future genetic sampling confirms the existence of three reciprocally monophyletic clades, and argues that those three clades merit taxonomic recognition.

74. ***Rhinoclemmys punctularia punctularia***: Siciliano et al. (2014) described finding two specimens of *R. punctularia* on the coastal plain of Rio de Janeiro and suggested that they might represent a native disjunct population or possibly introduced animals from the Amazon basin, the closest known population at that time occurring in Amazonian Maranhão (Pereira et al. 2013). Since then, a few more specimens of *R. punctularia* were discovered in coastal Bahia (do Valle et al. 2016), and more recently, a significant population with several animals was found on the coastal plain of Espirito Santo (Oliveira et al. 2019), suggesting that the taxon may indeed be native to the Atlantic Forest coastal plain, although in scattered disjunct locations. However, we continue to consider the two records from Rio de Janeiro to probably represent introduced specimens. Oliveira et al. (2019) postulated that their population in Espirito Santo represented an undescribed species of *Rhinoclemmys*, but a published description has not yet appeared.

75. ***Manouria emys***: Based on two mitochondrial markers (COI and cytochrome b), Kundu et al. (2018b) found shallow support for the genetic distinction between the two recognized subspecies of *M. emys*. They also examined pectoral scute morphology in a small sample of tortoises from northeastern India, Myanmar, and Bangladesh, as well as captive trade specimens in that region. They found widely separated pectoral scutes in *M. e. emys* and both broad and very narrow contact of the pectoral scutes with the plastral midline in *M. e. phayrei*, and claimed to have found all three morphotypes in northeastern India within the range of *M. e. phayrei*. Further sampling of known-locality specimens will be necessary to clarify this discordance.

76. ***Gopherus***: Román-Palacios and Wiens (2018) generated a time-calibrated phylogeny for tortoises (Testudinidae) based on four mitochondrial and one nuclear gene in a study of evolutionary diversification rates. Their chronogram found that 10 of 11 tortoise clades that diverged in the Oligocene (older than ca. 23 mya) are currently recognized as including two or three separate genera. The one clade with only one genus, *Gopherus*, contains two clades that are apparently older, having diverged at ca. 26 mya by their calculation, but are not currently recognized as separate genera. Their analysis supports the previous arguments by Bramble (1982), Bramble and Hutchison (2014), and Franz (2014) (see TTWG Annotation 17:67) that these two morphologically and genetically distinct clades should perhaps be recognized as the genera *Gopherus* (for *polyphemus* and *flavomarginatus*) and *Xerobates* (for *agassizii, morafkai, evgoodei*, and *berlandieri*). However, the broader time-calibrated phylogenetic study by Thomson et al. (2021) found that the divergence between the two clades of *Gopherus* was younger than the divergence between the two congeneric species of *Manouria*, in contrast to Román-Palacios and Wiens (2018) who dated the divergence of the *Manouria* species at about 20 mya. Based on the morphological evidence alone, there is a good argument for the recognition of these two deep and old clades of Gopherine tortoises, and in conjunction with their deep genetic divergence, we suggest that they should perhaps be considered as subgenera, as previously concluded and recommended by Gerlach (2001).

77. ***Gopherus berlandieri***: Savage (2021) provided formal justification of the *nomen oblitum* status of the two names *Testudo tuberculata* Berlandier 1850 and *Testudo bicolor* Berlandier 1850, with full documentation of the *nomen protectum* status for *Xerobates berlandieri* Agassiz 1857, as per ICZN Article 23.9. The same conclusions had previously been reached by us (TTWG Annotation 14:34) and Bour (2017), with *nomen oblitum* status suggested for both names, but without full and formal ICZN-recommended justification of *nomen protectum* for *X. berlandieri*.

78. ***Gopherus polyphemus***: Gaillard et al. (2017) analyzed range-wide phylogeography of this species based on 20 microsatellite loci using 933 individuals from 47 sampling sites. They defined five separate well-delineated Management Units (Western, Central, West Georgia, East Georgia, and Florida), with major river systems and physiographic provinces forming the boundaries between the genetically defined regions, but did not recommend any taxonomic changes.

79. ***Astrochelys yniphora***: Mandimbihasina et al. (2020) examined variation in mitochondrial sequence data and nuclear microsatellite data across living and extirpated populations of *A. yniphora,* arguably the most critically endangered tortoise species in the world, now nearly extinct in the wild due to illegal poaching. The mitochondrial data were not well resolved geographically, whereas the microsatellite data identified four geographically discrete genetic clusters. No taxonomic changes were recommended, but three of the genetic clusters were identified as separate Management Units. The authors advised that these genetic clusters be treated as conservation units for both wild and captive management to maintain the breadth of genetic diversity present in the wild.

80. ***Chelonoidis carbonarius***: The alleged fossil taxon *Geochelone atlantica* † was described by López-Jurado et al. (1998) based on three bone specimens embedded in a chalky tufa-like

matrix thought to represent an extinct Quaternary tortoise endemic to Sal Island, Cape Verde (see also TEWG 2015). However, Kehlmaier et al. (2021b) studied the type material using ancient DNA approaches and AMS radiocarbon dating and unexpectedly found that the type material actually matches extant specimens from Paraguay representing the disjunct southern population of *Chelonoidis carbonarius,* and that the single tortoise to which the type specimens belong was still alive from at least 1962 to 1974. They could not disentangle the history of the specimens that led to this confusion, but options are that the type material may have been misidentified as to its origin, or that the tufa-like matrix may have been fabricated.

81. ***Chelonoidis chilensis***: Sánchez et al. (2017) presented a phylogenetic and divergence time analysis of *C. chilensis* using mitochondrial cytochrome b sequence data from 111 individuals sampled across the known geographic range of the species. The resulting trees showed similar topologies and support values, with *C. chilensis* always recovered as a monophyletic group sister to *C. niger* and composed of two major reciprocally monophyletic and largely allopatric clades corresponding closely to the Dry Chaco and Monte ecoregions, respectively. Although these clades were well defined, they were less deeply divergent than intraspecific clades in other *Chelonoidis* species, and no recommendations were made for nomenclatural novelties nor a return to the older taxonomy of two (or three) purported Chaco taxa as species or subspecies: *C. chilensis* and *C. petersi* (and *C. donosobarrosi*), agreeing with the previous recommendations by Fritz et al. (2012a) and Sánchez et al. (2015) (see TTWG Annotations 12:30 and 17:59).

82. ***Chelonoidis niger***: Miller et al. (2018) analyzed single nucleotide polymorphisms (SNPs) for 117 individuals representing all 11 extant taxa of Galapagos giant tortoises (*Chelonoidis niger*). They detected genetic lineages concordant with these extant taxa, but noted significant additional structure within the polymorphic taxon *becki* from Wolf Volcano on Isabela Island, suggestive of successive independent colonizations from Santiago Island. Their SNP-based estimates of diversity and differentiation were significantly correlated with those derived from previously published nuclear microsatellite loci and mitochondrial DNA sequences, but provided higher resolution to detect individuals with admixed ancestry than previously used genetic markers.

Based on four mitochondrial and one nuclear gene, Román-Palacios and Wiens (2018) generated a time-calibrated phylogeny of all tortoises (Testudinidae), including the extinct genus *Cylindraspis*. Their analysis indicated that no tortoise species diverged less than 2 mya except for 10 of the 11 sampled taxa from the Galapagos Islands. They discussed this recent rapid diversification, but made no comment on the taxonomic status of these populations.

Poulakakis et al. (2020) analyzed mitochondrial genomes of all 11 extant and 2 recently extinct taxa of Galápagos tortoises to infer that dispersal of the ancestral form of *Chelonoidis* occurred from the two oldest Galápagos islands (San Cristóbal and Española) to Santa Cruz, Santiago, and Pinta, and was followed by colonization events from several sources within the archipelago. Using a molecular clock, they inferred that divergence within the Galápagos archipelago commenced ca. 1.5 mya.

Kehlmaier et al. (2021a) conducted an independent fossil-calibrated molecular clock analysis comparing mitochondrial genomes of all species groups of extant tortoises, including the same 13 Galápagos taxa and the recently extinct five *Cylindraspis* species from the Mascarenes, and 11 subfossil Holocene specimens of extinct *Chelonoidis* (from 700–2700 ybp) from the Bahamas archipelago. They observed that the inter-island differentiation within the Bahamas and within the Galápagos were much younger (ca. 1.5 mya and 2.0 mya, respectively) than the genetic differentiation between any other congeneric pair of tortoise species (ca. 4.0–26.8 mya). Even the divergences between two samples of *Chelonoidis carbonarius* (ca. 3.7 mya) exceeded those between the respective tortoises from the Bahamas and the Galápagos. They concluded that each archipelago harbored only one species of tortoise, and that the taxa from the Galápagos, currently regarded as distinct species, should be returned to subspecies status, as the extinct Bahamas taxa were already considered (Franz et al. 2020).

Thomson et al. (2021), in their comprehensive global turtle phylogeny using 15 nuclear loci (and no mitochondrial genomes, so completely independent from Kehlmaier et al.), also showed very shallow differentiation for five *Chelonoidis* taxa from the Galápagos, with less divergence than between any other congeneric tortoise species, except for *Kinixys belliana* and *K. spekii* (however, the latter case conflicted with earlier reported deeper genetic differentiation patterns for *Kinixys* [Kindler et al. 2012] and may have resulted from sample misidentification [H.B. Shaffer, pers. comm.]).

In view of the strong corroborating evidence from these recent comprehensive studies, as well as similar findings and recommendations from earlier work by Loire et al. (2013), Fontaine (2017), and Loire and Galtier (2017), we now agree that the *Chelonoidis* taxa from the Galápagos are probably more conservatively and appropriately considered subspecies of a single species, *C. niger,* rather than separate species as treated by Miller et al. (2018), Poulakakis et al. (2020), Caccone (2020), Gibbs et al. (2020), and others, including ourselves in most of our previous checklists (see TTWG Annotations 07:58, 09:32, 12:31, and 17:60). As a result, we have returned all these taxa to subspecific status pending further analysis. We note that full genomic analysis of all Galápagos taxa, including type specimens, may help further clarify their relationships—Kehlmaier et al. (2021a) highlighted that the mitochondrial genomes of 13 taxa from the Galápagos (data from Kehlmaier et al. 2017 and Poulakakis et al. 2020) corresponded to only 6–7 clades, whereas 15 distinct taxa (one unnamed) are currently recognized (Frazier 2020; Caccone 2020).

83. ***Chelonoidis niger***: Sizes provided for these taxa are maximum straightline carapace length (SCL) and maximum curved carapace length (CCL) of the largest known specimens in the Galápagos, as opposed to specimens in captivity elsewhere. These records were sourced from published field studies and the extensive unpublished database of over 35,000 measurements of tortoises by the Galapagos Conservancy, the Galapagos National Park Directorate, and the Giant Tortoise Restoration Initiative, generously shared by James P. Gibbs. In addition, summarized data from this database found in Chiari (2020), although stating that "maximum CCL" measurements were documented in Table 8.1, were actually 95th percentile sizes, while Fig. 8.6(A) provided a graphic indication of maximum recorded sizes. We additionally provide these 95th percentile sizes here.

84. ***Chelonoidis niger niger***: In our previous checklist (see TTWG Annotation 17:62) we commented on the just-published article by Olson and Humphrey (2017) that discussed the probable island origin of the lost type specimen of *Testudo elephantopus* Harlan 1826 as likely being Floreana (Charles Island). We do not disagree with this assessment, and have therefore now tentatively moved this taxon from its previous placement under *Chelonoidis,* sp. indet., into the synonymy of *Chelonoidis niger niger* (Quoy and Gaimard 1824b). We also note that we overlooked the clarification by Olson and Humphrey that Harlan's work was actually published in 1826 (November), not 1827; we therefore correct the date accordingly. Although we place *Testudo elephantopus* in the

synonymy of *C. n. niger*, we retain it as a *nomen dubium*, as its origin is not totally certain, and the holotype is lost and not available for genetic analysis. In addition, as we noted previously, and pending genetic analysis of the holotype of *Testudo nigra* Quoy and Gaimard 1824b, we do not agree with Olson and Humphrey that the name *elephantopus* should replace *niger* as the currently accepted name for the extinct Floreana Giant Tortoise.

85. ***Chelonoidis niger phantasticus***: This spectacular giant tortoise, known from only a single old male specimen collected on Fernandina in 1906, had previously generally been assumed to be extinct, but was recently assessed by the TFTSG and IUCN as Critically Endangered (Possibly Extinct) (see TTWG Annotation 17:63) based on scattered signs of its possible persistent survival (Hendrickson 1965; Rhodin et al. 2017 Red List Assessment; Kiester 2019). An expedition in early 2019 to Fernandina by the Galapagos Giant Tortoise Restoration Initiative (Tapia 2019; Tapia et al. 2020) and Animal Planet host Forrest Galante (Liu 2019) led to the exciting discovery and collection of a live female tortoise from a relatively inaccessible area on the western side of Fernandina. Genomic analysis by Adalgisa Caccone at Yale University confirmed its identity in May 2021 as *C. n. phantasticus* (A. Caccone, pers. comm., unpubl. data).

86. ***Chelonoidis niger porteri***: We previously listed *Testudo planiceps* Gray 1854b under *Chelonoidis*, sp. indet., based on Pritchard (1996), but based on examination of its skull by Günther (1875a) it would appear to be consistent with his concept of *Testudo nigrita* Duméril and Bibron 1835, a *nomen dubium* subjective senior synonym of *Testudo porteri* Rothschild 1903. We therefore tentatively place *T. planiceps* in the synonymy of *Chelonoidis niger porteri*, pending genetic analysis of the types of *T. planiceps* and *T. nigrita*.

87. ***Chelonoidis niger* subsp. [?]**: Poulakakis et al. (2012) analyzed mitochondrial DNA from four specimens of *Chelonoidis* tortoise bones collected on Santa Fé (Barrington Island) by Rollo Beck in 1906, who found only appendicular bones and some subfossil eggs there, but no shells or skulls (Van Denburgh 1914). Poulakakis et al. (2012) showed that the mtDNA of these Santa Fé specimens was distinct from and sister to the clade of *abingdonii* (Pinta), *hoodensis* (Española), *chathamensis* (San Cristóbal), and *donfaustoi* (eastern Santa Cruz) (the latter still unnamed at that time). Several authors since then have referred to these bones from Santa Fé as an undescribed extinct species (Poulakakis et al. 2015; Frazier 2020; Caccone 2020).

However, the original provenance of the bones found on Santa Fé had previously been questioned by Pritchard (1996:65), who suggested that since only leg and pelvic bones were found, the specimens may have been brought in as provisions from a ship anchored in the island's easily accessible harbor and that the animals had perhaps been obtained elsewhere and butchered before being brought onto the island. On the other hand, Townsend (1925) recorded that 22 tortoises were removed from Santa Fé in 1839 and one in 1853, and Van Denburgh (1914) noted anecdotal reports of tortoises still present there in about 1876 and 1890, but none thereafter.

Two specimens of *chathamensis* were used by Poulakakis et al. (2012) as comparisons to the four Santa Fé specimens. One was the female paratype of *chathamensis* (CAS 8133) collected by Beck in 1906 from the now-extinct population from central San Cristóbal (see Pritchard 1996:59, map 5), and the second was a recent specimen of *chathamensis* from the extant population at Media Luna in northeastern San Cristóbal. There also existed a now-extinct population of tortoises in southwestern San Cristóbal (Pritchard 1996; Tapia et al. 2020). No specimens from this extinct southwestern population have been genotyped, but they could hypothetically have been distinct from central and northeastern *chathamensis* and possibly the same haplotype as the Santa Fé animals and could therefore conceivably have been the source of the limb bones brought to Santa Fé and consumed there. We list this Santa Fé taxon here as distinct, but consider it an unnamed extinct subspecies of *C. niger*, rather than a species.

88. ***Chersina angulata***: Spitzweg et al. (2020) sampled the mitochondrial cytochrome b gene and 14 microsatellite loci across the range of *C. angulata* in southern Africa. Both data sets suggested the existence of two lineages (a western clade, including southern Namibia and western South Africa; and an eastern clade, in southern South Africa) occupying different climatic niches. They estimated that these lineages diverged in the Pliocene (about 3.8 mya), but hybridize in areas of sympatry, suggesting conspecificity. The authors concluded that the two clades each warrant subspecific recognition; however, they cannot yet be named until type material of the synonymized taxa can be genotyped and their origins clarified. Their microsatellite analysis also identified two genetic sub-clusters (western and southwestern) within the western subspecies, which they recognized as important Management Units.

89. ***Chersobius* and *Homopus***: As previously noted (TTWG Annotation 17:64), Hofmeyr et al. (2017) resolved a paraphyletic *Homopus*, and resurrected the genus *Chersobius* for the five-toed species (*signatus*, *boulengeri*, and *solus*) formerly in the genus *Homopus*, and restricted the genus *Homopus* to the four-toed species (*areolatus* and *femoralis*). We tentatively accepted those changes in our previous checklist (TTWG 2017). Hofmeyr and Branch (2018) have now corroborated those genetic findings with a morphologic analysis that lends further support for this split, and we therefore now fully accept this taxonomy.

90. ***Cylindraspis***: Kehlmaier et al. (2019b) analyzed mitogenomics of all five extinct giant tortoise species of *Cylindraspis* from the Mascarenes in the western Indian Ocean. They found that *Cylindraspis* was monophyletic and sister to a diverse and deeply structured clade containing genera from sub-Saharan Africa (*Centrochelys, Chersina, Chersobius, Homopus, Kinixys, Psammobates*, and *Stigmochelys*), India (*Geochelone*), Madagascar (*Astrochelys* and *Pyxis*), Aldabra (*Aldabrachelys*), and South America plus the Bahamas and Galápagos (*Chelonoidis*), and these two clades were sister to the clade containing *Malacochersus, Indotestudo*, and *Testudo*. Within *Cylindraspis*, *C. triserrata* from Mauritius was deeply divergent from the remaining four species, resolved as two clades. *Cylindraspis inepta*, also from Mauritius, was sister to *C. indica* from Réunion, and the two species from Rodrigues, *C. vosmaeri* and *C. peltastes*, were sister taxa with a genetic divergence similar to that between *C. inepta* and *C. indica*. Their data documented that the evolutionary divergence within *Cylindraspis* is much older and deeper than the radiations within other extant and extinct giant tortoise lineages from either Aldabra and Madagascar (*Aldabrachelys*), the Bahamas (*Chelonoidis*), or the Galápagos archipelago (also *Chelonoidis*). The extinction of *Cylindraspis* not only represents the loss of one of the five major radiations of extant Testudininae but also that of a truly ancient vertebrate lineage.

91. ***Cylindraspis vosmaeri***: The trinomen *Testudo indica vosmaeri* Schoepff 1795 (or as "1792" or "1793") is occasionally cited as the first use of the specific epithet *vosmaeri* (e.g., Hubrecht 1881, Vaillant 1893). However, Schoepff (1795:103) used "Testudo indica. *Vosmaeri"* as the heading for a specimen of *Testudo indica* described by Vosmaer, just as he also used the heading "Testudo indica. *Perrault*" for a specimen of *Testudo indica* described by Perrault. As such, Schoepff's supposed trinomen has no ICZN Code-compliant standing as an available name, as pointed out by Hoogmoed et al. (2010). Suckow (1798) was the first to use the trinomen in a Code-compliant manner.

92. ***Geochelone elegans***: Vamberger et al. (2020b) sequenced three mitochondrial genes for *G. elegans*, representing each of the three primary disjunct distribution areas from Pakistan across India to Sri Lanka. They found little variation across their samples, with three weakly to moderately supported clades that did not correspond to the geographic distribution patterns. One clade contained samples from Pakistan, southeast mainland India, and western Sri Lanka. A second clade was identified from Gujarat in northwestern India, geographically close to the Pakistan samples. The third clade included only individuals from eastern Sri Lanka, not far from samples of the second clade. The authors speculated that these unclear geographic patterns, as compared to the rangewide patterns previously reported by Gaur et al. (2006), may reflect the long-term illegal commercial trade and resultant indiscriminate release of confiscated tortoises into non-native areas.

93. ***Homopus areolatus***: Hofmeyr et al. (2020) examined the mitochondrial ND4 gene and the nuclear prolactin gene from samples across the range of *H. areolatus*. Although the nuclear locus exhibited no evidence of geographic structure, the mitochondrial gene revealed two well-supported genetic clades strongly associated with ecological niche divergence, one in southwestern South Africa and the other across the more central and eastern parts of southern South Africa. They estimated their divergence as the late Pliocene (>2.5 mya). Because their study was based on only a single variable marker, they recommended no taxonomic changes, but suggested the recognition of the two clades as Management Units.

94. ***Psammobates tentorius***: Zhao et al. (2020a, 2020b, 2020c, 2020d, 2021) investigated the rangewide phylogeography of mitochondrial and nuclear DNA and microsatellites in the three currently recognized subspecies of the *P. tentorius* species complex: *tentorius*, *trimeni*, and *verroxii*. Zhao et al. (2020a) initially identified seven mtDNA clades and inferred five to seven putative species or operational taxonomic units (OTUs), rather than just the three recognized subspecies, though the single conservative nuclear gene generated incongruent results. Their ongoing analyses demonstrated *verroxii* as currently defined to be paraphyletic, with a distinctive northwest-southeast geographic divide separated by the lower Orange River, and that most mitochondrial clades appeared to be geographically and historically climatically delimited by distributional barriers (rivers and mountain ranges). However, microsatellite analyses revealed broad admixture between some of the geographically adjacent clades, not necessarily supportive of distinct species. They made no specific nomenclatural recommendations, but in their two most recent papers (Zhao et al. 2020d, 2021) they suggested that four taxa should be considered for recognition pending further morphological studies: *tentorius, trimeni, verroxii* (southeastern clade), and *verroxii* (northwestern clade).

The *P. tentorius* species complex has a confusing and prolific nomenclatural history, with no less than 26 different nominal taxa synonymized under the three currently recognized subspecies. Genetic analysis of DNA of the pertinent type specimens of many of these taxa will need to be accomplished to help elucidate what names may need to be applied to the various clades being identified.

Within the current concept of *P. t. verroxii*, with its 14 synonymized nominal taxa, we note that the clade southeast of the lower Orange River would apparently keep the name *verroxii*. However, its restricted type locality (north of Aliwal North, north of the origin of the upper Orange River and south of the Caledon River) is beyond the southeastern distributional limit of the clade as sampled and depicted by Zhao et al. (2020d).

For the paraphyletic *verroxii* clade north of the lower Orange River, the primary candidate taxon name would appear to be *Testudo oscarboettgeri* Lindholm 1929, a justified *nomen novum* replacement name for *Testudo boettgeri* Siebenrock 1904a (a junior primary homonym of *Testudo graeca boettgeri* Mojsisovics 1889) with its type specimen from Great Namaqualand, Namibia. In addition, both *Homopus bergeri* Lindholm 1906 and *Psammobates depressa* FitzSimons 1938 appear to belong to the northern *verroxii* clade.

95. ***Stigmochelys pardalis***: Spitzweg et al. (2019) and Dajčman et al. (2021) analyzed population genetic and phylogeographic variation in the southern portion of the range of Leopard Tortoises using microsatellite loci and mitochondrial DNA. They found two major genetic clusters, reflecting a north-south divergence: a southern cluster distributed in southern coastal South Africa, and a northern cluster in Namibia to Mozambique. While the southern cluster showed little variation, substructuring occurred in the north. The results of both studies were concordant, but Dajčman et al. (2021) had denser sampling in the north, resulting in the identification of one additional northern subcluster as compared to Spitzweg et al. (2019). According to Dajčman et al. (2021), the northern cluster consisted of four sub-clusters: 1) northwestern South Africa to Namibia; 2) north-central South Africa; 3) northeastern South Africa; and 4) far eastern South Africa and Mozambique, with considerable admixture among the sub-clusters. The two studies did not recommend any taxonomic changes, and Spitzweg et al. (2019) concluded that Leopard Tortoises occurring in the southern part of the Western Cape province of South Africa could either be native, or had expanded their range recently, or represented short-distance transplants (possible introductions). Dajčman et al. (2021) urged the recognition of the five genetic clusters as Management Units.

96. ***Testudo graeca***: Schweiger and Gemel (2020) documented and corrected the confusing history regarding the type locality of the subspecies *Testudo graeca graeca* Linnaeus 1758. The original description by Linnaeus was based on an illustration, Plate 204 in Edwards (1751), and the type locality given as "Africa." Edwards had indicated that he received the illustrated specimen from Thomas Rawlings of "Santa-Cruz in West Barbary," but Houttuyn (1764), erroneously cited as Leven (1764) by Bour (1987) and TTWG (2017), recorded the origin of Edwards' depicted animal as simply "Santa Cruz in Barbarie," dropping the "West" qualifier. Strauch (1862) then erroneously interpreted "Santa Cruz" as referring to the "alte spanische Festung bei Oran in der Algérie" (on the Mediterranean coast of Algeria in the region that was previously known as Barbary), and the type locality for *T. g. graeca* has been interpreted as such ever since. However, Schweiger and Gemel (2020) documented that Edwards (1747) had previously specifically noted that Thomas Rawlings lived in "Santa Cruz, in that Part of Barbary which lies without the Streights of Gibraltar, on the Atlantic Ocean," i.e., in coastal Morocco, not Algeria, and that the town of Santa Cruz had undergone several name changes over the years and is currently known as Agadir (30.4278° N, 9.5981° W). Since the vicinity of Agadir is also the type locality for the subspecies *T. g. soussensis* Pieh 2001, Schweiger and Gemel (2020) declared *soussensis* to be a junior subjective synonym of *graeca*.

The clarification of the actual type locality of *T. g. graeca* also meant that the subspecies in northeastern Morocco to central Algeria needed a new name. Schweiger and Gemel attributed the name *T. mauritanica* Duméril and Bibron 1835 to this population formerly regarded universally as *T. g. graeca*. Duméril and Bibron had originally designated the distribution (*patrie*) of *T. mauritanica* as extremely widespread: "Mauritanie..[&]..les côtes occidentales de la mer Caspienne..[&]..les environs d'Alger." Later, Mertens and Wermuth (1955) restricted the type locality to "Umgebung von Algier" [Algeria], possibly based on the statement by Duméril and

Bibron that among the specimens from which they had described their new species were many obtained from Parisian markets that had come from Algiers. However, as Mertens and Wermuth did not designate a lectotype among the many available syntypes (specimens and descriptions cited by Duméril and Bibron), their type locality designation was invalid (ICZN Art. 76.1). According to Schweiger and Gemel, no remaining syntypes of *T. mauritanica* are currently identifiable at MNHN, and they therefore designated MNHN 0.1937, labeled as coming from "Alger," as the neotype of *mauritanica*, agreeing with the previously restricted type locality of Algiers.

However, Schweiger and Gemel discounted the fact that Bour (1987) had previously validly designated Plate 204 in Edwards (1751), already the holotype of *T. graeca*, as also being the lectotype of *T. mauritanica*, as Duméril and Bibron (1835) had listed that plate in the synonymy of their new species, qualifying it as a syntype (ICZN Art. 72.4.1). Schweiger and Gemel also overlooked the fact that both Cochran (1961) and Reynolds et al. (2017) documented that a "cotype" (= syntype) of *T. mauritanica* was obtained by the USNM in 1881 from the Jardin des Plantes in Paris (an affiliate of MNHN). As such, USNM 10980 (formerly MNHN 22, an alcoholic adult male, CL 110 mm, from Algeria) is the only known remaining physical paralectotype of *T. mauritanica*. Since both a lectotype and paralectotype of *T. mauritanica* exist, the neotype designation by Schweiger and Gemel (2020) is superfluous and invalid, and *mauritanica* remains a junior objective synonym of *graeca*. Further, the type locality of *mauritanica* must agree with the origin of its lectotype (ICZN Art. 76.2), so it is hereby restricted to Agadir, Morocco.

Other possible names to consider for the subspecies in northeastern Morocco to central Algeria are *T. pusilla* Linnaeus 1758 and *T. whitei* Bennett *in* White 1836. *Testudo pusilla* has a confusing history, in that Linnaeus (1758) first listed its description as sourced only from Worm (1655), Grew (1681), and Ray (1693), but then later (Linnaeus 1766) also added Edwards (1751:pl.204) as a source for its description, removing that source from his prior description of *T. graeca* (Linnaeus 1758). Whether Linnaeus examined any specimens of *T. pusilla* is unknown, but Linné and Thunberg (1780) listed one specimen as present in the Linnaean collections, but it was never recorded again and is presumably lost. *Testudo pusilla* is appropriately listed as a junior synonym of *T. graeca,* and its type locality, previously restricted by Strauch (1862) to "Santa-Cruz (alte spanische Festung bei Oran in der Algérie)" is hereby corrected to Agadir, Morocco, as for *T. graeca*.

Testudo whitei also has an uncertain history, with an unknown provenance of the holotype obtained from the pet trade and kept for a long time in England (Bennett 1836; White 1836). Gray (1873j) designated its origin as "S. Europe," but Highfield and Martin (1989b) concluded that the holotype resembled animals from Algeria and restricted the type locality to "Algier and its environs, Algeria." As such, *T. g. whitei* becomes the new apparent name for the *T. graeca* subspecies occurring from northeast Morocco through central Algeria, pending genetic evaluation of the holotype to confirm or reject whether it matches the mitochondrial haplotype for that population as identified by Fritz et al. (2009c).

Despite these irregularities and prior confusion concerning the type specimens and type localities for *T. graeca*, *T. mauritanica*, and *T. whitei*, what Schweiger and Gemel (2020) have demonstrated is that the subspecies of *T. graeca* occurring from northeastern Morocco to central Algeria should no longer be called *T. g. graeca*. It is now instead referred to *T. g. whitei* (instead of *T. g. mauritanica*), and *T. g. graeca* replaces *T. g. soussensis* as the valid name for the subspecies in southwestern Morocco.

97. ***Testudo graeca***: Turkozan et al. (2018) examined variation in two mitochondrial genes (cytochrome b and ND4) for populations of the four subspecies of *T. graeca* in Turkey (*armeniaca, buxtoni, ibera, terrestris*), and their phylogenetic analysis generally supported the monophyly of each of them, although the support values were not high. In addition, they reported that *ibera* and *terrestris*, *armeniaca* and *ibera*, and *armeniaca* and *buxtoni* are found syntopically in some locations, where they hybridize. They also examined morphometric variation among the four subspecies and found that only *armeniaca* was morphometrically distinct from the others. However, they concluded that the available molecular and morphological data were insufficient to warrant the recognition of subspecies in Turkey. Until broader sampling of the genome is done across the entire *T. graeca* complex, we continue to recognize these taxa as subspecies of *T. graeca*.

98. ***Testudo graeca armeniaca, T. g. buxtoni,* and *T. g. ibera***: In a paper describing the ecomorphology of *T. gracea* subspecies in Armenia, northwestern Iran, and far eastern Turkey, where the three taxa *armeniaca, buxtoni,* and *ibera* occur and hybridize, Arakelyan et al. (2018) found that ecological habitat conditions of tortoises were correlated with significant external morphological plasticity. Their results were also concordant with previous findings of admixed mitochondrial and microsatellite loci and the existence of a contact zone with extensive gene flow between the three subspecies occurring in this area (Mashkaryan et al. 2013).

99. ***Testudo hermanni***: Biello et al. (2021) examined variation across seven microsatellite loci in *T. hermanni* from 28 regions across its range. Their best supported model confirmed the divergence between the two recognized subspecies *hermanni* and *boettgeri*. However, a secondary well-supported model also emerged, subdividing *T. h. hermanni* into four genetic subclusters, and *T. h. boettgeri* into two. Five of these subclusters had previously been identified by Perez et al. (2014) and the sixth was from a previously unsampled population in Calabria at the southwestern tip of continental Italy (see also TTWG Annotations 14:36 and 17:74). Since the purpose of their paper was for conservation and forensics (e.g., determining the provenance of trade-confiscated animals), they did not discuss taxonomy. Although the subclusters qualify as Management Units, we concur that they do not warrant taxonomic designation.

Djurakic and Milankov (2019) examined variation in the partial mitochondrial cytb gene (518 bp) across the range of *T. hermanni boettgeri*. They identified three primary genetic clusters, one corresponding to *T. h. hermanni* (see also TTWG Annotation 17:74) and two within *T. h. boettgeri*: 1) Croatia, Bosnia and Herzegovina, and northern Greece, and 2) Romania, Serbia, Bulgaria, North Macedonia, and most of Greece). They also compared carapace morphometrics between a population in each of the two *boettgeri* genetic clusters and found subtle but statistically significant differences, but made no taxonomic recommendations.

In a follow-up study, Djurakic and Milankov (2020) undertook another combined morphological and molecular analysis of variation across Greek populations of *T. h. boettgeri*. Their analysis of a small (266 bp) portion of the mitochondrial 12s rRNA locus revealed three haplotypes differing in only one to three bases from three regions: 1) northern mainland Greece, 2) southern mainland Greece, and 3) the Peloponnese peninsula. Their analysis of plastral morphometry showed no difference between the two mainland groups, but both of them differed significantly from tortoises in the Peloponnese. Again, the authors made no taxonomic or management recommendations.

100. ***Testudo hermanni hermanni***: The fossil species *Testudo globosa* † Portis 1890, with its junior synonyms, *Testudo oriens* † Portis 1890 and *Testudo seminota* † Portis 1890, were included in

the synonymy of *T. h. hermanni* in our previous checklists based on Lapparent de Broin et al. (2006b, 2006c) (see TTWG Annotation 14:37), but Corsini et al. (2014) considered *T. globosa* distinct and separate, so we have now removed it and its two synonyms, and will include them in our planned revised edition of TEWG (2015).

101. ***Lissemys punctata***: As a follow-up to the study by Praschag et al. (2011; see TTWG Annotation 11:14) of mtDNA sequence variation in *L. punctata*, Bhaskar and Mohindra (2019) undertook additional geographic sampling, but examined only one (cytochrome b) of the three genes studied by Praschag et al. The results of both studies were concordant, supporting the recognition of three subspecies (*punctata*, *andersoni*, and *vittata*). However, both studies identified two well-supported subclades within *L. p. vittata*: one apparently restricted to the states of Goa and Karnataka in western central India, and the other ranging widely across the rest of central India. Although Praschag et al. (2011) did not discuss this divergence, presumably because they only had two samples from the restricted area, Bhaskar and Mohindra, with 13 samples, suggested that *vittata* may represent two subspecies, pending further study.

102. ***Pelodiscus axenaria*** and ***Pelodiscus huangshanensis***: Yu et al. (2019) analyzed the full mitochondrial genome of a single softshell turtle from Huangshan, Anhui, that they identified as *P. axenaria*, although occurring far from its previously defined range. Subsequently, Gong et al. (2021) described a new small-sized *Pelodiscus* species from Huangshan, southern Anhui province, China, based on molecular and morphological evidence, and identified the specimen that Yu and colleagues had examined as belonging to their new species. Based on phylogenetic analyses of the mitochondrial cytochrome b and ND4 genes, *P. huangshanensis* is most closely related to *P. axenaria* and another unspecified lineage previously characterized by Gong et al. (2018). *Pelodiscus huangshanensis* was described as having a very limited distribution and a narrow ecological niche confined to clear rivers with fine sand in the slightly upland source area of the Xian'anjiang River. No genetic comparisons were made with *P. sinensis* specimens from near the type locality of *P. huangshanensis*, and the authors' statements about the maximum carapace length size of the new species varied from 84.0 to 101.6 to 115.6 mm, suggesting some confusion as to its size, although it is apparently the smallest known softshell turtle. Its habitat in higher gradient upland sandy-bottomed clear rivers apparently differentiates it from the larger *P. sinensis* which tends to inhabit a variety of nearby habitats, including more lowland rivers with muddy bottoms. According to the authors, the known population of *P. huangshanensis* is highly threatened due to habitat destruction and hunting pressure. We tentatively accept this new species pending more genetic analysis and improved definition of its distribution and whether or not it occurs sympatrically with *P. sinensis*.

103. ***Pelodiscus parviformis*** **and** ***Pelodiscus variegatus***: Gong et al. (2018) and Farkas et al. (2019) analyzed genetic and morphological characteristics of all *Pelodiscus* species and concluded that *P. parviformis*, previously considered to have two disjunct populations, one in central China and one in Vietnam, was a composite of two species. They documented distinct mitochondrial and nuclear DNA differences as well as diagnostic morphological and color-pattern differences between these populations, and Farkas et al. (2019) described the Vietnamese one as a new species, *Pelodiscus variegatus*, noting that it also occurred on Hainan Island in China. We agree with this assessment.

104. ***Pelodiscus sinensis***: Xiong et al. (2019) analyzed mtDNA variation in this wide-ranging species using the partial cytochrome b gene (922 bp). They identified four separate genetic lineages (Yangtze River, Xijiang River, Yellow River, and Taiwan) and suggested that the species probably originated in the Yangtze River basin, with specimens from Japan apparently having been introduced from the Yellow River lineage. Further, they noted evidence of lineage mixing between some specimens of *P. sinensis, P. parviformis*, and *P. maackii*, and suggested that the latter two taxa should be considered subspecies of *P. sinensis*. We await further genetic analysis before following this recommendation, and we also note that it is unclear whether the analyzed turtles were native or farmed animals and we abstain from any conclusions on the distribution of these species based on these data.

105. ***Chelonoidis alburyorum***: In recent years several studies have contributed significantly to a better understanding of the diversity of the extinct Holocene tortoises from the Bahamas archipelago (Franz and Franz 2009; Kehlmaier et al. 2017, 2021; Albury et al. 2018; Franz et al. 2020; Steadman et al. 2020). All native Bahamian tortoises vanished shortly after the arrival of prehistoric humans 900–700 years ago (Steadman et al. 2020). These tortoises were originally widely distributed in the archipelago and were large-bodied to giant-sized (Franz et al. 2020; Kehlmaier et al. 2021a). Tortoises on the individual islands differed in morphological characters so much that Steadman et al. (2020) suggested that up to seven distinct species could have existed there. Franz and Franz (2009) initially described a single species from the Bahamas, *C. alburyorum*. Later, based on morphological evidence, Franz et al. (2020) described two additional subspecies: *C. alburyorum keegani* and *C. a. sementis*. Subsequently, a comparison of near-complete mitochondrial genomes of 11 subfossil specimens from six islands by Kehlmaier et al. (2021a) revealed only two well-supported but weakly divergent clades and, in comparison to the divergences observed in other testudinids, suggested conspecificity of the specimens. Their results also indicated the possible recognition of only two subspecies of *C. alburyorum* rather than three.

A fossil-calibrated molecular clock indicated that the two Bahamian clades separated ca. 1.5 mya, which is too early for in-situ divergence, since high interglacial sea levels made the Bahamas only permanently hospitable for land vertebrates about 400,000 ybp. This suggests that the Bahamas tortoises colonized the islands twice from other landmasses, most likely the Greater Antilles (Kehlmaier et al. 2021a).

One of the two clades recovered by Kehlmaier et al. (2021a) included sequences from one specimen from Great Abaco and two from Crooked Island; the other clade contained sequences corresponding to the remaining tortoise material from Great Abaco and Crooked Island, as well as from Eleuthera, Mayaguana, Middle Caicos, and Grand Turk. Archeological evidence and radiocarbon dates of the studied material suggested that the occurrence of tortoises of both clades on Great Abaco and Crooked Island was the result of prehistoric human transport of tortoises between islands (Kehlmaier et al. 2021a).

PREVIOUS CHECKLIST ANNOTATIONS

2007 Checklist Annotations

TTWG 2007b (CRM 4:173–199) (07:1-105)

07:1. Both IUCN (The World Conservation Union, http://www.iucnredlist.org) and CREO (Committee on Recently Extinct Organisms, http://creo.amnh.org) have designated 1500 AD as their official cutoff date for determining what constitutes a recently extinct species, and we follow their criteria in our checklist.

07:2. ***Chelydra***: Phillips et al. (1996) elevated *acutirostris* and *rossignoni* to full species status and retained the subspecies *osceola*. See Shaffer et al. (in press) for a complete review.

07:3. ***Macrochelys* [formerly *Macroclemys*]**: Although *Macroclemys* has been the most commonly used name, Webb (1995b) showed that *Macrochelys* is the oldest available name.

07:4. ***Chelonia mydas***: Bowen et al. (1992) showed that recognition of the taxon *agassizii* Bocourt 1868 renders *mydas* paraphyletic, and *agassizii* is no longer generally recognized as either a distinct species or subspecies. See Parham and Zug (1996) and Karl and Bowen (1999) for a complete review.

07:5. ***Eretmochelys imbricata***: Fritz and Havas (2006, 2007) did not list *bissa* as a valid taxon, but no argumentation for this opinion was given. Genetic data (Okayama et al. 1999) have suggested significant separation of Atlantic from Pacific stocks.

07:6. ***Kinosternon* species**: Serb et al. (2001) elevated two former subspecies of *flavescens* (*arizonense* and *durangoense*) to full species status.

07:7. ***Kinosternon chimalhuaca***: This new species name appeared prematurely and erroneously first in the hobbyist literature, with the full original description published a few months later (Berry et al. 1996, 1997).

07:8. ***Kinosternon scorpioides scorpioides***: Includes the previously recognized subspecies *seriei* Freiberg 1936 and *carajasensis* Cunha 1970 in synonymy (Cabrera and Colantonio 1997).

07:9. ***Sternotherus***: This genus was included as a junior synonym of *Kinosternon* by Iverson (1992) and David (1994) based on work by Seidel et al. (1986) and Iverson (1991). However, this view was never widely accepted, and Iverson (1998) showed that the species referred to either *Sternotherus* or *Kinosternon* formed reciprocally monophyletic clades and recommended that both genera be used.

07:10. ***Sternotherus depressus***: Whereas some earlier authors had placed this taxon as a subspecies of *minor*, Walker et al. (1998) showed that *depressus* was genetically distinct from *minor*.

07:11. ***Chrysemys picta dorsalis***: This subspecies of *Chrysemys picta* was elevated to full species status by Starkey et al. (2003), who recognized two distinct genetic lineages: *C. dorsalis* and *C. picta*. They did not find genetic support for the other subspecies of *C. picta* (*belli, marginata*) but did not recommend that they be abandoned. Fritz and Havas (2006, 2007) argued that full specific status of *dorsalis* was not fully demonstrated and retained it and the other two taxa as subspecies of *C. picta*, agreeing also with Ernst et al. (2006a).

07:12. ***Graptemys ouachitensis sabinensis***: Based on molecular and morphologic data, Stephens and Wiens (2003) suggested that *sabinensis* may not be closely related to *ouachitensis*. However, statistical support for this was weak, and they did not discuss or recommend a taxonomic change. Further study of this complex may warrant the elevation of the sympatric taxon *sabinensis* to full species status.

07:13. ***Pseudemys concinna concinna***: Includes the previously recognized subspecies *hieroglyphica* Holbrook 1836, *mobilensis* Holbrook 1838, and *metteri* Ward 1984 in synonymy (Seidel 1994).

07:14. ***Pseudemys concinna floridana***: This taxon was previously considered a separate species, but was designated a subspecies of *concinna* by Seidel (1994). Jackson (1995) argued for the retention of *floridana* as a full species, but Seidel (1995) rejected this argument.

07:15. ***Pseudemys concinna suwanniensis***: Previously considered a subspecies of *concinna*, Seidel (1994) argued for the elevation of this taxon to full species status, but Jackson (1995) argued for its subspecific status.

07:16. ***Pseudemys gorzugi***: This taxon was previously considered a subspecies of *concinna*, but was elevated to species status by Ernst (1990) without argumentation, but then supported through analysis by Seidel (1994).

07:17. ***Pseudemys peninsularis***: This taxon was previously considered a subspecies of *floridana*, but was elevated to species status by Seidel (1994). Jackson (1995) argued for the retention of *peninsularis* as a subspecies of *floridana*, but Seidel (1995) reaffirmed his recognition.

07:18. ***Trachemys* species**: Seidel (2002) recommended elevating nine Mesoamerican taxa, previously recognized as subspecies of *Trachemys scripta*, to species rank.

07:19. ***Trachemys* subspecies**: Seidel (2002) also recommended reassigning five taxa, previously subspecies of *scripta*, to subspecies of his various elevated *Trachemys* species.

07:20. ***Trachemys dorbigni***: Includes the previously recognized subspecies *brasiliensis* Freiberg 1969 in synonymy, based on morphologic work (del Barco and Larriera 1993).

07:21. ***Emydoidea* and the turtles formerly known as *Clemmys***: The four traditional species of *Clemmys* (*guttata* [type], *insculpta, muhlenbergii*, and *marmorata*) do not form a monophyletic group with respect to the two monotypic genera *Emys orbicularis* and *Emydoidea blandingii* in phylogenies based on DNA data (Bickham et al. 1996; Burke et al. 1996; Lenk et al. 1999; Feldman and Parham 2002). While there is a general agreement that *insculpta* and *muhlenbergii* are sister-species and should be placed in the genus *Glyptemys* (Holman and Fritz 2001; Parham and Feldman 2002), there are two schemes presented for *marmorata* and *blandingii*. Holman and Fritz (2001) recommended that *marmorata* be placed in the monotypic genus *Actinemys*, retaining both *Emys orbicularis* and *Emydoidea blandingii* as additional monotypic genera. Other authors (Bickham et al. 1996; Feldman and Parham 2002; Parham and Feldman 2002) recommended that *marmorata* and *blandingii* be placed into an expanded *Emys*, a scheme favored in the most recent analysis of variation in *marmorata* (Spinks and Shaffer 2005).

07:22. ***Emys* or *Actinemys marmorata***: Previously, two subspecies were distinguished, including *pallida* Seeliger 1945, but genetic analysis by Spinks and Shaffer (2005) demonstrated that the typical and previously recognized subspecies *pallida* were within the same phylogeographic clade and so *pallida* should not be considered valid.

07:23. ***Emys orbicularis iberica***: Includes the recently described subspecies *kurae* Fritz 1994 in synonymy (Fritz 1998).

07:24. ***Emys orbicularis persica***: Includes the recently described subspecies *orientalis* Fritz 1994 in synonymy (Fritz 1998).

07:25. **Mexican *Terrapene carolina***: Stephens and Wiens (2003) suggested that Mexican subspecies of *T. carolina* may warrant full species status. While this convention has also been adopted previously (Smith et al., 1996), almost all other workers recognize these as subspecies.

07:26. **Platysternidae**: Krenz et al. (2005) confirmed that nuDNA placed *Platysternon* solidly within the Testudinoidea, and Parham et al. (2006a) supported this finding with mtDNA.

07:27. ***Platysternon megacephalum***: Ernst and Laemmerzahl (2002) synonymized two subspecies of *megacephalum* (*vogeli* Wermuth 1969 and *tristernalis* Schleich and Gruber 1984) with the nominate subspecies.

07:28. **Testudinoidae or Testuguria**: Shaffer et al. (1997) coined the name 'Testudinoidae' for the clade that united Testudinidae with Bataguridae/Geoemydidae. Joyce et al. (2004) listed Testudinoidae as an undesirable derivative of *Testudo* being to similar to both 'Testudinidae' and 'Testudinoidea.' In that same paper, the authors coined the new clade name 'Testuguria' for that same clade (while neglecting to list Testudinoidae as an objective senior synonym). Parham et al. (2006a) explicitly argued for the use of Testuguria over Testudinoidae.

07:29. **Bataguridae or Geoemydidae**: Both names are being used to refer to this group of predominantly Asian testudinoids. McDowell (1964) used the name Batagurinae for this group (as a subfamily) which was changed to Bataguridae (as a family) by Gaffney and Meylan (1988). Bour and Dubois (1986) showed that Geoemydidae has priority, and David (1994), Spinks et al. (2004) and others have embraced this view. However, this approach was questioned by Joyce et al. (2004) who, working in a rank-free phylogenetic taxonomy framework, recommended the continued use of Bataguridae. In the interest of reconciling phylogenetic nomenclature with traditional Linnaean rules of priority, Parham et al. (2006a) endorsed a phylogenetic codification of Geoemydidae.

07:30. ***Batagur***: Praschag et al. (2007b) and Le et al. (2007) demonstrated that species of *Kachuga* were genetically paraphyletic with respect to those referred to *Batagur* and *Callagur* and recommended that only one genus be recognized, and the name *Batagur* has priority.

07:31. ***Batagur baska***: The subspecies *ranongensis* Nutaphand 1979 is not well differentiated and has been synonymized under *baska* by Fritz and Havas (2006, 2007), but no specific morphologic or genetic analysis has yet been performed to formally evaluate the status of this taxon.

07:32. ***Cuora***: Phylogenies based on DNA data (Honda et al. 2002a; Stuart and Parham 2004; Parham et al. 2004; Spinks et al. 2004) have shown that continued recognition of the genus *Pyxidea* for *mouhotii* would render *Cuora* paraphyletic. All of these studies recommended expanding *Cuora* to include *mouhotii*. Other schemes for *Cuora* have not been published in the recent scientific literature, though there has been some use of *Cistoclemmys* for *flavomarginata* and *galbinifrons* (e.g., Zhao et al. 1997; Zhao 1997; Yasukawa and Ota 1999).

07:33. **Hybrid species**: The validity of six taxa of *Cuora, Mauremys* [including *Ocadia*], and *Sacalia* recently described from pet trade specimens has been refuted by genetic studies that have shown them to be based on hybrids (Parham et al. 2001; Wink et al. 2001; Spinks et al. 2004; Stuart and Parham 2004, 2007). The taxa shown to be hybrids are: *Cuora galbinifrons serrata* Iverson and McCord 1992b, *Mauremys iversoni* Pritchard and McCord 1991, *Mauremys pritchardi* McCord 1998, *Ocadia glyphistoma* McCord and Iverson 1994, *Ocadia philippeni* McCord and Iverson 1992, and *Sacalia pseudocellata* Iverson and McCord 1992a.

07:34. ***Cuora flavomarginata sinensis***: Some authors recognize this taxon as a valid subspecies (McCord and Iverson 1991; Fong et al. 2002) while others synonymize it with *flavomarginata* (Yasukawa and Ota 1999; Fritz and Havas 2006, 2007).

07:35. ***Cuora galbinifrons***: The taxa *bourreti* and *picturata*, originally described as subspecies of *Cuora galbinifrons*, were elevated to species rank by Stuart and Parham (2004) based on concordance of morphological with molecular differentiation. Fritz et al. (2006c) returned *bourreti* to subspecies rank based on osteological characters shown by market specimens, and suggested that *picturata* warrants the same ranking; Fritz and Havas (2006, 2007) subsequently listed *picturata* at subspecies rank based on morphologically intermediate pet trade specimens. Includes the previously recognized *hainanensis* Li 1958 in synonymy (Zong and Pan 1989; Iverson and McCord 1992b).

07:36. ***Cuora trifasciata***: Blanck et al. (2006a) recommended that *Cuora trifasciata* be split into two species (including their newly named species *cyclornata* and its new subspecies *meieri*) based on paraphyletic mtDNA haplotypes and morphological differences. Spinks and Shaffer (2007) showed that *trifasciata* as traditionally recognized is monophyletic based on nuDNA and therefore recommended that *cyclornata* should not be recognized, pending additional study.

07:37. ***Cuora yunnanensis***: This species has been listed as extinct by the IUCN since 2000 (www.iucnredlist.org), based on several decades of not finding any surviving animals despite intensive searches. Recently, a pair of animals representing this species were found in markets (Zhou and Zhao 2004; Zhou 2005), with subsequent confirmation through genetic analysis (He et al. 2007).

07:38. ***Cyclemys***: Iverson (1992) recognized two taxa of *Cyclemys* (*dentata* and *tcheponensis*). Later, *atripons* and *pulchristriata* were described and *oldhamii* was resurrected (Iverson and McCord 1997; Fritz et al. 1997). Genetic analysis by Guicking et al. (2002) also supported the validity of *shanensis*.

07: 39. ***Geoemyda***: Yasukawa et al. (1992) elevated *japonica* to species status (previously considered a subspecies of *spengleri*).

07:40. ***Hardella thurjii***: Praschag et al. (2007b) found no genetic or morphologic evidence for continued recognition of the subspecies *indi* Gray 1870b, and synonymized it under *thurjii*.

07:41. ***Heosemys annandalii* [formerly in *Hieremys*]**: Spinks et al. (2004) showed that *annandalii* was nested among species of *Heosemys*. Diesmos et al. (2005) formally moved *annandalii* into *Heosemys*.

07:42. ***Leucocephalon yuwonoi* [formerly in *Geoemyda* or *Heosemys*]**: Originally described as a species of *Geoemyda* (McCord et al. 1995), Fritz and Obst (1996) placed *yuwonoi* in *Heosemys*. McCord et al. (2000) showed that *yuwonoi* was not closely related to the type species of *Geoemyda* or *Heosemys*, but instead sister to *Notochelys platynota*, and erected a new genus, *Leucocephalon*, for *yuwonoi*.

07:43. ***Malayemys macrocephala***: Brophy (2004) proposed the recognition of this species as distinct from *subtrijuga* based on morphological grounds.

07:44. ***Mauremys* [including species formerly in *Annamemys*, *Chinemys*, or *Ocadia*]**: Iverson and McCord (1994) included *annamensis* under an expanded *Mauremys*. Subsequent phylogenies based on DNA data (Honda et al. 2002b; Barth et al. 2004; Feldman and Parham 2004; Spinks et al. 2004) showed that the genera *Ocadia* and *Chinemys* rendered *Mauremys* paraphyletic. Based on these results, some authors (Feldman and Parham 2004; Spinks et al. 2004) recommended synonymizing *Ocadia* and *Chinemys* under *Mauremys*. Barth et al. (2004) presented this same scheme as well as one that would retain *Chinemys* and *Ocadia* and further divide *Mauremys* into the genera *Cathaiemys* and *Emmenia*. Barth et al. (2004) did not favor one scheme over the other and a competing scheme for *Mauremys* has not been formally proposed in the scientific literature.

07:45. ***Mauremys leprosa***: Fritz et al. (2006a) explicitly synonymized several subspecies of *leprosa* recently described by Schleich (1996a) (*atlantica, erhardi, marokkensis, wernerkaestlei*, and *zizi*) plus *vanmeerhaeghei* Bour and Maran 1998 [1999], and only recognized *leprosa* and *saharica*.

07:46. ***Mauremys reevesii***: Iverson et al. (1989) and Barth et al. (2003, 2004) refuted the validity of the terminal taxon *megalocephala* Fang 1934, but it has continued to be recognized by Chinese researchers (Guo et al. 1997; Zhao 1997; Zhang et al. 1998), and Fritz and Havas (2006, 2007) listed it as a separate taxon with speculation about its relationships.

07:47. ***Melanochelys trijuga edeniana***: The subspecies *wiroti* Reimann 1979 was recognized by Iverson (1992), but David (1994) suggested that it was synonymous with *edeniana*, and Fritz and Havas (2006, 2007) followed this arrangement.

07:48. ***Pangshura* [formerly in *Kachuga*]**: Das (2001) and Schleich and Kästle (2002) used the name *Pangshura* to refer to small-bodied *Kachuga*. A phylogeny based on DNA data (Spinks et al. 2004) showed that *Kachuga* was paraphyletic and so removed *flaviventer, smithii, sylhetensis, tecta*, and *tentoria* into the genus *Pangshura*. Praschag et al. (2007b) using mtDNA confirmed the well-supported monophyly of *Pangshura*.

07:49. ***Pangshura tentoria flaviventer***: Schleich and Kästle (2002) elevated *flaviventer* to full species status based on sympatry with *circumdata*, but Praschag et al. (2007b) performed a phylogeographic analysis and retained *flaviventer* as a subspecies of *tentoria*.

07:50. ***Siebenrockiella leytensis* [formerly in *Heosemys*]**: Diesmos et al. (2005) placed *leytensis* into the genus *Siebenrockiella* based on strong genetic evidence for its sister relationship to *S. crassicollis*.

07:51. ***Vijayachelys silvatica* [formerly in *Geoemyda*]**: This species was originally named as a species of *Geoemyda*. However, a molecular study by Praschag et al. (2006) suggested a distant relationship with that genus and they recommended that it be placed in the new monotypic genus *Vijayachelys*.

07:52. **The *Geochelone* complex**: This generic complex includes the genera *Geochelone, Aldabrachelys, Astrochelys, Angonoka, Centrochelys, Chelonoidis, Dipsochelys*, and *Stigmochelys*. Lapparent de Broin (2000b), Gerlach (2001, 2004), Le et al. (2006), and Fritz and Bininda-Emonds (2007) recommended dividing the *Geochelone* complex into several genera, although their schemes differ somewhat. A general consensus on a generic-level revision for some members of the group is lacking while in other areas (e.g., *Astrochelys radiata*, *Chelonoidis*) there is agreement.

07:53. ***Aldabrachelys* or *Dipsochelys***: Bour (1982a) originally recommended that Aldabran tortoises (*dussumieri* or *gigantea*) be placed in the genus *Dipsochelys* instead of *Aldabrachelys*. However, *Aldabrachelys* is still widely used, including sometimes by Bour (Austin et al. 2003), though *Dipsochelys* is favored by others (Palkovacs et al. 2002, 2003; Gerlach 2004). There is recent disagreement regarding the type specimen of *Testudo gigantea*, the type species of *Aldabrachelys*, that was presumed lost. Frazier (2006) designated a neotype for *T. gigantea*, an act that would seemingly validate the use of both *Aldabrachelys* and the terminal taxon *gigantea*. Around the same time, Bour (2006c) rediscovered the original lost type specimen, which is actually an individual of the South American tortoise *Chelonoidis denticulata*. If this claim is correct, then the names *Aldabrachelys* or *gigantea* might not be applicable to Aldabran tortoises. Whether Frazier's neotype designation or Bour's specimen rediscovery prevails nomenclaturally remains a matter of ongoing debate, but since Bour (2006c) was the most recently published authority we use the name *dussumieri* rather than *gigantea* in our list.

07:54. ***Aldabrachelys* or *Dipsochelys* species**: Gerlach and Canning (1998) recognized six species of tortoises in Aldabra, Madagascar, and the Seychelles (three of which were extinct: *abrupta, daudinii*, and *grandidieri*). The two species from Madagascar became extinct prior to modern times (*abrupta* Grandidier 1868 in ca. 1250 AD and *grandidieri* Vaillant 1885b in ca. 950 AD) so we do not include them in our list of modern taxa. Palkovacs et al. (2002, 2003) questioned the validity of multiple extant species based on their analysis of genetic data, recognizing only a single living taxon (*Dipsochelys dussumieri*). Gerlach and Bour (2003) reemphasized the validity of the extant species based on the observation that the hatchlings are diagnostic. Fritz and Havas (2006, 2007) recognized only one extant species of Indian Ocean giant tortoise which they referred to *Aldabrachelys gigantea*, but did not address the findings of Gerlach and Bour (2003) or Bour (2006c). As we consider the issues surrounding the validity of these species as remaining unresolved, we list all these species as potentially valid.

07:55. ***Aldabrachelys* or *Dipsochelys dussumieri***: Iverson (1992) listed this species as *Geochelone gigantea* Schweigger 1812. Many authors now use *dussumieri* for the Aldabra tortoise (see above), but others persist in using the older name *gigantea* (e.g., Fritz and Havas 2006, 2007), and others have used the name *elephantina* Duméril and Bibron 1835 (David 1994; Devaux 2007).

07:56. ***Astrochelys* or *Angonoka yniphora***: Le et al. (2006) named *Angonoka* for *yniphora* because of its uncertain phylogenetic position. Fritz and Bininda-Emonds (2007) recovered a weak sister relationship between *yniphora* and *Astrochelys radiata* under some algorithms and recommended that *yniphora* be placed in *Astrochelys*.

07:57. ***Chelonoidis petersi***: According to Cabrera (1998), citing morphologic and osteologic work by Fernández (1988), *Chelonoidis chilensis* should be divided into two species, *chilensis* and *petersi* Freiberg 1973, but he considered the taxon *donosobarrosi* Freiberg 1973 to be synonymous with *chilensis*. Fritz and Havas (2006, 2007) speculated that *petersi* may not be valid and synonymized it under *chilensis*, citing phenotypic plasticity in other tortoise species as a reason for not accepting the reported differences between *petersi* and *chilensis*.

07:58. ***Chelonoidis nigra***: Most recent authors have considered the various taxa of Galapagos tortoises as subspecies of *nigra* (e.g., Pritchard 1996; Caccone et al. 1999; Fritz and Havas 2006, 2007), but Caccone et al. (2002) and Russello et al. (2005, 2007) treated them as distinct species. The nomenclatural and survival status of these taxa were discussed in detail by Pritchard (1996).

07:59. ***Chelonoidis nigra chathamensis***: This taxon described from western Chatham Island (San Cristóbal) appears to have been extirpated from its original range, but a population of tortoises persists on eastern Chatham Island that was considered a possible separate subspecies by Pritchard (1996). Pending genetic analysis and resolution of this issue we continue to list *chathamensis* as the extant taxon from Chatham, whereas Fritz and Havas (2006, 2007) listed it as extinct, but made no mention of the extant population.

07:60. ***Chelonoidis nigra duncanensis***: This taxon from Duncan Island (Pinzón) was historically usually referred to *ephippium* Günther 1875a, but Pritchard (1996) demonstrated that *ephippium* was a synonym of *abingdonii* and therefore resurrected the old *nomen nudum* name *duncanensis* Garman 1917.

07:61. ***Chelonoidis nigra nigra***: The nominotypical subspecies *nigra* from Charles Island (Santa Maria or Floreana) is considered to be extinct and is therefore included separately on this list.

07:62. ***Chelonoidis nigra phantastica***: This taxon was listed by Fritz and Havas (2006, 2007) as extant, but Pritchard (1996) considered it probably extinct.

07:63. ***Chelonoidis nigra porteri***: This taxon from Indefatigable Island (Santa Cruz) has often been referred to *nigrita* Duméril and Bibron 1835, but most recent authors, including Pritchard (1996) and Fritz and Havas (2006, 2007) have used *porteri*.

07:64. ***Chelonoidis nigra vicina***: This widespread taxon from Albemarle Island (Isabela) was previously recognized as one of several valid taxa on that island, including *becki* Rothschild 1901, *microphyes* Günther 1875a, *guentheri* Baur 1889, and *vandenburghi* De Sola 1930. Pritchard (1996) synonymized *microphyes, guentheri*, and *vandenburghi* under *vicina*, and recognized only *vicina* and *becki* from Albemarle.

07:65. ***Cylindraspis indica***: Includes the recently described *borbonica* Bour 1978 in synonymy, based on genetic work by Austin and Arnold (2001).

07:66. ***Cylindraspis vosmaeri***: Fritz and Havas (2006) credited Fitzinger 1826 with authorship of this name, but corrected it to Suckow 1798 in their 2007 checklist.

07:67. ***Homopus***: A separate taxon of *Homopus* was referred to *H. bergeri* Lindholm 1906 by Branch (1989). However, that name was a junior synonym of *Psammobates tentorius verroxii* Smith 1839b (Branch 1992; Boycott and Bourquin 2000), and the new taxon was recently described as *H. solus* by Branch (2007).

07:68. ***Indotestudo travancorica***: This taxon was previously considered a subspecies of *forstenii* (Hoogmoed and Crumly 1984; Iverson 1992), but was resurrected to species status by Pritchard (2000) based on morphology, a conclusion supported by mtDNA analysis by Iverson et al. (2001c).

07:69. ***Kinixys belliana***: Fritz and Havas (2006, 2007) recognized only *belliana* and *nogueyi*, following Broadley (1993) uncritically, but others (Iverson 1992; David 1994; Iverson et al. 2001a) also recognized *domerguei* and *zombensis*. As the phylogeography of this broadly distributed species complex has not been analyzed, we list the four most widely recognized subspecies.

07:70. ***Pyxis arachnoides***: The three recognized subspecies have recently been confirmed as genetically distinct lineages (Chiari et al. 2005).

07:71. ***Stigmochelys* or *Psammobates pardalis***: Based on genetic analysis, Le et al. (2006) recommended that this taxon be included in an expanded genus *Psammobates*. Fritz and Bininda-Emonds (2007) argued for the retention of a monophyletic *Psammobates* exclusive of *pardalis*. Le at al. (2006) also found a high level of mitochondrial divergence between two specimens assigned to the two subspecies *pardalis* and *babcocki*. In conjunction with morphological distinctions between these two taxa (Loveridge and Williams 1957; Broadley 1989), the preliminary genetic data suggest that they may be different at the species level.

07:72. ***Testudo* or *Agrionemys***: The species *horsfieldii* and *hermanni* have been alternatively placed in the genera *Testudo* or *Agrionemys* (Khosatzky and Mlynarski 1966; Gmira 1993, 1995) and *hermanni* also recently in *Eurotestudo*. Lapparent de Broin (2000a,b) and Parham et al. (2006b) supported the placement of *horsfieldii* in the genus *Agrionemys*, but suggested that a new genus name was needed for *hermanni*. Later Lapparent de Broin et al. (2006a) created the name *Eurotestudo* for *hermanni*, but Fritz and Bininda-Emonds (2007) demonstrated that older genus names (*Chersine* and *Medaestia*) are available for that species. Fritz and Bininda-Emonds (2007) recovered a weakly monophyletic clade that included *horsfieldii, hermanni*, and the three core species of *Testudo* (*graeca, kleinmanni*, and *marginata*). Based on this phylogeny they recommended that all of these species be placed in the genus *Testudo*. The genetic support for some nodes within this clade is not strong and the decision to lump or split is subjective (e.g., whether *Agrionemys* should be used for *horsfieldii* is open to debate), therefore the taxonomy of this group may remain in flux for some time.

07:73. ***Testudo graeca***: This species complex has been the subject of massive taxonomic revisions at the species and subspecies level. These revisions have resulted in the naming and elevation of numerous taxa (e.g., Perälä 2002a,b,c). Several studies (van der Kuyl et al. 2002, 2005; Harris et al. 2003; Carretero et al. 2005; Parham et al. 2006b,c; Fritz et al. 2007a) have explicitly refuted the validity of many of these taxonomic acts. Fritz et al. (2007a) proposed a taxonomic scheme that recognized five mitochondrial clades in the eastern part of the range of *T. graeca* as subspecies, but did not address the status of several North African subspecies. Since this is the most recent taxonomic suggestion, it is listed here. However, in their recent checklist, Fritz and Havas (2006, 2007) included not only the eleven taxa we list, but also *anamurensis* Weissinger 1987, *antakyensis* Perälä 1996, *floweri* Bodenheimer 1935, *nikolskii* Chkhikvadze and Tuniyev 1986, *pallasi* Chkhikvadze and Bakradze 2002, and *perses* Perälä 2002c. The relationships within this species complex remain uncertain and we expect its taxonomy to continue fluctuating.

07:74. ***Testudo kleinmanni***: Baha el Din (2006), Široký and Fritz (2007), and Attum et al. (2007) explicitly refuted the validity of *werneri* Perälä 2001 as a species distinct from *kleinmanni*.

07:75. ***Testudo marginata***: Fritz et al. (2005b) explicitly refuted the validity of *weissingeri* Bour 1996 as a subspecies of *marginata*.

07:76. ***Testudo hermanni***: Fritz et al. (2006b) explicitly refuted the validity of *hercegovinensis* Werner 1899 (previously resurrected by Perälä 2002b) and recommended that *boettgeri* be considered a subspecies of *hermanni*.

07:77. ***Testudo horsfieldii***: In a conference proceedings, Perälä (2002a) elevated two subspecies of *horsfieldii* (*kazachstanica* and *rustamovi*) to full species status. This was accepted by Lapparent de Broin et al. (2006b), but warrants reconsideration, especially considering the evidence for unjustified taxonomic inflation in related tortoises in the same work (van der Kuyl et al. 2002, 2005; Fritz et al. 2005b, 2006b; Parham et al. 2006b,c).

07:78. ***Carettochelys insculpta canni***: This subspecies from northern Australia described by Wells (2002a) was only weakly defined as different from the nominotypical subspecies from New Guinea. We list it tentatively pending further analysis, as did Fritz and Havas (2006), although they excluded it from their 2007 checklist.

07:79. ***Apalone spinifera atra***: This taxon has usually been designated a subspecies of *spinifera* (usually with the original spelling *ater*), but others (e.g., Flores-Villela 1993; David 1994) have listed it as a full species, though usually without specific argumentation.

07:80. ***Aspideretes* or *Nilssonia***: Engstrom et al. (2004) found *Aspideretes* to be paraphyletic with respect to *Nilssonia formosa* based on morphologic and genetic criteria. Praschag et al. (2007a) formally synonymized *Aspideretes* into an expanded concept of *Nilssonia* based on their analysis of mtDNA of all five included taxa.

07:81. ***Aspideretes* or *Nilssonia nigricans***: Recent morphologic and genetic work on this species previously known only from a single captive population has demonstrated that it also occurs in the wild (Praschag and Gemel 2002; Praschag et al. 2007a).

07:82. ***Pelodiscus***: The genus has recently been recognized as including up to four separate species by some authorities (David 1994; Zhao 1997; Chen et al. 2005, 2006; Fritz and Havas 2006, 2007). Relationships within the genus are far from resolved and also complicated by translocation and mixing of huge numbers of farm-raised individuals from many parts of the range.

07:83. ***Rafetus swinhoei***: Includes the recently described *Pelochelys taihuensis* Zhang 1984 (Farkas 1992) and *Rafetus leloii* Duc 2000 in synonymy (Farkas and Webb 2003).

07:84. ***Acanthochelys macrocephala***: Includes the recently described *Phrynops chacoensis* Fritz and Pauler 1992 in synonymy (Fritz and Pauler 1999).

07:85. ***Chelodina***: This genus was split into three genera by Wells and Wellington (1985), using *Chelodina* for the narrower-headed shorter-necked species (*longicollis, novaeguineae*), and establishing *Macrochelodina* for the broader-headed longer-necked species (*oblonga, expansa, rugosa, siebenrocki*), and *Hesperochelodina* for *steindachneri*. Iverson et al. (2001b) refuted the availability of the name *Hesperochelodina*, but validated *Macrochelodina*. Georges et al. (2002) retained *Chelodina* for the entire genus, but identified three phylogenetic clades within the genus and recommended recognition of three subgenera (but did not name them). Fritz and Havas (2006, 2007) accepted two of these clades (*Chelodina* and *Macrochelodina*) as separate genera.

07:86. ***Chelodina canni***: This taxon is the same as the previously described *rankini* Wells and Wellington 1985, but that name was declared invalid as a *nomen nudum* by Iverson et al. (2001b). Wells (2007a) recently disputed this interpretation and redescribed *rankini*, but *canni* McCord and Thomson 2002 retains nomenclatural precedence and *rankini* Wells 2007a is therefore a junior synonym of *canni*.

07:87. ***Chelodina mccordi roteensis***: This recently named subspecies described in the hobbyist literature needs genetic confirmation of its distinctiveness, but we recognize it pending further analysis.

07:88. ***Chelodina oblonga***: Thomson (2000) showed that the holotype of *oblonga* Gray 1841 is a specimen of what is currently regarded as *Chelodina rugosa* Ogilby 1890. An application is before the International Commission for Zoological Nomenclature (ICZN) to conserve current usage of the name *C. rugosa* Ogilby 1890 for the northern snake-necked turtle and to apply the earlier available name *Chelodina colliei* Gray 1856a to the long-necked species of southwestern Australia, while retaining the nomenclatural availability of the name *oblonga* for potential future designation of distinct populations of *rugosa* (Thomson 2006). Though no decision has yet been rendered by the ICZN, Fritz and Havas (2006, 2007) used the name *colliei* for this southwestern population. Georges et al. (2002) found support that this taxon represents a third subgenus under *Chelodina*, but did not formally establish it under a generic-level name.

07:89. ***Chelodina timorensis***: This species recently described in the hobbyist literature by McCord et al. (2007b) was also described a few months later as a new subspecies of *mccordi* ('*timorlestensis*') by Kuchling et al. (2007), but the McCord et al. description has chronologic precedence. Concerns surrounding the history and methodology of the description of *timorensis* by McCord et al. are discussed by Kuchling et al. (2007) and serve to emphasize our recommendations (made in our other chapter in this volume) to follow certain procedural guidelines for descriptions of new taxa (Turtle Taxonomy Working Group 2007a).

07:90. ***Chelodina kuchlingi***: This species was described from a single specimen, leading to doubts about its validity (Georges and Thomson 2006; Fritz and Havas 2006, 2007), but it remains listed pending further exploration of its remote area of provenance.

07:91. ***Chelodina rugosa***: The species *siebenrocki* Werner 1901 was considered valid by Rhodin and Mittermeier (1976) and Rhodin and Genorupa (2000), but synonymized under *rugosa* by Georges et al. (2002) based on weakly differentiated allozymes within the broader *rugosa* complex.

07:92. ***Elseya***: This genus has been recognized as consisting of two separate lineages (Georges and Rose 1996; Georges and Thomson 2006). It was subsequently split into two genera, *Elseya* and *Wollumbinia*, by Wells (2007c), with *latisternum* designated genotype of *Wollumbinia*. Papers by Wells (2002a,b; 2007a,b,c) and Wells and Wellington (1985) have been self-published without any peer review and also highlight our recommendations to follow certain procedural guidelines for descriptions of new taxa (Turtle Taxonomy Working Group 2007a).

07:93. ***Elseya branderhorsti***: This species was considered valid by Rhodin and Genorupa (2000), Thomson et al. (2006), and Georges and Thomson (2006).

07:94. ***Elseya jukesi***: The name *jukesi* Wells 2002b was a *nomen nudum* since no type specimen was designated, but the species was recently redescribed by Wells (2007b).

07:95. ***Elseya schultzei***: This species was listed by Thomson et al. (2006) and Georges and Thomson (2006), but neither morphologic nor genetic data have been analyzed from the type population and its status remains unclear.

07:96. ***Elseya stirlingi***: The previously named taxon *stirlingi* Wells and Wellington 1985 was declared invalid as a *nomen nudum* by Iverson et al. (2001b) (though spelled erroneously as *sterlingi*), but was recently redescribed as a valid species by Wells (2007b).

07:97. ***Elseya* or *Wollumbinia bellii***: The taxon *dorriani* Wells 2002b is a *nomen nudum* without a type designation, but was recently considered a valid subspecies of *bellii* by Wells (2007c).

07:98. ***Emydura macquarii***: The taxonomy of *E. macquarii* was previously reviewed by Georges and Adams (1996). Later, Cann et al. (2003) and McCord et al. (2003) described two new subspecies, but taxa previously described by Cann in 1998 (*binjing, dharra, dharuk*, and *gunabarra*), plus *signata* Ahl 1932 were not specifically evaluated by those authors. However, these taxa were all recognized as subspecies of *macquarii* by Fritz and Havas (2006, 2007), and since phylogeographic variation in the *macquarii* species complex has not yet been fully resolved with adequate genetic work, we tentatively list all these subspecies as valid, pending further analysis.

07:99. ***Emydura subglobosa worrelli***: Originally described as *Tropicochelymys worrelli*, this taxon was synonymized under *Emydura victoriae* Gray 1842 by Iverson (1992) and the nomenclatural validity of the species name confirmed by Iverson et al. (2001b). Cann (1998) considered it a distinct species, but Georges and Thomson (2006), partially based on electrophoretic work by Georges and Adams (1996), concluded that it was best referred to as a subspecies of *subglobosa* Krefft 1876. Fritz and Havas (2006, 2007) also listed it as a subspecies of *subglobosa*, but Georges et al. (2006) referred to it as a species, though without providing data or argument.

07:100. ***Phrynops***: Wermuth and Mertens (1977) divided this genus into three subgenera: *Phrynops, Batrachemys*, and *Mesoclemmys*. Cabrera (1998) and Georges et al. (1998) elevated these subgenera to generic level. McCord et al. (2001) further divided the remaining monophyletic *Phrynops* into a total of four genera (*Bufocephala, Phrynops, Ranacephala*, and *Rhinemys*). Joyce et al. (2004) did not accept the taxonomic acts of McCord et al. (2001). Bour and Zaher (2005) synonymized *Bufocephala* and *Ranacephala* with *Mesoclemmys*, but recognized *Rhinemys* as distinct.

07:101. ***Mesoclemmys heliostemma***: Rueda-Almonacid et al. (2007) questioned the validity of this taxon which is completely sympatric with *raniceps*, suggesting that it may simply represent a juvenile color morph of that taxon, and recommended genetic analysis.

07:102. ***Pelomedusa subrufa***: Gasperetti et al. (1993) recommended that the two previously recognized subspecies (*nigra* Gray 1863b and *olivacea* Schweigger 1812) be abandoned.

07:103. ***Pelusios seychellensis***: The taxonomic status of this species is unclear. Gerlach and Canning (2001) concluded that it is extinct.

07:104. **Podocnemididae or Podocnemidae**: Cope (1868) used the name Podocnemididae to refer to this clade. Baur (1893b) later referred to this group as Podocnemidae. Joyce et al. (2004) phylogenetically defined Baur's name (Podocnemidae) to refer to this clade.

07:105. ***Podocnemis unifilis***: This long-recognized species was briefly referred to as *P. cayennensis* Schweigger 1812 by David (1994), but that name was previously often used for what is now recognized as *P. erythrocephala* (Mittermeier and Wilson 1974), and most authors have continued to use *unifilis*.

2008 Checklist Annotations

Rhodin et al. 2008 (000.1-38.checklist.v.1) (08:2-25)

08:2. ***Chelodina* or *Macrodiremys***: The southwestern long-necked turtle of Australia (*Chelodina oblonga* or *colliei*, see annotation below) represents one of three lineages that were considered unnamed subgenera of *Chelodina* by Georges et al. (2002). McCord and Joseph-Ouni (2007b) created the name *Macrodiremys* for *oblonga/colliei*, designating *Chelodina oblonga* Gray 1841, as type species by original designation and monotypy,and elevated this to a full monotypic genus. Whether *Chelodina* sensu stricto will be a subgenus of *Chelodina* sensu lato along with *Macrodiremys* and *Macrochelodina* or if all three will be used as full genera is subjective and not yet stable.

08:3. ***Chelodina* or *Macrodiremys oblonga***: Within *Chelodina*, the specific epithet *oblonga* has long been applied to a long-necked species in southwestern Australia. Thomson (2000) showed that the holotype of *oblonga* Gray 1841 is a specimen of what is currently regarded as *Chelodina rugosa* Ogilby 1890 from northern Australia. An application (Thomson 2006, 2007) is before the International Commission of Zoological Nomenclature (ICZN) to conserve current usage of the name *C. rugosa* Ogilby 1890 for the northern snake-necked turtle and to apply the next available name, *Chelodina colliei* Gray 1856a, to the long-necked species of southwestern Australia. Separately, McCord and Joseph-Ouni (2007b) designated the holotype of *colliei* as the neotype of *oblonga* which would render *colliei* a junior synonym of *oblonga* which would be incompatible with an identification of the holotype and name *oblonga* as pertaining to the northern Australian taxon. We list the southwestern long-necked species as *oblonga* because McCord and Joseph-Ouni (2007b) is the latest published action but note that, given the differing taxonomic acts and opinions, this name may remain unstable in the coming years.

08:4. ***Macrochelodina* or *Chelodina walloyarrina***: McCord and Joesph-Ouni (2007b) described the new species *Macrochelodina walloyarrina* based on morphological criteria.

08:5. ***Chelydra serpentina***: Shaffer et al. (2008) recommended synonymization of *Chelydra serpentina osceola* Stejneger 1918 into *Chelydra serpentina* (Linnaeus 1766) based on range-wide patterns in variability of mtDNA.

08:6. ***Cyclemys***: Fritz et al. (2008b) performed a revision of the genus based on molecular and morphological data that included the description of three new species (*enigmatica*, *fusca*, and *gemeli*).

08:7. ***Cyclemys dentata***: Stuart and Fritz (2008) analyzed mtDNA from type specimens of *Cyclemys belli* Gray 1863e, *Cyclemys orbiculata* Bell 1834 and *Cyclemys ovata* Gray 1863e, and confirmed their previous morphology-based synonymizations with *Cyclemys dentata* (Gray 1831d) as accurate.

08:8. ***Cyclemys oldhamii***: Stuart and Fritz (2008) placed the names *shanensis* Annandale 1918, and *tcheponensis* Bourret 1939a, into the synonymy of *oldhamii*, based on the absence of significant genetic variation between the type specimen of *oldhamii*, topotypes of *shanensis*, and samples of *tcheponensis* from near the type locality.

08:9. ***Batagur***: Praschag et al. (2008) examined mtDNA variation within *Batagur baska* sensu lato and recommended that the southern populations should be elevated to full species status and for which the available name *affinis* Cantor 1847 should be used.

08:10. ***Carettochelys insculpta***: Fritz and Havas (2007) and Georges et al. (2008) indicated that *Carettochelys insculpta canni* Wells 2002a is not an available name because it had not been published in accordance with criteria established by the International Code of Zoological Nomenclature.

08:11. ***Kinixys nogueyi***: This taxon was treated as a full species by McCord et al. (2005) with minimal argumentation for the change from traditional recognition as a subspecies of *K. belliana*.

08:12. ***Rhinoclemmys punctularia***: *Testudo scabra* Linnaeus 1758 has previously been referred (as a *nomen dubium*) to the synonymies of both *Melanochelys trijuga* (Schweigger 1812) and *Rhinoclemmys punctularia* (Daudin 1801) (see Fritz and Havas 2007). Examination of the holotype specimen still extant in the Uppsala Linnaean collection indicates that it appears to be a *Rhinoclemmys punctularia* (Rhodin and Carr, in press) [2009]. However, since the name *Testudo scabra* has not been used as the name for a recognized taxon since the early 1800s, it remains a *nomen oblitum* and does not replace the name *punctularia* Daudin 1801, recognized and used as valid since its description, and also protected by the ICZN (1963) as a *nomen conservandum*.

08:13. ***Aldabrachelys* or *Dipsochelys***: The generic and specific names of the Aldabra tortoise are still being debated (reviewed in TTWG 2007). The original type specimen of *Testudo gigantea* Schweigger 1812 is a *Chelonoidis denticulata* from Brazil (Bour 2006c), but since the name *gigantea* had been associated with tortoises from Aldabra for a long time, Frazier (2006) designated a neotype from Aldabra, leading to some confusion. The matter is currently being petitioned to the International Commission on Zoological Nomenclature (Frazier 2008).

08:14. ***Chelonoidis nigra vicina***: The type locality for *Testudo microphyes* Günther 1875a was given as follows: "I suppose that the specimen… has come from Hood's Island," and Pritchard (1996) concluded that the name *microphyes* was a *nomen dubium* since its type specimen was not identifiable as either a Hood Island tortoise or any other recognizable taxon. Fritz and Havas (2007) indicated that Günther (1877) had subsequently designated the type locality for *microphyes* as "Tagus Cove, northern Albemarle Island" and they placed *microphyes* in the synonymy of *Testudo vicina* Günther 1875a, but this is not necessarily correct. Günther (1877) simply referred later-collected specimens from Tagus Cove to his type-based concept of *microphyes*—the name *microphyes* therefore remains a *nomen dubium* until such time as the original type specimen can perhaps be identified as to its exact provenance using genetic analysis.

08:15. ***Agrionemys* or *Testudo horsfieldii***: Vasilyev et al. (2008) demonstrated minimal mitochondrial variation between populations of *horsfieldii* Gray 1844 and *kazachstanica* Chkhikvadze, Amiranashvili, and Ataev 1990 and so recommended that these taxa be considered subspecies of *Agrionemys horsfieldii*. Elsewhere in the paper they referred to *A. h. rustamovi* as a third subspecies, but made no definitive comment on taxonomic status or validity.

08:16. ***Podocnemis unifilis***: The terminal taxon *lata* Bell *in* Gray 1830e has previously been included under the synonymy of *Peltocephalus dumerilianus* (Schweigger 1812) by many previous authors, including Fritz and Havas (2007), but Bell (*in* Gray 1830e) described *Chelys (Hydraspis) lata* as having a depressed black shell and orange-spotted head more typical of *Podocnemis unifilis* or *P. expansa*. Later, Gray (1870f) placed *Hydraspis lata* in the synonymy of his concept of *Chelonemys dumeriliana* (= *Podocnemis unifilis*) and added *P. unifilis, P. cayennensis*, and *P. erythrocephala* to the same synonymy, while differentiating *Peltocephalus tracaxa* (= *Peltocephalus dumerilianus*) as a distinct taxon. Though *Chelys (Hydraspis) lata* Bell *in* Gray 1830e is an older name than *Podocnemis unifilis* Troschel 1848, it is a *nomen oblitum* not used for a valid taxon since its description, and therefore does not replace *unifilis* as the valid name for the species.

08:17. ***Trachemys decussata***: Authorship of this taxon was actually first by Bell (*in* Griffith and Pidgeon 1830) with a plate. Seidel (1988a) listed the author as Gray 1831:28 (= Gray 1831d), and Fritz and Havas (2007) listed the author as Gray 1831:11 (= Gray 1830e). Griffith and Pidgeon 1830 was published in September 1830, whereas Gray 1830e was published in December 1830, and Gray 1831d was published in May 1831.

08:18. ***Graptemys geographica***: The name *lesueuri* Gray 1830d (= *lesueurii* Gray 1830e) was shown by Bour and Dubois (1983) to be a junior synonym of *geographica* LeSueur 1827 rather than a senior synonym of *pseudogeographica* Gray 1831d as recorded by Fritz and Havas (2007).

08:19. ***Graptemys pseudogeographica***: The name *pseudogeographica* Gray 1831d was originally published only as a *nomen nudum* of a LeSueur manuscript name in junior synonymy under *geographica* LeSueur 1827, but gradually achieved wide usage by many authors. Holbrook (1842) was the first to actually describe the taxon under the name *pseudogeographica*, and arguably his name should perhaps be associated with it, but Stejneger and Barbour (1917) established the name as *pseudogeographica* Gray 1831d as pointed out by Bour and Dubois (1983), who agreed that Gray should be listed as the author.

08:20. **Cryptodira and Pleurodira**: These subordinal names were based on the French vernacular names, Cryptodères and Pleurodères, originally used by Duméril and Bibron 1834. Cope (1864, 1865, 1868b) has generally been credited with authorship of these names, and he was the first to use the exact names Cryptodira in 1868 and Pleurodira in 1865, but previously used the name Pleurodera in 1864. Cope was preceded by Lichtenstein (1856) who used Cryptodera and Pleurodera as subordinal names, but in a printed catalogue distributed to zoological colleagues and museums, and not apparently sold in bookstores, so therefore perhaps not nomenclaturally available.

08:21. ***Cuora evelynae***: In the previous checklist (TTWG 2007), *Cuora flavomarginata* (Gray 1863e) had three subspecies. Ernst et al. (2008) recommended returning *Cuora evelynae* Ernst and Lovich 1990 to full species status, based on new morphological and previously published molecular data. They also argued that the mainland populations assigned to taxon *sinensis* Hsü 1930 are synonymous with nominotypical *flavomarginata*.

08:22. ***Apalone spinifera***: In the previous checklist (TTWG 2007), seven subspecies of *spinifera* LeSueur 1827 were listed. McGaugh et al. (2008) performed a rangewide phylogeographic study that uncovered patterns of discordant molecular and morphological variation. These authors conservatively refrained from making sweeping nomenclatural changes, but noted that there was "little utility" in recognizing the taxon *hartwegi* Conant and Goin 1948 and synonymized it under *spinifera*.

08:23. ***Apalone spinifera atra***: In the previous checklist (TTWG 2007), *atra* Webb and Legler 1960 was referred to as a subspecies of *spinifera* LeSueur 1827 as it is here. This taxon is sometimes considered a full species (e.g., argumentation cited in Flores-Villela 1993). Several recent studies on *atra* (McGaugh 2008, McGaugh and Janzen 2008, McGaugh et al. 2008) have argued in support of subspecies status based on low levels of genetic distinctiveness and habitat-driven color variation. The subspecific status of *atra* was followed by Cerdá-Ardura et al. (2008).

08:24. ***Sacalia quadriocellata***: Shi et al. (2008) performed a mitochondrial survey of *S. quadriocellata* based on known-locality and trade specimens. They found that populations on Hainan are genetically distinct and can also be diagnosed by morphological characters. They did not elevate these populations to species status, but noted that eventual study might validate this conclusion, in which case the name *Sacalia insulensis* (Adler 1962) would be available. They also noted that samples of *S. quadriocellata* from northern Vietnam are genetically distinct from those from Laos and the type region of central Vietnam, but there appear to be no obvious morphological differences between these populations.

08:25. ***Rhinoclemmys flammigera***: Barrio-Amorós and Narbaiza (2008) elevated *Rhinoclemmys punctularia flammigera* Paolillo 1985 to species status based on distinct head coloration pattern and allopatric isolated distribution.

2009 Checklist Annotations

TTWG 2009 (000.39-84.checklist.v.2) (09:3-49)

09:3. **Chelydridae**: Chandler and Janzen (2009) analyzed the phylogenetic position of the Chelydridae based on nucleotide sequence data, and found weak support for a sister group relationship with either the Kinosternoidea (Kinosternidae + Dermatemydidae) or Chelonioidea (Cheloniidae + Dermochelyidae). In a more extensive analysis, Barley et al. (in press) show that Chelydridae is sister to Kinosternoidea.

09:4. ***Macrochelys temminckii***: Roman et al. (1999) showed that *M. temminckii* could be divided into three major mitochondrial clades which they treated as Evolutionarily Significant Units (ESUs). They noted that samples from the Suwannee drainage in Florida showed high divergence from the rest of the range. Echelle et al. (2009) performed a microsatellite study and further subdivided *M. temminckii* into six ESUs. They also noted that the Suwannee population was the most distinct and concluded that it might eventually be recognized as a distinct taxonomic unit.

09:5. ***Cheloniidae***: Bowen and Karl (2007) reviewed population genetics and phylogeography of marine turtles and while they noted mtDNA divergence between Indo-Pacific and Atlantic *Chelonia mydas* and *Eretmochelys imbricata*, they recognized no taxa below the species level.

09:6. **Lacépède 1788 and Bonnaterre 1789**: The International Commission on Zoological Nomenclature (ICZN) previously rejected the names created by Lacépède in his 1788 *Histoire Naturelle des Serpens* and subsequent editions since they were published in non-binomial works (ICZN 1987). However, all names published in his earlier 1788 volume, *Histoire Naturelle de Quadrupèdes Ovipares* (which contained all his turtle descriptions), continued to be nomenclaturally available until recently, when they were also rejected as being published in a non-binomial work (ICZN 2005). A few of these turtle names from the 1788 *Histoire Naturelle de Quadrupèdes Ovipares* volume had already been individually suppressed by the ICZN (1963). Therefore, Bonnaterre (1789), who republished Lacépède's descriptions with proper binomials, becomes the authorship source for these rejected Lacépède turtle names.

09:7. ***Testudo nasicornis***: *Testudo nasicornis* Lacépède 1788 was described as distinct from *Testudo caouana* Lacépède 1788 (= *Caretta caretta*) based on the possession of a soft nasal projection and on being fit for human consumption like *Testudo marina* (= *Chelonia mydas*). The species was included in the synonymy of various other marine turtle taxa until Loveridge and Williams (1957) placed it alongside *T. caouana* in the synonymy of *Caretta caretta* (Linnaeus, 1758). Bonnaterre (1789) provided an amplified description and drawing of *Testudo nasicornis*, but his concept of the taxon differed from that of Lacépède, illustrating a specimen (pl. 3, fig. 3; hereby designated as the holotype) with 13 large carapacial scutes, costal tubercles forming an interrupted lateral keel, a strongly serrated carapacial margin, and apparently two pairs of prefrontal scales. The 13 carapacial scutes are inconsistent with *Caretta* but correspond to *Chelonia* or *Eretmochelys*, while the serrated carapacial margin and apparently split prefrontals indicate that the figured specimen is an *Eretmochelys imbricata* (Linnaeus, 1766). As long as the name *Testudo nasicornis* was nomenclaturally occupied by Lacépède's 1788 description, Bonnaterre's 1789 description could simply be dismissed as an incorrect subsequent attribution. However, now that ICZN Opinion 2104 (ICZN 2005) has rejected availability of all of Lacépède's turtle names, Bonnaterre's becomes the first available usage of the name *Testudo nasicornis*. Bonnaterre's description is clearly attributable to *Eretmochelys imbricata*, and thus we consider *Testudo nasicornis* Bonnaterre 1789 to be a subjective junior synonym of that taxon, while retaining *Testudo nasicornis* Lacépède 1788 as a *nomen rejectum* attributable to *Caretta caretta*.

09:8. **Meyer 1790 species names**: Meyer (1790), in a long-overlooked review article, provided short diagnoses and replacement names (*nomina nova*) for four species described by Lacépède (1788). These names have never appeared in any subsequent synonymies and are clearly *nomina oblita*. The Meyer names are *Testudo bomarii* for *Testudo viridisquamosa* (= *Lepidochelys kempii* or *Chelonia mydas*), *Testudo lauanna* for *Testudo caouana* (= *Caretta caretta*), *Testudo sonnerati* for *Testudo punctata* (= *Lissemys punctata punctata*), and *Testudo rubra* for *Testudo subrufa* (= *Pelomedusa subrufa*).

09:9. ***Eretmochelys imbricata***: This checklist (TTWG 2007b; Rhodin et al. 2008) has previously treated *bissa* as a valid subspecies of *imbricata* in the absence of a definitive, data-based synonymization. Whereas genetic results have demonstrated distinct genetic lineages in the Atlantic and Indo-Pacific Oceans, no genetic studies or reviews (Okayama et al. 1999; Bowen and Karl 2007) have argued for continued recognition of the subspecies *bissa*. The phylogenetic structure within *Eretmochelys* is comparable to that within *Chelonia*, for which only a single monotypic species is currently recognized, and thus we now treat *bissa* as a synonym of *imbricata*.

09:10. ***Kinosternon arizonense***: The authorship of this name was given as *arizonense* Gilmore 1922 in our previous checklist as well as TTWG (2007b) and Fritz and Havas (2007). However, the article appeared in February 1923 and the year is therefore corrected.

09:11. ***Kinosternon hirtipes***: The authorship of this name was given as Wagler 1833 in our previous checklist as well as in TTWG (2007b) and Fritz and Havas (2007), whereas previous authors (e.g., Iverson 1992) have recognized *hirtipes* Wagler 1830, a name sometimes interpreted as a *nomen nudum*. However, the ICZN (1999) rules for availability of names published prior to 1931 (Article 12) state that species names must be accompanied by a "description or definition" or by an "indication". The 1830 citation for *hirtipes* is not accompanied by a description or definition, but is accompanied by an indication—the associated illustration of the holotype of the taxon being named (see Article 12.2.7). Wagler 1830 is therefore the correct authorship designation.

09:12. **Deirochelyinae**: Spinks et al. (2009b) performed a phylogenetic analysis of the Emydidae based on mitochondrial and nuclear DNA. Their mitochondrial phylogeny did not recover a monophyletic Deirochelyinae, instead it placed *Deirochelys* as the sister to the rest of Emydidae. In contrast, their nuclear data recovered a monophyletic Deirochelyinae.

09:13. ***Pseudemys***: Spinks et al. (2009b) performed a phylogenetic analysis of Emydidae based on mitochondrial and nuclear DNA. Although their sampling within *Pseudemys* was limited and uneven, their samples of *concinna* and *floridana* did not yield a monophyletic *P. concinna* with respect to *peninsularis* (mtDNA and nuclear DNA) or *nelsoni* (nuclear DNA only). Further genetic and morphological study of known locality samples will be necessary in order to resolve the taxonomic status of the terminal taxa within *Pseudemys*.

09:14. ***Trachemys***: Seidel (2002) made several recommendations about the specific and subspecific taxonomy of *Trachemys*, as reflected in our earlier checklist. Jackson et al. (2008) performed a mitochondrial survey of the genus and supported those taxonomic revisions.

09:15. ***Trachemys scripta***: Rhodin and Carr (2009) demonstrated that the original authorship of the taxon name *scripta* should be attributed to Thunberg *in* Schoepff (1792), rather than just Schoepff.

09:16. ***Emys* or *Actinemys* and *Emys* or *Emydoidea***: Using nuclear markers, Spinks and Shaffer (2009) re-emphasized a close phylogenetic relationship among *marmorata*, *orbicularis/trinacris*, and *blandingii* as was previously shown from mitochondrial DNA (see Feldman and Parham 2002 and case summary in annotation 07:21 of TTWG 2007b). Spinks and Shaffer (2009) also showed that those species share a complex evolutionary history including prehistoric hybridization, and that *blandingii* and *orbicularis/trinacris* are sister taxa. In light of this evidence they strongly recommended that all these species be included in the genus *Emys* rather than continued recognition of the genera *Actinemys* and *Emydoidea*. Other authors (Iverson et al. 2008) argue for the continued recognition of all three genera in this clade.

09:17. ***Emys orbicularis orbicularis***: Fritz et al. (2009b) demonstrated that the mitochondrial DNA differentiation of the two previously recognized subspecies *colchica* and *luteofusca* were insufficient to continue to recognize them as distinct and therefore synonymized both under *orbicularis*.

09:18. ***Emys orbicularis fritzjuergenobsti***: Velo-Antón et al. (2008) performed a genetic analysis of multiple populations of *Emys orbicularis* on the Iberian peninsula and found no significant genetic divergence between the two previously-defined subspecies *hispanica* and *fritzjuergenobsti*, and therefore synonymized the former under the latter.

09:19. ***Emys orbicularis persica***: Fritz et al. (2009b) demonstrated that the mitochondrial DNA differentiation of the previously recognized subspecies *iberica* was insufficient to continue to recognize it as distinct and therefore synonymized it under *persica,* thereby also bringing *kurae* under the synonymy of *persica*.

09:20. **Geoemydidae and *Rhinoclemmys***: Le and McCord (2008) evaluated the molecular phylogeny of *Rhinoclemmys* and other geoemydid genera and affirmed the monophyly of the Geoemydidae, but recommended that *Rhinoclemmys* be afforded subfamilial recognition as the Rhinoclemminae, a grouping concept first proposed by Gray (1873j) as the Tribe Rhinoclemmyina.

09:21. ***Batagur affinis edwardmolli***: Praschag et al (2009) assessed the taxonomic status of *B. affinis* using mitochondrial and nuclear genetic analysis, and described the populations of Cambodia and the eastern coast of Peninsular Malaysia as the new subspecies *edwardmolli*, with the populations of western Peninsular Malaysia and Sumatra (Indonesia) retained as the nominotypical subspecies *affinis*.

09:22. ***Cuora galbinifrons* complex**: In our previous checklists we listed the three taxa *galbinifrons*, *bourreti*, and *picturata* as subspecies of *galbinifrons*. However, the preponderance of well-documented evidence now supports the elevation of these three taxa to recognition as three closely related full species, based on both morphology and genetics (Stuart and Parham 2004, Spinks et al. 2009a).

09:23. ***Cuora trifasciata***: Spinks et al. (2009a) assessed the validity of the recently described *Cuora cyclornata* Blanck, McCord, and Le 2006a using a combination of mitochondrial and nuclear genetic markers. Their genetic evidence elucidates a complex history of introgression involving *Cuora trifasciata* and the *Cuora pani* complex. They also provide a critique of the morphological analysis of Blanck et al. (2006), concluding that the available evidence is not sufficient to diagnose *C. cyclornata*. Following their previous analysis of this group (Spinks et al. 2006), they continue to recommend that *C. cyclornata* be considered a junior synonym of *C. trifasciata*.

09:24. ***Cyclemys* species**: Praschag et al. (2009b) analyzed mitochondrial and nuclear genes in these species, and found that *gemeli* and *fusca* were distinct but closely related, and that *atripons*, *dentata*, and *pulchristriata* were also well-differentiated and formed a well-supported clade. The taxonomy of the genus *Cyclemys* has been subject to intense debate over the past several years and will likely continue for some time before it is stabilized.

09:25. ***Geoemyda spengleri***: Gong et al. (2009a) demonstrated phylogeographic structure in mitochondrial DNA within this taxon.

09:26. ***Mauremys***: Hirayama et al. (2007) recommended splitting the genus *Mauremys* (sensu Feldman and Parham 2004) into five genera (*Mauremys*, *Cathaiemys*, *Chinemys*, *Ocadia*, and an unnamed new genus) based on the morphology of the palate. The relative utility of single character typological taxonomies and monotypic genera versus restricting familiar names to well-defined evolutionary clades has been discussed elsewhere for *Mauremys* and turtles in general (Parham and Feldman 2002; Feldman and Parham 2004; Spinks et al. 2004; Turtle Taxonomy Working Group 2007a; Spinks et al. 2009). Following the philosophy outlined in these papers we retain the larger aggregate *Mauremys* and recommend consideration of subgenera for phenetically distinctive subclades (e.g., Parham and Feldman 2002; Smith and Chizsar 2006).

09:27. ***Mauremys caspica***: Fritz et al. (2008a) performed a rangewide genetic survey of *Mauremys caspica*. Their study revealed discordant patterns of morphological and genetic differentiation in this species. They did not recommend abandoning the current subspecies, but highlighted the need for future taxonomic revision.

09:28. ***Rhinoclemmys punctularia flammigera***: Barrio-Amorós and Narbaiza (2008) elevated this taxon to species status based on a brief statement about head coloration and allopatric distribution, a change we reflected in our previous checklist; however, based on the relative lack of supportive data, we treat it again as a subspecies pending further analysis.

09:29. ***Aldabrachelys* or *Dipsochelys***: The nomenclatural validity of the generic and specific names of the Aldabra tortoise (*Aldabrachelys gigantea* or *Dipsochelys dussumieri*) is currently being debated (reviewed in TTWG 2007b and Rhodin et al. 2008). There is recent disagreement regarding the type specimen of *Testudo gigantea*, the type species of *Aldabrachelys*, that was presumed lost. Frazier (2006) designated an Aldabran neotype for *T. gigantea*, an act that would validate the use of both *Aldabrachelys* and the terminal taxon name *gigantea*. Around the same time, Bour (2006c) reported to have rediscovered the original lost type specimen, which is actually an individual of the South American tortoise *Chelonoidis denticulata,* making *gigantea* and *Aldabrachelys* junior synonyms of *denticulata* and *Chelonoidis*, respectively, which would thereby result in the use of *Dipsochelys dussumieri* as the valid name for the Aldabra tortoise. Whether Frazier's neotype designation or Bour's specimen rediscovery prevails nomenclaturally remains a matter of major ongoing debate. The matter has been petitioned to the International Commission on Zoological Nomenclature (Frazier 2009), with multiple commentaries on both sides of the issue (Zug et al. 2009; Bour et al. 2009; Takahashi et al. 2009), but no decision has yet been made by the ICZN.

09:30. ***Aldabrachelys* or *Dipsochelys* species**: Gerlach and Canning (1998) recognized six species of tortoises in Aldabra, Madagascar, and the Seychelles (three extant: *gigantea* or *dussumieri*, *arnoldi*, and *hololissa*; and three extinct: *abrupta*, *daudinii*, and *grandidieri*). The two species from Madagascar became extinct prior to modern times (*Testudo abrupta* Grandidier 1868 in ca. 1250 AD and *Testudo grandidieri* Vaillant 1885b in ca. 950 AD) so we do not include them in our list of modern taxa. Palkovacs et al. (2002, 2003) rejected the validity of multiple extant species inhabiting the Indian Ocean Islands based on their analysis of genetic data, recognizing only a single living taxon (*gigantea* or *dussumieri*). Gerlach and Bour (2003) re-emphasized the validity of their recognized species based on the observation that the hatchlings are diagnostic. Further morphologic and genetic research is clearly needed to determine whether more than one taxon of giant tortoise persists on the Indian Ocean Islands. Based on their lack of demonstrable genetic differences, we suggest that these morphologically-defined taxa be listed as subspecies of *gigantea*/*dussumieri* pending further analysis.

09:31. ***Astrochelys yniphora***: Le et al. (2006) proposed the genus name *Angonoka* for the single taxon *yniphora*, but Fritz and Bininda-Emonds (2007) showed that this species is closely related to *radiata* and so placed both species in the genus *Astrochelys* Gray 1873j. The genus name *Angonoka* has not been adopted by other authors and we recommend the use of the genus name *Astrochelys* for both *radiata* and *yniphora*.

09:32. ***Chelonoidis nigra* species complex**: Many recent authors and our previous two checklists have considered the various taxa of Galápagos tortoises as subspecies (e.g., Pritchard 1996; Caccone et al. 1999; Beheregaray et al. 2003; Fritz and Havas 2007; TTWG 2007b; Rhodin et al. 2008). However, previous authors have considered them as full species based on morphology (Bour 1980a; Fritts 1983; Ernst and Barbour 1989) and recently several researchers (Caccone et al. 2002; Russello et al. 2005, 2007; Poulakakis et al. 2008; Chiari et al. 2009) have re-elevated them to species based on congruent patterns of mitochondrial and nuclear variation. Given the allopatric distribution of Gálapagos taxa, combined with the concordant patterns of mitochondrial, nuclear, and morphological variation, we support their recognition as distinct species. In raising these taxa to species, we prefer to highlight their close monophyletic relationship (as distinct from mainland South American *Chelonoidis*) by listing them as a species complex.

09:33. ***Chelonoidis nigra***: The correct epithet for the extinct Floreana tortoise is *nigra* Quoy and Gaimard 1824. Poulakakis et al. (2008) used the epithet *elephantopus* Harlan 1827, but this is in error because that name is younger and the now-lost holotype of *elephantopus* cannot be assigned to any island based on descriptions (Pritchard 1996). Extinct on Floreana since the 1850s, hybrid descendants of this species were recently discovered on Isla Isabela (Poulakakis et al. 2008; Parham 2008) indicating that the lineage persists but has interbred with *becki* Rothschild 1901. Captive cross-breeding of these *becki* x *nigra* hybrids could be used to partially reconstitute the *nigra* lineage.

09:34. ***Chelonoidis abingdonii***: Hybrid descendants of *C. abingdonii* have recently been found on Volcan Wolf on Isla Isabela (Russello et al. 2007), and since only a single male (Lonesome George) of this species survives, the lineage could be partially reconstituted by captive cross-breeding.

09:35. ***Chelonoidis porteri***: Chiari et al. (2009) performed an extensive analysis of morphological, mitochondrial, and nuclear genetic variation in the two separate populations of tortoises on Santa Cruz presently referred to the taxon *porteri*. They demonstrated that the Cerro Fatal population is genetically and morphologically distinct from the La Caseta population and warrants a formal new taxon description, currently in preparation.

09:36. ***Chelonoidis vicina***: Pritchard (1996) previously synonymized *guentheri* Baur 1898 under this taxon (see TTWG 2007b) based on lack of morphological distinctiveness. Recent genetic work by Ciofi et al. (2006) has confirmed a lack of significant genetic distinctiveness between these previously recognized taxa on southern Isabela Island.

09:37. ***Chersina angulata***: Daniels et al. (2007) have demonstrated that this taxon includes two parapatric mitochondrial lineages. These lineages are morphometrically distinct and also show ecological and behavioral differences. Taken together, these data suggest the existence of more than one taxon within *C. angulata* and the matter is under further study (Daniels et al. 2007; Hofmeyr 2009).

09:38. ***Cylindraspis indica***: In our previous checklist (Rhodin et al. 2008) we followed Fritz and Havas (2007) in synonymizing *Testudo tabulata africana* Schweigger 1812 under *Chersina angulata* (Schweigger 1812). However, Bour (1985) previously identified the type specimen of *africana* as being a *Cylindraspis graii*, and Bour (2008a) reaffirmed it as a synonym of *Cylindraspis indica*.

09:39. ***Kinixys belliana nogueyi***: This taxon was treated as a full species by McCord et al. (2005) with minimal argumentation for the change from traditional recognition as a subspecies of *K. belliana,* and we followed that usage in our previous checklist. However, we now agree with Branch (2008) and traditional usage, and therefore restore *nogueyi* to a subspecies of *belliana*.

09:40. ***Testudo* or *Chersine* or *Agrionemys***: The type species and synonymizations of the genera *Chersine* Merrem 1820 and *Medaestia* Wussow 1916 have recently come under discussion. Bour and Ohler (2008) argued that *Testudo graeca* Linnaeus 1758 is the type of *Medaestia* and that *Testudo hermanni* Gmelin 1789 is the type of *Chersine*, whereas Fritz and Kraus (2008) concluded that *hermanni* is the type species for both. In either case, the oldest available generic name for *hermanni* or the clade (*hermanni* + *horsfieldii*) is *Chersine* Merrem, 1820, of which *Eurotestudo* and perhaps *Medaestia* are objective junior synonyms. *Agrionemys* is a subjective junior synonym if *horsfieldii* is considered congeneric with *hermanni* outside the genus *Testudo*, but remains available for a monotypic genus containing *horsfieldii*.

09:41. ***Testudo graeca graeca***: Fritz et al. (2009c) demonstrated that the mitochondrial haplotype of topotypic *T. g. whitei* is identical to samples of *T. g. graeca*, a taxon with overall low genetic variation. They therefore reconfirmed placement of *whitei* Bennett *in* White 1836 in the synonymy of *graeca* Linnaeus 1758.

09:42. ***Testudo graeca marokkensis***: Fritz et al. (2009c) demonstrated that *T. g. lamberti* and *T. g. marokkensis* share the same mitochondrial haplotype. They also questioned the morphometric analyses and proposed geographical separation of *lamberti* and *marokkensis* that were used to justify these taxa, and recommended combining them into a single subspecies. Since both *lamberti* and *marokkensis* were proposed in the same publication (Pieh and Perälä 2004), they invoked the principle of first reviser and chose *marokkensis* as the valid name.

09:43. ***Testudo* or *Agrionemys horsfieldii***: A recent study by Hitschfeld et al. (2008) showed that carpal osteological characters used previously to elevate the subspecies *kazachstanica* and *rustamovi* to species level are ontogenetically variable. In addition, Fritz et al. (2009a) have demonstrated the presence of three major mitochondrial haplotype clades that do not correspond well with the presently understood geographic distribution of the three currently recognized morphologically-defined subspecies. Whether or not to continue to recognize *kazachstanica* and *rustamovi* as distinct subspecies remains uncertain, but we retain them on the list pending further analysis and resolution.

09:44. ***Lissemys punctata***: Rohilla et al. (2009) demonstrated some geographic differentiation in allozymes in this wide-ranging taxon.

09:45. ***Wollumbinia* or *Myuchelys***: Thomson and Georges (2009) described the new genus *Myuchelys* for these taxa (but not including *dorsii* Wells 2009), choosing not to recognize the previous description of *Wollumbinia* Wells 2007c as nomenclaturally available. Whether Wells' work, distributed online without adequate hardcopy dissemination, is nomenclaturally available needs to be decided by the International Commission on Zoological Nomenclature, and we therefore list both names.

09:46. ***Wollumbinia* or *Myuchelys dorsii***: Wells (2009) described the new species *Wollumbinia dorsii*, but whether the name is nomenclaturally available is open to question, as the description was distributed online without adequate hardcopy dissemination. As Australian chelid taxonomy is in a state of flux and the validity of Wells' multiple papers in his Australian Biodiversity Record is under question, we list the name here. However, we make no determination as to its validity either nomenclaturally or taxonomically.

09:47. ***Wollumbinia* or *Myuchelys latisternum***: Wells (2009) resurrected the taxon *Wollumbinia spinosa* (originally *Euchelymys spinosa* Gray 1871a) as a separate valid species, based on the supposed distinctiveness of the single holotype without known locality data collected in 1866 (as noted by Cann 1998). Whether this resurrection will be accepted as valid is open to question, as no further specimens of the taxon have been identified and its distribution is unknown. We therefore retain *spinosa* as a junior synonym of *latisternum* pending further data.

09:48. **Podocnemididae**: Vargas-Ramírez et al. (2008) performed mitochondrial and nuclear genetic analysis of all eight extant species and demonstrated strong support for the Madagascan genus *Erymnochelys* being sister to a strongly monophyletic South American *Podocnemis*, and the South American *Peltocephalus* being sister to *Erymnochelys* + *Podocnemis*. This phylogenetic analysis renders the occasionally used subfamilial clade name Podocnemidinae Broin 1988 (for *Podocnemis* and *Peltocephalus*) paraphyletic.

09:49. ***Podocnemis unifilis***: As we noted in our previous two checklists (TTWG 2007b; Rhodin et al. 2008), most authors since Troschel 1848 have used the name *unifilis* for this species (the yellow-spotted river turtle), though some early authors erroneously used the epithet *dumeriliana* Schweigger 1812. Recently, the name *unifilis* was referred to the synonymy of *cayennensis* Schweigger 1812 by David (1994), but the latter name has historically been used for what is now recognized as *P. erythrocephala* (the red-headed Amazon River turtle) (Mittermeier and Wilson 1974). Bour (2006a) then redescribed what he concluded to be one of the original three specimens used by Schweigger in his concept of *cayennensis* and designated it as lectotype, but noted that this specimen was actually a representative of the taxon currently known as *unifilis*, and he recommended that the name *cayennensis* therefore be used instead of *unifilis*. However, since the measurements of the lectotype provided by Bour do not correspond exactly with those originally provided by Schweigger, and since Schweigger evidently had examined three specimens for his description, it remains unclear whether the lectotype has been correctly identified. In view of the long history of stable usage of the epithet *unifilis* for the yellow-spotted river turtle, we recommend its continued usage; suppression of *cayennensis* by petition to the ICZN may be needed for nomenclatural stabilization.

2010 Checklist Annotations

TTWG 2010 (000.85-164.checklist.v.3) (10:4-49)

10:4. **Testudines**: In a paper published too close to our manuscript deadline to fully analyze its implications, Dubois and Bour (2010b) discuss the distinction between nomenclature at family-series and class-series rank, and its application to the widely used Order group name Testudines Batsch 1788. Arguing that group names established at a family-series level cannot be applied at a class-series level, and that the family-group name based on the genus *Testudo* is already validly applied at the Family level (as "Testudinidae Batsch 1788"), they conclude that the name Testudines Batsch 1788 cannot also be applied to the Order of turtles, but do not suggest an available name for the Order. However, the International Code of Zoological Nomenclature does not regulate use of names above the superfamily level, and there remain a variety of uncertainties and possible alternative interpretations on the validity, format, use, and authorship attribution of these names. Additionally, some modern authors continue to use and defend the use of the original name Testudines Linnaeus 1758 to designate all modern turtles, even though the name was used primarily in a vernacular fashion in the original publication. Therefore, we do not make any changes at this time, but continue to refer to all turtles as the Order Testudines Batsch 1788, and expect to revisit this issue in more detail in a future checklist.

Additionally, in recent years, the rank level of turtles has been recommended by some to be elevated from its traditional rank of Order within the Class Reptilia to full Class rank on its own (e.g., Collins et al. 2010). Under this scheme, Reptilia would be the Class containing only squamates and tuataras (traditionally known as the Lepidosauria), Class Eusuchia would contain the crocodiles, Mammalia the mammals, and Aves the birds. This possible class-level rank for turtles is to some extent supported by studies indicating the paraphyly of the traditional Class Reptilia with regard to birds. However, other studies indicate a sister-group relationship between turtles and diapsid reptiles, or placement of turtles within diapsids, and hence, uncertainty about the phylogenetic relationship of turtles to other groups abounds (e.g., Laurin and Reisz 1995, deBraga and Rieppel 1997, Kirsch and Mayer 1998, Modesto and Anderson 2004, Bhullar and Bever 2009). Considering that the monophyly of turtles has never been challenged, and that ranking of turtles at class-level provides no improved resolution of the group's phylogenetic position, but simply shifts its distinctiveness to a different rank, we continue to treat turtles as an Order, with no implied judgment of its placement among other living and fossil tetrapod groups.

10:5. ***Caretta caretta***: Dubois and Bour (2010a) noted that Garsault (1764) depicted and named a marine turtle as *Testudo marina*, which they considered a junior synonym of *Caretta caretta* (Linnaeus 1758) based on morphology and geography. *Testudo marina* Garsault 1764 is also a senior homonym of *Testudo marina* Wilhelm 1794, a junior synonym of *Dermochelys coriacea* (Vandelli 1761).

10:6. ***Chrysemys dorsalis* or *picta dorsalis***: Phylogeography of the entire *Chrysemys picta* complex was studied by Starkey et al. (2003), who demonstrated two distinct mtDNA genetic lineages: *dorsalis* and *picta*. They recommended elevating *dorsalis* to species status, but did not find genetic support for the other traditional subspecies (*bellii*, *marginata*), although they recommended that they not be abandoned. Ernst et al. (2006a) documented morphologic intergradation between *dorsalis* and *marginata* in Missouri, but did not express an opinion as to the validity of the proposed elevation of *dorsalis* by Starkey et al., although they referred to their work. Fritz and Havas (2007) suggested that full specific status of *dorsalis* was not fully demonstrated by Starkey et al.'s data and retained it and the other two taxa as subspecies of *picta*. Iverson et al. (2008) agreed with Starkey et al.'s analysis and listed *dorsalis* as a full species, as have other recent authors and database managers (e.g., McAllister et al. 2007, NatureServe), while others retain *dorsalis* at subspecies rank (e.g., Ernst and Lovich 2009, ITIS). The sequencing of the entire *Chrysemys picta* genome is currently in draft form and should help resolve this problem. We now choose to list this taxon provisionally at species rank, recognizing the validity of arguments on either side of the issue, which remains unresolved.

10:7. **Gray 1830e and Gray 1831d**: The date of publication of Gray 1830e (A Synopsis of the Species of the Class Reptilia) is cited by most sources as 1831, since the title page of Griffith and Pidgeon, Volume 9 (Reptilia), in which the Synopsis appears as a Supplement, is dated 1831. However, Gray's Synopsis is dated on its first page as having been written in October 1830, and Volume 9 of Griffith and Pidgeon was actually published in three separate sections from 1830 to 1831 (see Cowan 1969). The first section, Part 25 (pp. 1–192), which included Griffith and Pidgeon's own text on Chelonia (plus part of Sauria), appeared in September 1830 (this part also includes three new Bell and Gray names that we cite as Bell 1830a and Gray 1830c). The second section, Part 26 (part of Sauria plus Ophidia and probably including Gray's Supplement) was apparenty published in December 1830; this date was interpolated by Cowan (1969) as the planned three-month time interval between the publication dates of Parts 25 and 27. The last section, Part 27 (Batrachia plus 18 plates) was published in March 1831. Cowan (1969) did not indicate when Gray's Supplement was published, nor with which Part it appeared. It was certainly not published in Part 25 in September 1830, when only pp. 1–192 of the main text were published, and prior to the October date recorded by Gray on his Synopsis, nor was it published with Part 27 in March 1831 with the Batrachia and plates. The page header for the first few pages of Gray's supplement has "Order Ophidia" printed at the top, and was therefore printed at the same time as the Ophidia section published in Part 26.

In his later publication, Gray 1831d (Synopsis Reptilium; or Short Descriptions of the Species of Reptiles), dated on p. viii as having been written in January 1831, on p. 77 Gray referred to the exact pagination for the citation for *Hydraspis lata* in the earlier published Griffith version (p. 17 in Gray 1830e). Therefore, Gray 1830e was available for page-citation in January 1831, and was therefore published with Part 26, probably in December 1830. Also, in Gray's own listing of his publications (Gray 1873k) he recorded 1830 as the date for publication of his Synopsis in Griffith's Vol. 9. In addition, Cogger et al. (1983) recognized 1830 as the date of publication for this work, as do we.

The date of publication of Gray 1831d has always been considered to be 1831, but the exact date has not been recorded. As noted, it is dated on p. viii as having been written in January 1831. The back cover of the publication lists other books by Gray already available for sale at the same time. Listed as already published are Gray's Illustrations of Indian Zoology, Parts 1 through 6, with a statement that a total of 20 parts were to be completed, one published every three months. Sawyer (1953) recorded that Part 1 of Indian Zoology was published on 6 January 1830, Part 2 on 30 March 1830, Part 3 on 15 July 1830, Part 4 on 6 October 1830, Part 5 on 25 January 1831, Part 6 on 7 April 1831, and Part 7 on 27 July 1831. Gray 1831d was therefore published between Parts 6 and 7, i.e., between April and July 1831, and we have chosen May as the probable month of publication.

10:8. ***Graptemys gibbonsi* and *G. pearlensis***: Ennen et al. (2010) analyzed morphological and genetic variation in *Graptemys gibbonsi* throughout its range and concluded that the western population inhabiting the Pearl River system of eastern Louisiana and western Mississippi is sufficiently distinct to warrant description as a full species, *Graptemys pearlensis*, with *Graptemys gibbonsi* restricted to the Pascagoula River system of eastern Mississippi only.

10:9. ***Pseudemys concinna, floridana*, and *peninsularis***: These three taxa remain difficult to resolve morphologically and genetically, and their taxonomic relationships have vacillated among various views held by Seidel (1994, 1995), Jackson (1995, 2006), and Thomas and Jansen (2006). Our checklist has historically listed *floridana* as a subspecies of *concinna,* and *peninsularis* as a separate species, based primarily on Seidel's work, and we continue to do so. However, recent ongoing fieldwork (e.g., Jensen et al. 2008; M. Aresco and D. Jackson, in litt.) potentially supports recognition of *floridana* and *concinna* as separate species, based on marked differences in their habitat preferences across wide areas of sympatry, with *peninsularis* apparently a subspecies of *floridana*. In view of the long history of taxonomic uncertainty surrounding these taxa and the unresolved nature of the data, we now note these conflicting views by providing alternative listings of *floridana* as either a subspecies of *concinna* or a possible separate species, and *peninsularis* as either a species or possible subspecies of *floridana*. However, we make no actual change in the taxonomic status of these turtles at this time, but await further field data and genetic analyses of this difficult species complex, both of which are ongoing.

10:10. ***Trachemys venusta***: McCord et al. (2010) described three new subspecies of *Trachemys venusta* based on patterns of head and neck stripes, carapace and plastron patterns and coloration, plastral scute formulae, maximum sizes, and distribution. We provisionally list these subspecies pending genetic analysis.

10:11. **Duméril 1805**: This reference has historically been given as 1806, as that date is printed on its frontispiece, but recent work by Gregory (2010), brought to our attention by R. Bour, has shown that it was actually published in November 1805.

10:12. ***Emys, Actinemys,* and *Emydoidea***: Wiens et al. (2010) analyzed multiple mitochondrial and nuclear loci for many emydid terminal taxa. They considered that their results did not provide phylogenetic support for the placement of *Actinemys* and *Emydoidea* in *Emys* (as recommended most recently by Spinks and Shaffer 2009); instead, Wiens et al. recommended recognizing *Actinemys* and *Emydoidea* as monotypic genera, with *Actinemys* apparently more closely related to *Clemmys*. We note the discordance among various published data sets regarding the relationships and analyses of the *Emys* + *Emydoidea* + *Actinemys* group, and hence, we retain our previous listings pending greater resolution.

10:13. ***Emys orbicularis orbicularis***: Dubois and Bour (2010a) noted that Garsault (1764) depicted and named a freshwater turtle as *Testudo terrestris*, which they identified as an *Emys orbicularis* (Linnaeus 1758), and which they considered a subjective junior synonym of *E. o. orbicularis* based on geography. *Testudo terrestris* Garsault 1764 is also a senior homonym of *Testudo terrestris* Forskål 1775; however, the latter name has extensive usage over the past half century, and is a *nomen conservandum* (ICZN 1963), thus safeguarding its continuing usage.

10:14. ***Emys orbicularis galloitalica***: Pedall et al. (2011) investigated genetic differentiation of populations of Italian, Corsican, Sardinian, and Sicilian *Emys orbicularis* populations, based on mtDNA and polymorphic microsatellite loci. They found no significant divergence of Corsican and Sardinian populations from populations of the southwestern Italian mainland, supporting the view that the subspecies *capolongoi* (Sardinia) and *lanzai* (Corsica) described from these islands are invalid. Their results also suggested that Sardinian and Corsican populations represented reintroduced populations following earlier extirpations of native taxa. While Pedall et al. (2011) did not explicitly synonymize *capolongoi* and *lanzai* into *galloitalica*, they indicated synonymization to be warranted and we consider their results adequate justification to do so. This leaves the status of the subspecies *ingauna*, restricted to a small isolated area in Liguria in the middle of the range of *galloitalica*, unresolved. Fritz and Havas (2007:184) noted that *ingauna* could be synonymous with *galloitalica*, but no data-supported analyses of the status of *ingauna* have apparently been published since its original description; in the absence of evidence to the contrary, we continue to recognize *ingauna* as a valid subspecies.

10:15. ***Emys* or *Actinemys marmorata***: An extensive mitochondrial and nuclear gene study by Spinks et al. (2010) indicated that southern and northern lineages, with a zone of contact somewhere in the central Coast Range of California, exist and may well be diagnosable. However, given the lack of concordance between the traditionally defined ranges of *pallida* in the south and *marmorata* in the north (as previously recognized subspecies), and with two nuclear and four mitochondrial lineages identified, we follow Spinks et al. in waiting for any formal recognition of this variation pending publication of a much larger, ongoing genetic analysis, and we do not re-elevate *pallida* from synonymy at this time.

10:16. ***Glyptemys muhlenbergii***: The name *Emys biguttata* Say was previously recorded as being published in 1824; however, though the paper was read in 1824, it was not published until 1825, in Volume 4, Part 2 of the *Journal of the Academy of Natural Sciences*.

10:17. ***Terrapene***: The genus name *Cistudo* was previously attributed to Say 1825 as a *nomen novum*, as also recorded by Fritz and Havas (2007); however, an Errata sheet published with Say's article in Volume 4, Part 2 of the *Journal of the Academy of Natural Sciences* noted that the name should have been *Cistuda* (as originally published by Fleming 1822). However, many subsequent authors used *Cistudo* as a valid generic name, often citing Say as the original author. The first authors to do so appear to have been Duméril and Bibron (1835), but many others, including Gray (1856b), Agassiz (1857a), and Boulenger (1889) followed suit.

10:18. ***Mauremys japonica***: Hoogmoed et al. (2010) indicated that this species name was actually published in 1834 rather than 1835 as previously recorded by most other authors.

10:19. ***Chelonoidis carbonaria* and *C. denticulata***: Vargas-Ramírez et al. (2010a) investigated phylogeographic differentiation in *carbonaria* and *denticulata*, and found distinct mitochondrial clades in *carbonaria* but only weak differentiation in *denticulata*. They recommended further investigation, but proposed no taxonomic changes at this time.

10:20. ***Chelonoidis carbonaria***: Nowak-Kemp and Fritz (2010) examined the holotype of *Testudo hercules truncata* Gray 1830e in the Bell collection of the Oxford University Museum and determined that it is a *C. carbonaria*, rather than a *C. denticulata*, where it was previously synonymized as a *nomen dubium*.

10:21. ***Chelonoidis chilensis* and *C. petersi***: The validity of the taxa *petersi* and *donosobarrosi* remains subject to debate; the latest contribution to the case was made by Vinke et al. (2008), who considered *petersi* synonymous with *chilensis* based on syntopic occurrence and lack of consistent morphological differentiation of populations attributed to *petersi* vs. *chilensis*. We consider the situation unresolved and tentatively retain our recognition of distinct southern and northern taxa (*chilensis* and *petersi*) within the *chilensis* group, pending further analysis of range-wide patterns of morphological and molecular variation.

10:22. ***Gopherus agassizii***: Cooper's description appeared in print in a section of the *Proceedings of the California Academy of Sciences* that was printed and distributed in 1861, not 1863 when the completed volume (including wrappers dated 1863) was issued (R.B. Murphy, pers. comm.). The two bird species described by Cooper in the same paper (Whitney's Owl, *Athene whitneyi*, now *Micrathene whitneyi*, and Lucy's Warbler, *Helminthophaga luciæ*, now *Vermivora luciae*) are consistently attributed to Cooper 1861 in the ornithological literature.

10:23. ***Homopus***: The date of authorship of the genus *Homopus* has traditionally been given as 1835, referring to Tome 2 of Duméril and Bibron (1835:145). However, Roger Bour (pers. comm.) has drawn our attention to the fact that the name was actually created and diagnosed in Tome 1 of Duméril and Bibron (1834:357).

10:24. ***Homopus signatus***: Daniels et al. (2010) investigated systematics and phylogeography of *Homopus signatus* using mitochondrial and nuclear DNA, neither of which supported the recognition of the two traditional subspecies, *signatus* and *cafer*. As a result they recommended abandoning subspecies designations for *H. signatus*, and we concur.

10:25. ***Homopus signatus***: Our previous checklists and earlier checklists by other authors have consistently listed *Testudo juvencella* Gray 1831d:14 as a junior synonym of this taxon. However, Gray attributed the name to Daudin, and in fact, it was formally described by Daudin in 1802; hence we correct this oversight.

10:26. ***Stigmochelys***: Le et al. (2006) proposed placing *pardalis* in the genus *Psammobates*, while Fritz and Bininda-Emonds (2007) argued for placement in the monotypic genus *Stigmochelys*. Since then, at least three peer-reviewed publications have consciously (i.e. citing Le et al. 2006, among their references) chosen to use *Stigmochelys*, as did two ecological papers (which did not refer to Le et al. 2006) and the CITES Nomenclature Specialist (CITES 2010); in contrast, only a single peer-reviewed paper (Spinks et al. 2009) was published after 2006 using the combination *Psammobates pardalis*, and this was to name the species as an outgroup. Noting the emerging consensus, we no longer accept *Psammobates* as an alternative name for *Stigmochelys*.

10:27. ***Stigmochelys pardalis***: Fritz et al. (2010a) analyzed phylogeographic patterns in mitochondrial DNA and found that seven, largely parapatric, mtDNA lineages could be identified; these clades did not correspond to the traditional subspecies (*pardalis* vs. *babcocki*) nor to the pronounced geographic size variation. They concluded that there is no rationale for recognizing subspecies within *S. pardalis*.

10:28. ***Testudo graeca buxtoni***: The taxon *Testudo ecaudata* Pallas 1814 has historically been listed in the synonymy of *Testudo graeca*, and Fritz and Havas (2007) and our earlier checklists synonymized it under *T. g. buxtoni* as a *nomen dubium*. Wermuth and Mertens (1961) synonymized it under *T. g. ibera,* and in their later checklist (Wermuth and Mertens 1977) again under *T. g. ibera*, but with a question mark. However, in an overlooked reference, Darevsky and Mertens (1973) examined the unpublished plate from Pallas (1814) depicting the type specimen of *ecaudata,* and determined it to be a variety of the South African *Psammobates tentorius verroxii* (Smith 1839b), despite the fact that the specimen was allegedly obtained in the forests of northern Persia along the Caspian Sea. Despite being a co-author, Mertens was evidently not completely convinced of the synonymization, and only added a question mark to the name in his 1977 checklist, while retaining it under the synonymy of *T. g. ibera*. Because of the uncertainty of the identification of *ecaudata* by Darevsky and Mertens, we solicited input from several specialists regarding the identity of the figured specimen. Examination by Roger Bour, Ernst Baard, Brian Henen, Oguz Türkozan, and Jim Buskirk confirmed that it was not a *Psammobates*, but a juvenile specimen of a *Testudo*, most likely referable to *T. graeca*.

10:29. **Forskål or Forsskål**: The spelling of the family name of Pehr Forsskål has varied through the years, with widespread usage of both single and double 's' spelling (as in our previous checklists). Dubois and Bour (2010a) declared the "Forsskål" spelling to be a mistake, but whether to spell his name with a single or double 's' depends on its usage. In the original paper describing *Testudo terrestris* and *T. triunguis* his name is given on the title page in Latin as Petrus Forskål with one 's', but in his own Swedish vernacular he always spelled his name as either Petter or Pehr Forsskål, with a double 's'. Current references to his name are reasonably evenly split between the two spellings (as determined by a search on Google), with the scientific literature preferring Forskål and the sociohistorical literature preferring Forsskål. We therefore now spell his name as rendered on the original publication, Forskål, just as we render the name Carolus Linnaeus in the original published Latin form rather than the name he was known by in his own Swedish vernacular, Carl von Linné.

10:30. ***Testudo* or *Agrionemys horsfieldii***: Three new taxa from this species complex have recently been described by Chkhikvadze and colleagues: *Agrionemys bogdanovi*, *A. kazachstanica kuznetzovi*, and *A. kazachstanica terbishi*. In addition, they have elevated two other taxa, *A. horsfieldii rustamovi* and *Testudo baluchiorum,* to species status. The taxonomy of Central Asian steppe tortoises remains in a state of flux; in contrast to the deeply-dissected arrangement of several species and subspecies in *Agrionemys* as proposed by Chkhikvadze and colleagues based on morphological characters, Fritz et al. (2009a) found phylogeographic structure as evidenced by mtDNA to be in weak agreement with morphologically-defined taxa, suggested synonymy of *rustamovi* with *horsfieldii*, and recognized only a single species, placed in *Testudo*, with implicit recognition of subspecies *kazachstanica* and an unnamed ESU in the Fergana valley. To minimize nomenclatural changes in a highly dynamic situation, and to attempt a middle road between the views of Chkhikvadze et al. and Fritz et al., we retain the recent arrangement of a single species with several subspecies, with the newly-described taxa *bogdanovi*, *kuznetzovi*, and *terbishi* provisionally listed as subspecies of *horsfieldii*, keeping *rustamovi* as a subspecies, and not elevating *baluchiorum* from synonymy. We anticipate that further changes will occur in the near future. Additionally, we drop *Chersine* as an alternative generic name for the *horsfieldii* species complex, as all authors use either *Testudo* or *Agrionemys* for this group. This issue was previously discussed in TTWG 2009.

10:31. ***Cycloderma aubryi***: Duméril (1856) described this species under the name *Cryptopodus aubryi*, sp. nov., in his text, but labeled the plate *Cryptopus aubryi*. *Cryptopodus* is considered an *ex errore* name for *Cryptopus*

Duméril and Bibron 1835.

10:32. ***Pelodiscus***: Fritz et al. (2010b) carried out preliminary genetic analyses of softshells of the *Pelodiscus sinensis* group, and demonstrated the taxonomic validity and species status of *P. maackii*; further taxonomic research was called for to elucidate the status and proper name of the lineages currently recognized by some as *P. axenaria* and *P. parviformis*, as we continue to do in this checklist.

10:33. ***Rafetus swinhoei***: Le et al. (2010) described a purported new species of giant softshell, *Rafetus vietnamensis*, with the type specimen a complete mounted skeleton located in the Hung Ky pagoda in Hanoi, but without locality data, while at the same time indicating that *R. leloii* Ha 2000 was probably not a taxonomically valid description. The study analyzed mostly the same materials as Le and Pritchard (2009), who reached the opposite conclusion, that Vietnamese records of *Rafetus* all pertain to *R. swinhoei*. A critical re-assessment of the description of *R. vietnamensis* is in progress (M. Le, B. Farkas, pers. comm.). Based on the conclusions of Le and Pritchard (2009), we provisionally list *R. vietnamensis* in the synonymy of *R. swinhoei*.

10:34. ***Chelodina* subgenera**: Georges and Thomson (2010) summarized the history and rationale of grouping species of Australasian snake-necked turtles and naming these groups, and concluded that the preferred nomenclatural arrangement would be to place all species in the genus *Chelodina*, while recognizing three subgenera within *Chelodina*: subgenus *Chelodina* for the narrow-headed species traditionally assigned to 'Group A' related to *C. longicollis*, subgenus *Macrodiremys* for the single species *C. colliei* (= *C. oblonga* of many authors), and subgenus *Macrochelodina* for the broad-headed species of 'Group B' related to *C. expansa*. However, as explained in annotation 10:39, the name *Macrodiremys* may be invalid.

10:35. ***Chelodina (Chelodina) gunaleni***: Georges and Thomson (2010) considered *gunaleni* McCord and Joseph-Ouni 2007a as synonymous with *novaeguineae* Boulenger 1888b, but provided no data supporting their conclusion; we retain *gunaleni* as distinct pending further analysis.

10:36. ***Chelodina (Chelodina) mccordi***: Georges and Thomson (2010) synonymized *Chelodina timorensis* (McCord et al. 2007a) under *C. mccordi* (Rhodin 1994b), without recognizing any subspecies of *mccordi*, instead referring to the taxa *roteensis* and *timorensis* as Diagnosable Terminal Taxa or ESU's (Evolutionarily Significant Units). Kuchling et al. (2007) interpreted these taxa as subspecies of *mccordi*, and we provisionally agree until further work clarifies their taxonomic status. The CITES Nomenclature Specialist (CITES 2010) also synonymized *timorensis* under *mccordi*.

10:37. ***Chelodina (Macrochelodina) rugosa***: Georges and Thomson (2010) reiterated their earlier (Georges and Thomson 2006) synonymy of *C. kuchlingi* Cann 1997d into *C. rugosa* Ogilby 1890, and we now synonymize it as well.

10:38. ***Chelodina (Macrochelodina) walloyarrina***: Georges and Thomson (2010) treated *walloyarrina* McCord and Joseph-Ouni 2007b as synonymous under *burrungandjii* Thomson et al. 2000, referring to morphological and molecular information available in the literature, and their own research indicating hybridization and introgression of *burrungandjii* with *rugosa*. However, we provisionally retain *walloyarrina* as distinct until published molecular data resolves the issue.

10:39. ***Chelodina* (subgenus name undetermined) *oblonga* or *colliei***: Thomson (2006), Georges and Thomson (2010) and Kuchling (2010) summarized the convoluted nomenclatural history of the name *Chelodina oblonga* Gray 1841, and attributed it to the northern populations (currently named *C. rugosa* Ogilby 1890, a name provisionally retained by them) as a senior synonym, pending the outcome of ICZN Case 3351 (Thomson 2006). With the name *oblonga* thus potentially unavailable for the snake-necked turtle of southwestern Western Australia, they referred to this turtle either by its next available name, *Chelodina colliei* Gray 1856a [Georges and Thomson], or *C. oblonga* (= *C. colliei*) [Kuchling] to maintain prevailing usage. In an attempt to retain traditional usage of the name *oblonga* for the southwestern snakeneck, McCord and Joseph-Ouni (2007a) had designated a neotype for *oblonga* Gray 1841, being the lectotype of *C. colliei*. However, as a type specimen already exists for *oblonga*, their neotype designation is invalid (Kuchling 2010).

There is general agreement that the southwestern snakeneck represents a distinct lineage within the *Chelodina* group (Burbidge 1967, Goode 1967, Kuchling 1988, Georges and Adams 1992, Georges et al. 1998, 2002), warranting recognition at subgenus level alongside *Macrochelodina* and *Chelodina* sensu stricto. The genus name *Macrodiremys* was created by McCord and Joseph-Ouni (2007a) to recognize this lineage. They designated *oblonga* as its type species, in the mistaken belief that their neotype designation had fixed the name *oblonga* to the southwestern taxon. However, with *oblonga* being applicable to the northern taxon (*rugosa*) by virtue of its original valid holotype, *Macrodiremys* becomes a junior synonym of *Macrochelodina*, in contrast to the intent of McCord and Joseph-Ouni. Kuchling (2010), as first reviewer, listed possibilities under which articles of the Code the name *Macrodiremys* could potentially be fixed to the southwestern longneck, but stated his conviction that it was reasonable to await an opinion on case 3351 of the ICZN plenum to be published before such nomenclatural acts should be attempted, and expressed his hope that in their ruling on case 3351, the ICZN plenum would take suitable action to solve these problems. Independently, Georges and Thomson (2010) made an explicit attempt to correct the error and follow the intent of McCord and Joseph-Ouni 2007a under Article A 67.13.1 of the Code by correcting the type species of *Macrodiremys* to *Chelodina oblonga* McCord and Joseph-Ouni 2007a = *C. colliei* Gray 1856a, making it potentially available as a genus-group name for the southwestern snakeneck. However, Kuchling (2010) had already pointed out the possibility that a nomenclatural act such as the attempted correction by Georges and Thomson (2010) could be invalid under the ICZN Code.

Further nomenclatural acts in this group of animals must await the outcome of the anticipated ICZN plenary decision to avoid further complicating this issue. For that reason, we list *Macrodiremys* as a synonym of *Chelodina* sensu lato and we do not employ a subgenus designation for the southwestern species in this year's checklist, recognizing well that the southwestern snakeneck warrants its own subgenus and that a name is potentially available for it.

10:40. ***Elseya novaeguineae***: Georges and Thomson (2010) returned *E. schultzei* Vogt 1911 to the synonymy of *E. novaeguineae* Meyer 1874, and also tentatively placed *E. novaeguineae* in the genus *Myuchelys*. However, we retain the species in *Elseya* pending further genetic analysis.

10:41. ***Emydura m. macquarii***: Georges and Thomson (2010) reviewed the complicated history of the name *Hydraspis australis* Gray 1841, and supported the conclusion of Cogger et al. (1983) that the name is a junior synonym of *E. m. macquarii*. The name *australis* had previously been inconsistently used for a variety of *Emydura* populations in northern Australia (e.g., Cann 1998); Georges and Thomson (2010) instead used the name *victoriae* for some of these populations. We interpret the name *australis* as a *nomen dubium* and agree with its synonymization under *macquarii*.

10:42. ***Emydura m. macquarii***: Georges and Thomson (2010) synonymized the previously recognized subspecies *E. m. binjing*, *E. m. dharra*, *E. m. dharuk*, *E. m. gunabarra*, and *E. signata*, into typical *E. m. macquarii*, based on lack of distinction based on allozyme electrophoresis, and they attributed variation in shell shape and body size to phenotypic plasticity. They considered that the Bellinger River population of *Emydura macquarii* is genetically unremarkable and that it was almost certainly established by introduction of animals from adjacent drainages.

10:43. ***Myuchelys* and Wells taxa**: Thomson and Georges (2009) described the new genus *Myuchelys* and noted that the name *Wollumbinia* Wells 2007c, used for the same group of species, but proposed online in an unpublished web-based document without adequate hardcopy dissemination, is nomenclaturally unavailable. They also considered all web-based names proposed by Wells in his *Australian Biodiversity Record* (Wells 2002, 2007a,b,c, 2009), as unpublished and nomenclaturally unavailable. In previous editions of this checklist we included *Wollumbinia* as an alternative genus name and listed some of the species described in the other documents; however, based on arguments against availability of all these names proposed by Wells (Fritz and Havas 2007, Thomson and Georges 2009, Georges and Thomson 2010), we now concur in considering these names unavailable under the ICZN Code and treat each of them as an unavailable name (*nomen illegitimum*) placed in synonymy.

10:44. ***Phrynops geoffroanus* and *tuberosus***: The taxonomic status and distribution of these two taxa remains problematic, without clear consensus of taxon limits or range delimitations. Pritchard and Trebbau (1984) documented that *tuberosus* is isolated from the broad range of *geoffroanus* and restricted to a small upland area in eastern Venezuela, extreme western Guyana, and northern Roraima in Brazil. Métrailler and Le Gratiet (1996) documented that neither *tuberosus* nor *geoffroanus* occurs in French Guiana, and neither taxon has ever been recorded in Suriname or lowland Guyana. However, McCord et al. (2001), based on an examination of three specimens of what they identified as *tuberosus* from eastern Venezuela, the Brazil–Guyana border, and Piauí, northeastern Brazil, depicted large apparently well-defined allopatric ranges for both taxa, with *tuberosus* supposedly distributed throughout the

Guyanan lowlands, the lower Brazilian Amazon, and northeastern Brazil. Rueda-Almonacid et al. (2007), while acknowledging that the systematics of the *Phrynops geoffroanus* complex (Rhodin and Mittermeier 1983) remained controversial and unresolved, nevertheless reproduced the vastly different ranges of *tuberosus* and *geoffroanus* depicted by McCord et al. We choose at this time to instead recognize the earlier documented restricted view of the distribution of *tuberosus*, since it is based on more extensive fieldwork, while also noting that the *P. geoffroanus* complex remains in need of a thorough range-wide phylogeographic study.

10:45. ***Pelomedusa subrufa***: Phylogeographic patterns of mitochondrial and nuclear DNA variation in *Pelomedusa subrufa* were analyzed by Vargas-Ramírez et al. (2010b) and Wong et al. (2010). Both studies reached the same conclusion that the species is structured into three major clades: northwestern, eastern, and southern lineages, with evidence that Madagascan populations may have been introduced there in prehistoric times. Vargas-Ramírez et al. (2010b) suggested that valid taxonomic units may currently be included in the synonymy of *Pelomedusa subrufa*, and recommended further study to clarify the taxonomy.

10:46. ***Podocnemis erythrocephala***: We previously listed the name *Podocnemis agassizi* Coutinho 1868 as a synonym, as did other earlier checklists. However, although Coutinho described a new species of turtle in 1868 that he proposed to name in honor of "M. Agassiz", no formal name was created at that time. Later, Göldi (1886) translated and reprinted Coutinho's earlier writings and created the binomen *Podocnemis agassizii*, attributing it to Coutinho, but recommending that it be changed to *Podocnemis coutinhii* since the name *agassizii* had already been used for another turtle, *Chelonia agassizii*.

10:47. ***Podocnemis sextuberculata***: Coutinho (1868) provided an excellent description of this species that he named *Podocnemis pitiu*, a name overlooked in our previous checklists as well as other earlier checklists.

10:48. ***Podocnemis unifilis***: We continue to use this name for the Yellow-spotted River Turtle, as it has a long and continuous usage, although the name *Emys cayennensis* Schweigger 1812 has recently been shown to have priority based on the available type material (Bour 2006a). However, the name *cayennensis* was for a long time erroneously applied to *Podocnemis erythrocephala* and it would introduce unacceptable confusion to use that name for what has nearly always been referred to as *unifilis*. We therefore maintain prevailing usage of *unifilis* and retain the name *cayennensis* in synonymy as a provisional *nomen rejectum* pending petition to the ICZN (R.C. Vogt et al., in prep.).

10:49. ***Podocnemis unifilis***: Coutinho (1868) provided an excellent description of this species that he named *Podocnemis tracaya*, a name overlooked in our previous checklists as well as other earlier checklists.

2011 Checklist Annotations

TTWG 2011 (000.165-242.checklist.v.4) (11:5-20)

11:5. ***Malaclemys terrapin***: Parham et al. (2008) demonstrated, based on radiometric dating of a fossil found in a cave on Bermuda, that the small population of diamondback terrapins present there was the result of a natural dispersal event dating from before human presence on the island. As a result, we now consider the Bermuda population as native rather than introduced. Genetic comparison of Bermuda samples with U.S. populations also demonstrated closest similarity to samples from the Carolinas, so we provisionally list the Bermuda population under the subspecies *M. t. centrata* pending further studies.

11:6. **Genus *Trachemys***: Fritz et al. (2011c) assessed the phylogeny and taxon boundaries of *Trachemys* from Central and South America based on mitochondrial and nuclear DNA. Their nuclear data were largely uninformative, but based on their mitochondrial and combined analyses, they concluded that the Pacific Coast taxa *grayi*, *emolli,* and *panamensis* form a distinct clade that warrants recognition at the species level, as *Trachemys grayi*, with three subspecies. Fritz and co-authors also recommended combining the taxa *cataspila, ornata, venusta, callirostris,* and *chichiriviche* as subspecies under a single species, *Trachemys ornata*. They further proposed placing *adiutrix* at subspecies level in *dorbigni*, and considered the taxon *uhrigi* to be synonymous with typical *venusta*. Their analysis did not include samples of the taxon *iversoni*, whose range on the Yucatan Peninsula is embedded in the range of the redefined *ornata* group, nor did they sample most *Trachemys* taxa from the arid western region of Mexico.

While Fritz et al. (2011c) provide a useful set of hypotheses for future testing, we recognize that taxonomy of *Trachemys* will remain dynamic and expect further changes when additional nuclear data, and deeper geographic sampling of field-verified specimens, are brought to bear on the problem. We therefore provide the alternative taxonomies of Seidel (2002) and Fritz et al. (2011c) in this year's checklist.

11:7. ***Emys/Emydoidea/Actinemys***: Fritz et al. (2011b) reviewed competing generic concepts for Blanding's, Western Pond, and European Pond turtles, and reiterated their support for recognition of *Emydoidea* and *Actinemys* as separate genera distinct from *Emys*.

The TTWG members continue to be deeply divided in their perspectives on whether to recognize three genera, or a single genus, for the four species concerned (*blandingii, marmorata, orbicularis*, and *trinacris*). The challenge is that available primary research findings result in different relationship trees among the four, based on mitochondrial and nuclear DNA and on morphology (Spinks and Shaffer 2009; Wiens et al. 2010; Fritz et al. 2011b). Overall, the majority of data indicate that *blandingii, marmorata, orbicularis*, and *trinacris* collectively are each others' closest relatives. Whether to recognize this by combining the four species in an expanded genus *Emys*, or to emphasize the morphological distinctiveness of *blandingii* and *marmorata* from (*orbicularis* + *trinacris*) by recognizing *Actinemys* and *Emydoidea* as monotypic genera, is largely a subjective matter. Correspondingly, the herpetological taxonomic community and recent scientific literature have not come to a clear consensus or prevailing usage. With further research in progress, we agree that the situation remains undecided, and continue to present alternative taxonomies in this year's checklist, with no implication that this represents the preferred or supported arrangement of individual TTWG members.

11:8. ***Terrapene carolina***: Butler et al. (2011) conducted morphological and molecular analyses to address the status of lineages within *Terrapene carolina*. They found that box turtles phenotypically corresponding to *T. c. carolina, T. c. bauri,* and *T. c. triunguis* all occur within the range of *T. c. major*, and that the latter does not demonstrate a diagnosable morphology. They also found that *carolina, bauri*, and *triunguis* possess divergent mtDNA haplotypes, which are present alongside a fourth, distinct, haplotype in the range of *T. c. major*. Butler et al. interpreted these findings as the introgressed genetic signal of the extinct Pleistocene *T. c. putnami* perpetuating in a morphologically mixed population, and advocated equating the taxon *major* with *putnami*; they argued that *major*, which has precedence over *putnami*, should only be used to refer to the large extinct form.

Their genetic analysis also placed *bauri* as sister to *ornata*, and *triunguis* as sister taxon to the [*ornata* + *bauri*] clade. Butler et al. thus suggested that *bauri* should be elevated to species status, although this would leave the remaining taxa in *T. carolina* paraphyletic by continued inclusion of *triunguis*. Butler et al. did not address the status of *mexicana* and *yucatana*, which have variously been considered subspecies of *carolina* or full species each. Furthermore, their analysis did not support the previously recognized species groups (e.g., Milstead 1969; Spinks et al. 2009).

We are reluctant to change the widely-recognized taxonomic arrangement for a species complex of notable conservation and legislative significance based on a single study that relied heavily on a short mtDNA segment. Until the alternative taxonomy presented by Butler et al. is independently corroborated by further research, and potentially finds widespread acceptance in the herpetological and taxonomic communities, we prefer to retain the traditional arrangement and defer possible adoption of their hypothesis until a later version of this checklist.

11:9. ***Cuora flavomarginata evelynae***: In previous checklists we had overlooked that Ota et al. (2009) had transferred *evelynae* back to subspecies status under *Cuora flavomarginata*, but we now follow them here.

11:10. ***Aldabrachelys gigantea*** or ***Dipsochelys dussumieri***: Gerlach (2011a) studied morphological development of juveniles of the three forms of Indian ocean giant tortoises reared under identical captive conditions, and concluded that animals consistently develop into the morphotypes characterized by their parents. Gerlach thus concluded that the morphotypes cannot be explained by environment alone, and may have a genetic basis, supporting the recognition of *arnoldi* and *hololissa* as taxonomically distinct from *gigantea*/*dussumieri*.

11:11. ***Gopherus agassizii*** **and** ***G. morafkai***: Murphy et al. (2011) investigated taxonomic problems affecting the Desert Tortoise. They designated the sole remaining of three syntypes of *Gopherus agassizii* as lectotype and genetically confirmed that it originated from California. They also determined that the holotype of *G. lepidocephalus* originated from the Mojave desert population, at least based on mitochondrial DNA, reconfirming *lepidocephalus* as a junior synonym of *agassizii*. A suite of morphological, molecular and ecological differences between the Mojave and Sonoran Desert populations led Murphy and co-authors to describe the Sonoran form, long recognized as an Evolutionarily Significant Unit, as a new and distinct species, *Gopherus morafkai*. Further research will be necessary to determine if the southernmost populations of *G. morafkai* in the Sinaloan thornscrub ecosystem also deserve taxonomic recognition (Lamb et al. 1989; Murphy et al. 2011).

11:12. ***Testudo graeca* and *T. marginata***: Chkhikvadze et al. (2011) described *Testudo dagestanica* from Lake Papas, Dagestan, and considered the taxa *anamurensis, pallasi, terrestris, weissingeri,* and *zarudnyi* (variously considered subspecies or synonyms of *T. graeca* or *T. marginata* in earlier versions of this checklist) as valid subspecies of *T. marginata*. However, Parham et al. (2006) and Fritz et al. (2007a) placed the Dagestan population of *Testudo* firmly in *T. graeca* based on a combination of morphological and genetic characters, although those studies differed in their assignment of this population to *T. g. ibera* and *T. g. armeniaca*, respectively. Until further data become available supporting the radical changes proposed by Chkhikvadze et al., we take a conservative approach and make no changes to the taxonomy of *T. graeca* or *T. marginata*.

11:13. ***Testudo marginata***: Perez et al. (2012) studied the effects of landscape features and demographic history on the genetic structure of *Testudo marginata* using microsatellites. They found that their samples from Sardinia clustered with samples from northern Greece, suggesting that the Sardinian population may have originated from a small founder population approximately 200 generations ago, while the source population from which those founders originated was estimated to be very large. In contrast, the samples from the 'dwarfed' *marginata* population of the southwestern Peloponnesus demonstrated a low but significant differentiation from all other *marginata* populations. While Perez et al. did not recommend taxonomic recognition of the dwarf population, they did emphasize the conservation significance of what in effect is an Evolutionarily Significant Unit (ESU).

11:14. **Genus *Lissemys***: Praschag et al. (2011) analyzed variability across the range of the genus *Lissemys*, based on 2286 bp of mitochondrial DNA sequences, with additional morphological and biogeographical considerations. They concluded that *scutata* is a distinct divergent lineage and reaffirmed Webb's (1982) conclusion to recognize *scutata* as a full species. They found that the Sri Lankan population shows similar divergence, and recognized this population as a full species, *Lissemys ceylonensis* (Gray 1856a). The remaining populations of *Lissemys* fell into three lineages, one broadly corresponding to the spotted northern taxon *andersoni* (though with some intergradation with unspotted animals in Orissa) inhabiting the Indus-Ganges-Brahmaputra systems, and the other two lineages comprised of unspotted populations in peninsular India. Praschag et al. recommended recognition of the two peninsular lineages by the names *punctata* for the southernmost Indian lineage, and *vittata* for the central Indian lineage. Because the three mainland Indian lineages are more closely related to each other than to either *scutata* or *ceylonensis*, and intergradation between at least *andersoni* and *vittata* is known, Praschag et al. proposed recognition of *vittata* and *andersoni* at subspecies rank under *punctata*. They also concluded that *Emyda granosa intermedia* Annandale 1912, traditionally placed in synonymy of the southern, unspotted form *punctata* (see Webb 1980a:554), is based on intergrades between *vittata* and *andersoni* and cannot be used as the valid name for any *Lissemys* taxon. As *intermedia* is clearly not a valid synonym of *andersoni*, and its type locality (Purulia, western West Bengal) is far outside the redefined range of *L. p. punctata*, we take this opportunity to place *intermedia* into the synonymy of the central unspotted taxon *L. p. vittata*.

11:15. **Genus *Nilssonia***: In earlier versions of this checklist, we used the provisional designation '*Nilssonia* or *Aspideretes*' as a transitional phase between the widespread usage of *Aspideretes* since Meylan's (1987) morphological analysis, and the more recent findings that *Aspideretes* is paraphyletic with regard to *Nilssonia* and consequent recommendation to synonymize *Aspideretes* into *Nilssonia* (Engstrom et al. 2004; Praschag et al. 2007; Fritz and Havas 2007). We note that the species *gangetica, hurum, leithii,* and *nigricans* are now widely accepted as belonging in the genus *Nilssonia*, making *Aspideretes* a synonym.

11:16. **Genus *Pelodiscus***: Yang et al. (2011) evaluated the validity of *P. parviformis* and inferred it to be a distinct species based on the results of their morphological and molecular analyses. Stuckas and Fritz (2011) sequenced DNA from the lectotype of *P. sinensis* and analyzed its placement in relation to other *Pelodiscus*. They found it distinct from the lineages identified as *P. axenaria* and *P. parviformis*, and concluded that *P. sinensis* is not a senior synonym of either of these two names. Consequently, Stuckas and Fritz proposed recognition of *axenaria, maackii, parviformis,* and *sinensis* as valid species; they recognized that older names may be available for some of these, but recommended use of these four names for the time being. The respective distribution ranges of the different forms, and possible areas of co-occurrence, remain unclear; the reported occurrence of both *axenaria* and *parviformis* in Guangxi and Hunan warrants further research.

11:17. ***Rafetus swinhoei***: Farkas et al. (2011) reviewed the description of *Rafetus vietnamensis* Le et al. 2010. They declared *vietnamensis* an objective synonym of *R. leloii*, and reasserted their view that *R. leloii* (and thus *R. vietnamensis*) is a subjective synonym of *R. swinhoei*.

11:18. ***Trionyx triunguis***: Gidis et al. (2011) sequenced up to seven genes of 20 known-locality samples and reported shallow divergence among Mediterranean Coast, Nile, and Cameroon samples, in contrast to the results of Guçlu et al. (2009), who found four different haplotypes for the four unknown-locality Sub-Saharan specimens that they compared to their Mediterranean samples.

11:19. **Pelomedusidae**: Fritz et al. (2011a) examined the phylogeny of *Pelusios* and *Pelomedusa* species based on three mitochondrial and three nuclear DNA fragments. They reported divergent lineages within *Pelusios rhodesianus* and *P. sinuatus*, found no clear differentiation of *P. chapini* from *P. castaneus*, and attributed the nesting of the sole *P. williamsi* sequence within *P. castaneus* to misidentification of the *williamsi* sample in GenBank. They also demonstrated very shallow divergences within *P. castanoides*, suggesting that populations in Madagascar and the Seychelles were only recently colonized; these findings agreed with those of Silva et al. (2010), who found limited mtDNA differentiation of Seychelles from Madagascar specimens of *P. castanoides*, but cautioned that their sampling of Madagascar material was limited. Fritz et al. (2011a) did not propose explicit changes to taxonomy, but indicated that *chapini* could be re-instated to subspecies rank under *P. castaneus*, and that the recognition of subspecies of *P. castanoides* could be unwarranted; they also suggested the existence of cryptic taxa within *P. rhodesianus* and *P. sinuatus*, and reaffirmed the view of Vargas-Ramírez et al. (2010) that *Pelomedusa subrufa* represents a species complex.

11:20. **Podocnemididae**: Gaffney et al. (2011) analyzed the phylogeny of fossil and living species of Podocnemididae in the context of their earlier analysis of extinct related groups (Gaffney et al. 2006). They reconfirmed the monophyly of the family Podocnemididae, and largely agreed with França and Langer (2006) in not recognizing Erymnochelyinae as a subfamily.

2012 Checklist Annotations

TTWG 2012 (000.243-328.checklist.v.5) (12:6-44)

12:6. **Testudines**: Crawford et al. (2012) and Lourenço et al. (2012) analyzed the placement of turtles in a wider context based on molecular phylogeny, and each team concluded that their data provided strong support for turtles being the sister group to Archosauria (i.e., Crocodilians + Birds, and extinct related groups), rejecting hypothesized relationships of turtles as sister group to Lepidosauria (lizards, snakes, and tuataras), or as the most basal branch of the reptilian (including birds) lineage. Lourenço et al. (2012) estimated the divergence of turtles and archosaurs as dating back to the late Permian around 255 million years ago (MYA), and dated the divergence between Cryptodira and Pleurodira at about 157 MYA in the late Jurassic. Guillon et al. (2012) analyzed mitochondrial and nuclear DNA sequences available in GenBank, including whole genomes for a few species, and constructed a phylogeny for the group involving 230 turtle species representing all families and nearly all genera. Their results reconfirmed the monophyly of Testudines and of Pleurodira and Cryptodira, added support for the placement of *Platysternon* among Testudinoids, placed *Dermatemys* in the Kinosternoids, placed Trionychoids (Trionychidae + Carettochelyidae) as sister to all other Cryptodires (a finding shared with Lourenço et al. [2012] and Wang et al. [2012]), and indicated the need for additional research to better resolve various groups of chelids and testudinids at the genus level.

12:7. **Cheloniidae**: The recognition of higher taxa within the Family Cheloniidae has been inconsistent, at least since Gray's (1825) recognition of an imprecisely defined Carettidae. The inconsistency has been due primarily to the uncertainty regarding the phylogenetic relationships of *Natator* and *Eretmochelys*, and the relationships of fossil to living cheloniids. However, in the midst of the uncertainty of most of the relationships within this family, the close (sister) relationship of *Caretta* and *Lepidochelys* has not been disputed at least since Deraniyagala (1934), who initially argued for the recognition of the latter as the Carettidae, with the remaining taxa in the Cheloniidae. By 1952, Deraniyagala had changed his position to subfamilial recognition of these two groups. Some authors have followed this latter arrangement of recognizing these groups at subfamily rank (e.g., Mlynarski 1976; Pritchard and Trebbau 1984; Smith and Smith 1979), but most have followed Zangerl and Turnbull (1955) and Zangerl (1958) in recognizing these groups as two tribes within the Cheloniidae: Carettini (including *Caretta* and *Lepidochelys*) and Chelonini (including the remaining taxa: *Chelonia*, *Natator*, and *Eretmochelys*).

Impetus for continuing to recognize the Carettini as a tribe (rather than a subfamily) emerges from 1) the strong support for *Caretta* as sister to *Lepidochelys* (virtually every study since Deraniyagala); 2) the controversy about the phylogenetic positions of *Natator* and *Eretmochelys* (i.e., the possible paraphyly of the living Cheloniinae or Chelonini; review in Bowen et al., 1993); and 3) the uncertain phylogenetic relationships of numerous fossil cheloniid taxa, rendering any hierarchy likely to introduce paraphyly (e.g., see Parham and Fastovsky 1998).

Fortunately, four recent publications, by Naro-Maciel et al. (2008; based on two mitochondrial and five nuclear genes), Parham and Pyenson (2010; based on osteology), Duchene et al. (2012; based on the entire mitogenome), and Guillon et al. (2012; based on all available GenBank sequences), seem to reveal the relationships among the living genera quite definitively. These studies clearly resolved *Natator* as sister to *Chelonia*, and *Eretmochelys* as sister to (*Caretta* + *Lepidochelys*), with each of these two clades being reciprocally monophyletic. However, Duchene et al. (2012) explicitly recognized these clades as subfamilies, whereas Naro-Maciel et al. (2008) explicity referred to them as tribes; Parham and Pyenson (2010) defined the tribe Carettini for (*Caretta* + *Lepidochelys*) only, but did not use or define group names for other groups below family level, while Guillon et al. (2012) took no position. In an effort to recognize recent research consensus, to promote stability, and until the relationships among fossil cheloniid taxa are better resolved, we here recognize the two living clades as subfamilies (Carettinae and Cheloniinae), and hope that this will stimulate further research and discussion of the phylogeny of living and extinct cheloniid sea turtles.

12:8. **Cheloniidae**: Vilaça et al. (2012) reviewed the occurrence of natural interspecific hybrids among marine turtle species, and using nuclear markers demonstrated that hybridization among marine turtle species is very common along the Brazilian coast. Most of the hybridization involves male *Eretmochelys* and female *Caretta*, but problematic introgression is occurring among all four genera *Caretta, Eretmochelys, Lepidochelys*, and *Chelonia*. Vilaça et al. hypothesized that the incidence of this hybridization may have escalated only about 40 years ago, and may be the result of overhunting and local warming of the beaches due to coastal deforestation.

12:9. **Cheloniidae and Dermochelyidae**: Duchene et al. (2012) studied variation across the entire mitochondrial genome of all seven living marine turtle species, and demonstrated divergent intraspecific haplotype clades in the Pacific versus Atlantic and Indian Ocean basins for *Eretmochelys imbricata*, *Chelonia mydas*, and *Dermochelys coriacea*. However, they made no recommendations regarding intraspecific taxonomy.

12:10. ***Chelonia mydas***: Shamblin et al. (2012) demonstrated distinctive mitogenomic haplotype frequencies among the nesting populations of Green Turtles at Buck Island (US Virgin Islands), Aves Island (Venezuela), Suriname, and Tortuguero (Costa Rica), and recommended that these populations receive separate management unit status. However, although these populations are genetically distinct, the authors made no recommendations for taxonomic changes.

12:11. ***Kinosternon subrubrum steindachneri***: Bourque (2012a, 2012b) analyzed the phylogenetic placement of two new fossil *Kinosternon* taxa, and in the course of his morphological analysis found that *Kinosternon subrubrum steindachneri* was placed as sister taxon to the (*K. subrubrum* + *K. baurii*) group; consequently he suggested (2012a) and then elevated (2012b) *steindachneri* to full species rank. Regrettably, he did not specify whether his data for *K. subrubrum* were based on characters of *K. s. subrubrum*, *K. s. hippocrepis*, or a combination of these. The extreme morphological similarity of *baurii* to *hippocrepis* was already noted by Iverson (1992), and we provisionally retain *steindachneri* at subspecies rank under *subrubrum* pending further analysis.

12:12. ***Chrysemys***: Gemel and Grillitsch (2008) reported that Wagler (1821) had nomenclatorally occupied the genus name *Hydrochelys* for the species *Testudo picta* (now *Chrysemys picta*), and explicitly qualified *Hydrochelys* Wagler 1821 as a *nomen oblitum* and invalid, and qualified *Chrysemys* Gray 1844 as *nomen protectum* and valid.

12:13. ***Chrysemys picta***: The description of *Testudo picta* has generally been attributed to Schneider (1783). However, careful reading of his work indicates that the description of *picta* was based on descriptive information contained in letters from Johann Hermann of Strasbourg, and shows no indication that Schneider had access to the actual specimen, instead adding information from Hermann's letters for the sake of completeness of his (Schneider's) monograph of turtles.

Article 50.1.1 of the Code (ICZN 1999) states "However, if it is clear from the contents that some person other than an author of the work is alone responsible both for the name or act and for satisfying the criteria of availability other than actual publication, then that other person is the author of the name or act." In the case of *picta*, it is not evident how much Schneider was directly quoting from Hermann's writings, so we continue to attribute authorship of the name to Schneider, rather than 'Hermann *in* Schneider 1783'.

As an aside, we note that Hermann used different spellings for his surname over time, involving single or double 'r' and single or double 'n', as well as using French (Jean) and German (Johann or Johannes) versions of his given name. We elect to use the spelling 'Hermann' as that matches the spelling on his death certificate (indicating his preferred spelling later in life), and the spelling employed by Gmelin six years later for the tortoise named for him, *Testudo hermanni*.

12:14. ***Graptemys***: Freedman and Myers (2012) identified and sequenced a species-specific mitochondrial control region marker and two nuclear markers in a population of *Graptemys pseudogeographica* that had hybridized historically with *G. geographica*, after which geological events prevented further inbreeding for several generations. Both mitochondrial and nuclear introgression was documented. They provided additional evidence for hybridization events among *G. pseudogeographica*, *G. ouachitensis*, and *G. geographica* in other parts of the range, and combined with literature records of *Graptemys* hybridization events in captivity, concluded that reproductive isolation in *Graptemys* has evolved incompletely. In the context of conflicting evidence for monophyly vs. paraphyly of *G. pseudogeographica* and *G. ouachitensis*, they suggested that the two groups may maintain reproductive isolation in parts of their range while interbreeding in other areas.

12:15. ***Graptemys ouachitensis***: Brown et al. (2012) examined mitochondrial DNA control region sequence variation throughout the range of the subspecies *ouachitensis*, and found 18 haplotypes forming two minimally divergent groups. They also found modest divergence between *o. ouachitensis* and *o. sabinensis*, and slightly greater divergence between *ouachitensis* and *pseudogeographica*. They acknowledged earlier studies suggesting that *sabinensis* might warrant species status, and noted the need for additional studies to clarify the relationship among these taxa.

12:16. ***Pseudemys***: Using mitochondrial DNA, Jackson et al. (2012) inferred phylogenetic relationships of the taxa within *Pseudemys*. While recovering the genus as a strongly supported monophyletic group, they found no support for monophyly of the traditionally recognized redbelly (*rubiventris*) and cooter (*concinna*) species groups. They also did not find great support for monophyly of individual taxa other than *gorzugi* and *texana*, suggesting mitochondrial introgression since the glacial retreat in the Pleistocene, or recent speciation, as possible explanations. They made no specific recommendations for taxonomic changes based on their results, and indeed cautioned against making taxonomic changes within this highly complex group without comprehensive data.

12:17. ***Trachemys taylori***: McGaugh (2012) analyzed population genetic structure of *Trachemys taylori*, including a detailed genetic assessment of potential hybridization, and found significant genetic differentiation among populations, consistent with population bottlenecks, but detected no genetic evidence for hybridization of *T. taylori* with invasive *T. scripta elegans*.

12:18. ***Trachemys venusta***: Perry (1810) published a description of *Testudo panama*, a name overlooked and/or ignored ever since, until Bauer and Petit (2004) discussed it. They attributed it to the genus *Trachemys* based on the illustration and text description, and based on provenance and color pattern, regarded *Testudo panama* as referring to *Trachemys venusta* (Gray 1856b). Invoking ICZN Article 23.9, Bauer and Petit (2004) asserted that *Testudo panama* Perry 1810 was to be regarded as a *nomen oblitum* and invalid, and *Emys venusta* Gray 1856b as a *nomen protectum* whenever the two are considered as synonyms.

12:19. ***Emys orbicularis hellenica***: Schreiber 1875, in his section on *Cistudo lutaria*, listed and defined eight varieties, including var. h), to which he attributed "*Emys Hoffmanni* Fitzinger Mus. Vindob." Our previous inclusion in earlier checklists of *Emys orbicularis hoffmani* [sic] Schreiber 1875 as a synonym of *E. o. hellenica* referred in fact to a subsequent use of Fitzinger's (1835) name *Emys (Emys) hofmanni* (with a minor spelling difference) rather than to a new taxon description, and as such we now delete it from our listing of synonymized primary taxa.

12:20. ***Terrapene ornata***: Joyce et al. (2012) described a new fossil box turtle and carried out a phylogenetic analysis of extant and fossil box turtle species based on morphological and osteological characters. The fossil taxon *T. longinsulae* Hay 1908, from an undefined location in the general region of Long Island, Kansas (possible age ranging from Miocene to Pleistocene; see Joyce et al. 2012:185), scored identical for all available characters to the character states shown by both living *T. ornata ornata* and *T. o. luteola*, including two unique shared characters. They therefore placed *T. longinsulae* in the synonymy of *T. ornata*.

12:21. **Geoemydidae**: The deep divergence of living New World from Old World geoemydids has been well-established based on mitochondrial and nuclear DNA data (Spinks et al. 2004; Le and McCord 2008; Guillon et al. 2012), and has recently been dated at 57 mya (Lourenço et al. 2012). Le and McCord (2008) first proposed the recognition of living New World taxa (genus *Rhinoclemmys*) as the subfamily Rhinoclemminae. Given that the divergence of the latter is as old as, or older than, that of the widely accepted emydid subfamilies (dated at 37 mya by Dornburg et al. 2011; 57 mya by Lourenço et al. 2012), we support the subfamilial status of the genus *Rhinoclemmys*. However, we amend Le and McCord's name to Rhinoclemmydinae to correspond to the proper case for its ending *-emys* (genitive *emydis*), and we note that the group may also include North American fossil species of the genera *Echmatemys* (Hervet 2004) and *Bridgeremys* (Hutchison 2006). Correspondingly, we apply the subfamily name Geoemydinae to all Eurasian geoemydid taxa.

12:22. ***Cuora***: Phylogeny and species boundaries were studied for the genus *Cuora* by Spinks et al. (2012a) using a combination of mitochondrial and nuclear genes. While noting discrepancies between the results of the mitochondrial and nuclear data sets, concordance with traditional, morphology-based phylogenies for *Cuora* was greatest with the nuclear dataset, which they considered to represent the most reliable estimates of phylogeny and species boundaries. The species *amboinensis*, *flavomarginata*, *mouhotii*, and *yunnanensis* emerged clearly resolved, whereas the *trifasciata* and *galbinifrons* taxon clusters were less well resolved. *Cuora aurocapitata* and *C. pani* showed signs of introgression of *trifasciata* mtDNA, but were reciprocally monophyletic based on nuclear markers. The position of animals attributed to '*cyclornata*' was highly variable depending on what markers were analyzed, a result that was interpreted as being most consistent with introgression, and leading to the recommendation to consider animals with '*cyclornata*' phenotype as part of *C. trifasciata* rather than a distinct separate taxon. *Cuora zhoui* emerged as a strongly divergent species based on nuclear DNA, but its mtDNA association with *trifasciata* may indicate mitochondrial introgression. The monophyly of *C. mccordi* was well supported, though its phylogenetic position was different when nuclear and mtDNA datasets were analyzed. While some doubts were expressed about the species status of *mccordi*, the authors recommended continued treatment as a valid species for the time being. The members of the *galbinifrons* group (*bourreti*, *galbinifrons*, and *picturata*) were strongly supported as a clade of three genetically and morphologically diagnosable taxa, and while some potential gene flow was detected between these taxa, the authors recommended that they continue to be recognized as valid separate species.

12:23. ***Cuora amboinensis***: Ernst et al. (2011) evaluated the potential to use shell morphology and postorbital stripe to separate the subspecies *amboinensis* and *kamaroma* in the Philippines, as alternative approaches to the usual plastron pattern character used to differentiate these subspecies. They found that shell shape and postorbital stripe data do not necessarily correspond to plastron pattern, suggesting that animals previously identified as *kamaroma*, and as such representing a potential co-occurrence of two different subspecies in some areas of the Philippines (i.e., Palawan and Sulu), may in effect be *amboinensis* animals with a plastral pattern resembling that of *kamaroma* through introgression or phenotypic plasticity.

12:24. ***Cuora galbinifrons***: Bourret described this species in a work dated 1939 on the title page, but it was not actually published until 1940 (R. Bour, pers. comm.). We have therefore changed the date of publication from 1939 to 1940.

12:25. ***Heosemys spinosa***: Spinks et al. (2012b) examined variation in mitochondrial (cyt b) and nuclear (11 loci) DNA in a large sample of *Heosemys spinosa* that lacked locality data. Two clades were clearly identified by the mtDNA analysis, and were supported by preliminary morphological analysis, but not recovered in the nuDNA analysis. Future identification of the geographic provenance of these two clades is critical for conservation management as well as establishing the taxonomic implications of this work.

12:26. ***Mauremys caspica***: Vamberger et al. (2013) investigated population structure and history of *Mauremys caspica* based on an analysis of 14 microsatellite loci and cytochrome *b* mtDNA sequences from nearly range-wide samples (but lacking Iraq). Their results found two clusters of mitochondrial haplotypes, and four microsatellite clusters, with each mtDNA haplotype cluster comprising two of the microsatellite clusters. Specimens from Bahrain and Saudi Arabia were found to constitute a distinct microsatellite cluster, and were thus viewed as representing native (and endangered) populations. The authors proposed that each of the four identified phylogenetic clusters (i.e., Central Anatolia; eastern Turkey and Syria; Dagestan, Azerbaijan, and Iran; and Bahrain and Saudi Arabia) be treated as distinct management units. Their results did not support the validity of any of the three previously morphologically-defined subspecies, and they therefore proposed that the subspecies no longer be recognized, a recommendation that we follow here.

12:27. ***Orlitia borneensis***: Palupcikova et al. (2012) analyzed mitochondrial (cyt *b*) and nuclear (R35) sequences, and shell and scute morphometrics among *Orlitia borneensis* specimens in European collections. Most specimens lacked precise locality data because they originated from a single confiscation in 2001, but three known-locality specimens from Borneo and Sumatra were added to the sample series (no reference specimens from West Malaysia were available). Haplotype diversity in cyt *b* was found to be relatively high, with three main haplotype groups identified; nucleotide diversity was low, and phylogenetic structure was poorly supported. The three known-origin animals clustered within one of the main haplotype groups, suggesting that the confiscated animals covered much of the species' genetic diversity. Only minimal variation was found in R35 sequences. Geometric morphometrics demonstrated morphological similarity of all examined specimens. These results led the authors to conclude that all examined animals represented a single conservation unit.

12:28. ***Aldabrachelys gigantea* or *Dipsochelys dussumieri***: The latest contribution to the ongoing debate in the ICZN (case #3463) on the scientific name for the Aldabra Tortoise came from Ceríaco and Bour (2012), who traced the history of the specimen claimed to be the type of *Testudo gigantea* Schweigger from the MNHN Paris via the defunct Royal Cabinet of Natural History of Ajuda in Lisbon to the collections made in Brazil and other parts of South America by Alexandre Rodrigues Ferreira during his travels there during 1783–1792. The authors thus provided further evidence that Schweigger's type specimen of *Testudo gigantea* originated in Brazil and represents a *Chelonoidis denticulata*, providing support for possibly precluding the use of the name *gigantea* for the Aldabra Tortoise. At the time of writing of this annotation, the ICZN is voting regarding the use of either *gigantea* or *dussumieri*, and a result is expected to be published in the next issue of the Bulletin of Zoological Nomenclature.

12:29. ***Geochelone* or *Centrochelys sulcata***: Bour and Henkel (2012) described a captive colony of tortoises of different species maintained in extensive enclosures in southern France and documented a female *Centrochelys sulcata* producing viable, morphologically aberrant, hatchlings that were interpreted as hybrids between this sulcata female and a male *Dipsochelys dussumieri* [or *Aldabrachelys gigantea*], with which copulation had been observed. From each of three clutches of 20 eggs each, normal *sulcata* hatched from 15 eggs after 75–90 days, one hatchling emerged after 140–170 days and was a suspected *sulcata-dussumieri* hybrid, and 4 eggs failed to develop. The authors also reported the repeated production of hybrid hatchlings between *C. sulcata* and *Astrochelys radiata* at the A Cupulatta facility in Corsica; these either died just before emergence from the egg, or within days after hatching. These records add to the growing catalog of documented intergeneric turtle hybrids (see also annotation 12:8 above).

12:30. ***Chelonoidis chilensis***: The number of species in the *Chelonoidis chilensis* complex recognized by various authors has ranged from one to three (see TTWG 2010, annotation 10:21). However, based on an examination of a mitochondrial gene (cyt *b*) and 10 microsatellite loci, Fritz et al. (2012a) found negligible genetic variation among populations and concluded that this complex represents only a single species, *C. chilensis*. Previously described morphological variation among populations is apparently explained by Bergmann's Rule, with body size increasing with latitude. Hence, *C. petersi* and *C. donosobarrosi* were placed in the synonymy of *C. chilensis*.

12:31. ***Chelonoidis nigra* species complex**: Only two papers published in the past year bear on the taxonomy of the Galapagos tortoises, and both continue to recognize the various taxa at the species level (see TTWG 2009, annotation 09:32). Garrick et al. (2012) reported the discovery of hybrid tortoises on Volcan Wolf that were F1 hybrids between a purebred Floreana tortoise (*C. nigra*; erroneously referred to in their paper as *C. elephantopus*) and the local Volcan Wolf tortoise (*C. becki*). This led the authors to speculate that translocated

Floreana tortoises might still exist on northern Isabela. Actual rediscovery of genetically pure individuals of Floreana tortoises would reverse their current IUCN status as Extinct, and be cause for great celebration.

Based on DNA sequences from three mitochondrial genes from extant and museum specimens of Galapagos tortoises, Poulakakis et al. (2012) attempted to resolve the phylogenetic relationships and reconstruct the biogeographic history of the living and extinct taxa. Prior to their study, they recognized eleven extant and four extinct species of Galapagos tortoises, though one of the latter has not yet been described. It should be noted that the taxa they recognized a priori did not completely agree with those recognized by the TTWG. In any case, the results of Poulakakis et al. (2012) suggested that the following populations represent "independent evolutionary units" and they applied the term "species" to them: *abingdonii* (extinct in 2012, Pinta), *becki* (Volcan Wolf, northern Isabela), *chathamensis* (San Cristobal), *darwini* (Santiago), *elephantopus* (extinct, Floreana; recognized as *nigra* by the TTWG), *ephippium* (Pinzón; recognized as *duncanensis* by the TTWG), *hoodensis* (Española), *porteri* (La Reserva, Santa Cruz), and *vicina* (central and southern Isabela, and including the names *microphyes*, *guentheri*, and *vandenburghi*; matching previous TTWG checklists), an unnamed extant species (Cerro Fatal, Santa Cruz), and an unnamed extinct species (Santa Fe). They explicitly noted that two taxa were not likely to be independent evolutionary units: *wallacei* (Rabida) being subsumed under *vicina* (as already reflected in previous TTWG checklists), and *phantastica* (extinct, Fernandina; possibly introduced by humans) under *porteri*. However, in the face of pronounced morphological differences between the extreme saddleback *phantastica* and the greatly domed *porteri*, the TTWG believes that additional support must be presented before synonymization of *phantastica* is warranted. Finally, while Poulakakis et al. (2012) laudably extracted DNA from bones of museum specimens from extinct lineages, it is critical that the genotyping of actual type specimens of all possible named Galapagos tortoise taxa (including those of synonyms) be completed before final allocations of names to existing populations can be done with full confidence.

12:32. ***Gopherus flavomarginatus***: Ureña-Aranda and Espinosa de los Monteros (2012) examined variation in a mitochondrial gene in the Bolson Tortoise and not only found no geographic structure in that variation, but also noted that the existing variation was the lowest ever reported for a tortoise. They attributed this low variability to the post-Pliocene collapse of this once more widely distributed (New Mexico to central Mexico) species.

12:33. ***Gopherus polyphemus***: Based on a single mitochondrial gene fragment (ND4), Ennen et al. (2012) examined geographic variation in Gopher Tortoises and found two major haplotype assemblages that overlapped in distribution in the Appalachicola-Chattahoochee River basin. They also found some (albeit weak) support for the distinction of the Federally Threatened portion of the western assemblage to the west of the Mobile River Basin (USFWS 1987). In a more comprehensive study of both mitochondrial (cyt *b*) and nuclear microsatellite markers, Clostio et al. (2012) confirmed the Appalachicola basin as the transition region between the distinctive western and eastern lineages. In addition, based on both mtDNA and nuDNA, they noted the distinction of the populations west of the Mobile River and those in western Georgia. They concluded that the tortoises in each of these four regions should be managed independently, but they made no specific taxonomic recommendations.

12:34. ***Gopherus* species indeterminate** *Testudo australis* Girard 1858 was described based on a specimen reputedly originating from New Zealand. Clearly this specimen must have been transported by humans, as no testudinids or other non-marine turtles are known from New Zealand, living or fossil. The name has generally been overlooked or ignored, except by Boulenger (1889) who attributed it with doubt to *Gopherus polyphemus*. Based on communication with Robert Murphy and Steve Gotte, the specimen cannot be found in the USNM collection, if indeed it ever was there. Girard's description of a uniform near-black tortoise agrees nearly perfectly with *Gopherus*, except for the small nuchal (cervical) scute, which is usually wide in *Gopherus*. The scutellation on the top of the head and on the forearms, the absence of thigh spurs, as well as the shape of the caudal (supracaudal) scute are all characters that eliminate *Manouria*. *Chelonoidis* species are eliminated from consideration by the presence of a nuchal in *australis*. Therefore, we tentatively attribute *Testudo australis* Girard 1858 to the genus *Gopherus*. Attribution to any particular species is challenging: based on size and coloration, *G. berlandieri* and *G. flavomarginatus* are easily excluded, and while the Pacific location of New Zealand suggests possible seafaring or trade links with California and therefore *G. agassizii* and/or *G. morafkai*, morphological details such as the large head with rounded snout, and upward curving of the gulars, are more reminiscent of *G. polyphemus*. We therefore include *Testudo australis* Girard 1858 as a *nomen dubium* and *nomen oblitum* under *Gopherus* species indeterminate.

12:35. ***Kinixys***: Kindler et al. (2012) examined the phylogeography, phylogeny, and taxonomy of all currently recognized *Kinixys* taxa, based on examination of sequence data for three mtDNA fragments (12S, ND4, cyt *b*) and three nuclear loci (C-mos, ODC, R35). Their findings indicated that the savannah taxa, traditionally recognized as subspecies or affiliated species of *K. belliana*, represent three deeply divergent clades, which are paraphyletic with respect to the rainforest species *K. erosa* and *K. homeana*.

To reflect this phylogeny, the authors recognized their East African cluster as a valid species, for which they followed the first reviser (Bour 1979) to apply the name *zombensis* in preference over *zuluensis*. They also elevated *nogueyi* to full species status, and reconfirmed *lobatsiana*, *natalensis*, and *spekii* as evolutionarily distinct and ranked as full species.

They did not, however, present a clear arrangement of recognized taxa; their new delineation of species is presented in their Fig. 2, implying that no subspecies are recognized. They noted that their samples of *domerguei* from Madagascar clustered with *zombensis*, and it appears that they intended to transfer *domerguei* from the synonymy of *K. b. belliana* (following Broadley 1992, 1993; Fritz and Havas 2007; Branch 2008) to that of *K. zombensis*. In their text (Kindler et al. 2012:198), the five-clawed tortoises of the Central African Republic are specifically combined with the four-clawed West African animals to form the distinct species *K. nogueyi*; however, these Central African Republic records are mapped (Fig. S1) and listed (Table S1) as '*belliana belliana*' in the online supporting material.

While the TTWG generally believes that the results presented by Kindler et al. (2012) represent major advances in our understanding of *Kinixys* phylogeny, we prefer to retain a slightly more traditional arrangement for *domerguei*, pending further data. While *domerguei* may not be genetically recognizable based on the examined genes, it is morphologically well established (e.g., Bour 2006e), and we continue to recognize it as a valid taxon at subspecies rank under *zombensis* (to which it appears most closely related). Hence, we recognize the new combinations *Kinixys zombensis zombensis* and *K. z. domerguei*.

12:36. ***Testudo graeca***: Parham et al. (2012) extracted mtDNA sequence data from Iranian tortoises of the *T. graeca* complex, specifically the holotype of *T. g. zarudnyi* and topotypes of *T. g. buxtoni* and *T. g. perses*. Their results confirmed the previous work of Fritz et al. (2007a, 2009) regarding the existence of two distinctive mitochondrial haplotypes in Iran, one in the northwest, and one in eastern and central regions.

Using AFLPs (amplified fragment length polymorphisms) from samples across the range of the *T. graeca* species complex, Mikulíček et al. (2013) identified four geographically defined genetic groups: 1) western Mediterranean (Morocco and Spain to Libya); 2) Balkans-Middle East (Bulgaria and Romania to southwestern Russia, Azerbaijan, eastern Turkey, and southern Israel); 3) Caucasian (extreme eastern Turkey, Russia, and southeastern Azerbaijan to northwestern Iran); and 4) central and eastern Iran. These groups generally correspond to the mtDNA haplotype lineages identified by Fritz et al. (2007a, 2009), but with one to four mitochondrial lineages per AFLP group.

Considered together, these two data sets suggest that the western Mediterranean and central-eastern Iran groups are both divergent and allopatric, and thus could be considered as distinct species. The oldest available names for these groups are *T. graeca* (including *cyrenaica*, *lamberti*, *marokkensis*, *nabuelensis*, *soussensis*, and *whitei*) and *T. zarudnyi*, respectively. The remaining two groups come into contact in the eastern Caucasus, with some mtDNA evidence of gene flow between them. Hence, there remains uncertainty as to whether they represent distinct evolutionary units worthy of species status. The oldest available names for those two groups are *T. terrestris* (Balkans-Middle East) and *T. buxtoni* (Caucasus; including *armeniaca*, *perses*, and *pallasi*). Unfortunately, variation in neither set of markers corresponds well with described morphological variation in this complex, on which the traditional taxonomy has been based.

Pending future studies of variation in nuclear markers and a re-examination of morphological variation to determine minimally plastic characters that correspond to the currently defined genetic groups (i.e., dismissing color and general body size and shape), we prefer to retain *T. graeca* as a single species, with no changes in the subspecies recognized from our previous checklist.

12:37. ***Apalone spinifera***: McGaugh (2012) examined variation at ten microsatellite loci for populations of *Apalone spinifera* within and outside of the

Cuatro Ciénegas basin in Mexico. She found considerable divergence among all sampled populations (particularly eastern versus western basin localities), but found no genetic variation associated with carapacial color variation within the basin (the basis for the original description of *A. s. atra*). She reported negligible differentiation between softshells sampled inside the basin compared to those outside, but provided no indication whether additional *A. s. emoryi* were sampled since the range-wide analysis of *A. spinifera* reported by McGaugh et al. (2008) and did not provide a detailed comparison between *Apalone* within the Cuatro Cienegas basin versus outside the basin. As McGaugh did not make an explicit taxonomic recommendation to synonymize *atra* with *emoryi*, we conservatively continue to recognize *atra* as before, at subspecies level.

12:38. ***Nilssonia gangetica***: An analysis of mitochondrial and nuclear DNA sequence data by Liebing et al. (2012) confirmed the monophyly of the genus, resolved the placement of *N. formosa* as sister to other *Nilssonia*, and identified significant intraspecific genetic variation within *N. gangetica* corresponding to river basin of origin. Populations from the Brahmaputra, Mahanadi, and combined Indus and Ganges basins were each genetically distinct, and worthy of separate management. The authors did not support species recognition of the three identified units, but noted that if these units were given subspecies status, the name *mahanaddica* (Annandale 1912b) is available for the Mahanadi basin population, and the nominate trinomial would apply to the Indus-Ganges population. No name has been applied to the Brahmaputra population. Until the three intra-specific populations are adequately characterized and named, we continue to recognize *N. gangetica* as monotypic.

12:39. **Chelidae**: It was assumed by Gaffney (1977) that the three long-necked taxa in the Chelidae (*Chelodina*, *Hydromedusa* and *Chelus*) formed a monophyletic lineage. However, Pritchard (1984) proposed that these three taxa were not necessarily closely related, based on the major structural differences in how they arrived at their long-necked condition, a position generally consistent with the phylogenetic arrangement previously proposed by Baur (1893a). Sequencing of 12S mtDNA was used to demonstrate that the Australian radiation of the Chelidae formed a monophyletic group (Seddon et al. 1997; Georges et al. 1998) and that the shorter-necked South American taxa (including *Chelus*) were also a monophyletic group, with *Hydromedusa* a third lineage (Georges et al. 1998). At that time Georges et al. (1998) proposed names for the three lineages; Chelinae [as Chelidinae] for *Chelus* and its South American relatives; Chelodininae for the Australasian species; and Hydromedusinae for the genus *Hydromedusa*, a clade that also includes the fossil genus *Yaminuechelys* (de la Fuente et al. 2001) and hence is not monotypic. Further morphological work agreed with Pritchard (1984) and supported the molecular results with differences in skull, shell, and cervical structures among the three monophyletic lineages (Thomson 2000), indicating that what gross similarity there is between the long-necked forms was a result of convergence and not of shared ancestry. In the ten or so years since these publications, numerous studies have added further support to this phylogenetic arrangement, which was summarized and further supported by Guillon et al. (2012). Therefore we now include these three subfamily assignments in this edition of the checklist.

We are aware of the family-group name Hydraspidina Bonaparte 1836, based on the genus *Hydraspis* Bell 1828, whose type species is *Testudo* [now *Chelodina*] *longicollis*, as a potential source for the subfamily name for chelids of the Australia-New Guinea region. However, as Bonaparte's concept of *Hydraspis* differed fundamentally from that of Bell, to the point of excluding *longicollis* from *Hydraspis* by properly placing it in *Chelodina* Fitzinger 1826, revival of the family-group name Hydraspidina (as Hydraspidinae for this subfamily) would lead to unnecessary confusion. In the absence of strict ICZN priority requirements for family-group names, we therefore use the name Chelodininae Baur 1893b for the chelids of the Australia-New Guinea region.

12:40. ***Mesoclemmys dahli* and *M. zuliae***: Based on both mitochondrial and nuclear gene sequence variation, Vargas-Ramírez et al. (2012a) confirmed the species distinction of *Mesoclemmys dahli* and *M. zuliae*, and identified two geographically isolated, weakly divergent populations within *M. dahli* (Córdoba and Cesar Departments, Colombia). Further sampling will be necessary to determine if this divergence has taxonomic implications.

12:41. ***Mesoclemmys heliostemma* and *M. raniceps***: Because some authors (e.g., Rueda-Almonacid et al. 2007) have questioned whether *M. heliostemma* is distinct from *M. raniceps*, Molina et al. (2012) undertook a multivariate morphometric study of those two taxa (and *M. gibba*). Their results supported the validity of *M. heliostemma*, and identified eight new localities that significantly expand the known range of the species across the Amazon basin.

12:42. ***Pelusios castanoides***: Analysis by Fritz et al. (2012c) of mitochondrial genes of *P. castanoides* revealed that samples from Madagascar and the Seychelles were weakly differentiated from each other, and significantly different from the sampled mainland populations. However, sparse sampling from the mainland precluded any final conclusions about the origins of the Malagasy and Seychelles populations, and therefore the validity of the currently named, endemic subspecies of the Seychelles. As the population of Madagascar is related more closely to that of the Seychelles than to the continental African populations, a subspecies designation for these combined populations might be warranted. The oldest available name is *kapika* Bour 1979; however, we defer any changes to our checklist at this time.

12:43. ***Pelusios subniger***: Parallel analysis by Fritz et al. (2012c) of mtDNA samples of *Pelusios subniger* from mainland Africa, Madagascar, and the Seychelles demonstrated the existence of a cryptic, unnamed taxon from the Democratic Republic of the Congo, but no significant variation among all other sampled populations. Based on these results, the authors suggested that *subniger* was introduced by humans to both Madagascar and the Seychelles, and recommended that the supposed endemic Seychelles subspecies *P. s. parietalis* be placed into the synonymy of a monotypic *P. subniger*. However, reanalysis of the morphological differentiation that originally distinguished these taxa has not been carried out, and we are reluctant to make a definitive change at this time, particularly for a taxon with such significant regional conservation concerns. We await further analysis before amending this taxonomy.

12:44. ***Podocnemis lewyana***: Based on 10 microsatellite loci and a mitochondrial DNA fragment, Vargas-Ramírez et al. (2012b) found low genetic variability across the range of *Podocnemis lewyana*, consistent with a significant historic population bottleneck. They did identify three weakly differentiated genetic management units: 1) the Upper Magdalena River Basin; 2) the Lower Magdalena, Lower Cauca, and San Jorge Basins; and 3) the Sinú River Basin, but made no taxonomic recommendations.

2014 Checklist Annotations

TTWG 2014 (000.329-479.checklist.v.7) (14:1-50)

14:1. ***Macrochelys temminckii***: Two new names for Alligator Snapping Turtles were coined by Hoser (2013). There are significant nomenclatural, technical, and biological problems inherent in these descriptions, and at this time it seems appropriate to treat his names, *Macrochelys temminckii muscati* and *Macrochelys maxhoseri,* as unavailable synonyms of *Macrochelys temminckii*.

14:2. ***Caretta caretta***: Considerable confusion has surrounded the names and authors and dates of publication of the turtle descriptions published in various outputs of the *Expédition Scientifique de Morée*, currently cited in our checklist as Valenciennes (1833), Bibron and Bory de Saint-Vincent (1833), and Bory de Saint-Vincent (1835). See the detailed clarification below in annotation 14:25 for *Emys orbicularis hellenica*. The name *Chelonia pelasgorum* was first published on plate 6 by Valenciennes (1833), but rendered as *C. pelasgica* in the subsequent text by Bibron and Bory de Saint-Vincent (1833), where they synonymized it with *Chelonia caouanna* (= *Caretta caretta*).

14:3. ***Eretmochelys***: In last year's checklist, in annotation 13:7, we outlined our reasoning for recognizing the subfamilies Cheloniinae and Carettinae. Unfortunately, we made an editorial error in listing *Eretmochelys* under the Cheloniinae when, in fact, studies have shown that it is more closely related to *Caretta* and *Lepidochelys,* and belongs in the Carettinae, as we pointed out in our annotation. We correct the error in this year's checklist.

14:4. ***Eretmochelys imbricata***: The junior synonym *Chelonia grisea* Eschscholtz 1829b has for many years been incorrectly cited as *Chelonia griseam* in our previous checklists and in Fritz and Havaš (2007) and extensively on the web. Having finally successfully accessed the obscure original publication, we now note this long-standing error and correct it.

14:5. ***Chelonia mydas***: We note also that in the same obscure publication cited above, Eschscholtz (1829b) also described *Chelonia castanea* from Surinam as a new species. The name has been overlooked since its description and is a *nomen oblitum* and junior synonym of *C. mydas*.

14:6. ***Dermochelys coriacea***: The original citation for the junior synonym *Dermatochelys porcata* is actually Wagler (1830b), not Wagler (1833) as listed in our previous checklists, but which contained no new turtle descriptions.

14:7. ***Dermochelys coriacea***: In our previous checklists we had included the name *Testudo marina* Wilhelm 1794 in the synonymy of *D. coriacea*, based on its inclusion in older checklists (e.g., Fritz and Havaš 2007). However, examination of Wilhelm's (1794) work indicates that his use of the name *Testudo marina* was as an incorrect collective group name for "marine" species (sea turtles and softshells), as he also grouped most "terrestrial" turtles (testudinids and kinosternids) under the incorrect group name *Testudo terrestris*, and all other freshwater turtles under the group name *Testudo fluviatilis*. In discussing separate species under these group names, he used names previously described by other authors (including a description of the Leatherback, using the name *Testudo coriacea*), but not in a consistently binomial manner. His work therefore has no standing nomenclaturally, and we have removed the name *Testudo marina* Wilhelm 1794 from the synonymy of *D. coriacea*.

On the other hand, Ranzani (1832) published a description in Latin of the Leatherback Turtle in which he described it as *Testudine coriacea marina*. This description is valid (as the trinomen *Testudo coriacea marina*), as per ICZN Code Article 11(h)(ii) allowing for the use of adjectival Latin descriptions, as previously noted by Smith and Rhodin (1986) in regard to the validity of the original authorship of *Testudo coriacea* Vandelli 1761.

14:8. ***Dermatemys mawii***: González-Porter et al. (2013) presented microsatellite data that supported their previous mitochondrial DNA studies (González-Porter et al. 2011) in recognizing populations of *Dermatemys mawii* in the Papaloapan River drainage as genetically distinctive. However, they made no taxonomic recommendations based on their results. In addition, they also identified a small sample of genetically divergent individuals in the Sarstun and Salinas River basins along the southeastern distribution of the species that they speculated might represent a cryptic taxon.

14:9. **Kinosternidae**: Iverson et al. (2013) sequenced three mtDNA and three nuclear markers for every recognized species and most subspecies of kinosternids. Their analyses revealed three well-resolved clades within the Kinosterninae, corresponding to *Sternotherus*, a previously unnamed clade that they described as the new genus *Cryptochelys*, and *Kinosternon* sensu stricto. Their molecular data support for *Cryptochelys* was strong, but data support for non-monophyly of *Kinosternon* with respect to *Sternotherus* was weak. The identified groups are broadly consistent with morphological and biogeographical features. Their new genus *Cryptochelys* was diagnosed based on an extensive set of morphological and molecular characters, and contains the designated type species *leucostoma,* as well as *acuta*, *angustipons*, *creaseri*, *dunni*, and *herrerai*.

As we are aware of a parallel study of kinosternid phylogenetics, currently in review, that reaches different taxonomic conclusions, we present the recommended taxonomy of Iverson et al. (2013) as an additional alternative to the traditional arrangement, in the knowledge that we will revisit kinosternid taxonomy again in our next edition, and hopefully come to a consensus position then.

14:10. ***Kinosternon abaxillare***: A multivariate analysis of morphometric data by Berry (1978) demonstrated the distinctiveness of the endemic, allopatric taxon *K. scorpioides abaxillare* from the parapatric *K. s. cruentatum*. In addition, preliminary molecular sampling of the *K. scorpioides* complex by Iverson et al. (2013) suggested that *K. s. abaxillare* was more closely related to *K. oaxacae* than to *K. s. cruentatum* (or any other *K. scorpioides*). Given both the morphometric and molecular evidence, the latter authors followed Alvarez del Toro (1972, among many others) and suggested that *K. abaxillare* be recognized as a full species. Until more thorough geographic and molecular sampling is completed, we acknowledge both options in this checklist, but treat the taxon as more likely a species.

14:11. ***Kinosternon chimalhuaca***: In 1996, while the original, full description by Berry et al. (1997) of *K. chimalhuaca* was in press, it was shared with Manfred Rogner for inclusion in his forthcoming book. However, though unintended, Rogner's abbreviated version, clearly attributed to Berry et al., was published first (in 1996). Hence, although many authors have cited Berry et al. (1997) as the original description for this taxon, the proper attribution should be Berry, Seidel, and Iverson *in* Rogner (1996). The ICZN has now been petitioned (Rogner et al. 2013) to officially confirm this proper authorship and date, which has already been used in all previous TTWG checklists.

14:12. ***Kinosternon subrubrum steindachneri***: Based on osteology, Bourque (2012) recommended that *K. s. steindachneri* be elevated to full species status, as it was originally described. Preliminary molecular data provided by Iverson et al. (2013) supported this conclusion. However, until a more complete, range-wide study of molecular and morphological variation of the *K. subrubrum-baurii* complex is available, we here retain *steindachneri* as a subspecies of *K. subrubrum*.

14:13. **Staurotypinae or Staurotypidae**: Highlighting the extensive divergence of the staurotypines from the kinosternines based on morphology (Hutchison 1991), genetics (Iverson et al. 2103), karyotype (Bickham and Carr 1983), and sex determination mechanisms (Ewert et al. 2004), Iverson et al. (2013) followed Bickham and Carr (1983) in recognizing the Staurotypidae as a separate family. Within the TTWG we have differing opinions on the appropriate ranking of this taxonomic node, and recognize that the views and actions of the wider turtle taxonomic community will determine its eventual accepted ranking; until consensus emerges, we provide alternative rankings in the checklist.

14:14. ***Graptemys***: In a historical review of the taxonomic history of the genus *Graptemys*, Lindeman (2013:20) mentioned two genus names from an unpublished manuscript by Georg Baur: *Neoclemmys* (intended to include *pseudogeographica* and *oculifera*) and *Megaloclemmys* (for *pulchra*), while *Graptemys* would have been retained for *geographica* and *kohnii*. However, Lindeman only used these names in a conditional manner, without formal status as valid taxa, and hence the names *Neoclemmys* and *Megaloclemmys* were not made available according to Article 15.1 of the International Code of Zoological Nomenclature (see also annotation 14:19 for *Graptemys intermedia*).

14:15. ***Graptemys flavimaculata***: Using microsatellite loci, Selman et al. (2013) demonstrated a significant degree of genetic structure across the range of the species in the Pascagoula River basin, with the greatest divergence between the main Pascagoula basin and the lowland Escatawpa River tributary, historically separate drainages. Although they urged that at least these two units be managed separately, they made no taxonomic recommendations.

14:16. ***Graptemys ouachitensis* or *G. o. ouachitensis***: See annotation 14:19 below regarding the taxon *sabinensis*, previously listed as a subspecies of *ouachitensis*, but now conditionally elevated to full species status, therefore also necessitating listing the Ouachita Map Turtle as a full species, rather than the nominate subspecies.

14:17. ***Graptemys pulchra***: In his historical review of the taxonomic history of *Graptemys*, Lindeman (2013:20) also made reference to Baur's manuscript names for the species he eventually described as *Graptemys pulchra*; we hereby designate these names, *G. alabamensis* and *G. grandis*, as *nomina nuda*, and associate them with the synonymy of *G. pulchra*, as they were considered for application to that taxon.

14:18. ***Graptemys sabinensis* or *G. o. sabinensis***: Originally described as a subspecies of *Graptemys pseudogeographica* by Cagle (1953a), the Sabine Map Turtle (*G. sabinensis*) was later classified by Vogt (1980) as a subspecies of *G. ouachitensis*, and most subsequent authors have followed that arrangement. However, based on a small sample of skulls, Ward (1980) believed that *sabinensis* was so distinctive that it warranted species status. Recent analyses of morphology, mitochondrial DNA, and nuclear DNA have generally failed to resolve the relationships of *sabinensis* with confidence, and the interrelationships of the "narrow-headed *Graptemys*" remain largely unresolved (Stephens 1998; Stephens and Wiens 2003; Myers 2008; Wiens et al. 2010; Brown et al. 2012). Based on these previous studies and his own extensive examinations of Gulf Coast *Graptemys* specimens, Lindeman (2013) noted that *sabinensis* is allopatric, non-intergrading, and diagnosable morphologically, and concluded that it should be recognized as a full species. While subspecific as well as specific recognition can each be supported, we conclude that enough uncertainty remains regarding this lineage to list it as either a species or subspecies. Further sampling of the nuclear genome and more strongly supported phylogenetic trees will be necessary to settle this issue as well as the relationships across the entire genus *Graptemys*.

14:19. ***Graptemys sabinensis* or *G. o. sabinensis*:** In a checklist of turtles of Louisiana, Beyer (1900) listed "*Malacoclemmys intermedia* Baur" from the "southern and southwestern parts", referring to a manuscript name by Georg Baur for the taxon subsequently described as *Graptemys pseudogeographica sabinensis* by Cagle (1953a). The name was based on specimens from the Mermentau River basin, now in the Tulane University Museum collection, sent to Baur by Joseph Gustave Kohn (Lindeman 2013). The original publication of the name *Malacoclemmys intermedia* is therefore attributable to Beyer and pre-dates the name *sabinensis* Cagle by 53 years, but is clearly a *nomen nudum*. Furthermore, it has not been used in over 113 years and would have the status of *nomen oblitum*. In his discussion of the history of the name *Graptemys intermedia* used by Baur in his unpublished manuscript, Lindeman (2013) published Baur's original manuscript drawings (Fig. 2.4) and a photograph of the Kohn specimens on which Baur had intended his diagnosis to rest (Fig. 8.18). Lindeman also clearly identified *intermedia* as a synonym of the taxon he recognized by the name of *G. sabinensis*. However, Lindeman only, and consistently, used the name *G. intermedia* in a conditional manner, without formal status of valid taxon, and the name *intermedia* as used by Lindeman, published after 1960, has not been made available according to Article 15.1 of the International Code of Zoological Nomenclature.

14:20. ***Pseudemys***: Based on three mitochondrial and ten nuclear gene loci, Spinks et al. (2013) examined variation across all recognized taxa of the genus *Pseudemys*. Their analyses revealed essentially no support for currently recognized species groups, species, or subspecies. Only *P. gorzugi* was consistently recovered as monophyletic across all their analyses, while their molecular evidence identified three geographically cohesive groups that do not correspond to current species boundaries. They concluded that the genus *Pseudemys* has probably been oversplit taxonomically. However, they made no explicit recommendations for change until a much larger and more definitive, multi-character data set is brought to bear on this complex. Thus we retain *Pseudemys* essentially unchanged from the previous checklist.

14:21. ***Trachemys***: In their book on Mexican turtles, Legler and Vogt (2013) continued to follow the taxonomy for *Trachemys* as used by Legler (1990) (i.e., all Mexican taxa as subspecies of *T. scripta*), and did not provide data or rationale to refute the phylogenetic data and taxonomic opinions published since 1990. Because implementing that taxonomy here would reverse 23 years of increased understanding and progress toward a stable classification of this complex genus, we have not incorporated the *Trachemys* taxonomy presented by Legler and Vogt (2013) in our current checklist.

14:22. ***Trachemys* (Caribbean)**: Parham et al. (2013) examined variation in mitochondrial and nuclear DNA markers for *Trachemys* populations across the Greater Antilles. They identified the morphologically distinct population reported by Tuberville et al. (2005) in northwestern Jamaica as *T. d. decussata*, representing a significant range extension from eastern Cuba. Parham et al. (2013) demonstrated the monophyly of West Indian taxa, as well as evidence of hybridization between *T. decorata* and *T. stejnegeri* in the southern Dominican Republic, and between *T. terrapen* and *T. d. decussata* in northwestern Jamaica. The authors were unable to determine whether the presence of *decussata* on Jamaica and localized hybridization with *terrapen* was the result of natural or human-mediated dispersal.

Their data also supported the continued recognition of the subspecies *T. s. stejnegeri* (Puerto Rico) and *T. s. vicina* (Hispaniola), with occasional gene flow (natural or human-mediated) between them. They also acknowledged that morphological and genetic data suggest the recognition of *T. d. decussata* (eastern Cuba) and *T. d. angusta* (western Cuba) as full species, but declined to make that recommendation pending further sampling in Cuba.

Finally, they speculated that the occurrence of *T. d. angusta* on the Cayman Islands was "non-native". Given that Grand Cayman was periodically inundated even in the latest Pleistocene (20–25 thousand years ago; Iturralde-Vinent 2006), and that the prevailing winds and currents would make a natural colonization from the northwest difficult, we concur that the Grand Cayman populations of *T. d. angusta* are likely the result of human introduction. This is further supported by Echternacht et al. (2011) who, in their review of the herpetofauna of the Cayman Islands, explicitly stated that since no *Trachemys* fossils have been found in peat deposits on the island (which contained many other vertebrates), they presumed *T. decussata* to be introduced.

In addition, Parham et al. (2013) analyzed a small sample of *Trachemys* from Central America that yielded results indicating genetic similarity of *T. venusta* and *T. emolli*, demonstrating the need for further sampling and analysis to evaluate the sweeping taxonomic changes proposed by Fritz et al. (2012) and the subspecies described by McCord et al. (2010). Until such additional information becomes available, Parham et al. (2013) recommended taxonomic conservatism and cautious interpretation of preliminary results, and proposed no taxonomic changes.

14:23. ***Trachemys* (Central America)**: Using mitochondrial DNA sequence data for *Trachemys* downloaded from the European Nucleotide Archive and new data from two Honduran specimens, McCranie et al. (2013) confirmed that the range of the taxon *emolli* extends from northwestern Costa Rica to southeastern El Salvador (see Ibarra Portillo et al. 2009). Because of the extensive overlap in their analysis with the data used by Fritz et al. (2012), McCranie et al. (2013) supported their earlier taxonomic recommendations. McCranie et al. (2013) also commented on the status of the taxon *T. v. uhrigi*, originally described from Honduras, but subsequently reported from Colombia, Costa Rica, Nicaragua, and Panama, and argued that the diagnostic coloration of *uhrigi* is not exhibited consistently by Caribbean Honduran specimens (and presumably occurs in individuals of *T. venusta* as far away as Colombia), and suggested that *T. v. uhrigi* has no taxonomic validity. In contrast, Páez et al. (2012) listed *T. v. uhrigi* as being the subspecies occurring in the Colombian Departments of Antioquia and Chocó. However, until additional molecular data are forthcoming from the Caribbean versant of Central America, particularly from the Yucatan peninsula, Honduras, Nicaragua, Costa Rica, Panama, and Colombia, we adhere mainly to the alternative taxonomies of Seidel (2002) and Fritz et al. (2012).

14:24. ***Emys* (sensu lato)**: In a molecular analysis of emydine turtles, Angielczyk and Feldman (2013) found strong support for a monophyletic *Emys* (including *orbicularis*, *blandingii*, and *marmorata*) using mtDNA sequence data, but strong support for a paraphyletic *Emys* using 14 nuclear genes. The combined data set resolved a monophyletic *Emys*, but the results were apparently driven by the much more variable mitochondrial genome. Despite some uncertainty about the monophyly of *Emys* sensu lato (see also Wiens et al. 2010), we retain both options of a narrow and a broad definition of the genus *Emys*, pending even more genetic data.

14:25. ***Emys orbicularis hellenica* and *Mauremys rivulata***: Considerable confusion has surrounded the names and authors and dates of publication of the turtle descriptions published in various outputs of the *Expédition Scientifique de Morée*, currently cited in our checklist as Valenciennes (1833), Bibron and Bory de Saint-Vincent (1833), and Bory de Saint-Vincent (1835). Sherborn and Woodward (1901) documented that the zoology sections dealing with vertebrates, in which turtle descriptions (*Chelonia pelasgorum, Emys hellenica, Emys iberica*, and *Emys rivulata*) appear, were all first published sequentially in 1833 in looseleaf "*livraisons*" with sets of plates ("*planches*") and text, and later all the plates were re-published as a bound volume in 1835. Confusion about the sequence of publication of the turtle plates and the text has arisen due to the imprint of "1832" on the frontispiece of the text, but it actually appeared in 1833, after the plates. That the unbound turtle plates by Valenciennes (1833:pls.6–9) were published first was clearly documented in the subsequent text by Bibron and Bory de Saint-Vincent (1833:61, lines 5–9, 21–23, footnote 2), who referred to the specifically numbered plates as coming from the "troisième séries".

The name *Emys hellenica* was first published in the third series of *planches* (plate 8, figures 2–2a), where it was attributed to Valenciennes in the legend, and then subsequently described (as *Cistuda hellenica*) on pages 61–62 of the text, where it was attributed to Bibron and Bory de Saint-Vincent. Proper original attribution of the name is therefore *Emys hellenica* Valenciennes *in* Bory de Saint-Vincent 1833:pl.8. That name was subsequently synonymized, as "Cistude hellénique", with *Cistudo europaea*, another synonym of *Emys orbicularis*, by Duméril and Bibron (1835:227), but is today recognized as a valid subspecies of that taxon (Fritz et al. 2005; Fritz and Havaš 2007).

According to Bibron and Bory de Saint-Vincent (1833), in their text on page 61, lines 5–9, under the synonymy of *Cistuda europaea* (= *Emys orbicularis*), they noted that Valenciennes (1833) had "for unknown reasons" ("*on ne sait pourquoi*") named the juvenile specimen of *Emys* on plate 9 as *iberica* [not *Emys iberica* Eichwald 1831]. The original typeface in the legend of plate 9 reads "*Emyde ibérienne*. *Emys iberica*. *Val*."; however, in at least some contemporary copies of the subsequently bound atlas (Bory de Saint-Vincent 1835), a small printed label in similar text reading "*des anciens*" has been pasted over "*ibérienne*", and a second label reading "*antiquorum*" pasted over "*iberica*" and the first part of "*Val*." We do not know if these labels were originally added as an "erratum" to all looseleaf copies at the time of their original publication in 1833, or more likely only to some of them when bound into the atlas in 1835, because some copies today lack the labels (e.g., that in the Paris Museum, but apparently not those in the British Museum [Gray 1844:31] or the Museum of Comparative Zoology at Harvard [Loveridge and Williams 1957:213]). It must also be noted that Bibron and Bory de Saint-Vincent (1833) commented on the name *iberica* printed on the original plate, but made no mention of the name *antiquorum*. This uncertainty greatly complicates these names and their authorship. If the "*antiquorum*" labels were added to all copies of this work by the publisher, then *Emys iberica* Valenciennes was technically never described, and *Emys antiquorum* would presumably be attributable to Bory de Saint-Vincent, the editor of the 1835 atlas, although the remaining partial exposure of the name "*Val*." led Gray (1844:31) to attribute the name *antiquorum* to Valenciennes when he (Gray) synonymized that name with *Cistudo europaea* [= *Emys orbicularis*]. If the labels were inconsistently added to only some copies of the original work, then the name *antiquorum* would have no nomenclatural status. Pending the availability of additional historic information about the consistency of this labeling and the reasons behind it, we here attribute the name *Emys iberica* to Valenciennes *in* Bory de Saint-Vincent (1833), and declare *Emys antiquorum* Bory de Saint-Vincent (1835) a *nomen* *novum* and *nomen nudum*; and interpret both names as junior synonyms of *Emys orbicularis hellenica* (Valenciennes *in* Bory de Saint-Vincent 1833).

14:26. ***Emys orbicularis,* ssp. indet.**: Rook et al. (2013) synonymized the two Upper Pliocene fossil taxa, *E. major* and *E. latens*, described by Portis (1890), with *Emys orbicularis*, citing an unpublished thesis by Chesi (2009). The fossils were from Valdarno (d'Arno valley) along the northwest Italian Ligurian coast, within the range of the present-day subspecies *E. o. galloitalica*. However, given the subsequent Pleistocene and Holocene climate-associated range shifts of *E. orbicularis*, we do not associate these fossil names with any current subspecies at this time.

14:27. ***Terrapene***: Martin et al. (2103) examined variation in two mitochondrial genes and one nuclear gene across all previously recognized taxa of *Terrapene* (except *T. nelsoni klauberi*). Both mtDNA and a single nuclear gene supported the monophyly of *T. ornata*, *T. carolina* (including *T. coahuila*), and *T. nelsoni*. All analyses confirmed the distinctiveness of *T. nelsoni* and *T. ornata*, but found no support for distinction between *T. o. ornata* and *T. o. luteola*, and hence, they recommended the synonymy of the latter. For mtDNA only, they found significant divergence within the previously recognized *T. carolina* group taxa (including *T. coahuila*), and identified a western clade (including *triunguis, mexicana*, and *yucatana*) and an eastern clade (all others, including *coahuila*); the western clade was strongly supported based on mtDNA, but the eastern clade had only very weak support. The authors recommended the recognition of the western clade as a full species, *T. mexicana*, with three subspecies (*mexicana, triunguis,* and *yucatana*). They were not able to resolve the relationships among *bauri*, *major,* and *carolina*, and retained them as subspecies of *T. carolina*. Similarly, the relationship of *T. coahuila* to Gulf Coast *T. carolina* was suggested but not resolved, and they recommended continued recognition of *T. coahuila* at the species level. Meanwhile, Legler and Vogt (2013) treated *T. mexicana* and *T. yucatana* as full, monotypic species, and continued to recognize *T. o. luteola* as the subspecies of *T. ornata* inhabiting Mexico.

As the suggested taxonomic rearrangements of Martin et al. (2013) and Legler and Vogt (2013) are not based on a comprehensive analysis of morphology, mitochondrial DNA, and nuclear genes, and show disagreement with both the traditional taxonomy of *Terrapene* and the molecular phylogeny presented by Butler et al. (2011), we consider that the phylogenetic relationships within this genus remain insufficiently resolved for us to adopt such significant taxonomic changes, especially in light of the desire for minimal fluctuations in taxonomy of this genus, given its extensive inclusion in State, Federal, and CITES legislation.

14:28. ***Terrapene putnami***: This species was described by Hay (1906) based on a single fossil hypoplastron from the Alafia River basin in Florida with imprecise stratigraphic data, but presumably Late Pleistocene. The taxon has been widely assumed to represent virtually all eastern North American fossil *Terrapene* material from the Miocene to the late Pleistocene, which is clearly an exaggerated concept of the taxon (Ehret et al. 2011). This has become increasingly problematic because of recent molecular analyses of extant taxa that suggested that *T. putnami* should be synonymized with *T. carolina major* (Butler et al. 2011; followed in TTWG 2012) or that argued that *putnami* be retained as an extinct subspecies of *T. carolina* (Martin et al. 2013). To facilitate future attempts to resolve the relationships among living and fossil turtles of the *T. carolina* complex, Ehret et al. (2013) proposed to the ICZN the designation of a neotype for *T. putnami* with precise locality and stratigraphic data, and consisting of a nearly complete carapace and plastron with numerous associated postcranial elements.

We here maintain *T. putnami* as a synonym of *T. carolina major* as recommended by Butler et al. (2011), until the ICZN makes a ruling and additional research clarifies the relationships of extant and fossil members of the *T. carolina* group.

14:29. ***Mauremys annamensis***: *Clemmys guangxiensis* was described by Qin (1992) based on two market specimens supposedly originating from Guangxi, China. Iverson and McCord (1994) speculated that the type series might be a composite of *Mauremys mutica* and *M. iversoni* (the latter now known to be of hybrid origin between *Cuora trifasciata* and *M. mutica*; Parham et al. 2001). As a result, we have previously included *C. guangxiensis* in the synonymies of both *C. trifasciata* and *M. mutica*. However, Hu et al. (2013) provided sequence data from a single mitochondrial gene for four specimens of *Mauremys* from Guangxi purported to be *M. guangxiensis*, along with two *M. mutica* from the same province. When included in a phylogenetic analysis with sequences of *Mauremys* downloaded from GenBank, they determined that their four specimens of *M. guangxiensis* were nearly identical to *M. annamensis* (which is endemic to Vietnam) and not *M. mutica*. Assuming their four specimens represented the same taxon as described by Qin (1992), Hu et al. (2013) interpreted their results as indicating that *M. guangxiensis* was either synonymous with *M. annamensis* or a subspecies of the latter. However, their analysis did not address the possibility of a hybrid origin for *guangxiensis*. Pending further study of specimens being referred to *M. guangxiensis*, we add *guangxiensis* to the synonymy of *annamensis* (as partim, hybrid), while retaining its inclusion in the synonymy of *M. mutica* and *C. trifasciata*.

14:30. ***Mauremys japonica* and *Pelodiscus sinensis***: Temminck and Schlegel's publications in Fauna Japonica are usually recorded as having been published in 1835. However, their chapter on "Les Cheloniens" (pp. 1–80, plates 1–9) was actually published in 1834 (see Hoogmoed et al. 2010) and only contained invalid vernacular names. Their valid names *Trionyx japonica* = *Pelodiscus sinensis* and *Emys vulgaris japonica* = *Mauremys japonica* were not published until 1838 when Schlegel wrote and published (on p. 139) his dated explanation of the previously published plates and for the first time provided Latin names for the two new species described earlier in French (*Trionyx stellatus* Var. Japon [pls. 5 and 7] = *Trionyx japonica* and *Emys palustris* Var. Japon [pls. 8 and 9] = *Emys vulgaris japonica*). Although the species name "*palustris*" was used on the plate, in the text it was corrected to "*vulgaris*", but never with a specific "var. Japon" modifier attached to it.

14:31. ***Rhinoclemmys***: Based on both mitochondrial and nuclear DNA data, Vargas-Ramírez et al. (2103) identified significant phylogeographic structuring within *R. melanosterna*, but found conflicting phylogenetic relationships among the allopatric/parapatric members of the *R. punctularia* group (including *R. funerea, R. diademata*, and *R. melanosterna*). They recommended no taxonomic changes without further geographic and genome sampling.

14:32. ***Aldabrachelys gigantea***: After several years of vigorous debate, the ICZN (2013b) published their decision (Opinion 2316) regarding the appropriate scientific name for the Aldabra Tortoise (Case 3463; Frazier 2008, 2009). The Commission ruled to conserve the long-term use of the specific name *Testudo gigantea* Schweigger (1812) for this tortoise, to affirm the neotype designation of Frazier (2006), and to suppress the more recently used name *Testudo dussumieri* Gray (1831d). One effect of this action was also to validate the genus name *Aldabrachelys* Loveridge and Williams (1957) over *Dipsochelys* Bour (1982a). Comments were published in BZN 66:80–87, 169–186, 274–290, 352–357; 67: 71–90, 170–178, 246–254, 319–331; 68: 72–77, 140–143, 294–300. With 83 published comments, this represented the most extensive correspondence received by the Commission on a Case to date.

14:33. ***Chelonoidis carbonaria***: The original citation for the junior synonym *Testudo boiei* is actually Wagler (1830a), not Wagler (1833) as listed in our previous checklists; the latter contained no new turtle descriptions.

14:34. ***Gopherus berlandieri***: In 1850, Berlandier described two terrestrial turtles from the "llanos" of Tamaulipas, Mexico: *Testudo bicolor* (not to be confused with *Terrapene bicolor* Bell 1826, synonym for *Testudo* [= *Cuora*] *amboinensis* Daudin 1801) and *Testudo tuberculatu* [sic] (not to be confused with *Testudo tuberculata* Pennant *in* Schoepff 1801 [= *Dermochelys coriacea*]). His ample description leaves little doubt that the names referred to a juvenile and adult male, respectively, of *Xerobates* [= *Gopherus*] *berlandieri* Agassiz 1857a, and hence should be considered senior subjective synonyms of the latter. However, since 1850, *T. tuberculatu* has only been mentioned by True (1882), as *T. tuberculata*. In 1980 Berlandier's manuscript was translated and republished, with both species recorded again, as *T. bicolor* and *T. tuberculata*, with distinct diagnostic characters, "and they are common on both banks of the Rio Bravo." No other publications seem to include these names, both considered here as being *nomina oblita*.

14:35. ***Testudo graeca***: Based strictly on morphology Chkhikvadze et al. (2013) continued to argue for the recognition of six taxa of tortoises in the Caucasus (*Testudo graeca ibera, T. g. nikolskii, T. g. armeniaca, T. marginata pallasi, T. m. buxtoni,* and *T. dagestanica*). However, genetic sampling by Fritz et al. (2007a), Mashkaryan et al. (2013), and Mikulíček et al. (2013), including specimens from within the ranges of each of those six purported taxa, supports only the recognition of three taxa in the area (*T. g. ibera, T. g. buxtoni,* and *T. g. armeniaca*). Because the unreliability of morphology in establishing species boundaries within the genus *Testudo* has been well documented (Parham et al. 2006; Fritz et al. 2007a, 2009; Mikulíček et al. 2013; Danilov et al. 2013; among others), we have not followed Chkhikvadze et al. (2013), pending further genetic sampling.

14:36. ***Testudo* or *Chersine hermanni***: Perez et al. (2014) examined variation in mitochondrial DNA and nuclear microsatellites across the range of *T. hermanni*, and found substantial geographic differentiation based on distance between sites. They documented the greatest divergence between the recognized subspecies, with the eastern subspecies (*T. h. boettgeri*) ranging westward to and including the Po River valley in northeastern Italy, Their data also demonstrated the effects of thousands of years of human-mediated dispersal of these tortoises. Although they noted that the isolated population in France could have been established via natural or human dispersal, their data supported the hypothesis that the Spanish, Corsican, and Sardinian populations were likely the result of prehistoric human introductions of animals with Sicilian genotypes.

14:37. ***Testudo* or *Chersine h. hermanni***: Lapparent de Broin et al. (2006b) analyzed all known fossil specimens of *T. globosa*, *T. oriens*, and *T. seminota*, and concluded that *oriens* and *seminota* were synonymous with *globosa* and that *globosa* was apparently synonymous with western *T. h. hermanni*.

14:38. ***Testudo* or *Agrionemys h. kazachstanica***: *Agrionemys kazachstanica terbishi* was described by Chkhikvadze (2009) based on a mummified specimen, supposedly from Mongolia, in the Kohovd University collection (Kohovd City, Mongolia). Ansorge et al. (2012) reported that the type specimen has been lost, that the herpetologist who collected the specimen believed that it was a pet brought from Kazachstan, and that there is no confirmed record of an extant tortoise indigenous to Mongolia. They recommended that *Testudo horsfieldii terbishi* (Chkhikvadze 2009) should be regarded as a *nomen dubium* and allocated to the synonymy of *Testudo horsfieldii*; they also recommended that Mongolia should be excluded from its distribution range. We adopt these recommendations and associate the taxon with *T.* or *A. h. kazachstanica* by virtue of it having originally been described as a subspecies of that taxon.

14:39. ***Acanthochelys* and *Platemys***: Sequence data from two mitochondrial genes analyzed by Huebinger et al. (2013) supported the sister group relationship between *Platemys* and *Acanthochelys*, the monophyly of the latter, and the possibility that *A. radiolata* as currently defined morphologically may be polyphyletic. We continue to affirm the recognition of both genera, even though *Platemys* is monotypic.

14:40. ***Phrynops geoffroanus***: The name *Emys tritentaculata* was listed by Cuvier (1829) as attributed to Auguste de Saint-Hilaire, a botanist who traveled in Brazil and subsequently deposited several chelid turtles in the Paris Museum (Bour, unpubl. data). Based on the name, suggestive of several barbels, we assign it tentatively to the synonymy of *P. geoffroanus* pending further study of Saint-Hilaire's original specimens. The name *E. tritentaculata* does not refer to the American Box Turtle, *Terrapene carolina*, as originally synonymized by Wermuth and Mertens (1961) and followed by several others since then.

14:41. ***Platemys platycephala***: The name *Emys carunculata* Cuvier 1829 was listed by Wermuth and Mertens (1961, 1977) and Fritz and Havaš (2007) as an *ex errore* name for *E. canaliculata* Spix 1824, itself a synonym of *P. platycephala*. However, the name *E. carunculata* was attributed by Cuvier (1829) to Auguste de Saint-Hilaire, while in the same paragraph also listing *E. canaliculata* as attributed to Spix. The two names clearly represent different *nomina nuda*. Pending further studies of the chelid turtles that Saint-Hilaire collected in Brazil (Bour, unpubl. data), we leave *E. carunculata* in the synonymy of *P. platycephala* for the present.

14:42. ***Chelodina (Macrochelodina) kuchlingi***: This species, originally described by Cann (1997d), was synonymized under "*Chelodina rugosa*" (now *Chelodina oblonga*) by Georges and Thomson (2010). Their original basis for the synonymization was "that names that are available under the Code, but that apply to supposed taxa, unsupported by scientific evidence either in the original account or subsequently, are placed in synonymy." They also indicated that *C. kuchlingi* was described from a single specimen of uncertain origin with a long history of captivity and so was treated as a junior synonym of "*C. rugosa*" (now *C. oblonga*), citing Georges and Thomson (2006) who had questioned the distinction between *C. kuchlingi* and *C. rugosa*, but did not synonymize them. The synonymization by Georges and Thomson (2010) was subsequently followed by us (TTWG 2010) and Kennett et al. (2014) in their recent CBFTT species account for *C. oblonga* (see link under that species). However, the synonymization has recently been challenged by Kuchling (CCB, in review, and in litt.), who has provided data that *C. kuchlingi* is an apparently demonstrably valid and distinct range-restricted species, with a more extensive distribution in northeastern Western Australia (including the Ord River basin) than noted in the original description. Kuchling also raised serious concerns about the conservation status and potential regional development threats to *C. kuchlingi*. Georges (in litt.) has acknowledged the difference in opinion, but stands by his opinion that the original description was deficient, and that there has been insufficient evidence presented to date that *C. kuchlingi* is a valid taxon.

We take note of this on-going controversy here and, based on our own principles of making only data-driven taxonomic changes in the checklist, acknowledge that our original decision to follow the hypotheses of Georges and Thomson (2006, 2010) to synonymize *C. kuchlingi* was likely premature, and also inconsistent with our continued recognition at that time of other species also synonymized by Georges and Thomson at the same time (e.g., *C. gunaleni* and *C. walloyarrina*). Given the potential conservation threats to this range-restricted species and the lack of data supporting the prior synonymization, we therefore now reverse our earlier decision and resurrect *C. kuchlingi* from its synonymy with "*C. rugosa*" (now *C. oblonga*) and await further data-driven analyses from Kuchling, Georges, and others.

14:43. ***Chelodina oblonga* (formerly *C. rugosa*)**: Thomson (2000) demonstrated that the holotype of *Chelodina oblonga* Gray 1841 is actually a specimen of what had over the last ca. 40 years been referred to as *Chelodina rugosa* Ogilby 1890 from northern Australia. The ICZN was petitioned (Thomson 2006, 2007) to conserve current usage of the name *C. rugosa* for the Northern Snake-necked Turtle and to apply the next available name, *Chelodina colliei* Gray 1856a, to the Southwestern Snake-necked Turtle, instead of the commonly and erroneously used name *C. oblonga*. We previously discussed this ICZN case in our second checklist (Rhodin et al. 2008). Recently, in their Opinion 2315, the ICZN (2013a) declined to support the petition to give precedence to the younger, recently used name *C. rugosa* over the older name *C. oblonga* for the Northern Snake-necked Turtle. Although the latter species has been known as *C. rugosa* since 1974 and was listed as such in previous editions of this checklist, we now follow the ruling of the ICZN and use the name *Chelodina (Macrochelodina) oblonga* Gray 1841 for the Northern Snake-necked Turtle, although the name *Chelodina (Macrochelodina) rugosa* Ogilby 1890 remains an available name in the synonymy of *C. oblonga*. The decision by the ICZN has also been followed by Kennett et al. (2014) in their recently published account on the Northern Snake-necked Turtle in this CBFTT monograph series.

14:44. ***Macrodiremys***: In an attempt to conserve usage of the name *Chelodina oblonga* for the Southwestern Snake-necked Turtle, McCord and Joseph-Ouni (2007b) designated the lectotype of *Chelodina colliei* (set by Thomson 2000) as the neotype of *Chelodina oblonga*. At the time this was done, there was already an open case before the ICZN (Thomson 2006) concerning whether to use the name *C. oblonga* or *C. rugosa* for the Northern Snake-necked Turtle (see annotation 14:43). It should also be noted that the setting of a neotype where an extant holotype (or lectotype) already exists can only be done by the ICZN. In their subsequent Opinion (ICZN 2013a), it was ruled that, considering the confusion over these names and the potential for further confusion, that the Principle of Priority should be followed, and that *C. oblonga* should maintain priority over *C. rugosa* for the northern taxon. By associating the new name *Macrodiremys oblonga* to the lectotype of *C. colliei*, McCord and Joseph-Ouni (2007b) had effectively erected a new nominal species as a junior objective synonym of *C. colliei*. Thus, since *M. oblonga* was the type species for the new genus *Macrodiremys*, then in effect so was also its senior objective synonym, *C. colliei*. Fortunately, the latter was not already a type species for another genus. Georges and Thomson (2010) reduced the various genera of snake-necked turtles to subgeneric status, all under the oldest genus name *Chelodina*; this has been recognized in previous editions of the checklist (TTWG 2012), however, the subgenus name for *C. colliei* was left undetermined because of the uncertainty surrounding the case. In this checklist edition, now that the ICZN Opinion has been published, this matter can be rectified by restoring the subgeneric name *Macrodiremys*, which follows the intent of McCord and Joseph-Ouni (2007b).

14:45. ***Elseya* and *E. schultzei***: Based primarily on mtDNA data, Georges et al. (2014) identified three reciprocally monophyletic, deeply divergent clades within the taxon formerly recognized as *Elseya novaeguineae*: 1) the Birds Head (Kepala Burung, Vogelkop, or Doberai Peninsula) population of western Indonesian New Guinea, 2) the population on the New Guinea mainland north of the Central Range, and 3) the mainland population south of the Central Range. They also demonstrated some phylogeographic structure within each of those three clades, and confirmed the genetic distinction of *E. branderhorsti* of the southern lowlands / Fly River floodplain as separate from the *E. novaeguineae* clades. They suggested that these three clades each deserved species rank, and they followed Rhodin and Genorupa (2000) in noting that the southern form is distinct and undescribed and that the name *E. schultzei* (Vogt 1911) is available for the northern population. They also implied that the name *E. novaeguineae* should be applied to the Birds Head population (the source of the type). We follow these recommendations and now recognize *E. schultzei* as a full species (again), and await additional work in progress to determine the appropriate name for the southern form, whose populations we retain under *E. novaeguineae* pending further work.

14:46. ***Flaviemys* and *F. purvisi***: Using molecular data only, Le et al. (2013) concluded that the species known as *Myuchelys purvisi* is the sister taxon to all other taxa that were included in *Emydura, Elseya* and/or *Myuchelys*. To correct this paraphyly, they erected a new monotypic genus, *Flaviemys,* with type species *Elseya purvisi* Wells and Wellington 1985, by original designation and monotypy. There is also support for this in previous studies, where *Flaviemys purvisi* and *Myuchelys georgesi* were perceived as a cryptic species pair, very similar by appearance, but on analysis were found not to be sister taxa (Georges and Adams 1992; Georges et al. 1998; Thomson and Georges 2009; Georges and Thomson 2010; Fielder et al. 2012; Fielder 2013). We follow this new taxonomy here.

14:47. ***Pelusios castaneus seychellensis***: Based on mitochondrial gene sequence data from all known lineages of *Pelusios*, Stuckas et al. (2013) found that the lectotype of *P. seychellensis* was nested among specimens of the West African *P. castaneus*. They concluded that *P. seychellensis* was most likely based on specimens of *P. castaneus* not native to the Seychelles Islands, and recommended the synonymy of *P. seychellensis* with *P. castaneus*. However, Bour (1983) identified significant morphological differences between these two taxa, and recently (Bour 2013a) argued that *seychellensis* might represent an ancient prehistoric introduction of *castaneus* to the islands by humans that has subsequently diverged morphologically from the ancestral population. He recommended the use of the subspecific designation *P. castaneus seychellensis* until additional comparisons (especially morphological) can be made between *castaneus* and *seychellensis*, a recommendation we have adopted. See also the pertinent discussion of the geographic occurrence of this species [*P. castaneus*] in the distributional data appendix below.

14:48. ***Podocnemis erythrocephala***: The forgotten names *Emys bitentaculata* and *Hydraspis bitentaculata* were not listed or synonymized by Wermuth and Mertens (1961, 1977) or Fritz and Havaš (2007). Gray (1830e) first placed the Cuvier manuscript name *Emys bitentaculata* under his concept of *Chelys* (*Hydraspis*) and subsequently (Gray 1831d) described it himself as *Hydraspis bitentaculata*: "*Testa rufa, subtus pallide lutea nigro maculate, scutello nuchal nullo*." Fitzinger (1835) synonymized both names under his concept of *Hydraspis (Podocnemis) tracaxa* (which also included *Podocnemis expansa* in part and some chelid turtles). Gray's description did not identify the species very well, but the combination of a red shell (*testa rufa*), two barbels (*bitentaculata*), and lack of a nuchal scute (*scutello nuchal nullo*) suggests that it is indeed a *Podocnemis*, and we tentatively place it as most likely synonymous with *P. erythrocephala,* which shares those features, including a red shell margin in juveniles.

14:49. **Humboldt *Podocnemis* names**: Alexandre de Humboldt first published the names *Testudo arrau* (= *P. expansa*) and *Testudo terekay* (= *P. unifilis*) in the French version of his original work (Humboldt 1819a:243). This work was subsequently translated into English (Humboldt 1819b:482), and later (Humboldt 1820:415) into German. These various translations have caused some confusion in the literature, and some authors (including our previous TTWG checklists) have even attributed the names to Humboldt *in* Gray (1831d:77). However, the French version remains the original source for these names. Both names are considered *nomina oblita* (see also annotation 14:50 for *P. unifilis*).

14:50. ***Podocnemis unifilis***: *Emys cayennensis* was described from French Guiana by Schweigger (1812), but was incorrectly applied to *Podocnemis erythrocephala* for most of its history (reviewed in Pritchard and Trebbau 1984; but see David 1994 and Bour 2006a). In 1819 Humboldt (see annotation 14:49) described *Testudo terekay* from Venezuela; however, this obscure work was ignored by most subsequent authors (but see Schinz 1833). In 1830 Bell (*in* Gray 1830e) described *Chelys (Hydraspis) lata* from Guyana and this name was also ignored by most subsequent authors until Rhodin et al. (2008) declared it a *nomen oblitum* (see also Schneider et al. 2012). All three of these names apply to the taxon *Podocnemis unifilis* that was finally described from Guyana by Troschel (1848), and the latter name has been applied to the Yellow-spotted Amazon Turtle by most (but not all) authors over the last 165 years. In light of this complicated nomenclatural history, and in an effort to ensure the stability of Troschel's name, Vogt et al. (2013) petitioned the ICZN to conserve the name *Podocnemis unifilis* Troschel 1848 for the Yellow-spotted Amazon Turtle, giving it precedence over *Emys cayennensis* whenever the two are considered synonymous. Furthermore, they declared the names *Testudo terekay* Humboldt 1819a and *Chelys (Hydraspis) lata* Bell *in* Gray 1830e as *nomina oblita*. Our checklist reflects this arrangement, pending an ICZN ruling.

2017 Checklist Annotations

TTWG 2017 (CRM 7, checklist.v.8) (17:1-105)

17:1. **Phylocode Classification**: Crawford et al. (2015) performed a genome-scale analysis of turtle phylogeny, sequencing 2381 ultraconserved element loci representing a total of 1,718,154 bp of aligned DNA sequences in 32 turtle taxa representing 14 turtle families. Their recovered phylogeny corresponded to well-supported clades that they concluded were consistent with the temporal appearance of clades and paleobiogeography. They recommended the alternative hierarchical Phylocode classification of turtles presented at the beginning of our Checklist. We continue to use our ICZN-compliant Linnaean classification as outlined on the same page.

In addition, Pereira et al. (2017) recently used publicly available databases for nucleotide sequences and composed a dataset comprising 13 loci for 294 living species of Testudines, accounting for all living genera and 83% of extant species diversity (as recognized in our checklist); they constructed a Phylocode-based classification scheme somewhat at variance with both Crawford et al. (2015) and our checklist.

17:2. ***Macrochelys***: Previous molecular studies have demonstrated significant diversity within the long-recognized widespread species *Macrochelys temminckii*: mtDNA data supported the distinction of three geographic clades, and microsatellite data suggested that six genetic clusters were recognizable (Roman et al. 1999; Echelle et al. 2010). Based on additional mtDNA data, a morphometric (osteological) analysis, and an examination of all available fossil material for the genus, Thomas et al. (2014) demonstrated the existence of three distinct, Recent, geographically separated populations: *M. suwanniensis* (Suwannee River drainage), *M. apalachicolae* (Apalachicola River and nearby lesser drainages), and a restricted *M. temminckii* (Yellow-Conecuh to Mobile Bay to Mississippi to Neches River basins). Independently, Murray et al. (2014) examined morphometric variation in the skull of *Macrochelys* across most of its range. Their results demonstrated distinct drainage-specific differences in skull morphology, supported the distinction of the Suwannee River turtles, and suggested that "further splitting may eventually be warranted" among the basins west of the Suwannee. Subsequently, Folt and Guyer (2015) reconsidered the published data, critiqued the methods of Thomas et al. (2014), and concluded that the evidence to date supported the distinction of *M. suwanniensis*, but that *M. apalachicolae* was not adequately distinguished from *M. temminckii* (sensu stricto), and thus recommended their synonymization, with which we concur.

17:3. ***Macrochelys***: Two names for Alligator Snapping Turtles used by Hoser (2013) (*Macrochelys temminckii muscati* and *Macrochelys maxhoseri*) in his attempt to name some of these lineages, have been noted by Thomas et al. (2014) to be unavailable for nomenclatural purposes due to technical errors in the descriptions.

17:4. **Names coined by Hoser**: Raymond Hoser (2013, 2014a,b, and several other papers) has circumvented conventional standards of scientific analysis and peer-review in his broadly sweeping and extensive new taxonomies and nomenclatures. We regard his actions as confusing and unwarranted acts of nomenclatural disruption under the International Code of Zoological Nomenclature (ICZN 1999), and we do not regard the documents circulated under the name *Australasian Journal of Herpetology* as scientific publications nor as available publications for the purposes of nomenclature (Kaiser et al. 2013; Kaiser 2014; Rhodin et al. 2015). In collaboration with a wide leadership group representing the global herpetological and zoological communities, we have petitioned the International Commission on Zoological Nomenclature to declare and treat Hoser's works in his self-produced *Australasian Journal of Herpetology* as nomenclaturally unavailable (Rhodin et al. 2015), and have noted that all new names created therein are nomenclaturally unavailable pending a ruling by the Commission. Hoser's production has heretofore focused primarily on snakes, but recently he has proposed names for purportedly distinct new taxa of turtles, including American *Macrochelys*, Australasian *Pelochelys*, and Australian *Chelodina*. We consider all these names to be unavailable unless the ICZN rules them to be available.

17:5. ***Caretta caretta***: Continued examination of intraspecific genetic structure within this species by Shamblin et al. (2014) using mitochondrial gene sequences from samples from 42 nesting rookeries identified 59 different haplotypes. However, the authors made no taxonomic recommendations, and we agree.

17:6. ***Eretmochelys imbricata***: Gaos et al. (2016) examined mtDNA haplotype diversity among nesting populations of Hawksbills along the eastern Pacific Ocean. Despite the low genetic diversity across their samples, their phylogenetic analysis suggested that Eastern Pacific Hawksbills are more closely related to those from the Indo-Pacific rather than to those in the Atlantic, despite the recent closure of the Panamanian Portal. In addition, despite the low haplotype diversity overall, differences among the four major eastern Pacific rookeries (El Salvador, Nicaragua, Costa Rica, and Ecuador) led the authors to recommend that these four rookeries should be considered separate management units for conservation purposes.

17:7. ***Lepidochelys olivacea***: This species was described by Eschscholtz in 1829 in two separate publications (Eschscholtz 1829a, 1829b), the earlier of them in general overlooked until recently (Flores-Villela et al. 2016). Historically, and in our previous checklists, the *Zoologischer Atlas* (Eschscholtz 1829b) has always been credited as the source for the name *Chelonia olivacea*, and although we previously listed his other publication from the journal *Die Quatember* (Eschscholtz 1829a) as the source for two other new names (*Chelonia castanea* and *Chelonia grisea*) (TTWG 2014), we assumed that his *Zoologischer Atlas* had been published first and had nomenclatural priority. However, Flores-Villela et al. (2016) have now shown that the *Quatember* article was published earlier (January 1829) than the *Atlas* (after May 1829), and is therefore the original source for the name *olivacea*. In addition, the relatively overlooked name *Chelonia grisea*, previously synonymized by others and us under *Eretmochelys imbricata*, has been shown by Flores-Villela et al. (2016) to more likely represent an anomalous *Chelonia mydas*, and we follow their suggestion to reassign it as such.

17:8. ***Chelonia mydas***: Okamoto and Kamezaki (2014) examined plastral coloration and head and shell morphometrics for *Chelonia* captured in the Western Pacific off Japan. Their data demonstrated the presence of two distinct phenotypes ("yellow" and "black") and they argued that the black form represented *C. agassizii*, and should be recognized as a full species. However, given previous studies (see annotation 07:4), we continue to consider *C. agassizii* to be a synonym of *C. mydas*, unless integrated range-wide analyses of morphology, coloration, and genetics conclusively demonstrate significant lineage divergence.

Naro-Maciel et al. (2014) examined 15 microsatellite markers across 19 green turtle rookeries across the Atlantic Ocean. These data revealed a strong barrier to dispersal between the northern and southern Atlantic, but not a degree meriting taxonomic changes.

17:9. **Wagler 1830b and 1830c**: Gutsche and McCranie (2016) stated that Wagler's 1830 publication *Natürliches System der Amphibien* was issued as two separate parts: first the text (Wagler 1830b), and then the plates (Wagler 1830c), although dates for the publication of each were not provided. We and others had always treated these two parts as a single publication, but evidently they appeared as separate issues. As a result, the name *Dermatochelys* was established in Wagler 1830b, but the species *Dermatochelys porcata* first appeared in Wagler 1830c. Similarly, the name *Cinosternon hirtipes* was only a *nomen nudum* in Wagler 1830b, but described by association with the figures in Wagler 1830c, as we previously noted in our annotation 09:11. These changes do not affect any taxonomic or nomenclatural considerations. We also note in passing that the description of *Testudo boiei* Wagler 1830a (= *Chelonoidis carbonarius*) appears to have preceded these others.

17:10. ***Dermochelys coriacea***: Using mtDNA sequences and nuclear microsatellite markers, Molfetti et al. (2013) and Dutton et al. (2013) demonstrated considerable genetic structure within *Dermochelys coriacea* in the Atlantic Ocean basin. Although they advised the recognition of their units for conservation purposes, they made no taxonomic recommendations.

17:11. ***Kinosternon***: Iverson et al. (2013) sequenced three mitochondrial and three nuclear markers for all recognized species of kinosternid turtles, and their analysis revealed strong support for a monophyletic clade of *Sternotherus*, a second monophyletic clade of primarily Meso-American taxa that they named *Cryptochelys*, and a third restricted monophyletic clade of the remaining species formerly included in *Kinosternon*. However, their support for the non-monophyly of the traditional inclusive genus *Kinosternon* was weak. Subsequently, Spinks et al. (2014b) sequenced 14 additional nuclear loci for most (but not all) recognized species, and their analysis of the nuclear data alone supported the reciprocal monophyly of *Sternotherus* and the traditional *Kinosternon* (sensu lato), but did not support a monophyletic *Cryptochelys*. Because two independent data sets have produced different conclusions, we retain the alternative generic arrangement from our last edition until new data emerge or new analyses are performed to settle this complicated issue.

17:12. ***Kinosternon steindachneri***: Bourque (2016) treated this taxon as a distinct species based on morphology, and argued that no morphological or genetic data have been presented to support its continued recognition as a subspecies of *K. subrubrum* (Iverson 1998; Bourque 2012a, b; Iverson et al. 2013; Spinks et al. 2014; Bourque and Schubert 2015). We concur, and therefore now list *K. steindachneri* as a distinct species.

17:13. ***Kinosternon stejnegeri***: Iverson (1979a) synonymized extant *K. flavescens stejnegeri* Hartweg 1938 with the Pliocene–Pleistocene fossil taxon, *K. arizonense* Gilmore 1923, based on similar morphology. Considered a subspecies, *K. f. arizonense*, by Iverson (1979b), it was subsequently recognized as a distinct species based on genetic analysis by Serb et al. (2001). Recently, McCord (2016) examined all available Pliocene material of *K. arizonense* and compared it with extant specimens, and concluded that the fossil material differs significantly from the extant material and is actually more similar morphologically to *K. flavescens* (sensu stricto). As a consequence, he restricted the name *arizonense* to the Pliocene fossils and resurrected the old name *stejnegeri* for the extant species. This conclusion was also tentatively accepted by Joyce and Bourque (2016), and we follow these recommendations here, accepting the resurrected name *K. stejnegeri* for the extant species previously known as *K. arizonense*.

17:14. ***Kinosternon subrubrum hippocrepis***: Bourque (2016) elevated this taxon to a full species based on morphological data from living and fossil forms; however, without a range-wide analysis of morphometric and/or molecular data supporting that change, we continue to recognize *hippocrepis* as a subspecies of *K. subrubrum*.

17:15. ***Sternotherus depressus***: Scott and Rissler (2015) reported a 32–56% decline in the historical range of *S. depressus*, as well as significant unidirectional mtDNA introgression from *S. minor peltifer*. This hybridization is changing the morphology of *S. depressus* and severely threatens its continued distinction.

17:16. ***Sternotherus minor peltifer***: Bourque (2016) argued that this taxon should be recognized as a full species based on previous published phylogenetic analyses using molecular (Iverson et al. 2013) and morphological data (Bourque and Schubert 2015). In addition, Guyer et al. (2016), based on color differences and the mitochondrial DNA study by Walker et al. (1995), also recommended elevating *S. m. peltifer* to species status. However, Walker et al. (1995) sampled part of only one mitochondrial gene and included no samples from the previously hypothesized area of intergradation along the Gulf Coast (Iverson 1977). Because animals that appear to be morphological intergrades have been described (Iverson 1977), we consider these recommendations premature and continue to recognize *peltifer* as a subspecies of *S. minor*.

17:17. **Emydidae**: Seidel and Ernst (2017) provided an extensive review of the history and taxonomic status of the phylogeographic relationships of the family and its two subfamilies, but recommended no significant taxonomic changes.

17:18. ***Chrysemys picta***: Jensen et al. (2014a) examined genetic variation among populations of *C. picta* at the northwestern range limit in British Columbia (*C. p. bellii*). Although they documented very little variation in regional mitochondrial sequences, they found two unique mitochondrial haplotypes when compared to previously published range-wide data. In contrast, based on nine microsatellite loci, they identified six distinct local population clusters. They urged that these six geographic units be managed separately, but made no taxonomic recommendations; however, their data did support the continued recognition of *C. dorsalis* and *C. picta* as separate species. In addition, Jensen et al. (2015a) examined variation in one mitochondrial and one nuclear gene across the range of the genus. The nuclear gene provided no resolution, but the mitochondrial data demonstrated the reciprocal monophyly of *C. dorsalis* versus *C. picta* (*sensu stricto*), but no clear pattern among the subspecies of the latter. Because the available evidence for the recognition of *C. dorsalis* as a species vs. subspecies is primarily mitochondrial (see TTWG annotations

07:11 and 10:6), we continue to list two alternatives for its classification.

17:19. ***Graptemys***: Praschag et al. (2017) examined over 3200 bp of mtDNA sequence data and 7800 bp of nuclear DNA (across 12 loci) for 89 specimens of all recognized taxa of the genus *Graptemys*. The mtDNA data supported the distinctiveness of *G. geographica* (sister to all other *Graptemys*), and the divergence of the broad-headed clade from the narrow-headed clade. Most species in the broad-headed clade were resolved as reciprocally monophyletic, but in the narrow-headed clade only *G. caglei* and *G. versa* were well supported as monophyletic. Principal component analyses using coded phased nuclear DNA sequences revealed eight clusters: 1) *G. geographica*; 2) *G. barbouri*; 3) *G. caglei*; 4) *G. versa*; 5) *G. sabinensis*; 6) *G. ernsti*, *G. gibbonsi*, *G. pearlensis*, and *G. pulchra*; 7) *G. flavimaculata*, *G. nigrinoda*, and *G. oculifera*; and 8) *G. ouachitensis* and *G. pseudogeographica*. The authors concluded that species recognitions of *G. geographica*, *G. barbouri*, *G. caglei*, *G. versa,* and *G. sabinensis* were all well supported, but that the remaining taxa were oversplit. They suggested 1) that *G. flavimaculata* and *G. nigrinoda* should be relegated to subspecies of *G. oculifera* (see also Mertens and Wermuth 1955); 2) that *G. ernsti*, *G. gibbonsi*, *G. pearlensis*, and *G. pulchra* are conspecific; and 3) that *G. ouachitensis* should be relegated to a subspecies of *G. pseudogeographica*. Their results supported the earlier view by Walker and Avise (1998) that *Graptemys* is taxonomically oversplit, and they made some suggestions for possible changes, but they presented no explicit taxonomic revisions, and we await further clarification before changing the checklist.

Selman (2017), in an analysis of the incidence of presence of carapacial rings vs. blotches in *G. flavimaculata*, documented that blotches are the typical pattern in all populations examined, both for recently observed as well as historically preserved specimens. This was interpreted as representing the pervasive presence of a derived character, and distinctly different from *G. oculifera*, which consistently shows the ancestral pattern of carapacial rings, but he made no taxonomic recommendations.

17:20. ***Graptemys caglei***: Ward et al. (2013) examined microsatellite variation across the range of *Graptemys caglei* in the Guadalupe and San Marcos Rivers of Texas. They found weak but identifiable divergence between populations in the Upper Guadalupe Rive versus those in the Middle Guadalupe and San Marcos Rivers. They made no taxonomic recommendations, but noted that turtles in these two regions also differed in life history, morphology, and coloration.

17:21. ***Graptemys ernsti* and *G. barbouri***: Godwin et al. (2014) confirmed the previously unrecognized presence of both *Graptemys ernsti* and *G. barbouri* in the Choctawhatchee River basin, and demonstrated hybridization between those two species in that basin. Based on the available evidence they concluded that both species were likely present in that basin prior to human intervention. In a follow-up study, Ennen et al. (2016) examined morphometric, colorimetric, microsatellite and mitochondrial DNA variation in *G. ernsti*, across the three inhabited basins. They demonstrated no morphometric differences between turtles in two of the basins (no data for the Pea River, a tributary of the Choctawhatchee), weak colorimetric differences between turtles from the Yellow vs. Conecuh/Pea basins, and both microsatellite and mtDNA evidence for the distinction of turtles from the Yellow River vs. those from the other basins. They declined to recognize those populations taxonomically, and hesitated to even recommend their recognition as Evolutionarily Significant Units, and we concur with these conclusions. Although it is now clear that both *G. ernsti* and *G. barbouri* are established in the Choctawhatchee River basin, whether either of them is native to that system is still an open question (Godwin et al. 2014; Ennen et al. 2016).

17:22. ***Graptemys nigrinoda***: Ennen et al. (2014) examined morphometric and colorimetric characters, as well as sequence variation in a single mitochondrial gene, across the range of *Graptemys nigrinoda*. Morphological variation was primarily clinal, and mitochondrial haplotypes differed by less than 0.3% and were not related to geography. They recommended the synonymy of *G. n. delticola* with the nominate form, and we have followed their recommendation.

17:23. ***Graptemys pseudogeographica***: Lindeman et al. (2015) demonstrated that False Map Turtles from the Calcasieu River basin in southwestern Louisiana differ from those in all other basins in having a unique eye color and a variable chin pattern. They made no taxonomic recommendations, but encouraged further range-wide morphological and genetic study of this species in light of these findings.

17:24. ***Malaclemys terrapin***: Hart et al. (2014) examined 12 nuclear microsatellite loci from 21 populations of *Malaclemys terrapin* from across the species' range, and identified four genetic clusters that did not correspond to currently accepted, morphology-based subspecies descriptions. Despite gaps in their coastal sampling along the east coast of Florida and Georgia, and the Gulf Coast of Florida, their recommended management units were Massachusetts (part of the range of *M. t. terrapin*), New York to South Carolina (most of the range of *M. t. terrapin*, and part of the range of *M. t. centrata*), the Florida Keys to Tampa Bay (the range of *M. t. rhizophorarum* and part of that of *M. t. macrospilota*), and Louisiana and Texas (the combined ranges of *M. t. pileata* and *M. t. littoralis*). In addition, based on 16 microsatellite loci (12 shared by Hart et al. 2014), Drabeck et al. (2014) also found low diversity and an absence of structure among populations of *M. terrapin* along the Gulf Coast of Louisiana and Texas. Both studies questioned the current subspecies designations, but made no explicit taxonomic recommendations, and we agree. More studies with better geographic sampling are clearly needed.

17:25. ***Pseudemys concinna***: In a generally overlooked publication, Guérin (1829) provided an illustration as indication of a species that he named *Emys concinna*, preceding the description of *Testudo concinna* by Le Conte (1830). However, the species figured appears to represent what is now considered *Trachemys scripta elegans*, described by Wied-Neuwied (1839). Whereas *Emys concinna* Guérin 1829 is technically a senior homonym of *Testudo concinna* Le Conte 1830 (later placed in the genus *Emys*) and precedes the description of *Emys elegans* Wied-Neuwied 1839, it is also a name and attribution that has never been used since its appearance and we therefore declare it a *nomen oblitum*, not requiring any change in status or usage of the two subsequently published widely-used and accepted names.

17:26. **Central American *Trachemys***: The taxonomy of Meso-American *Trachemys* sliders has been a quagmire for decades. Because of the level of disagreement among recent authors concerning this group, with no clear resolution in sight, our last checklist listed as many as three taxonomic options for some taxa. However, in an attempt to settle the confusion, Parham et al. (2015) examined variation in one mitochondrial and one nuclear gene across every named *Trachemys* taxon from Mexico. Their analysis revealed that the samples of "*ornata*" from Acapulco used by Fritz et al. (2012) clustered with turtles from the Caribbean versant, and not with confirmed *ornata* from near its type locality. Hence, the species name *ornata* should be restricted to the western versant of Mexico, and the name *venusta* should be restricted to the eastern drainages of Mexico and Central America. Furthermore, they confirmed the finding of Fritz et al. (2012) that *grayi* is not closely related to *venusta*, but the sister taxon of *emolli*. We agree with these insights (although we remain equivocal regarding whether *emolli* is a distinct species or a subspecies of *grayi*) and have modified our checklist accordingly. Additionally, Fritz et al. (2012) showed that *panamensis* is very closely related to *grayi*, and should be considered a subspecies of that taxon, rather than of *venusta*, further corroborating the split between western and Caribbean versant taxa; we have now made that change in our checklist. Also, as a consequence of the recognition that *ornata* is a western versant taxon, *callirostris* is now considered either a distinct species or a subspecies of *venusta,* rather than of *ornata,* as it was designated in our previous checklist.

17:27. ***Trachemys adiutrix* or *T. dorbigni adiutrix***: Using a niche modelling approach, Rodrigues et al. (2016) supported the subspecies status of the Maranhao slider. The invasive potential of the nominotypical subspecies was better explained when the different climatic niches of both taxa were combined, reflecting the common pattern of lack of niche conservatism between subspecies.

17:28. ***Trachemys grayi***: The species *Callichelys concinna* Gray 1873a, described from San Mateo, Tehuantepec, Oaxaca, Mexico, has unfortunately been overlooked in all previous checklists, including our own (Siebenrock 1909a; Wermuth and Mertens 1961, 1977; Fritz and Havaš 2007; TTWG 2014). However, Gray (1873f) and Boulenger (1889) synonymized it with *T. grayi*, and Harfush-Meléndez and Buskirk (2008) noted it in their analysis of the distribution of *T. grayi*, and we now include it in our checklist.

17:29. ***Clemmys guttata***: Davy and Murphy (2014) examined variation in 11 nuclear microsatellite loci across Canadian populations of *Clemmys guttata*. They identified significant genetic structure, with a minimum of six distinct subpopulations, with the most distinctive population being in Hastings County, Ontario. They made no taxonomic recommendations, but strongly urged management and protection of the latter population, which numbers less than 50. An expansion of this study across the entire range of *C. guttata* would be invaluable.

17:30. ***Emys orbicularis orbicularis***: The identity of the Pleistocene fossil names *Clemmys schlotheimii* † Fitzinger 1835 and *Trionyx schlotheimii* † Fitzinger 1835 has previously been uncertain, and we did not even include

T. schlotheimii in our previous checklists. However, Karl and Paust (2014) examined the original fossil material, designated lectotypes of both taxa, and confirmed that both are synonyms of *Emys orbicularis*.

17:31. ***Emys orbicularis orbicularis***: The Pleistocene fossil taxon *Testudo (Emys) canstadiensis* † Plieninger 1847 was included under the synonymy of *Testudo hermanni* in our previous checklist (TTWG 2014), based on presumed synonymy suggested by Auffenberg (1974); however, the specimen is actually an *Emys orbicularis,* based on synonymization by Karl and Tichy (2002), and we corrected it in our fossil checklist (TEWG 2015), and herein.

17:32. ***Emys orbicularis occidentalis***: Based on both mitochondrial DNA sequences and 15 nuclear microsatellite markers, Stuckas et al. (2014) identified two distinct genetic units within *Emys orbicularis* in North Africa, one from Morocco (identified as *E. o. occidentalis*) and the other from eastern Algeria and Tunisia (undescribed). The former was found to be very similar to Iberian specimens (identified as *E. o. fritzjuergenobsti*). The authors declined to name the new taxon for want of morphological data, but synonymized *E. o. fritzjuergenobsti* under *E. o. occidentalis*, and we reflect that change here.

17:33. ***Emys orbicularis persica***: We spell the name of this taxon as *Emys orbicularis persica*, following Fritz (1998). However, Eichwald (1831:196) recognized three varieties ("var.") of *Emys europaea* Schneider 1783: the nominotypical, not named, α by inference, and *β* and *γ*, with names given as "*ibericae* var. *β*" and "minoris var. *γ persicae*." One might therefore assume that the valid names should be *Emys europaea persicae* and *Emys europaea ibericae*. However, the names *ibericae* and *persicae* are adjectives, referring to the countries of Iberia and Persia, respectively, and as a result, ICZN Article 11.9.2 applies: "An adjectival species-group name proposed in Latin text but written otherwise than in the nominative singular because of the requirements of Latin grammar is available provided that it meets the other requirements of availability, but it is to be corrected to the nominative singular if necessary." Therefore, *persica* and *iberica* are the valid names, and these were subsequently used by Eichwald (1840:47).

17:34. ***Emys trinacris***: Vamberger et al. (2015) examined mitochondrial and nuclear microsatellite variation (15 markers) in *Emys* from southern Italy. Their results revealed negligent gene flow between *E. orbicularis* and *E. trinacris*, with intergradation evident between *E. o. galloitalica* and *E. o. hellenica*. Their data support the continued recognition of *E. trinacris* as a species, and *galloitalica* and *hellenica* as subspecies of *E. orbicularis*.

17:35. ***Emys* or *Actinemys pallida***: Spinks et al. (2014a) examined 89 nuclear single nucleotide polymorphisms (SNPs) and a mitochondrial gene sequence from range-wide samples of *Emys* or *Actinemys marmorata*, and compared those results with earlier work (Spinks et al. 2010) using nuclear gene sequence data. The mitochondrial data resolved four poorly supported clades, whereas the previous nuclear sequence data revealed only two main groups with considerable admixture between them. However, the SNP analysis demonstrated strong support for two geographic clusters: a northern group from the southern San Joaquin valley to Washington, and a southern group from the Central Coastal Range of California and southern California to Baja California. These results are remarkably (though not perfectly) consistent with Seeliger's (1945) morphological work, who described the subspecies *pallida* for the southern populations. Furthermore, secondary analyses by Spinks et al. (2014a) of the molecular data within each of these two groups recognized two subgroups in the southern cluster, one from the coastal range and southern California, and the other from Baja California. Although populations from Baja were also recognized as morphologically distinct (though undescribed) by Seeliger (1945), Spinks et al. only noted that species recognition may emerge from future studies. Hence, they recommended that the two California lineages be recognized as separate species (rather than subspecies as defined by Seeliger 1945), and we follow that recommendation here.

17:36. ***Emys* or *Emydoidea blandingii***: Based on variation across 12 microsatellite loci, Davy et al. (2014) identified four distinct genetic units among populations of *Emydoidea blandingii* in Ontario, Canada, and suggested that they should be managed separately. Similarly, based on eight microsatellites, Sethuraman et al. (2014) identified moderate but significant differentiation among Midwestern USA populations, with four or five unique genetic clusters, but were unable to explain the close genetic relationship between a population in western Nebraska to those in eastern Illinois, rather than with intervening populations in Iowa. McCluskey et al. (2016) examined variation in seven microsatellites in this species in New York, and identified two or possibly three genetic units there. None of these studies made taxonomic recommendations. Range-wide genetic studies of *E. blandingii* are clearly needed, as is careful population management of this genetically diverse species.

17:37. ***Terrapene carolina* complex**: These North American box turtles remain the center of considerable taxonomic controversy (see TTWG 2014, annotation 14:27). Based primarily on mtDNA data, Martin et al. (2013) recommended the recognition of the western forms (*triunguis*, *mexicana*, and *yucatana*) as a polytypic species (*T. mexicana* being the oldest name) separate from the eastern forms (under *T. carolina*). However, in a brief summary of the turtle taxonomy issues, Fritz and Havas (2013) declined to accept this major change for the genus *Terrapene*, primarily because of evidence for introgression between the proposed species. Martin et al. (2014) responded with evidence of interspecific hybridization between other well-accepted species pairs, and reaffirmed their conclusion that *T. mexicana* was a distinct species by the phylogenetic species concept. Fritz and Havas (2014) replied with three lines of evidence as to why they considered it to be premature to recognize *T. mexicana* as distinct from *T. carolina*. First, intergradation is common where they are sympatric, and indeed, Butler et al. (2011) demonstrated panmixia (rather than occasional hybridization) in those areas. Second, *mexicana* was resolved as monophyletic by Martin et al. (2013) with relatively weak support based on mtDNA, and no support when based on a single nuclear gene. Third, previous study of mitochondrial and nuclear DNA sequence data (Spinks et al. 2009; seven nuclear loci) did not resolve *triunguis* as reciprocally monophyletic relative to eastern forms of *T. carolina*. A recent analysis of 30 nuclear and one mitochondrial loci (Spinks et al. 2016) indicated that while *triunguis* appears to be monophyletic and distinct, it is nested within a paraphyletic *carolina*; given the phylogenetic uncertainty surrounding much of this complex and the demonstrated hybridization among taxa, these authors also recommended that the traditional *carolina* taxonomy (all taxa as subspecies of *carolina*) be retained pending a comprehensive, genomic-level analysis of all contained taxa. Unfortunately, some authors (e.g., Guyer et al. 2015; Powell et al. 2016) have chosen to recognize the western populations as *T. triunguis* (rather than *T. mexicana*), without justification. Since the taxonomic issues here appear relatively unresolved, we continue to recognize the competing alternative taxonomies, pending additional sampling of the nuclear genome.

17:38. ***Terrapene carolina carolina***: In a nearly range-wide study of variation across eleven microsatellite loci for the subspecies *T. c. carolina*, Kimble et al. (2014) found surprisingly little genetic structure, except that the Appalachian Mountains represented a modest barrier to gene flow among populations.

17:39. ***Platysternon megacephalum***: In the present checklist we reallocate the placement of *Platysternon megacephalum tristernalis* Schleich and Gruber 1984 by moving it from the synonymy of *P. m. megacephalum* into the synonymy of *P. m. peguense*. Ernst and Laemmerzahl (2002) originally placed *P. m. tristernalis* in the synonymy of the nominotypical subspecies, which was followed by Fritz and Havaš (2007) and all previous editions of our checklist. However, Vetter and van Dijk (2006) identified the holotype of *tristernalis* from southwestern Yunnan as representing *peguense*, the taxon occurring in adjacent northwestern Laos, and Zheng et al. (2013) identified animals apparently from the *tristernalis*-topotypic area of southwestern Yunnan as *peguense,* both morphologically and genetically, and we agree with these assessments. In addition, Ernst and Laemmerzahl (2002) noted that the populations on Hainan appear to be intergrades between *P. m. peguense* and *P. m. shiui,* as also reflected on our current map.

Using the duplicate control region sequences of the mitochondrial genome of 20 *P. megacephalum* representing all three subspecies, Zheng et al. (2013) found these morphologically defined taxa to also be genetically distinct, with *P. m. megacephalum* and *P. m. shiui* identified as sister taxa. More comprehensive geographic surveys and the application of additional genetic markers to samples from across the species' entire range should hopefully refine current taxonomy and provide a better understanding of the geographic ranges of the individual taxa.

17:40. ***Cuora***: Tiedemann et al. (2014) sampled 16 nuclear microsatellite markers across all members of the *Cuora trifasciata* complex (*C. aurocapitata, C. pani, C. zhoui, C. trifasciata*, and the controversial Vietnamese *C. cyclornata*) (see previous annotations on the status of *cyclornata* Blanck et al. 2006a: TTWG 2007b, 07:36; TTWG 2009, 09:23; TTWG 2012, 12:22). The analyses by Tiedemann et al. (2014) confirmed the genetic distinction of each of these five taxa, and they recommended their recognition at the species level. In addition, their data corroborated the genetic distinction of the two morphotypes within *cyclornata* that were previously described as *C. c. cyclornata* and *C. c. meieri* (Blanck et al. 2006a). Finally, they also corroborated the genetic distinction of two morphotypes within the restricted *C. trifasciata*, one from the Chinese mainland (*C. t. trifasciata* according to the authors) and the other an undescribed subspecies from Hainan Island.

Independently, Li et al. (2015) sequenced the entire mitochondrial genome of nine species of *Cuora*; their phylogenetic analysis revealed that *C. trifasciata* (*sensu lato*) is polyphyletic, and that Chinese (*trifasciata*) and Vietnamese (*cyclornata*) populations are distinctly different. They also recommended the species recognition of *C. cyclornata*.

Given that morphology and mitochondrial and nuclear DNA data each support the recognition of *C. cyclornata* as a species distinct from *C. trifasciata*, with the former comprising two genetic lineages, we now follow Blanck et al. (2006a) in recognizing *C. cyclornata* with two subspecies, *C. c. cyclornata* and *C. c. meieri*.

17:41. ***Cuora amboinensis***: In a morphological and colorimetric study of populations of *Cuora amboinensis*, Ernst et al. (2016) recommended the synonymy of *C. a. lineata* with *C. a. kamaroma*, and of *C. a. couro* with *C. a. amboinensis* (suggesting that *C. a. couro* was an intergrade between *C. a. kamaroma* and *C. a. amboinensis*). However, their samples of *lineata* and *couro* were small, their analyses and conclusions were based primarily on color patterns, and they did not discuss the size of the inguinal scute (apparently diagnostic for at least *lineata*), nor did they present statistical or graphical results of their morphometric analyses (i.e., separately from color data).

Subsequently, Protiva et al. (2016) analyzed shell shape and mitochondrial DNA from *C. amboinensis* from primarily Borneo, Sumatra, and Seram. They disagreed with the findings of Ernst et al. (2016), and documented morphologic and genetic differentiation between Bornean vs. Sumatran populations, affirming the distinctiveness of *C. a. couro* from Sumatra and *C. a. kamaroma* from Borneo. Additionally, they identified a deeply divergent lineage from Seram that they indicated might require taxonomic recognition based on further work and improved sampling. Based on this, we consider the synonymizations by Ernst et al. (2016) to be premature, and await comprehensive genetic studies of *C. amboinensis* before altering the taxonomy.

17:42. ***Cuora aurocapitata*, *C. cyclornata*, and *C. trifasciata***: Blanck et al. (2017) analyzed variation in these three *Cuora* species from across their range, using morphometric principal components analysis (PCA) and microsatellite data, comparing their results with previous genetic work by Tiedemann et al. (2014) and Li et al. (2015). They concluded that all three species are polytypic and described a new subspecies within each: *C. aurocapitata dabieshani*, *C. cyclornata annamitica*, and *C. trifasciata luteocephala*. We tentatively accept these named taxa as new subspecies pending further analysis, but note that the described lineages are not completely distinctive and that the mixing of individuals across the clades suggests that this may be too fine an application of the lineage approach to defining taxa.

17:43. ***Cuora flavomarginata***: The map for this species has been updated and revised extensively by re-evaluating most previously recorded localities. We have also added many localities provided by T. Blanck based on compilations of Chinese survey literature and field data.

17:44. ***Cyclemys atripons* and *C. oldhamii***: Vamberger et al. (2017b) examined a recently discovered *Cyclemys* population from Phnom Kulen National Park in northwestern Cambodia using external morphology, 17 unlinked microsatellite loci, and the mitochondrial cytochrome b gene. Morphologically, the turtles resemble *C. oldhamii*, but have mitochondrial haplotypes of *C. atripons*, while having microsatellite loci distinct from *C. atripons*. The authors concluded that this population represents either a natural hybrid swarm of *C. atripons* and *C. oldhamii* or a distinct undescribed species with introgressed mitochondria of *C. atripons*, without drawing taxonomic consequences. This underscores that genetic differentiation in *Cyclemys* is complex and still incompletely understood.

17:45. ***Cyclemys pulchristriata***: Using a turtle kept in Shanghai Zoo, Li et al. (2017) published a complete mitochondrial genome (mt genome) assigned to *Cyclemys pulchristriata* and calculated a phylogenetic tree using complete mt genomes of other geoemydid species from GenBank. The topology of their tree conflicted with the trees published by Fritz et al. (2008) and Stuart and Fritz (2008) using the mitochondrial cytochrome b gene. When the cytochrome b sequences of the mt genomes used by Li et al. (2017) are compared to the data set of Fritz et al. (2008), it turns out that the sequences of '*C. atripons*' and '*C. pulchristriata*' used by Li et al. match the *C. pulchristriata* from the data set of Fritz et al., while the sequence of '*C. dentata*' used by Li et al. match the *C. atripons* from the data set of Fritz et al. (Fritz, pers. comm.). The data of Fritz et al. (2008) are considered taxonomically reliable. This underlines the pitfalls of sequencing animals with unclear identification and using uncritical taxonomic identifications of GenBank data.

17:46. ***Malayemys* species**: Brophy (2004) examined morphometric variation in *Malayemys subtrijuga* Schlegel and Müller 1845 (sensu lato) across its known range and concluded that turtles from the Mekong River basin (Laos, Cambodia, and Vietnam) differed (primarily in color pattern) from those in the Chao Phrya River basin (Thailand), and resurrected the name *macrocephala* (Gray 1859) for *Malayemys* from the latter basin.

Despite the facts 1) that Schlegel and Müller (1845) reported the type locality of *subtrijuga* as "Java", 2) that at least three syntypes are known (RMNH 6082, 6084–6085: Hubrecht 1881; although two others [NHMUK 1947.3.4.53 (specimen "m" listed in Boulenger 1889) and MNHN 7964 may also be among the original type series]; King and Burke 1989; Iverson 1992), 3) that field data associated with the RMNH syntypes indicate collection "most probably in the most western province of Bantam [=Bantan]" (Hubrecht 1881), 4) that numerous specimens of this taxon from "Java" were available in the 1800s (in at least eight European Museums; see Specimens Examined in Brophy 2004), 5) that this species has been recorded from at least six localities on Java (Brophy 2002); and 6) that Brophy's own morphometric analysis (2002: Figs. 30–31; 2004: Figs. 6–7) demonstrated that Javan specimens were distinct from specimens from both the Chao Phrya and Mekong basins (with the latter two samples actually overlapping in morphometric hyperspace), Brophy (2004) argued a) that the type locality of *subtrijuga* ("Java") was in error, b) that *Malayemys* does not occur nor has it occurred on Java, and c) that the holotype must have originated from the Mekong basin. Hence, Brophy (2004) assigned the name *subtrijuga* to the population of *Malayemys* inhabiting the Mekong basin (but refrained from restricting the type locality of *subtrijuga*, citing uncertainty about whether the Javan specimens might be native), and the name *macrocephala* to the population in the Chao Phrya basin. Furthermore, Brophy (2004) distinguished these two populations primarily on color patterns of the head.

More recently, Sumontha et al. (2016) and Ihlow et al (2016) observed that the head pattern in *Malayemys* from the Mekong tributaries of the Khorat Plateau (northeastern Thailand) and adjacent Laos, differed from that of specimens from elsewhere in the Mekong basin. Based solely on color differences, Sumontha et al. (2016) described a population from the northern Khorat Plateau as *Malayemys isan*. Nearly simultaneously (but see below), Ihlow et al. (2016) examined color pattern and some morphometrics, as well as mtDNA and nuclear microsatellite variation across three Southeast Asian mainland regions of *Malayemys* distribution (Chao Phraya basin, Mekong basin, and Khorat Plateau), and concluded that each of these regions has its own distinctive species, based on each of their data sets, and therefore described the form that they recorded from three locations on the Khorat Plateau as *M. khoratensis*. Two of those locations of *M. khoratensis* are effectively sympatric with the *M. isan* population, and color patterns in the two taxa are very similar, suggesting that the two taxa are subjectively synonymous. Although the description of *M. isan* by Sumontha et al. appeared online first, their paper did not comply with ICZN standards for digital publication, whereas that by Ihlow et al. did (see below); therefore, we conclude that *M. isan* is a junior subjective synonym of *M. khoratensis*.

Unfortunately, neither of these papers mentioned the possibility of taxonomically recognizing the Javan population as a fourth, distinctive taxon, whose continued occurrence is confirmed by ongoing exports for commercial trade (UNEP-WCMC 2017). If further phylogenetic research demonstrates the Javan population to be taxonomically distinct, the name *Emys subtrijuga* Schlegel and Müller 1845 would apply to that population, as would its later synonyms *Cistuda gibbosa* Bleeker 1857b, *Emys nuchalis* Blyth 1863, and *Damonia oblonga* Gray 1871. Furthermore, Gray 1870c also described *Damonia crassiceps* from "China", the locality probably erroneous but possibly representing the Mekong River basin population. Finally, none of these papers have addressed Schweigger's 1812 name *Emys herrmanni*, which is considered by most authors a *nomen dubium*, synonymous with *M. subtrijuga*.

It is problematic that none of these type specimens have been included in any morphometric or genetic analysis to date. For example, if a Javan population does or did exist, and it was found to be distinctive (as Brophy's morphometric analyses suggested), then the name *subtrijuga* should be applied there, and the Mekong population might be identifiable as *crassiceps*.

In conclusion, until a more comprehensive analysis of coloration and pattern, morphometrics, and both mitochondrial and nuclear DNA variation among all populations (including Java) is undertaken, with the inclusion of all of the type specimens mentioned above, we cannot be certain which name applies precisely to which population of *Malayemys*. Finally, the TTWG is not unanimous in its support for the recognition of *macrocephala* or *khoratensis* as full species, and whether or not *isan* is synonymous with or distinct from *khoratensis*. However, to minimize taxonomic changes as we await further data, we here recognize three species in the genus *Malayemys*: *subtrijuga, macrocephala,* and *khoratensis*.

17:47. ***Malayemys khoratensis***: In early 2016 a distinctive clade of Snail-eating turtles (*Malayemys*) from the Khorat Plateau of eastern Thailand was described as a new species with two different names in two separate articles (Ihlow et al. 2016; Sumontha et al. 2016). The name *M. khoratensis* Ihlow et al. 2016 was published on 6 April 2016, the date when the electronic version of the article, published in the journal *PLoS One*, met the ICZN Code for nomenclatural availability of electronic articles under article 8.5.3 (ICZN 2012). The name *M. isan* Sumontha et al. 2016 was published electronically on 26 March 2016 in the journal *Taprobanica*; however, the Zoobank registration of this article failed to meet the requirements of ICZN article 8.5.3.1, rendering the electronic version unavailable for the purposes of nomenclature. It must instead be considered as published when it first met the requirements of ICZN article 8.4.1, i.e., when numerous identical hard copies printed on paper became available. There is no evidence of the journal *Taprobanica 8(1)* having been printed prior to 13 April 2016, when copies were requested and were simultaneously sent to the archiving libraries as listed on the journal's website (Thomson and Lambertz, in press). Therefore, the date of publication of the journal *Taprobanica 8(1)* and the contained article by Sumontha et al. (2016) is to be corrected to 13 April under ICZN article 21.4, the first date for which there is evidence of its physical existence. As a result, the name *Malayemys khoratensis* has nomenclatural priority, and *Malayemys isan* becomes a junior subjective synonym (see above annotation 17:46).

17:48. ***Damonia crassiceps* Gray 1870c**: This taxon has been listed under the synonymy of *Malayemys subtrijuga* by most authors since Smith (1931). However, Sumontha et al. (2016) questioned its identification as representing either this species or genus, based on the description of the drawing of the species as lacking facial stripes, but did not suggest an alternative taxonomy.

17:49. ***Mauremys annamensis* and *M. mutica***: Zhao et al. (2016a) sequenced the entire mitochondrial genomes of three specimens of *Mauremys mutica* without published locality data, but purported to originate from Taiwan, China, and Vietnam or Hainan. Phylogenetic analysis revealed that the latter genome was more similar to that of *M. annamensis* than to the other more northerly mutica genomes, rendering *M. mutica* paraphyletic. Zhao et al. (2016b) examined variation in the mitochondrial barcode gene COI among larger sample sizes of *M. annamensis* and *M. mutica*. They identified reciprocally monophyletic northern (including Taiwan) and southern (Vietnam, Hainan and *M. annamensis*) clades, but the latter showed no monophyly among the constitutent populations. They speculated that *M. annamensis* might be of hybrid origin. Furthermore, Zhou et al. (2015) compared the entire mitochondrial genome of samples of eight species of *Mauremys*, and their results also nested *annamensis* within *mutica*, sister to *mutica* from southern China (near Vietnam). Unfortunately, they included no material from Vietnam, and most of their samples were purchased from the pet trade or food markets. More extensive geographic sampling (including *M. m. kami* from the Ryukyus) and nuclear analysis will be necessary before any taxonomic changes are warranted.

Independently, Somerová et al. (2015) examined variation in a mitochondrial gene and a nuclear intron in European zoo specimens of *M. annamensis*, and also resolved *M. mutica* as paraphyletic with respect to *annamensis*. In addition, their analysis also revealed two distinct, reciprocally monophyletic mitochondrial clades within *annamensis*, which they recommended be maintained separately in captive breeding operations. Unfortunately, the natural geographic provenance of these two clades was unknown.

17:50. ***Mauremys caspica* and *Mauremys rivulata***: Using microsatellite loci and nuclear and mitochondrial DNA sequences, Vamberger et al. (2017a) showed that the two species hybridize only rarely along their contact zone in Turkey. However, there is evidence for introgression between both species. In addition, they found hybrid evidence on Cyprus and, unexpectedly, terrapin populations in Israel and Jordan turned out to be a hybrid swarm of the two species, morphologically resembling *M. rivulata*. Ecological paleomodeling suggested that the two species formerly had temporary contact across what is now the Syrian Desert during more humid climatic episodes.

17:51. ***Mauremys leprosa***: An analysis of variation in two mitochondrial markers and one nuclear gene across the range of *Mauremys leprosa* by Veríssimo et al. (2016) confirmed two distinct genetic lineages that generally correspond to the two currently recognized subspecies. One is distributed from southern France through Iberia to Morocco, north of the Atlas Mountains (*M. leprosa leprosa*); the other occurs from northern Libya and Tunisia westward to Morocco, both north and south of the Atlas mountains (*M. leprosa saharica*); in northern Morocco there is secondary contact between these subspecies. In northeastern Iberia and southern France, some native populations have been genetically impacted by introduced *M. l. saharica* (Palacios et al. 2015).

17:52. ***Mauremys reevesii***: The historic native distribution of this species has been difficult to determine accurately, as the species has been traded extensively in China for several thousand years, and has apparently been introduced to Taiwan and Japan in historic times (see the genetic analysis by Suzuki et al. 2011). The populations in Korea may also have been introduced prehistorically, but could represent natural distribution during an interglacial warming period. Our previous distribution map in the last checklist was based on Iverson (1992) and the EmySystem database plus input from the CBFTT account by Lovich et al. (2011). We have now updated and revised this map extensively by re-evaluating most localities and restricting the distribution to areas below approximately 600 m elevation. We have also added more localities provided by T. Blanck (based on compilations of Chinese survey literature and field data) and D. Gaillard. While generally a lowland species, some populations (e.g., in Anhui) appear to occur up to elevations of ca. 500 m in hill regions, but in more southern regions (e.g., Hunan and Jiangxi) the species appears to be limited to lowland areas below 300 m (T. Blanck, unpubl. data). Most northern Chinese localities for *M. reevesii* appear to be trade specimens from ports and market centers (as also concluded by Pope 1935:46). Many southern and eastern coastal specimens are also trade specimens from coastal ports and markets or possibly locally invasive from markets. However, ancient Chinese writings seem to indicate that this species apparently occurred along the south coast, at least in Guangdong (T. Blanck, unpubl. data). Native wild populations do occur in the Chengdu basin of the upper Yangtze in Sichuan and all along the central Yangtze lowland basin, notably in Anhui, Guizhao, Hubei, Hunan, and Jiangxi. There also appears to be a native population in the Wei Valley of Shaanxi. Other scattered records north of the Yangtze may or may not represent native populations. Further genetic studies of Korean and southern and eastern coastal specimens with comparisons to specimens from the central Yangtze and Sichuan portions of the range are clearly needed.

Oh et al. (2017) examined geographic variation in mitochondrial cyt b sequences across the range of *M. reevesii*. Their results were complicated by the translocation of this species by humans since prehistoric times. They suggested that the two main natural populations in China and Korea were weakly but distinctly divergent genetically; however, introgression as a result of translocations is diluting that difference, precluding any taxonomic recognition.

17:53. ***Mauremys rivulata***: Vamberger et al. (2014) examined variation in a mitochondrial gene fragment and across 13 microsatellite loci for samples from throughout the range of *Mauremys rivulata*. The mitochondrial sequence data showed no evident structuring. However, the microsatellite data revealed a distinct genetic break in southern Turkey, separating eastern and western populations. This break is likely to be caused by introgressed alleles from *M. caspica* in the eastern portion of the distribution range of *M. rivulata* (Vamberger et al 2017a). Vamberger et al. (2014) attributed the lack of clear substructure among the western populations of *M. rivulata* to trans-Mediterranean dispersal.

17:54. ***Melanochelys trijuga parkeri***: This taxon was described as a large-bodied, low-shelled subspecies endemic to Sri Lanka, but recent surveys at all historically recorded localities have encountered mainly the more common and widespread smaller Sri Lankan subspecies *M. t. thermalis* (A. de Silva, unpubl. data). These two taxa need genetic evaluation to determine if and how they may be distinct, and if distinct, whether they are undergoing introgression and intergradation.

17:55. ***Aldabrachelys* and *Cylindraspis***: Based on contemporary Indian Ocean currents, and historic fluctuations in sea levels, Wilmé et al. (2017) proposed that insular Indian Ocean populations of tortoises were the result of introductions by humans approximately 4000 ybp. However, given that previous work dates the colonization of these islands by tortoises at 9.5–22 mybp, and fossils of *Aldabrachelys* have been dated to at least 138,000 ybp (Cheke and Hume 2008; Gerlach and Paquette 2014; Cheke et al. 2017; Hansen et al. 2017; Hawlitschek et al. 2017), this hypothesis is untenable.

17:56. ***Aldabrachelys gigantea* and *Testudo***: Besnard et al. (2016) used shotgun sequencing to elucidate the entire mitochondrial genome of *Aldabrachelys gigantea*. Phylogenetic analysis of the aligned sequence of this tortoise with the available mitochondrial genomes of twelve other tortoise species generally supported the results of Le et al. (2006), except for the placement of *Malacochersus* and *Testudo horsfieldii*. However, the analysis by Besnard et al. suggested a paraphyletic genus *Testudo*, although with reduced bootstrap support (77–78%). Synthesis of these data with nuclear markers is needed before any taxonomic changes are warranted.

17:57. ***Aldabrachelys gigantea***: Turnbull et al. (2015) examined variation in body size and sexual size dimorphism among four subpopulations of Aldabra tortoises. They speculated that these differences might have a genetic basis, and recommended population genetic studies.

17:58. ***Chelonoidis***: The gender of the tortoise genus name *Chelonoidis* Fitzinger (1835) has long been assumed to be feminine (e.g., Agassiz 1857) because its root is the feminine Greek noun *Chelone* (not *Chelonos* as assumed by Olson and David [2014]), and the Latinized suffix *-oides* (from the Greek *-eides*, meaning form or shape [or "like" in English]). However, according to the ICZN (Article 30.1.4.4) genus names ending in *-oides* must be considered masculine unless the original author indicated gender directly or indirectly (i.e., by usage). Because Fitzinger gave no direct indication or orthography indicating that he considered the name *Chelonoidis* to be feminine (or neuter), Olson and David (2014) argued that it should be considered masculine. However, Fitzinger did provide indirect evidence that he considered the genus name masculine, by his clear rendition of other reptile genera he described as masculine (e.g., *Dracontoidis* and *Elapoidis*). In either case, the conclusion is the same—that a strict application of the Code would render *Chelonoidis* masculine, and require the emendation of the suffix of many of the species currently recognized within that genus. The name *vicina* is treated as a noun in apposition (Art. 31.2.2) and thus is unaffected by the gender of the genus name. While the conversions to *carbonarius, denticulatus, niger*, and *phantasticus* imply disruption to a few well-established and widely-used names, they should not lead to any significant confusion, and in the interest of Code compliance, we adopt these changed endings.

17:59. ***Chelonoidis chilensis***: Sánchez et al. (2015) examined variation in the karyotype of *Chelonoidis chilensis* across its range. They identified two karyomorphs, one from tortoises in the Dry Chaco Ecoregion, and one from the Monte of Steppes and Plains Ecoregion. However, these karyomorphs were independent of the external morphotypes of *donosobarrosi, petersi*, or *chilensis*, and therefore they followed Fritz et al. (2012a) in recognizing only a single species (*C. chilensis*) in this complex.

17:60. ***Chelonoidis niger* complex**: Molecular studies of Galápagos tortoises have surged over the last several years, although most of the work has been more directed at population genetics than establishing species boundaries and their taxonomic implications. The general working assumption is that separate island populations previously recognized as subspecies of *Chelonoidis niger* [= *C. nigra*] (or synonyms thereof) are now accepted as species (e.g., Caccone et al. 2002; Russello et al. 2005, 2007; Poulakakis et al. 2008, 2012, 2015; Chiari et al. 2009; TTWG 2009 [annotation 09:32], 2014; Edwards et al. 2014; Garrick et al. 2014), and we continue to recognize them as such, now also resurrecting the three previously synonymized southern Isabela taxa (*guntheri*, *microphyes*, and *vandenburghi*) from their synonymy under *C. vicina*. However, Loire et al. (2013) examined the population genomics of five Galápagos tortoise taxa (purportedly representing three named island populations) based on 248 nuclear genes. Their results suggested panmixis across their samples, with little genetic differentiation, and they questioned the species-level recognition of the various island taxa. Expansion of this study to include Galápagos-wide sampling would clearly be helpful in settling some of the taxonomic issues facing these tortoises.

Edwards et al. (2014) examined 14 microsatellite loci for tortoises from southern Isabela from the ranges of *C. vicina* and *C. guntheri* (the latter was synonymized with the former based on mtDNA data in Poulakakis et al. 2012). Not only did they find support for the distinction of those two taxa, but they also identified a third, unnamed, geographically intermediate genetic cluster they referred to as the "*aplastados*" [flattened] type. Although they made no taxonomic recommendations, and an expansion of this study to include other Isabela populations is needed, these data warrant our removal of *C. guntheri* from the synonymy of *G. vicina*, with full species recognition. Simultaneously, based on 12 microsatellite loci and mtDNA sequence data, Garrick et al. (2014; see also Emerson and Faria 2014) identified two distinct but coalescing genetic lineages within *C. becki* on northern Isabela that appear to represent two different colonizations from Santiago (*C. darwini*). They also found some evidence of introgression of *C. vandenburghi* into the genome of *C. becki*. Hence, they concluded that "species boundaries in the group may be somewhat porous," and questioned the species-level status of *C. darwini* relative to *C. becki*.

Clearly, the evolutionary history of colonizations and divergences by tortoises in the Galápagos has been very complex, and much more reticulate than previously realized. Sorting out this history is an on-going challenge. However, as we noted in a previous checklist (TTWG annotation 12:31), genotyping of the many type specimens of named Galápagos tortoises is desperately needed, so that the correct names may be applied to all genetic lineages. Until those data are available, confusion and nomenclatural uncertainty will no doubt continue, such as some authors' use of *elephantopus* instead of *niger* or *nigra* (see TTWG annotation 09:33), and *ephippium* instead of *duncanensis* (e.g., Poulakakis et al. 2012; Jensen et al. 2015b; Hennessy 2015).

17:61. ***Chelonoidis donfaustoi***: Chiari et al. (2009) and Poulakakis et al. (2015) analyzed mitochondrial DNA and nuclear microsatellite characters in the two giant tortoise populations on Santa Cruz (Reserva and Cerro Fatal). Both studies found the populations to be genetically different and Poulakakis et al. (2015) demonstrated that the Reserva population represented the previously described *C. porteri*, and that the Cerro Fatal population was distinct and most similar to *C. chathamensis* from San Cristóbal. Despite minimal morphological differences from *C. porteri*, and that the holotype of *C. porteri* is a hybrid with Reserva nuclear DNA and Cerro Fatal mtDNA, they described the Cerro Fatal population as a new species, and we tentatively agree.

17:62. ***Chelonoidis niger***: Olson (2015) investigated the history of some early names applied to Galapagos tortoises. He concluded that the provenance of the single type specimen (MNHNP 9550) of both *Testudo californiana* Quoy and Gaimard 1824a and *Testudo niger* Quoy and Gaimard 1824b (= *Chelonoidis niger*) was "extremely unlikely" to be determined based on historical information, and hence the names should be considered *nomina dubia* and their use abandoned. Olson also concluded that one of the two syntypes of *Testudo nigrita* Duméril and Bibron 1835, designated the lectotype by Günther (1875a:268), was apparently lost, and since the paralectotype (MNHNP 9313) is a juvenile, he also recommended treating that name as a *nomen dubium*.

In addition, Olson and Humphrey (2017) investigated the origin of the type specimen of *Testudo elephantopus* Harlan 1827, and concluded that it may have come from Charles Island (Floreana), and suggested that the name *elephantopus* therefore replace the name *Testudo niger* Quoy and Gaimard 1824b, currently used for that island's species.

However, genetic analysis of the types currently in progress will hopefully demonstrate their geographic origins satisfactorily, and the allegedly lost lectotype of *nigrita* (NHMUK 1949.1.4.37) actually remains extant at the British Museum (P. Campbell, in litt., 2017). We therefore consider all these recommendations by Olson (2015) and Olson and Humphrey (2017) as premature and unnecessary at this time.

17:63. ***Chelonoidis phantasticus***: In our previous checklists we indicated that this species was Extinct, based on that supposition by Pritchard (1996), but its formal conservation status has not previously been assessed using IUCN Red List criteria (IUCN 2001). This has now been done by the TFTSG using updated Red Listing guidelines in regard to determining whether a species is actually Extinct or not (IUCN 2016). Although only a single individual of this species has ever been collected (in 1906), sightings and signs from 1964, 2009, and 2013 suggest that a few individual tortoises may remain extant in the exceedingly fragmented and hard-to-access landscape of Fernandina, most of which is covered by uninhabitable lava flows (A. Rhodin, L. Cayot, J. Gibbs, R. Kiester, and W. Tapia, in press). As such, the TFTSG now determines this species to be Critically Endangered (Possibly Extinct) and has submitted that assessment to the IUCN Red List for publication.

17:64. ***Chersobius, Homopus,* and *Psammobates***: Based on three mitochondrial and two nuclear genes, Hofmeyr et al. (2017) resolved a paraphyletic *Homopus* with respect to *Chersina*, and resurrected the genus *Chersobius* for the five-toed species (*signatus*, *boulengeri*, and *solus*) formerly in the genus *Homopus*, and restricted the genus *Homopus* to the four-toed species (*areolatus* and *femoralis*). We have tentatively accepted those changes here. The authors also noted strong support (Hofmeyr and Daniels, in prep.) for deep genetic divergence among the currently recognized subspecies of *Psammobates tentorius*, suggesting that they deserved species status. They also indicated the presence of phylogeographic structure within *Chersina angulata* and *Homopus signatus*, suggesting possible future taxonomic changes in those taxa. We await these forthcoming publications before making any further changes to the checklist.

17:65. ***Geochelone elegans***: Schweigger (1812:325) described *Testudo* *stellata* based on the same specimens and plate previously described and figured by Schoepff (1795:111) as *Testudo elegans*. However, Schweigger coined the new name *stellata* as a *nomen novum* because Schoepff had based his description of *elegans* partly on a Seba (1734) specimen (pl. 79, fig. 3) that Schweigger (1812:325) concluded had been incorrectly identified, and he instead synonymized that figure under *Testudo rotunda* Latreille. Schweigger therefore coined a new name for Schoepff's species, renaming it *stellata* and stating: "Habitat in India orientali. (Schoepf. sub falso nomine: test. elegans Seb.)". However, the description of *T. elegans* by Schoepff was nomenclaturally available, and therefore *T. stellata* Schweigger has the same type specimen as *T. elegans*, according to Article 72(e) of the ICZN Code, and thus becomes its objective junior synonym.

17:66. **Date of Publication of Blyth 1854 ["1853"]**: The date of publication of this article in issue number 7 of volume 22 of the Journal of the Asiatic Society of Bengal has historically been listed as 1853, the printed date on its page-headers. However, a note in the Proceedings published in the same issue 7 on p. 684 is dated 4 January 1854, indicating that the issue was actually not published until 1854, consistent also with the imprint date of 1854 on the bound volume of all 7 issues of volume 22. This change of date affects the following taxa: *Testudo phayrei* [= *Manouria emys phayrei*], *Testudo elongata* [= *Indotestudo elongata*], *Testudo megalopus* [= *Geochelone elegans*], *Testudo iberia* [= *Testudo graeca ibera*], and *Homopus burnesii* [= *Testudo horsfieldii horsfieldii*].

17:67. ***Gopherus***: In the recent book on the biology of North American tortoises (edited by Rostal et al. 2014), Bramble and Hutchison (2014) reviewed and augmented the previous morphological data for the five known living species at that time, as well as the fossil forms, and concluded that the available evidence (including molecular data) supported the reciprocal monophyly of *Xerobates*, including *agassizii, berlandieri*, and *morafkai*, and *Gopherus* (*sensu stricto*), including *flavomarginatus* and *polyphemus*. They recommended recognition of *Xerobates* and *Gopherus* as sister genera. In the same volume, Murphy (2014) provided a critical review of the systematics of the broad genus *Gopherus* and its members, and also concluded that *flavomarginatus* and *polyphemus* are sister taxa, and that *berlandieri* is sister to the *agassizii* group (including *morafkai*; see also Reid et al. 2011, not cited in Rostal et al. 2014). However, he made no recommendation about the use of *Xerobates*, and included all species in the broader genus *Gopherus*, as most authors since Crumly (1994) have done. Although most of the other authors of chapters in this book used the genus *Gopherus* (*sensu lato*), in his review of fossils, Franz (2014) recognized *Xerobates* and *Gopherus*. As noted by Murphy (2014), broad nuclear sampling is needed to resolve definitively the relationships within this species group. Until such time, and considering that the name *Gopherus* could still apply to all currently included species even if the two identified clades are reciprocally monophyletic, we retain *Gopherus* as the sole genus name.

17:68. ***Gopherus evgoodei***: The genetic distinctiveness of the southern Sonoran / northern Sinaloan population of Desert Tortoises has long been recognized (reviews in Edwards et al. 2015a,b, 2016), and has now been formally described as a new species by Edwards et al. (2016).

17:69. ***Indotestudo forstenii***: The type specimen of *I. forstenii* was recorded by Schlegel and Müller (1845) as having been collected by Forsten on "Gilolo, Indischen Archipel" (now Halmahera, Indonesia). However, no further specimens of *I. forstenii* have ever been recorded or found anywhere on that island since that time (D. Iskandar, A. Riyanto, pers. comm.), and the species does not appear to occur on Halmahera or its adjacent islands. The collector, Eltio Alegondas Forsten, spent a few months in 1841 collecting botanical and zoological specimens on Ternate island just off the west coast of Halmahera, where his collectors also obtained some material from mainland Halmahera. However, he also made extensive collections later in 1841–1842 on northern Sulawesi, while headquartered at Gorontalo (http://www.nationaalherbarium.nl/FMCollectors/F/ForstenEA.htm), where *I. forstenii* does occur. We hypothesize that the type specimen was therefore probably obtained by Forsten near Gorontalo, Sulawesi, Indonesia, and that it was then mislabeled as to its exact origin, or possibly that it was acquired from Ternate or Halmahera as a regionally traded specimen originating from Sulawesi. We no longer consider Halmahera to be part of the natural range of *I. forstenii*, and hereby formally restrict its type locality to "near Gorontalo, Sulawesi, Indonesia".

17:70. ***Testudo***: Based on a phylogenetic analysis of morphological traits for twelve fossil and the five extant species in the genus *Testudo* (sensu lato), Luján et al. (2016) recognized three monophyletic subgenera: *Chersine* for *hermanni*, *Agrionemys* for *horsfieldii*, and *Testudo* for *graeca, marginata,* and *kleinmanni*. Additionally, Vasilyev et al. (2014) studied variation in the 12S rRNA mitochondrial gene and three RAPD markers among individuals of a number of species of *Testudo* (sensu lato). Although *graeca, marginata, kleinmanni* (including synonymous *werneri*), and *horsfieldii* were resolved as monophyletic in the mtDNA analysis, *hermanni* was not; however, the RAPD analysis resolved each of those taxa as monophyletic. Support for the recognition of three monophyletic clades (corresponding to *Chersine*, *Agrionemys*, and *Testudo* [sensu stricto]) was ambiguous, with no support from the mtDNA, and only weak support from the RAPD data. Based on the combination of morphology of extant and fossil species and acknowledging the results of molecular genetics studies of *Testudo* by others, Luján et al. (2016) recommended that *Chersine* and *Agrionemys* (as well as the fossil *Paleotestudo*) be recognized as valid subgenera of *Testudo* (sensu lato). We now adopt that recommendation here, discontinuing our previous listing of alternative generic designations.

17:71. ***Testudo (Testudo) graeca***: In a paper previously not recorded in our checklist, Türkozan et al. (2010) analyzed morphometric variation in a large sampling of *Testudo graeca* from throughout Turkey. They determined that the putative subspecies *anamurensis* and *antakyensis* are not distinct from each other or from *terrestris* (and therefore synonymized under *terrestris*), and that *armeniaca* and *perses* are distinct. Further, they noted that the populations from northern and southern Turkey, possibly corresponding to the *ibera* and *terrestris* mtDNA clades, respectively, also appeared to be morphometrically distinct. They made no taxonomic recommendations other than maintaining a conservative approach pending additional morphologic and genetic assessment of more material from both within and outside Turkey. Our checklist has reflected these conclusions for many years, although we have listed *perses* as a synonym under the distinct taxon *buxtoni* since 2007, a placement reconfirmed by Parham et al. (2012) (see TTWG annotations 07:73 and 12:36).

Our current updated map with its subspecies delineations has benefitted from review and input by Oguz Türkozan and Peter Mikulíček. Notably, unpublished mtDNA genetic work in progress by Türkozan and colleagues now appears to confirm the earlier impression that *ibera* and *terrestris* represent well-separated northern and southern populations of *T. graeca*. Their distribution patterns reflect clear separation by the so-called Anatolian Diagonal, with only a few areas of intergradation in southwestern Turkey. Additionally, *buxtoni* appears to intergrade slightly with *terrestris* in the southeastern corner of Turkey.

Using the cyt b gene, Javanbakht et al. (2017) examined the phylogeography of the subspecies of *T. graeca* in Iran and Transcaucasia and refined the knowledge of their distribution. Based on species distribution models, they showed that the distribution ranges changed little since the Last Glacial Maximum.

Using three mitochondrial DNA fragments (cyt b, 12S, ND4 plus adjacent DNA coding for tRNAs), Graciá et al. (2017a) studied differentiation of the *Testudo graeca* complex. According to fossil-calibrated molecular clock calculations, they inferred a dual diversification burst. The eastern subspecies, including the last common ancestor of the North African taxa, radiated in the Mio-Pliocene, whereas a second radiation in North Africa took place during the Pleistocene. Based on a Libyan tortoise of unknown exact provenance, a new North African lineage was discovered. The recent introduction of most Western European populations was confirmed, with the exception of populations in southeastern Spain, which are older.

17:72. ***Testudo (Testudo) graeca* and *T. (T.) g. terrestris***: Meiri et al. (2011) examined body size variation in *Testudo graeca* across the Levant, and demonstrated that these tortoises follow Bergmann's Rule, with the smallest tortoises found at the southern end of the range in the Negev Desert. The small Negev tortoises had earlier been decribed as *T. floweri* by Bodenheimer (1935), and these authors agreed that this taxon is synonymous with *T. graeca*. Werner et al. (2016) then expanded that analysis to include all *T. graeca* (sensu lato; see TTWG 2014) from Morocco to Iran. They also found a general correlation of body size with latitude. However, their analyses of sexual size dimorphism demonstrated that it seems to scale differently among tortoises in Anatolia versus the Levant, and concluded that this might suggest that those two populations might deserve consideration as "separate entities" (presumably with taxonomic consequences).

17:73. ***Testudo (Testudo) kleinmanni***: Based on morphological differences between *Testudo kleinmanni* on opposites sides of the Nile River, Perälä (2001) described the eastern population as *T. werneri*. Subsequent studies (see TTWG 2007, annotation 07:74) did not support this distinction and *werneri* was synonymized with *kleinmanni*. However, Werner (2016) has re-emphasized the apparent morphological differences between the populations and has claimed that some tortoises from west of the Nile have been translocated to the east to northern Sinai, potentially confounding the recent studies. Therefore, he suggested that *werneri* should be recognized as a distinct subspecies. Until further genetic work tests this scenario, we continue to retain *werneri* in synonymy.

17:74. ***Testudo (Chersine) hermanni***: Based on an analysis of 17 nuclear microsatellite loci and broad geographic sampling, Zenboudji et al. (2016) identified three major genetic clusters within *Testudo hermanni hermanni*: one continental (Spain, France and Italy), one insular (Corsica, Sardinia, and Sicily), and one an island supporting two clusters (Menorca). There is still debate as to which populations are autochthonous and which are the result of human introductions (or reintroductions). Perez et al. (2014; see also TTWG 2014, annotation 14:36), based on mtDNA and microsatellites, concluded that the Spanish, Corsican, and Sardinian populations were likely introduced from Sicily by humans. However, although Zenboudji et al. (2016) agreed that the contemporary population on Sardinia is the result of introductions from Sicily following an earlier extirpation on Sardinia, they argued that the Corsican population is natural and genetically distinct. They also concluded that the population in northeastern Spain (Albera) is a relict, natural population. Menorca supports two distinct genetic populations. The one in the west is closely related to mainland populations, and hence is likely an introduction from a now extirpated mainland source. The eastern population is more distinct, but more closely related to the other insular populations, but whether this represents an ancient autochthonous divergence or an ancient human introduction of a lineage of unknown provenance could not be determined. Zenboudji et al. (2016) also noted a number of examples of mismatched genotypes in several populations, representing introduced individuals (and their offspring) from other populations. Finally, they recommended that six populations be considered genetic management units for conservation purposes: 1) Albera (Spain) + western Menorca; 2) France (Var); 3) Italy; 4) Sardinia + Sicily; 5) Corsica; and 6) eastern Menorca.

17:75. ***Cyclanorbis senegalensis***: Based on mitochondrial DNA sequence data, Mazuch et al. (2016) reported the presence of *C. senegalensis* in western Ethiopia for the first time, and also found significant genetic divergence between western (Togo and Benin) and eastern (Ethiopia) populations. They called for further phylogeographic study, but made no taxonomic recommendations.

17:76. ***Amyda cartilaginea* or *A. ornata***: Fritz et al. (2014a) examined variation in mitochondrial and nuclear DNA and color patterns across the range of *Amyda cartilaginea* (sensu lato). Their mtDNA tree was not highly resolved; however, because of the concordance of the identified clades with color pattern and geography (paleodrainages), the authors recognized two named species with four named subspecies within what was previously recognized as *A. cartilaginea*. They restricted *A. cartilaginea* (sensu stricto) to the southern portion of the Greater Sundas, with the nominate subspecies in southern Borneo and Java, and a new subspecies, *maculosa,* in the northern portion of the Greater Sundas (northwestern Borneo and southern Sumatra). Populations of *A. cartilaginea* (sensu lato) in northern Sumatra and Peninsular Malaysia were not assessed or assigned to subspecies. They also identified, but did not describe, a potential candidate species from northeastern Borneo. They resurrected the older name *ornata* (Gray 1861) for the Southeast Asian mainland species, with the nominate subspecies confined to the Mekong basin, and resurrected the name *phayrei* (Theobald 1868) for the subspecies in Thailand and Myanmar. They also identified, but did not describe, a third possible subspecies from Bangladesh. Regrettably, no specimens from southern Myanmar, southern peninsular Thailand, or Peninsular Malaysia were included. In view of the relatively weak resolution of their named mtDNA clades, but reasonable concordance of those clades with paleogeographic drainage basins and color patterns, we list their proposed taxonomic changes provisionally, pending additional geographic sampling and further genetic and morphologic work.

17:77. ***Apalone mutica calvata***: In a guide to Alabama turtles, Guyer et al. (2015) elevated *Apalone mutica calvata* to a full species based on its distinctive color pattern, its geographic isolation, and the mtDNA data (part of only one gene) presented by Weisrock and Janzen (2000). Powell et al. (2016) followed their recommendation. However, because of the small sample size and small DNA fragment available to Weisrock and Janzen (2000) and incomplete sampling in the presumed area of overlap in southeastern Louisiana, we consider this change premature, and continue to recognize *calvata* as a subspecies of *A. mutica*.

17:78. ***Nilssonia* and *N. nigricans***: Based on mitochondrial Cytochrome C Oxidase Subunit I (mtCOI) barcode sequences, Kundu et al. (2016) provided a phylogenetic analysis of the Asian softshell turtles allied with the genus *Nilssonia*. Their results confirmed the presence of *N. nigricans* in the wild in Assam, India, as well as provided additional support for the synonymy of *Aspideretes* with *Nilssonia* (see also TTWG 2011, annotation 11:15).

17:79. ***Pelochelys cantorii***: Hoser (2014a) coined a new subgeneric and two new species names for two purported varieties of *Pelochelys cantorii*. Since the ICZN has been petitioned by Rhodin et al. (2015) (see annotation 17:4) to declare these and other Hoser names unavailable under the Code (Article 82.1), we maintain prevailing usage and do not recognize these names.

17:80. ***Pelodiscus sinensis* and *P. maackii***: Suzuki and Hikida (2014) examined mitochondrial cytochrome b sequence data from specimens of *Pelodiscus* across Japan and compared them with previously published data from Fritz et al. (2010b) from across the wider species range. They identified two lineages from Japan, corresponding to the previously recognized *P. sinensis* and *P. maackii*. The latter was widely distributed in Japan, whereas the former had only a sporadic distribution, leading the authors to conclude that *maackii* was native to Japan and *sinensis* was introduced. They also noted that if future nuclear DNA data supported this scenario, the older name *japonicus* (Temminck and Schlegel 1838) could be available for the lineage currently recognized as *maackii* (Brandt 1857).

17:81. ***Pelodiscus sinensis***: The publication date of F.J.F. Meyen's *Reise um die Erde*, in which *Trionyx (Aspidonectes) sinensis* (= *Pelodiscus sinensis*) was first described by A.F.A. Wiegmann, has been a source of controversy. Although frequently cited as appearing in 1835, Bauer and Adler (2001) in a previously overlooked publication determined that the description of *sinensis* first appeared in print in 1834, and we have now corrected that date here.

17:82. ***Pelodiscus sinensis***: As clarified by Adler (2016), the name *Trionyx tuberculatus* was first used by Cantor (1842a), but without a description or indication, and thus a *nomen nudum*; then subsequently formally and validly described a few months later (Cantor 1842b).

17:83. ***Rafetus euphraticus***: We note that in the original description of *Testudo euphratica* published by Daudin (1801) that he specifically credited Olivier with providing him with the description of the new species. We therefore amend the authorship of the original name to *Testudo euphratica* Olivier *in* Daudin 1801.

17:84. ***Rafetus euphraticus***: Ihlow et al. (2014) examined variation in two mitochondrial genome fragments across nearly the entire range of the species, and found no significant genetic variation.

17:85. ***Rafetus swinhoei***: Le et al. (2014) analyzed sequence data from two mitochondrial loci and one nuclear gene from all known populations of *Rafetus swinhoei* in China and Vietnam. Their results demonstrated minimal divergence among populations, and warranted no taxonomic changes. Despite the long history in China of human use and transport of turtles, the authors cautioned against speculation that the Chinese distribution is unnatural.

17:86. **Chelidae**: A few recent authors have followed Storr (1978) in using the family name Cheluidae (Michael and Lindermeyer 2010; Wilson and Swann 2013), a grammatically correct derivation from the Greek type genus *Chelus*, genitive singular *Cheluos*. However, the spelling Chelidae has been in prevailing usage globally since Lindholm (1929) and most authors continue to use it. Under ICZN Article 29.5, the original spelling of a family-level name is to be maintained when it is in prevailing usage, whether or not its derivation from the name of the type genus is in accordance with grammatical procedures. We therefore regard the name Cheluidae as an unjustified emendation, given the long-standing prevalence of Chelidae in the literature, and we strongly recommend and concur with the continued usage of Chelidae.

17:87. ***Acanthochelys radiolata***: Garbin et al. (2016) examined morphological variation in *Acanthochelys radiolata* across its range. Although they described significant variation in this species (especially in color and shape), they could identify no geographic pattern to this variation and concluded that *A. radiolata* is a single, highly variable species. In addition, they considered records from Mato Grosso and Sao Paulo States to be in error.

17:88. ***Chelus fimbriata***: Zug (1977) clarified that the genus name for the matamata is *Chelus*, not *Chelys*, as originally proposed by Dumeril (1805:76). Most authors since then have treated the generic name as feminine, rendering the species name as *Chelus fimbriata*. However, Ferreira et al. (2016), following the recommendation of Vlachos (cited as a pers. comm., but also discussed in Vlachos 2015), argued that the genus name *Chelus* is actually masculine (and the species name therefore *Chelus fimbriatus*) because it was supposedly based on Latinization of the classical Greek feminine word *χέλυς*, and according to ICZN (1999) Art. 30.1.3, a Latinized suffix should take the gender of the Latin suffix. However, according to Appendix B of the 1961 and 1985 ICZN Codes, as well as Art. 30.1.2 and 30.1.3 of the 1999 Code, there is a distinction between transcription or transliteration vs. Latinization of a Greek word. Specifically, for the Greek letter *upsilon* (υ), its Latin equivalent (i.e., transliteration) is '*u*', whereas the Latinized version is '*y*' (ICZN 1985, App. B). Hence, the name *Chelus* is considered a transliteration, not a Latinization, of *χέλυς*, whereas *Chelys* is considered a Latinization. Unfortunately, Vlachos (2015) transposed the terms "transliteration" and "Latinization" in his Table 1—he rightly used "Latinized form" to name his column L (where he gives "*y*" as the Latinized form of *upsilon*), but used "transliteration" for it in the caption, causing considerable confusion. *Chelus* and *Chelys* should not be considered homonyms (1999: Art. 56.2; 1985: Art. 56.b), and in accordance with ICZN 1999 Art. 30.1.2 (1985: Art. 30a), the gender of both *Chelus* and *Chelys* is feminine. The correct species name is therefore *Chelus fimbriata*, as it has been rendered for several decades, and we continue to use it as such.

17:89. ***Mesoclemmys raniceps***: Rivas et al. (2015) discussed the alleged distribution of this species in Venezuela, concluding that of the three specimens recorded from there, two were misidentified, and one (the type specimen of *Hydraspis maculata*), was misidentified and incorrectly restricted to Venezuela. Hence, we delete Venezuela from the range of *M. raniceps*, and synonymize *H. maculata* under *M. raniceps* instead of under *M. nasutus* where it was previously placed.

17:90. ***Phrynops geoffroanus* and *P. tuberosus***: In a previous checklist (TTWG 2010, annotation 10:44), we noted that the distribution and taxonomy of these two taxa remained highly problematic and subject to differing opinions as to their extent and inter-relationships, and in our last checklist (TTWG 2014) we provided coarse and uncritical distribution maps for them. In this checklist we now present new revised distributional maps that document most known localities of these taxa, sourced from a combination of the EmySystem database (with several corrections), recently published literature, and previous research on many collected specimens by Rhodin and Mittermeier during their work on the *P. geoffroanus* complex (Rhodin and Mittermeier 1983; unpubl. data). Morphological analysis at that time indicated the presence of several apparently allopatric and differentiated populations of *P. geoffroanus* corresponding to various level 3 and 4 hydroshed basins, with several areas of close parapatry and possible intergradation. We now depict these distributional patterns in our revised maps, showing the distributional limits of the two taxa to delineate the hydroshed-restricted extent of their mostly separate populations, and showing the various subpopulations of *P. geoffroanus*. Many of these differentiated populations have now also been preliminarily substantiated as genetically distinct lineages by Carvalho et al. (2016). We anticipate that the *P. geoffroanus* complex will eventually be recognized as a polytypic species complex with several distinct lineages, notably the southeastern Brazilian coastal, the Rio São Francisco basin, the Rio Paraná basin, the lower Amazon basin, the Colombian, and the Peruvian-Bolivian populations.

17:91. ***Platemys platycephala melanonota***: Mendes-Pinto et al. (2011) reported the collection of a *Platemys platycephala* in southwestern Pará, Brazil, that was diagnosable as the subspecies *P. p. melanonota*. This record lies nearly 2000 km from the known range of *melanonota*, well within the known range of the nominate subspecies, and calls into question the validity of the subspecies *melanonota* which was described based primarily on color patterns. A re-evaluation of geographic variation and genetics in this species is needed.

17:92. ***Chelodina (Chelodina) longicollis***: Hodges et al. (2015) studied mitochondrial phylogeography of *Chelodina longicollis*, a highly terrestrially mobile freshwater species, to determine if its population genetic structure would correspond to hydrological boundaries or not. They found two ancient haplogroups broadly with east-west partitioning across the Great Dividing Range, but made no taxonomic recommendations. Each haplogroup was characterized by complex genetic structure, demographically stable subpopulations, and signals of isolation by distance; but the patterns were also overlaid with signatures of introgression and recent gene flow, likely facilitated by late Pleistocene and ongoing anthropogenic landscape changes.

17:93. ***Chelodina (Macrochelodina) expansa***: Hodges et al. (2014) carried out a phylogeographic study of *Chelodina expansa* based on mitochondrial gene variation to identify two major clades of mitochondrial haplotypes. The first comprised populations from the inland Murray-Darling Basin and the Mary River in southeast Queensland; the second comprised populations from coastal catchments north of the Mary River. They did not regard it as appropriate to provide taxonomic recognition for these populations east and west of the Great Dividing Range (as previously proposed for other similarly distributed taxa by Cann 1998), because the mitochondrial analysis demonstrated that the morphological variation observed was not concordant with the spatial population structure defined by the molecular data (views subsequently discussed further by Spinks et al. 2015). Nevertheless, Hoser (2014b) inappropriately applied novel names to two of the mitochondrial clades identified by Hodges et al. (2014). However, since the ICZN has been petitioned by Rhodin et al. (2015) (see annotation 17:4 on Hoser) to declare these and other Hoser names unavailable under the Code (Article 82.1), we maintain prevailing usage and do not use his names.

17:94. ***Chelodina (Macrochelodina) kuchlingi* and *C. walloyarrina***: Both of these purported taxa remain enigmatic and poorly known, with their apparent distinctiveness incompletely evaluated, and we remain uncertain whether they are indeed valid and recognizable taxa (as either species or subspecies), or poorly differentiated lineages of *C. oblonga* (formerly *C. rugosa*) and *C. burrungandjii*, respectively, or possibly their hybrid intergrades. Ellis and Georges (2015), in their catalogue of turtle type specimens held at the Western Australian Museum, synonymized *C. kuchlingi* under *C. oblonga* and *C. walloyarrina* under *C. burrungandjii*, following the earlier recommendation by Georges and Thomson (2010), but their action was not based on new data or analysis. However, we note that prior to the description of *Chelodina walloyarrina* from the Kimberleys by McCord and Joseph-Ouni (2007b), and not addressed in our earlier comment (TTWG 2010, annotation 10:38), is that Thomson et al. (2000) noted morphological differences between Kimberley specimens (= *C. walloyarrina*) and *C. burrungandjii* from Arnhem Land, while Georges et al. (2002) compared the still undescribed Kimberley form and *C. burrungandjii* from Arnhem Land species using allozyme data (45 independent nuclear loci), which showed no fixed differences between these populations. As we noted in our prior checklist (TTWG 2014, annotation 14:42), further analysis of the phylogeographic relationships among all these lineages is still in progress by Kuchling, Georges, and others, and based on our precautionary principles in regard to data-driven analysis in the recognition and protection of biodiversity, we remain reluctant to formally synonymize these taxa until more conclusive genetic and morphologic data emerge.

17:95. ***Elseya***: Thomson et al. (2015) divided the broad genus *Elseya* into three subgenera based on genetics and skeletal morphology: *Elseya (Elseya)*, *Elseya (Hanwarachelys)*, and *Elseya (Pelocomastes)*.

17:96. ***Elseya flaviventralis***: Allopatric populations of the *Elseya dentata* group from the Arnhem Land region of Northern Australia were first suggested to be unique by Legler (1981) based on morphology. Subsequent allozyme electrophoretic analyses by Georges and Adams (1992, 1996) and morphological work by several authors (reviewed in Thomson and Georges 2016) supported the distinction of these populations at the species level, and Thomson and Georges (2016) formally described this species as *Elseya (Elseya) flaviventralis*, which we accept.

17:97. ***Elseya rhodini***: As indicated in our last checklist (annotation 14:45), the population of *Elseya* (formerly included under *E. novaeguineae*) from the southern versant of New Guinea, previously noted by Rhodin and Genorupa (2000) and by Georges et al. (2014) to be genetically and morphologically differentiated from other New Guinean *Elseya*, has since been formally described as *Elseya (Hanwarachelys) rhodini* by Thomson et al. (2015). We accept this new species as distinct.

17:98. ***Emydura macquarii krefftii***: Todd et al. (2014a) examined variation in mitochondrial and nuclear microsatellite markers across the widespread range of *Emydura macquarii krefftii*. The mitochondrial data revealed 1) a distinct divergence between northern (Burdekin River northward) and southern (Fitzroy River and southward) populations of *E. m. krefftii*, 2) that *E. m. emmotti* was most closely related to but highly divergent from the northern *krefftii* clade, 3) that *E. m. nigra* and *E. m. macquarii* were nested within the southern *krefftii* clade, and 4) that populations in the upper Burnett River were highly divergent from other southern clade populations. Their examination of twelve microsatellite loci within only *krefftii* also demonstrated support for the same north-south divergence as for the mtDNA data, but did not support the distinction of the upper Burnett population (possibly a human translocation, according to the authors), or the taxonomic distinction among the subspecies *nigra*, *macquarii*, and southern *krefftii*. They made no explicit taxonomic recommendations, but did note that the north-south divergence was within the range exhibited for other accepted chelonian species. Further analysis is clearly indicated.

17:99. ***Myuchelys purvisi***: Legler (1981) foreshadowed splitting the genus *Elseya* into two major clades, one containing *Elseya dentata* and related species, the other containing *Elseya latisternum* and its close relatives, many of which were undescribed at that time. A subsequent study based on 54 allozymes loci (Georges and Adams 1994) established that Legler's "*latisternum* group" was indeed a clade (monophyletic), and this was the foundation for the description of the new genus *Myuchelys* (Thomson and Georges 2009) with four contained species: *M. purvisi, M. georgesi, M. bellii*, and *M. latisternum* as type. Unfortunately, morphological characters that diagnose that genus are symplesiomorphies.

Two subsequent analyses based on a limited set of nuclear and mitochondrial sequence data were equivocal on the monophyly of *Myuchelys*. Georges et al. (1998) recovered *Myuchelys* as paraphyletic with respect to *Elseya* based on analyses of two mitochondrial genes (12S rRNA and 16S rRNA), but without statistical support. More recently, analyses of a single nuclear locus (c-mos) provided moderate support (83% bootstrap support values) for grouping *Emydura macquarii*, *Myuchelys latisternum*, and *M. georgesi* as a clade to the exclusion of *M. purvisi*, a result confirmed by analysis of mtDNA (Fielder et al. 2012). However, Georges and Adams (1994), Georges et al. (1998), and Fielder et al. (2012) all maintained that the uncertainty surrounding incongruence among these analyses should preclude taxonomic revisions and therefore did not propose revisions to correct the potential paraphyly of *Myuchelys* with respect to *Emydura*.

Subsequently, Le et al. (2013) generated phylogenies for the chelid genera *Elseya, Emydura, Myuchelys, Elusor,* and *Rheodytes* using two mtDNA markers and a single nuDNA marker. Their phylogeny also recovered *Myuchelys* as paraphyletic, again owing to the position of *M. purvisi*, and they assigned *purvisi* to a new genus, *Flaviemys,* to maintain monophyly of *Myuchelys*. A more comprehensive analysis (Spinks et al. 2015) using 13 independent nuclear DNA markers recovered *Myuchelys*, including *M. purvisi*, as a well-supported clade, in agreement with the previous allozyme data. Thus, based on the weight of evidence, the taxonomic revision of Le et al. (2013), using their more limited sequence information, was considered by Spinks et al. (2015) to be premature.

On the basis of conflicting evidence from the mitochondrial and nuclear DNA evidence, and because *M. purvisi* and *M. georgesi* are morphologically similar and have been regarded as a cryptic species pair (but see Thomson and Georges 1996), we have retained *Myuchelys* based on the weight of evidence suggesting that it is a well-supported monophyletic group, and placed *Flaviemys* into its synonymy, following the recommendation of Spinks et al. (2015).

17:100. **Pseudemydurinae, *Pseudemydura, P. umbrina***: The affinities of *Pseudemydura* among the Chelidae are not well established. Early work using serological comparisons revealed that *Pseudemydura, Emydura-Elseya*, and *Chelodina* formed an unresolved trichotomy (Burbidge et al. 1974). Many of the defining morphological characters of *Pseudemydura* have been regarded as autapomorphies, and so not useful for phylogenetic analysis. Nevertheless, Gaffney (1977) placed *Pseudemydura* as sister to all the remaining extant chelids of both Australasia and South America (as the new subfamily Pseudemydurinae), while admitting that his case, based on a single retained primitive character, was weak. Subsequent DNA sequence studies were unable to resolve the conundrum. 12S mitochondrial rRNA data were unable to conclusively establish the relationships of *Pseudemydura*, but tentatively resolved it as sister to the other Australasian shortnecked genera—*Emydura, Elseya, Myuchelys, Rheodytes* and *Elusor* (Seddon et al. 1997). Additional sequence analysis from mt 16S rRNA and nuclear c-mos supported this arrangement, but bootstrap support remained poor (Georges et al. 1998). A more recent analysis, using the same data drawn from GenBank, resolved *Pseudemydura* as sister to *Chelodina* (Guillon et al. 2012). Subsequently, in a broad analysis of previously published sequence data representing 13 mitochondrial and nuclear DNA loci and including 83% of all extant turtle species (as per our checklist), Pereira et al. (2017) resolved *Pseudemydura* as sister to all short-necked Australasian chelids, with those two clades sister to *Chelodina*. Most recently, Zhang et al. (2017) analyzed the whole mitogenome of *Pseudemydura* and demonstrated it to be sister to all Australasian chelid turtles (subfamily Chelodininae), with strong bootstrap support; consequently, they proposed resurrection of the subfamily Pseudemydurinae Gaffney 1977, which we adopt here.

17:101. ***Pelomedusa***: Vargas-Ramírez et al. (2010) and Wong et al. (2010) reported deeply divergent mitochondrial clades within what was then recognized as the monotypic species *Pelomedusa subrufa*, with less, but concordant, variation in nuclear DNA markers. The extent of mitochondrial divergences of up to 20% of the cytochrome b gene exceeds pairwise divergences between any other congeneric chelonian species. Based on mitochondrial DNA variation, Petzold et al. (2014) and Nagy et al. (2015) identified at least thirteen terminal clades (see also Fritz et al. 2014b). Petzold et al. (2014) recommended full species status for some of these clades. They restricted *P. subrufa* (sensu stricto) to southern Angola, Botswana, southeastern Democratic Republic of the Congo, Madagascar (presumably introduced), Malawi, Namibia, South Africa, and Tanzania. Older names were resurrected from the synonymy of *P. subrufa* for three of the clades: *P. galeata* (Schoepff 1792; South Africa), *P. gehafie* (Rüppell 1835; Eritrea and possibly Sudan), and *P. olivacea* (Schweigger 1812; Benin, Burkina Faso, Niger, Nigeria, and Senegal). Six other species were newly described: *P. barbata* (Saudi Arabia and Yemen), *P. kobe* (Tanzania), *P. neumanni* (Kenya and Tanzania), *P. schweinfurthi* (Central African Republic and South Sudan), *P. somalica* (Somalia and Ethiopia; see also Fritz et al. 2015b), and *P. variabilis* (Ghana and Ivory Coast). The authors also identified two clades that they considered candidate species but did not describe: one from Cameroon, and the other from Sudan. Further candidate species could correspond to distinct clades within *P. galeata* and *P. somalica* (Fritz et al. 2015b), and Nagy et al. (2015) added another possible candidate species from the southeastern Democratic Republic of the Congo. All these studies, however, relied primarily on mitochondrial data and preliminary geographic sampling, but also included some morphologic work and sequencing and allocation of type specimens (see also Fritz et al. 2015a). We remain uncertain whether all taxa described and/or identified are valid and at what systematic level (species vs. subspecies vs. ESUs), pending corroborating data from nuclear genes. However, based on the data and extensive analyses presented, we tentatively accept the proposed taxonomic arrangement while urging and awaiting further work, notably analysis of nuclear loci, more detailed morphologic work, and further geographic sampling, especially from areas between assigned species. We document these unsampled and unassigned areas as *Pelomedusa subrufa* (sensu lato) species complex.

17:102. ***Pelusios***: Kindler et al. (2016) examined sequence variation in three mitochondrial and three nuclear genes in *Pelusios*, and found no phylogenetic structure in *P. chapini*, *P. gabonensis*, or *P. nanus*; however, they identified significant structure within *P. rhodesianus* (with two deeply divergent clades), *P. carinatus*, and *P. castaneus*. Both their mtDNA and nDNA data also suggested that *rhodesianus* was paraphyletic with respect to *carinatus*. But because their geographic sampling was incomplete and there was discordance between their mtDNA and nDNA data, the authors made no new taxonomic decisions regarding these six taxa.

17:103. ***Pelusios castaneus seychellensis***: Kindler et al. (2016), in their wider phylogeographic study of *Pelusios*, found that their mtDNA data nested the lectotype of *P. seychellensis* deep within a variable *P. castaneus*, and sister to specimens from the Republic of Congo, agreeing with Stuckas et al. (2013), leading them to treat *seychellensis* as a junior synonym of *castaneus*. We addressed the status of *seychellensis* previously in annotation 14:47 and interpreted it at that time as a subspecies of *P. castaneus*. We maintain that interpretation at this time; however, we acknowledge the possibility that the types of *seychellensis* could conceivably have been mislabeled or based on transported specimens, in which case *seychellensis* should indeed be synonymized with *castaneus*.

17:104. ***Podocnemis erythrocephala***: Santos et al. (2016) examined variation in a single mitochondrial gene across the range of *Podocnemis erythrocephala*. They identified considerable genetic structure among populations, with four distinct genotypes that they deemed "management units," but made no taxonomic recommendations.

17:105. ***Podocnemis sextuberculata***: *Podocnemis sextuberculata* and *Pentonix americana* (*nomen dubium*) (= *Pelomedusa subrufa*) were first described on p. 13 of Cornalia (1849), but the descriptions (with minor changes) were reprinted on p. 312 in the Appendix of Osculati (1850), who collected the holotype of *sextuberculata* described by Cornalia. The two publications have created some confusion about dates and pagination for these two names, and we correct our previously cited paginations here.

DISTRIBUTION UPDATES

Specific distribution updates were recorded in the 2011, 2012, and 2014 checklists, but were not continued in the 2017 or current checklists, except as reflected in the revised maps and distributional information under each taxonomic entry.

Distribution Updates 2011

Dermatemys mawii: Honduras (?) deleted from the range as per CBFTT account (Vogt et al. 2011).

Kinosternon scorpioides albogulare: Population in San Andrés, Colombia, indicated as possible prehistoric or modern introduction, as per CBFTT accounts (Berry and Iverson 2011, Forero-Medina and Castaño-Mora 2011).

Chrysemys dorsalis: Apparently established in Florida (Krysko et al. 2011).

Graptemys pseudogeographica: Apparently established in Florida (Krysko et al. 2011).

Malaclemys terrapin and *M. t. centrata*: Bermuda added to native range (Parham et al. 2008).

Pseudemys nelsoni: Introduced to Tortola, British Virgin Islands (Owen et al. 2005).

Trachemys scripta scripta: Apparently established in Florida (Krysko et al. 2011).

Emys orbicularis orbicularis: Spain deleted from range; Spanish populations are attributable to subspecies *E. o. fritzjurgenobsti* and *E. o. galloitalica,* but not to the nominate subspecies.

Terrapene nelsoni: Chihuahua, Mexico (*T. n. klauberi*) and Jalisco, Mexico (*T. n. nelsoni*) added to the range, as per CBFTT account (Buskirk and Ponce-Campos 2011).

Batagur kachuga: Occurrence in Nepal confirmed.

Cuora bourreti: Occurrence in Laos indicated as uncertain.

Cuora picturata: Occurrence in central Vietnam confirmed (Ly et al. 2011).

Cuora zhoui: Vietnam added as uncertain occurrence.

Geoemyda spengleri: Laos added to the range (Stuart et al. 2011).

Mauremys caspica caspica: Israel, Jordan and Lebanon deleted from the range; populations there attributable to *M. rivulata*. Turkmenistan added to the range.

Mauremys caspica siebenrocki: Turkmenistan deleted from the range; population there attributable to *M. c. caspica*.

Sacalia bealei: Occurrence in Guangxi, China, indicated as uncertain.

Aldabrachelys/Dipsochelys gigantea/dussumieri hololissa: Cousine Island added to extirpated range, Round and Cousine islands added to introduced range, as per CBFTT account (Gerlach 2011b).

Stigmochelys pardalis: Sudan deleted from the range, and the new nation of South Sudan added to the range.

Pelodiscus parviformis: Vietnam added to the range.

Acanthochelys pallidipectoris: Mendoza, Argentina, corrected from native range to introduced, as per CBFTT account (Vinke et al. 2011).

South Sudan: This newly independent nation has seven taxa of freshwater turtles and tortoises: *Kinixys belliana belliana, Stigmochelys pardalis, Cyclanorbis elegans, Cyclanorbis senegalensis, Trionyx triunguis, Pelomedusa subrufa,* and *Pelusios adansonii*.

Distribution Updates 2012

Cuora bourreti: Occurrence in Laos was confirmed (Stuart et al. 2011), and possible occurrence in Cambodia was deleted from the checklist following consultation with range-state biologists.

Mauremys reevesii: Based on analysis of mitochondrial DNA, Suzuki et al. (2011) indicated that Japanese populations of *M. reevesii* were possibly derived from multiple historical introductions from nearby countries, and thus questioned its traditional status as a presumed native species. They noted the ability of *M. reevesii* to hybridize with native *M. japonica* as a threat, but also recognized these populations to be valuable in the context of depleted populations elsewhere in its range.

Kinixys: Ranges adjusted according to species ranges outlined by Kindler et al. (2012).

Nilssonia formosa: Liebing et al. (2012) referred to a record of *N. formosa* from Shuangbai (Yunnan, China), and photographs of a specimen from the Lancang River [= Mekong] in the Xishuanbanna region of Yunnan, as suggesting that the species has crossed the watershed divide into the Mekong River basin of Yunnan, China. However, given the substantial documented trade volumes of live turtles from Myanmar into Yunnan and onwards, and the propensity of turtles to escape or be intentionally released by humans, combined with the great biogeographical barriers (despite their very close proximity) between the Salween, Mekong, and Yangtze, we consider it doubtful that these records represent natural occurrences.

Mesoclemmys heliostemma: Additional occurrences across the Amazon basin of Brazil were reported by Molina et al. (2012).

Italy (Sardinia): Vamberger et al. (2011) compared mitochondrial and nuclear DNA of *Testudo graeca* from Sardinia with that of *T. graeca* from North Africa, and concluded that the near-absence of differentiation from other *graeca* populations, and reduced variation within the Sardinian population, indicated prehistoric introduction into Sardinia by humans. They also reviewed recent studies of the other non-marine turtle species occurring in Sardinia and concluded that Sardinia's populations of *Testudo hermanni hermanni*, *T. marginata*, and *Emys orbicularis galloitalica* likely each represented prehistoric or early historic human introductions.

Latvia: Pupins and Pupina (2011) recorded introduced populations or individuals of *Trachemys scripta elegans*, *T. s. troostii*, *Mauremys caspica*, *M. rivulata*, *Testudo horsfieldii*, and *Pelodiscus sinensis* in Latvia. However, they did not document successful reproduction in the wild, and it remains uncertain whether these records represent established populations or isolated individuals.

South Korea: Chang et al. (2012) noted that the native softshells in South Korea are attributable to *Pelodiscus maackii*, and reported *P. sinensis*, *Trachemys scripta elegans*, *T. s. scripta*, *Pseudemys rubriventris*, and *Mauremys* [*Ocadia*] *sinensis* as introduced into the wild.

Distribution Updates 2014

Chelydra acutirostris: Páez et al. (2012) listed the occurrence of this species in the Colombian Departments of Caldas and Quindio, but did not list records from Atlántico, Bolivar, Magdalena, or Sucre.

Trachemys c. or *o. callirostris*: Páez et al. (2012) reported the occurrence of this taxon in the Colombian Department of Cundinamarca.

Trachemys d. decussata: Parham et al. (2013) documented the occurrence of this taxon in northwestern Jamaica, including hybridization with *T. terrapen*; whether the occurrence is native or introduced remains unknown.

Trachemys emolli or *grayi emolli*: McCranie et al. (2013) documented the occurrence of this taxon in Honduras, while Ibarra Portillo et al. (2009) documented its occurrence in eastern El Salvador.

Cuora amboinensis: Wangyal et al. (2012) reported this and four other species from southern Bhutan, the first turtles reported from that country.

Cuora mouhotii: Rahman (2012) reported the occurrence of this species in the southern Chittagong Hill Tracts of Bangladesh, Wangyal et al. (2012) reported it from southern Bhutan, and Ly et al. (2013) extended its range in southern Vietnam.

Cyclemys gemeli: Wangyal et al. (2012) reported this species from southern Bhutan.

Melanochelys tricarinata: Wangyal et al. (2012) reported this species from southern Bhutan.

Aldabrachelys gigantea: The historic and present distribution of native and introduced populations of the various morphotypes or subspecies (*gigantea, arnoldi*, and *hololissa*) of giant tortoises in the Seychelles (including all granitic and coralline islands) has been analyzed in detail and updated by Gerlach et al. (2013).

Centrochelys sulcata: Participants at the IUCN/TFTSG Sub-Saharan African Red List workshop in 2013 noted that *C. sulcata* occurs in Benin, Cameroon, and Togo, and may possibly occur in Djibouti, Somalia, Saudi Arabia, and Yemen. Its presence in Yemen and Saudi Arabia was also previously noted by Gasperetti et al. (1993).

Indotestudo elongata: Wangyal et al. (2012) reported this species from southern Bhutan.

Kinixys erosa: Participants at the Sub-Saharan African Red List workshop considered that *Kinixys erosa* certainly occurs in Benin and Togo, but is absent from Burkina Faso.

Kinixys homeana: In their CBFTT species account, Luiselli and Diagne (2013) noted that *K. homeana* occurs in the Central African Republic. They questioned its occurrence in Gabon and noted that it does not occur in Congo (ROC) and that old historical records from the eastern Congo (DRC) were likely based on misidentified *K. erosa*. These historical records need further evaluation.

Kinixys nogueyi: Participants at the Sub-Saharan African Red List workshop considered the distribution of *Kinixys nogueyi* to include the Central African Republic, but that the species does not range as far south as Equatorial Guinea or Gabon, and that records from Mauritania are likely historic, but that the species no longer occurs there.

Cyclanorbis senegalensis: Participants at the Sub-Saharan African Red List workshop considered that the occurrence of *C. senegalensis* is uncertain in Cameroon, Central African Republic, and Liberia, and that the species is likely extirpated from Mauritania.

Rafetus swinhoei: Wang et al. (2013) extended and defined the known recent historic range of this Critically Endangered species in the upper Red River of southern Yunnan, China.

Mesoclemmys dahli: Páez et al. (2012) and Forero-Medina et al. (2013, CBFTT account) documented the occurrence of *M. dahli* in the Colombian Department of Magdalena.

Mesoclemmys gibba: Páez et al. (2012) recorded the occurrence of *M. gibba* in the Colombian Departments of Arauca and Guaviare.

Mesoclemmys perplexa: Campos et al. (2011) recorded the occurrence of *M. perplexa* in the Brazilian State of Goiás.

Mesoclemmys vanderhaegei: Vinke et al. (2013) reviewed the distribution of *M. vanderhaegei* and concluded that there are no confirmed records for Bolivia.

Platemys platycephala: Páez et al. (2012) recorded the occurrence of *P. platycephala* in the Colombian Departments of Guainía, Guaviare, Meta, and Vichada.

Peltocephalus dumerilianus: Páez et al. (2012) reported *P. dumerilianus* to inhabit the Colombian Department of Guaviare.

Pelusios bechuanicus: In earlier versions of this checklist, we included Congo (DRC) as part of the range of *P. bechuanicus*. However, we have been unable to verify this occurrence, and consider that this was based on old literature records of *P. upembae*, which was originally described as a subspecies of *P. bechuanicus*.

Pelusios castaneus: Stuckas et al. (2013) questioned earlier records of occurrence of *P. castaneus* on Cape Verde and suggested that our recording of that presence on our previous checklists was outdated. We have investigated this further and agree with them. Although Boulenger (1906b) documented the collection of a specimen of "*Sternothaerus derbianus*" (= *P. castaneus*) from a "small island in Praja Bay, S. Jago" (= Santiago), Chevalier (1935) noted that the specimen was most likely introduced from West Africa and that no Caboverdians were aware of any freshwater turtles in the islands. However, Boulenger's record (mapped among others by Iverson 1992) led to the assumption for a long time that the species occurred in the islands; but surveys of the local herpetofauna have failed to record its presence (Schleich 1982, 1987, 1996b; Vasconcelos et al. 2013), even as an introduced population. The small island where it was originally collected housed a prison where turtles had evidently been released into a small pond at some point in the past. We therefore remove Cape Verde from the distribution of *P. castaneus*.

For this same species, we also question whether it occurs natively on São Tomé. Although it has been recorded from there, and specimens have been collected and genetically analyzed (Stuckas et al. 2013), the species does not occur on either nearby Príncipe or the other volcanic oceanic islands in the same archipelago (Manaças 1956; Jones 1994), nor is there any record of the species occurring on the nearby continental island of Bioko (Equatorial Guinea) off the coast of Cameroon. São Tomé was first settled by the Portuguese, who brought African slaves to the island, so it appears most likely that West African *P. castaneus* were introduced to São Tomé in conjunction with the slave trade. In fact, the genetic analysis by Stuckas et al. (2013) demonstrated that their São Tomé specimen was essentially indistinguishable from an Ivory Coast specimen, lending further strength to this theory.

Podocnemis erythrocephala: Páez et al. (2012) reported that *P. erythrocephala* occurs in the Colombian Department of Guaviare, and perhaps in Vichada.

Podocnemis lewyana: Páez et al. (2012) reported that the range of *P. lewyana* extends into the Colombian Department of Tolima.

Podocnemis sextuberculata: Páez et al. (2012) reported that *P. sextuberculata* occurs in the Colombian Departments of Caquetá and Putomayo.

Podocnemis vogli: Páez et al. (2012) reported that *P. vogli* occurs in the Colombian Department of Guaviare, but did not indicate occurrence in Boyacá.

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(Divided into Three Separate Sections)

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Conservation Biology of Freshwater Turtles and Tortoises (2008–2021)

All CBFTT publications (10 checklists and 114 accounts covering 148 taxa) are available online as hyperlinked open-access downloadable doi-designated pdf's.

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INSTITUTIONAL (MUSEUM) ACRONYMS
Used for Turtle Type Specimens

AMF = Australian Museum Palaeontology Department, Sydney, Australia.
AMG = Albany Museum, Grahamstown, South Africa.
AMNH = American Museum of Natural History, New York, New York, USA.
AMPG = Athens Museum of Palaeontology and Geology, University of Athens, Athens, Greece.
AMS = Australian Museum, Sydney, New South Wales, Australia.
ANGSSR = see GNM.
ANSP = Academy of Natural Sciences, Philadelphia, Pennsylvania, USA.
ANU = Anhui Normal University Museum, Wuhu, Anhui, China.
AUM = Auburn University Museum of Natural History, Auburn, Alabama, USA.
AZM = Australian Zoological Museum (Private), Katoomba, New South Wales, Australia.
BEG = Bureau of Economic Geology, University of Texas, Austin, Texas, USA.
BMNH = see NHMUK.
BYU = Brigham Young University, Monte L. Bean Life Science Museum, Provo, Utah, USA.
CAS = California Academy of Sciences, San Francisco, California, USA.
CAS-SU = California Academy of Sciences, Stanford University Collection, San Francisco, California, USA.
CHM = Charleston Museum, Charleston, South Carolina, USA.
CIB = Chengdu Institute of Biology (formerly Sichuan Biological Research Institute, SBRI), Chengdu, Sichuan, China.
CM = Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA.
CNAR = Colección Nacional de Anfibios y Reptiles, Instituto de Biología, Universidad Nacional Autónoma de México, Mexico City, Mexico.
CRI = see PCHP.
DBULPGC = Departamento de Biología, Universidad de Las Palmas de Gran Canaria, Spain.
EBD = Estación Biológica de Doñana, Sevilla, Spain.
EBRG = Estación Biológica de Rancho Grande, Museo, Maracay, Aragua, Venezuela.
ESK = Department of Earth Sciences, Kagoshima University, Kagoshima, Japan.
FGS = see USNM.
FMNH = Field Museum of Natural History, Chicago, Illinois, USA.
FU = Fudan University, Department of Biology, Shanghai, China.
GNM = Georgian National Museum (formerly Georgian State Museum [GSM] and Georgian Institute of Paleobiology [ANGSSR, IPANG, and IPGAS]), Tbilisi (Tiflis), Georgia.
GSI = Geological Survey of India, Kolkata, India.
GSM = see GNM.
GXUA = Guangxi Agricultural University, Nanning, Guangxi, China.
HUJ = Hebrew University of Jerusalem, Zoological Museum, Jerusalem, Israel.
IAVH = Instituto de Investigacion de Recursos Biologicos Alexander von Humboldt, Villa de Leyva, Colombia.
IBH = Instituto de Biología, Universidad Nacional Autónoma de México, Mexico City, Mexico.
IEBR = Institute of Ecology and Biological Resources, Hanoi, Vietnam.
IGF = Institute of Geology, Firenze (now Museo di Storia Naturale, Sezione di Geologia e Paleontologia, Università degli Studi di Firenze), Florence, Italy.
INHS = Illinois Natural History Survey, University of Illinois, Champaign, Illinois, USA.
IPANG = see GNM.
IPGAS = see GNM.
IRSNB = Institut Royal des Sciences Naturelles de Belgique, Bruxelles (Brussels), Belgium.
IVPP = Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences (Academia Sinica), Beijing, China.
KM = Kimberley Museum (now McGregor Museum), Kimberley, South Africa.
KU = University of Kansas Natural History Museum, Lawrence, Kansas, USA.
KUZ = Department of Zoology, Kyoto University, Kyoto, Japan.
KZM = Königsberger Zoologischen Museums, University of Königsberg, Königsberg, Germany (now Kaliningrad, Russia).
LACM = Natural History Museum of Los Angeles County, Los Angeles, California, USA.
LM = Leverian Museum (private, dispersed), London, England, United Kingdom.
LSUM = Louisiana State University Museum of Natural Science, Baton Rouge, Louisiana, USA.

LUZM = Lunds Universitet Zoologiska Museum (Lund University Biological Museum), Lund, Sweden.
MACN = Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", Buenos Aires, Argentina.
MAF = see NRM and UPSZTY.
MB = see ZMB.
MBLSSC = Museum of the Biological Laboratory of the Science Society of China (now National Research Institute of Biology, Chinese Academy of Sciences), Nanjing, Jiangsu, China.
MCZ = Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA.
MDG = see NRM and UPSZTY.
MGA = see NRM and UPSZTY.
MHD = Museo del Hombre Dominicano, Santo Domingo, Dominican Republic.
MRHA = Museo Regional de Historia de Aguascalientes
MHNL = Musée d'Histoire Naturelle de Lyon (now Musée des Confluences), Lyon, France.
MHNT = Muséum d'Histoire Naturelle de la Ville de Toulouse, Toulouse, France.
MLUH = Martin-Luther-Universität Halle-Wittenberg, Zentralmagazin Naturwissenschaftlicher Sammlungen (formerly Institut für Zoologie and Geiseltal Museum), Halle (Saale), Germany.
MMK = McGregor Museum, Kimberley, Cape Province, South Africa.
MMNHN = Metropolitan Museum of Natural History (now Nanjing Museum, Chinese Academy of Sciences (Academia Sinica), Nanjing, Jiangsu, China.
MNB = see ZMB.
MNG = Museums der Natur Gotha, Gotha, Germany.
MNHN = Muséum National d'Histoire Naturelle (Reptiles), Paris, France.
MNHN(P) = Muséum National d'Histoire Naturelle (Paleontology), Paris, France.
MNHNC = Museo Nacional de Historia Natural, Santiago, Chile.
MNHW = Muzeum Przyrodnicze Uniwersytetu Wrocławskiego (Museum of Natural History, University of Wroclaw), Wrocław (Breslau), Poland.
MNM = Museum für Naturkunde, Magdeburg, Germany.
MNUL = Museum für Natur und Umwelt, Lübecker Museen, Lübeck, Germany.
MPEG = Museu Paraense "Emilio Goeldi", Belém, Pará, Brazil.
MRAC = Musée Royal de l'Afrique Centrale (Koninklijk Museum voor Midden Afrika), Tervuren, Belgium.
MRHA = Museo Regional de Historia de Aguascalientes, Aguascalientes, Mexico.
MSNG = Museo Civico di Storia Naturale "Giacomo Doria" di Genova, Genoa, Italy.
MSNM = Museo Civico di Storia Naturale, Milano (Milan), Italy.
MSNVE = Museo di Storia Naturale di Venezia, Venice, Italy.
MSW = Menagerie zu Schönbrunn (now Tiergarten Schönbrunn), Wien (Vienna), Austria.
MTD = Museum für Tierkunde, Senckenberg Naturhistorische Sammlungen, Dresden, Germany.
MTKD = see MTD.
MUHNAC = Museu Nacional de História Natural e da Ciência, Universidade de Lisboa (formerly Museu Bocage and Secção Zoológica do Museu de Lisboa), Lisbon, Portugal.
MVZ = Museum of Vertebrate Zoology, University of California at Berkeley, California, USA.
MWNH = Museum Wiesbaden Naturhistorische Landessammlung, Wiesbaden, Germany.
MZB = Museum Zoologicum Bogoriense (now Bidang Zoologi, Pusat Penelitian Biologi, Lembaga Ilmu Pengetahuan Indonesia), Bogor, Java, Indonesia.
MZFC-HE = Colección de Herpetología de la Facultad de Ciencias de la Universidad Nacional Autónoma de México, Mexico City, Mexico.
MZP = Museo di Zoologia di Padova, Italy.
MZT = Zoological Museum, Tartu (now University of Tartu Natural History Museum), Tartu, Estonia.
MZUF = Museo di Storia Naturale, Museo Zoologico "La Specola", Université di Firenze, Florence, Italy.
MZUS = Musée Zoologique de la Ville de Strasbourg, Université de Strasbourg, Strasbourg, France.
MZUSP = Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.
NCSM = North Carolina Museum of Natural Sciences, Raleigh, North Carolina, USA.
NHM(P) = Natural History Museum (Paleontology) (formerly British Museum), London, England, United Kingdom.
NHMUK = Natural History Museum [formerly British Museum (Natural History)], London, England, United Kingdom.
NM = Natal Museum (now KwaZulu-Natal Museum), Pietermaritzburg, Natal, South Africa.
NMB = National Museum, Bloemfontein, South Africa.
NMNZ = Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand.
NMP6V = Národní Muzeum (National Museum), Prague, Czech Republic.
NMSZ = National Museums of Scotland (formerly Royal Scottish Museum, RSM), Edinburgh, Scotland, United Kingdom.
NMV = National Museum of Victoria, Melbourne, Victoria, Australia.
NMW = Naturhistorisches Museum Wien (Vienna), Austria.
NRM = Naturhistoriska Riksmuseet (Swedish Museum of Natural History) (formerly included Museum Adolphi Friderici [MAF], Museum Gustavi Adolphi [MGA], and Museum De Geer [MDG]), Department of Vertebrate Zoology, Stockholm, Sweden.
NTM = Northern Territory Museum (now Museums and Art Galleries of the Northern Territory), Darwin, Northern Territory, Australia.
NTM(P) = Nanjing Turtle Museum (Private), Nanjing, Jiangsu, China.
NTUM = National Taiwan University Museums, Institute of Zoology, Taipei, Taiwan.
NZMC = National Zoological Museum, Institute of Zoology, Chinese Academy of Sciences (formerly Fan Memorial Institute of Biology), Beijing, China.
OUM = Oxford University Museum, Oxford, England, United Kingdom.
PCHP (CRI) = Peter C.H. Pritchard Collection, Chelonian Research Institute, Oviedo, Florida, USA (now at Turtle Conservancy, Ojai, California, USA).
PEM = Port Elizabeth Museum, Bayworld, Port Elizabeth, South Africa.
PIK = Pedagogical Institute of Khovd, Khovd University, Mongolia.
PNGM = Papua New Guinea National Museum, Port Moresby, Papua New Guinea.
PPHM = Panhandle-Plains Historical Museum, Canyon, Texas, USA.
PUM = Panjab University, Museum of Centre of Advanced Study in Geology, Chandigarh, Punjab, India.
QM = Queensland Museum, Brisbane, Queensland, Australia.
RCSM = Royal College of Surgeons Museum, Hunterian Museum, London, England, United Kingdom.
RHK = Rua Hoan Kiem (= Hoan Kiem softshell turtle), stuffed specimen at Ngoc Son Temple [Hung Ky Temple], Hoan Kiem Lake, Hanoi, Vietnam.
RMNH = Rijksmuseum van Natuurlijke Historie (now Naturalis–Nationaal Natuurhistorisch Museum), Leiden, Netherlands.
RNM = Ratnapura National Museum, Ratnapura, Sri Lanka.
RSM = see NMSZ.
SBRI = see CIB.
SIZ = Shaanxi Institute of Zoology, Xian, Shaanxi, China.
SM(BCB) = Strecker Museum (now Mayborn Museum), Baylor University, Waco, Texas, USA.
SMF = Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany.
SMK = Sarawak Natural History Museum (now Muzium Sejarah Semulajadi), Kuching, Sarawak, Malaysia.
SMNS = Staatliches Museum für Naturkunde, Stuttgart, Germany.
SNHM = Shanghai Natural History Museum, Jing'an, Shanghai, China.
SYS = Biological Museum of Sun Yat-Sen University (Zhongshan University), Guangzhou (Canton), China.
TCU = Texas Christian University Collection, Fort Worth, Texas, USA.
TCWC = Texas Cooperative Wildlife Collection, Texas A&M University, College Station, Texas, USA.
THNHM = Natural History Museum, Pathum Thani, Thailand.
TMM = Texas Memorial Museum (now Texas Vertebrate Paleontology Collections), Austin, Texas, USA.
TMP = Transvaal Museum of Natural History (now Ditsong National Museum of Natural History), Pretoria, Transvaal, South Africa.
TNHC = Texas Natural History Collections, Texas Memorial Museum, University of Texas at Austin, Texas, USA.
TNZ = Tianjin Natural History Museum (formerly Musée Hoang-ho Pai-ho), Tianjin, China.
TT = The Tortoise Trust (Private), London, England, United Kingdom.
TU = Tulane University Museum of Natural History, Belle Chasse, Louisiana, USA.
TxVP = Texas Vertebrate Paleontology Collections, Jackson Museum of Earth History, The University of Texas, Austin, Texas, USA.
UAHC = University of Alabama Herpetological Collection, Tuscaloosa, Alabama, USA.
UCM = University of Colorado, Museum of Natural History, Boulder, Colorado, USA.
UCMZ = University of California Museum of Zoology (now Museum of Vertebrate Zoology), Berkeley, California, USA.

UF = University of Florida, Florida Museum of Natural History, Gainesville, Florida, USA.
UIMNH = University of Illinois Museum of Natural History, Urbana, Illinois, USA.
UKZM = University of Karachi, Dept. of Zoology Museum (formerly Kurrachee Museum), Karachi, Pakistan.
UMMP = University of Michigan Museum of Paleontology, Ann Arbor, Michigan, USA.
UMMZ = University of Michigan Museum of Zoology, Ann Arbor, Michigan, USA.
UMZ = University Museum of Zoology, University of Cambridge, Cambridge, England, United Kingdom.
UPSZTY = Uppsala Zoologiska Typsamling (Uppsala Zoological Type Collection), Museum of Evolution (formerly Uppsala University Zoological Museum, UUZM) (includes former Museum Adolphi Friderici [MAF], Museum Gustavi Adolphi [MGA], and Museum De Geer [MDG]), Uppsala University, Uppsala, Sweden.
USNM = United States National Museum (now National Museum of Natural History) (includes former Florida Geological Survey, FGS), Smithsonian Institution, Washington D.C., USA.
UU = University of Utah, Salt Lake City, Utah, USA.
UUZM = see UPSZTY.
UWZM = University of Wisconsin Zoological Museum, Madison, Wisconsin, USA.
VNUH = Vietnam National University, Hanoi, Vietnam.
VUM = Vinh University Museum, Vinh, Vietnam.
WAM = Western Australian Museum, Perth, Western Australia, Australia.
YPM = Peabody Museum of Natural History, Yale University, New Haven, Connecticut, USA.
YU = Yunnan University, Dept. of Biology, Kunming, Yunnan, China.
ZFMK = Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany.
ZIN = Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.
ZIUS = Zoologiska Institutionen, Stockholms Universitet, Stockholm, Sweden.
ZMB = Zoologischen Museum Berlin (now Museum für Naturkunde Berlin [MNB] and Paläontologisches Museum Berlin [MB]), Leibniz-Institut für Evolutions- und Biodiversitätsforschung an der Humboldt-Universität, Berlin, Germany.
ZMH = Zoological Museum Hamburg (Biozentrum Grindel und Zoologisches Museum), Universität Hamburg, Hamburg, Germany.
ZMMU = Zoological Museum of Moscow State University, Moscow, Russia.
ZMUG = Zoologisches Museum, Johann-Friedrich-Blumenbach-Institut für Zoologie und Anthropologie, Göttingen University, Göttingen, Germany (herpetology collection transferred to Zoologisches Forschungsmuseum Alexander Koenig [ZFMK] in 1977).
ZMUL = see LUZM.
ZMUP = see MZP.
ZSI = Zoological Survey of India, Kolkata (Calcutta), West Bengal, India.
ZSM = Zoologische Staatssammlung München (Munich), Germany.

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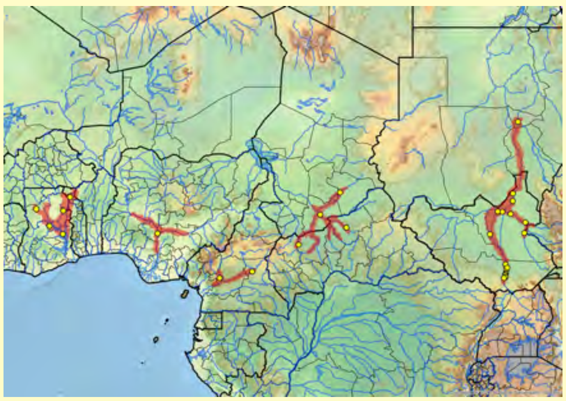

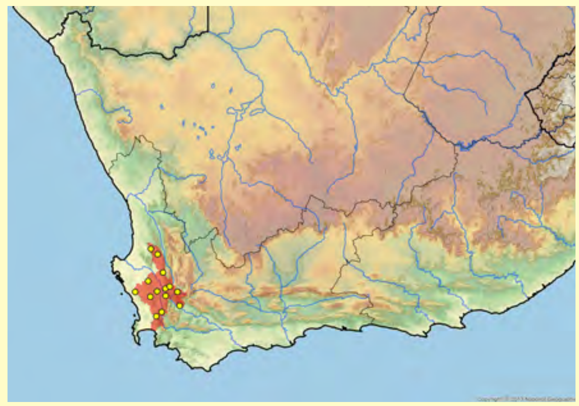

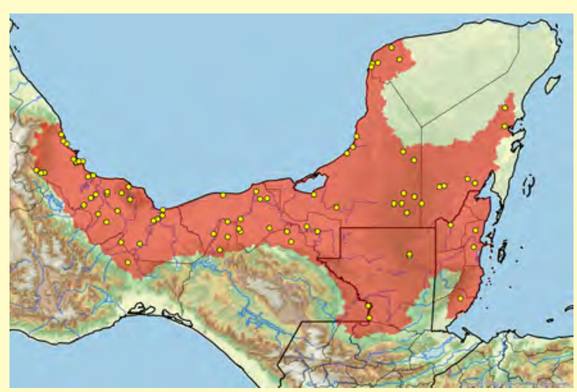

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