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A

## SYNOPSIS OF THE SPECIES

OF THE

## CLASS REPTILIA.

BY J. E. GRAY, ESQ. F.G.S., &c. &c.

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*N.B.—In the following List those species alone are included, which have either been seen\* by the author, or which have been well figured or described.*

### REPTILES.

Vertebrated animals, respiring by lungs, having warm red blood, heart with one ventricle and two auricles and the skin covered with scales.

\* In forming this list, the collection of reptiles of the British Museum, the College of Surgeons, and of Mr. Bell, in London, of the Gardens of Plants and Ecole de Medicine at Paris, of the Royal Museum of Leyden and Berlin, and the Free Town of Francfort, have been studied with attention through the kindness of their several keepers.—J. E. Gray. Oct. 1830.

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## CLASS REPTILIA.

### *Section I. CATAPHRACTA.*

Body covered with two shields. The vent longitudinal or circular: the ossa quadrata, and the pterygoid processes forming part of the skull; the organs of generation simple and single in both sexes.

#### *Order I. TESTUDINATA, OR TORTOISES.*

Ribs, vertebræ and sternum united together in a bony case, enclosing the body, and protecting the head and limbs; the jaws toothless.

The case is usually covered with horny shields, which are granular in the newly-hatched animal, and which increase in size by the addition of layers on the under side of the edge, and having the first formed granular part marked on their surface; this part is called the areola. The shields of the upper shell are called, from their position, discal, consisting of the vertebræ or central series, and costal, composed of the two lateral series and marginal plates, which have often an additional small narrow plate placed on the back of the neck, called the nuchal plate.

The under shell is usually covered with six pair of shields, one called the gular (which have sometimes an additional intergular plate between them), the second the humeral, the third the pectoral, the fourth the abdominal, the fifth the femoral, and the sixth the anal plates; the suture between the upper and lower shell is generally covered by the end of the pectoral and abdominal plates, and there is a small plate placed at each end of it, the front called the axillary, and the hinder the inguinal plate.

#### *Genus I. TESTUDO.*

Feet club-shaped, claws five before, four behind blunt; jaws horny. Shells hemispherical, solid, covered with horny plates; the hinder marginal plate broad, incurved.

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I. *Shell and sternum immoveable, sternal plates in the gular pair being separate.* Testudo.

*Indian Tortoise.* Test. *Indica*, Lin. Test. *Retusa*, Merrem.  
Test. *Elephantopus*, Harlan. Test. *Nigra*, and Test.  
*Californica*, Gaimard. Test. *Gigantea*, Schw. and Test.  
*Dussumieri*, Schegel. Shaw, t. 3. Frey. Voy. t.

Shell black, nuchal plate, often deficient; pectoral plates short. India, naturalized in California, Isle of France and Galapago Isles. Length three feet.

*Hercules Tortoise.* Testudo *Hercules*, Spix. Braz. t. 14.  
Test. *Carbonaria*, Spix. t. 16.

Shell subquadrate, depressed, contracted in the sides, black, areola yellow, rarely exceeds three quarters of an inch in width. Nuchal plate none. Sternum behind roundly lobed, leg red spotted, length twenty-four inches. South America, Var. *Truncata*. Shield and bones beneath elevated, conical, truncated.

*Tabular Tortoise*, Shaw. Test. *Tabulata*, Walb. Schoepf. t. 12. f. 2. t. 13. *T. Sculpta*, Spix. t. 15. *T. Cagado*, Spix. t. 17. Young, *T. denticulata*, Lin.

Shell oblong, depressed, deeply grooved; black brown areola large; the sternum behind rather acutely lobed. Brazils.

*Schweiger Tortoise.* Test. *Schweigeri*, n.

Shell oblong, depressed, pale brown, obscurely brown dotted; beneath brown rayed; areola small central; sternum before acutely cut. Hab. — ?

*Gopher Tortoise.* Test. *Polyphemus*, Bartram. *T. depressa*, Lesueur, Mss. Guerin. Icon. t. 1. f. 1. *T. Carolina*, Leconte Mus. Paris.

Shell oblong, depressed pale brown grooved; nuchal plate

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broad, square ; front of sternum projecting ; tail obsolete.  
North America.

*Bell-shaped Tortoise. Test. Marginata.* Schoepf. t. 11, 12,  
f. 1. *T. Graji.* Herin. *T. Gracæ,* Lacep. *T. Campanu-*  
*lata,* Walb.

Shell oblong, ventricose ; hinder margin flattened, expanded  
toothed ; shields grooved ; blackish yellow varied ; areola  
yellow, contracted ; nuchal plate, very slender, long.  
Egypt ?

*Radiated Tortoise,* Shaw. *Test. Radiata,* Shaw. Zool. t. 2.  
*J. Coui,* Daud. *T. Calcarata,* Merrem.

Shell hemispherical ; black, yellow rayed, areola sunk ; nu-  
chal plate none. Madagascar.

*Sulcated Tortoise. Test. Sulcata,* Shaw, Miller, Cym.  
Phys. t. *Test. Calcarata,* Merr. *Test. radiata Var.*  
*Gray,* Syn. Rept.

Shell sub-globular, yellow ; shield rather convex, deeply  
grooved ; areola small, superior ; nuchal plate none. Sene-  
gal. Dongola. Dr. Ruppell.

*Leopard Tortoise. Test. Pardalis,* Bell. Zool. Jour. t. 15.  
*T. armata,* Boie Mss. *Test. Bipunctata,* Cuv. R.A.

Shell hemispherical ; yellowish, black spotted ; nuchal plate  
none. Cape of Good Hope.

*Starred Tortoise. Test. Stellata, Test.-Actinodes,* Bell.  
Z. Jour. t. 23. *Test. Elegans,* Shaw, t. 6. f. 1. and  
Schoepf. t. 26. *T. Stellata,* Schw.

Shell globular ; shields convex, grooved ; black, yellow-  
rayed ; areola yellow, large ; nuchal plate none. India.  
Ceylon.

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*Geometrical Tortoise*, Shaw. *Test. Geometrica*, Lin.

Shaw. t. 1. f. 1. Jun. *T. Lutcola*, Daud.

Shell globular oblong, black; shields yellow-rayed; nuchal plate long;  $\beta$  nuchal plate short. *Test. Tentoria*, Bell. Z. Jour. t. 26. Cape of Good Hope, Madagascar.

*Greek Tortoise*. *Test. Græca*, Lin. *T. Carolina*, Herm.

*T. Geometrica*, Brunn. *Test. Hermannii*, Schn. Edw. t. 204. Shaw. t. 1.

Shell oblong, globose; black, yellow-rayed; nuchal plate, slender; caudal plate incurved. Var.  $\beta$  hinder margin expanded, Schoepf. t. 9. Inhab. South of Europe, Var. no nuchal plate. *Test. Zolhafa*, Forsk.

*Areolated Tortoise*, *Test. Areolata*, Thumb. Schoepf. t. 23.

Shell oblong, rather depressed; shields yellowish, deeply grooved; areola brown; sutures deep; nuchal plate, narrow. Var.  $\beta$  greenish; hinder lobe of sternum mobile. Cape of Good Hope, variable in number of dorsal and marginal plates.

*Marked Tortoise*. *Test. Signata*, Walb. Schoeff. t. 28.

*T. Cafra?* and *T. Juvencella?* Daud.

Shell rather depressed; dorsal shields flattish; yellowish, black-rayed; areola blackish; nuchal shields narrow. Africa?

II. *Dorsal shell and sternum both solid; sternal plates eleven, the gular pair produced united into one*. *Chersina*. Gray.

*Angular Tortoise*, *T. (Chersina) Angulata*, Dumeril.

*Test. Bellii*, Gray Spec. Zool. t. 3, f. 1. *Test. Pusilla*, Lin. *T. miniata*, Lacep.

Shell oblong, ventricose; black, shields grooved; areola yellow; nuchal plate very narrow. Cape of Good Hope.

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III. *Hinder part of dorsal shell mobile, united to the anterior by a carious ligamentous suture; sternum solid, shields twelve.* Kinyxis. Bell.

*Home's Tortoise.* Test. (*Kinyxis*) *Homeana*. Bell.  
Lin. Trans. xiv. t. f. 2.

Shell brown; hinder edge reflexed; upper edge of fifth vertebral plates prominent; nuchal shield long, narrow; front of sternum expanded. Demerara. Guadalupe.

*Bells Tortoise.* Test. (*Kinyxis*) *Belliana*, Gray.

Shell brown, edge hardly expanded; centre of hinder vertebral plates convex; nuchal shield long, narrow; front of sternum, narrow. Inhab. ?—Mus. Gray.

*Worn Tortoise.* Test. (*Kinyxis*) *Erosa*.

Shell brown; hinder edge reflexed, denticulated; centre of fifth vertebral plates prominent; nuchal shield none. Young, back rounded. *K. Castanea*. Bell. l. c. t. f. 1. Test. *Denticulata*, Shaw. Zool. t. 13. Test. *Erosa*, Schw. Inhab.

IV. *Dorsal shell solid; front lobe of sternum mobile.*  
Pyxis. Bell.

*Radiated Box Tortoise.* Test. (*Pyxis*) *Aranoides*, Bell.  
Lin. Trans. xv. t. 16.

Shell hemispherical, varied black and yellow; length 6, breadth 4 inches. Inhab.

Genus II. Emys.

Feet palmated; claws five—four, sharp; nostrils pervious; jaws horny; shell solid, covered with horny plates, marginal plates twenty-three or twenty-five, hinder pair free; sternal shields eleven or twelve; neck retractile; pelvis only attached to the vertebra.

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I. *Shell hemispherical ; sternum rounded before, divided by a transverse suture ; both lobes mobile, and united to the back shell by a cartilaginous suture ; sternal plates twelve.*  
*Cistuda*, Gray.

*American Box Terrapin*, E. (*Cistuda*) *Carolinæ*, Test. *Carolinæ*, Lin. Test. *Brevicaudata*, Lacep. Test. *Clausæ*, and *T. Irregularata*, Daud. *Terrapene Carolinæ*, Ter. *Nebulosa*, and *Ter. Guttata*, Bell. Edw. t. 205.

Shell hemispherical, brown yellow varied, convex, lowly keeled ; marginal plates twenty-six or twenty-seven. North America ; Var.  $\beta$ . *fusca*, brown, not spotted.

*Eastern Box Terrapin*. E. (*Cistuda*) *Amboinensis*, Illust. Ind. Zool, t. f. 1. *Emys Couro*, Schw. *Terrapene Bicolor*, Bell. Zool. Jour. ij. t. 14. Test. *Amboinensis*, Daud.

Shell hemispherical, slightly tri-keeled, blackish, margin expanded, broad ; nuchal plate linear ; sternum yellow and black varied ; head with two yellow lines on each side. Java and Penang, Var. *Leveriana*. Shell oblong, with back flattened, not keeled.

*Three-banded Box Terrapin*. E. (*Cistuda*) *Trifasciata*, Gray. *Sternothærus Trifasciatus*, Bell. Zool. Jour. iij. t. 13.

Shell oval, keeled, dull yellow, varied with black and reddish, with three dorsal streaks ; sternum behind nicked ; head yellow, with two brown bands on each side. Inhab.—

*European Box Terrapin*. E. (*Cistuda*) *Europea*. *Testudo Europea*, Schm. Test. *Flava*, Lacep. *T. Punctata*, Gotw. *T. Orbicularis*, Linn.? *T. Lutaria*, Merrem. *T. Meleagris*, Shaw, Zool. t. 5. Jun. *T. Pulchella*, Schoeff. t. 26.

Shell depressed, oval, yellow spotted ; sternum behind nicked

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before rounded ; body and head black and yellow spotted ; tail long. South of Europe. These are the only Water Tortoises known which have concave sternums.

II. *Sternum united to the back shell by a horny suture ; solid, before and behind lobed ; sternal plates twelve.*  
Emys.

*A. Margin of shell acutely toothed ; sides of sternum rounded.*  
*Found in the Old World.*

*Spinous Terrapin. Emys Spinosa, Gray, Illust. Ind. Zool. t.*

Shell suborbicular, pale brown ; edge sharply toothed ; areola with a central spine. Penang.

*Dhor Terrapin. Emys Dhor, Gray, Illust. Ind. Zool. t.*

Shell suborbicular, hinder edged, acutely toothed ; areola punctate ; brown, black spotted. India.

*Spengler Terrapin. Emys Spengleri. Test. Spengleri, Walb. t. 3. Test. Serrata, Shaw, t. 9. T. Tricarinata, Bory, Atlas. t.*

Shell oblong, pale brown ; tri-keeled ; hinder margin deeply toothed. Africa.

*Thick-necked Terrapin. Emys Crassicollis, Bell, Gray, Illust. Ind. Zool. t.*

Shell ovate, black, tri-keeled ; hinder edge toothed. Sumatra.

*Thuryi Terrapin. Emys Thuryi, Gray, Illust. Ind. Zool. t.*

Shell oblong, black, slightly tri-keeled ; hinder edge slightly toothed ; head blackish, eyebrow and chin yellow lined. Bengal.

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*Hamilton's Terrapin.* *Emys Hamiltonii*, Gray, Illust. Ind. Zool. t.

Shell oblong, black, yellow-rayed; hinder edge toothed; head, and body, and limbs yellow spotted. India.

*Eyebearing Terrapin.* *Emys Occilifera*, Kuhl. Beytr.

Shell hemispherical; behind toothed; above with blackish eyed rings, beneath yellow; a doubtful species.

*B. Shell margin entire; sternum with the sides keeled.*  
*Living in the Old World.*

*Tented Terrapin.* *Emys Tecta*, Bell, Gray, Illust. Ind. Zool. t.

Shell ovate, oblong. solid; olive, beneath varied brown and red; animal red and yellow lined.

*Lined Terrapin.* *Emys Lineata*, Gray, Illust. Ind. Zool. t.

Shell oblong, olive; head blueish ash; chin and cheeks yellow varied; nape and eyebrow scarlet lined. India.

*Batagur Terrapin.* *Emys Batagur*, Gray, Illust. Ind. Zool. Shell suborbicular, depressed, pale olive; margin dilated; body ash; chin and lips yellowish. Var.  $\beta$  *Test. Baska.* Shell oblong, ovate.

*Common Terrapin, or Mud Tortoise.* *Emys vulgaris.* *Test. Lutaria*, Lin.?

Shell ovate, olive, black dotted, clouded and ringed with blackish and orange, head and limbs orange lined. Adult smooth, young rugose. South of Europe. Spain.

*Caspian Terrapin.* *Emys Caspia*, Ruppell. *Test-Caspia*, Gmel. Trav. t. bad.

Shell oblong, slightly contracted on the sides, olive yellow netted; beneath black, irregular yellow spotted, head olive brown, with narrow sub-concentric yellow lines. Caspian Sea. Dr. Ruppell.

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*C. Shell margin sub-entire; sternum sides rounded. Living in the New World.*

*Rough Terrapin. Emys Scabra*, Lacep. t. 8. f. 2. *Emys Dorsata*, Schoepft.

Shell ovate oblong, acutely keeled; head with a fork band over each eye. South America.

*Dotted Terrapin. Emys Punctularia*, Schweiger, (not figured.)

Shell oblong, convex, brown; shield blackish edged; head with red lines and spots. South America.

*Marbled Terrapin. Emys Marmorata*, Spix, t. 10.

Shell oval, greenish, varied with black and yellow; shields yellow edged; head with yellow lines. Brazils.

*Muhlenberg's Terrapin. Emys Muhlenbergii*, Schw. *Emys Bipunctata*, Say. Schoeff, t. 31.

Shell oval, low, side contracted; shields grooved, varied with yellow; head blackish, with two yellow spots. North America.

*Spotted Terrapin. Emys Guttata*, Schw. *Test. Punctata*. Bosc. Schoeff, t. 5.

Shell low, oval, smooth, black, yellow dotted; head yellow spotted. North America.

*Painted Terrapin. Emys Picta*, Schw. Schoeff, t. 4.

Shell oblong, flattish, smooth, olive; shields pale edged; head and neck yellow lined. Young. *Cinereous Tortoise*, Brown, Illust. 48. North America.

*Specious Terrapin. Emys Speciosa*, Gray, Syn. Rept.

Shell oval, flattish, keeled; shields grooved, black, yellow spotted; beneath yellow with black areola. North America?

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*Concentric Terrapin.* *Emys Concentrica*, Schw. Schoeff.  
t. 15. *Test. Palustris*, Gmel. *T. Centrata*, Bosc.

Shell oval, side edges recurved; shield, brown ringed; head and limbs ash, black speckled. North America. *Var. polita* shell, black polished.

*Reticulated Terrapin.* *Emys Reticulata*, Gray. *Test. Reticulata*, Latr. Daud. t. 22, f. 3.

Shell oblong, olive, pale netted; beneath yellow, with four round black spots on side of the margin, and one at each end of the sternocostal suture. North America.

*Banded Terrapin.* *Emys Vittata*, Gray, Syn. Rept.

Shell oblong, olive; behind doubly toothed, varied with unequal yellow lines; beneath yellowish, with squarish eyed spots on the sutures of the marginal plates, and roundish ones on the end of the symphysis; head and feet yellow lined. North America?

*Furrowed Terrapin.* *Emys Decussata*, Gray.

Shell oblong, pale brown, shields rugulose; beneath yellowish, with subocellated spots, on the sutures of the marginal plates; animal greenish. North America.

*Lettered Terrapin.* *Emys Scripta*, Gray. *Test. Serrata*, Daud. t. 21. f. 1. Schoeff. t. 3. f. 5. Jun.

Shell oblong, longitudinally rugose, brown, sides yellow banded; beneath yellow, with a series of roundish spots on the middle of each marginal plate, or two on the gular plates, and four on each sternocostal symphysis. North America.

*Serrated Terrapin.* *Emys Serrata*, Gray.

Shell oblong, longitudinally rugulose, irregularly cross-banded; beneath yellowish, with a series of subocellated spots on the sutures of the marginal plates, and dark-edged pale lines on the symphysis. North America.

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*Ornamented Terrapin. Emys Ornata*, Gray.

Shell oblong, longitudinally rugose olive; vertebral shields, irregularly ringed; beneath, pale yellow, with an irregular black band down the centre, and on each side, and squarish-eyed spots on the suture of the marginal shields. South America. Young, beautifully orange and green-ringed.

*Rugose Terrapin. Emys Rugosa. Test. Rugosa*, Shaw,  
Zool. t.

Shell oblong, rugulose; black, with yellow lines and dots; beneath yellow with black dots and lines; Var.  $\beta$  shell livid, black dotted. North America.

*Lake Erie Terrapin. Emys Lesueurii*, Gray, Syn. Rept.

Shell oval, smooth, tuberculately keeled; behind, toothed; olive, with anastomosing black-edged pale lines; beneath, yellow, shields, black edged, margin, black ringed; head, yellow lined.  $\beta$  *Emys Geographica*, Lesueur, Jour. Acad. N. Philad. t. North America.

*Bell's Terrapin. Emys Bellii*, Gray, Syn. Rept.

Shell oblong; dorsal line, depressed; olive, netted with green and black dots; beneath blackish, yellow dotted, surrounded by an irregular yellow margin.

*White Spotted Terrapin. Emys Kinosternoides*, Gray,  
Syn. Rept.

Shell oblong, pale brown, with black-edged white keel, and side-spots, and with a dentated white edge; beneath yellow spotted; sternum rounded at both ends. (—?)

*Ring-bearing Terrapin. Emys Annulifera*, Gray, Syn.  
Rept.

Shell oblong, depressed; pale brown, yellow lined with

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yellow ring placed across the sutures of the vertebral plates ; beneath pale brown, varied with darker brown. (— ?)

III. *Sternum united to the back shell by a horny suture ; before rounded, behind rounded, or slightly nicked, divided by one or two cross sutures ; sternal plates, eleven gular pair united.* Kinosternon. Spix.

*Three-keeled Kinosternon.* E. (*Kinosternon*) *Scorpoides*. Test. *Scorpoides*, Lacep. Test. *Tricarinata*, Daud. *Kinosternon Shavianum*, Bell. *Kin. Longicaudatum*, Spix, t. 12 ? Shaw Zool. t. 15. Jun. Test. *Retzii*, Daud. Shaw, t. 11.

Shell oblong, olive polished, rather compressed three-keeled, keels continued, dorsal shields long, hexangular, sub-imbriate ; sternum as broad as the opening of the shell. South America.

*Three Ridged Kinosternon.* E. (*Kinosternon*) *Triporcata*, Gray. *Terrapena Triporcata*, Wiegmann, Mus. Berl.

Shell, oblong, olive, with three very high compressed ridges ; sternum cross shaped, very narrow ; the largest species of the genus.

*Pennsylvanian Kinosternon.* E. (*Kinosternon*) *Pennsylvanica*. Test. *Pennsylvanica*, Bosc. Test. *Subrufa*, Lacep. Edw. t. 287. Var. Test. *Glutinata*, Daud. Test. *Boscii*, Merrem.

Shell oval, brown ; dorsal shields, flattened ; sternum, rather narrower than the opening of the back shell ; behind nicked. North America.

*Musky Kinosternon,* E. (*Kinosternon*) *Odoratum*. Test. *Odorata*, Bosc. *Cistuda Odorata*, Say. *Sternotheros Odoratus*, Bell.

Shell ovate, keeled ; sides declivate ; sternum very narrow ;

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before acute, behind acutely nicked; head brown, yellow lined on each side. North America.

IV. *Sternum very narrow, cross-shaped, rounded at both ends, united to the back shell by very long bony processes. Sternal plates five pair, and a pair over the symphysis.* Chelydra Schw.

*Serrated Alligator Tortoise. Emys (Chelydra) Serpentina. Test. Serrata, Penn. Chelydra Lacertina, Schw. Young. Test. Serpentina. Lin. Shaw, t. 29.*

Shell oblong; vertebral shields flat; upper edge of costal plates, prominent; behind bluntly six toothed. Young sharply three-keeled and toothed. North America.

### III.—CHELYS, Gray.

Feet palmated; claws five—four, sharp; nostrils sub-tubular; shell solid, covered with horny plates; hinder pair of marginal plates separate; sternal plates thirteen, with an intergular one; neck contractile on the side; pelvis attached to the sternum and vertebræ.

I. *Lips horny; sternum front, and sometimes hinder lobes mobile; intergular plate marginal.* Sternotherus, Bell (part.) Gray.\*

*Chestnut Chelys. Ch. (Sternotherus) Castaneus, Gray. Emys Castaneus, Schw. Testudo Subniger,  $\beta$  Daud. Sternotherus Castaneus, Bell. Zool. Jour. t. 14.*

Shell oval, sharply keeled, convex, chestnut; shields radiately rugose; areola black. Var.  $\beta$  hinder lobe, mobile.

\* I have used as the name of the sub-genera those which have been given by authors to what they considered genera in this family; but I have generally restricted their signification, so as to render them more definite.

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*Test. Subniger*, Lacep. 2. O. t. 7. f. r. *Test. Nigricans*, Merrem.

II. *Jaws horny; sternum solid; intergular plates six sided between the gular and pectoral plates.* Chelodina.

*Long-necked Chelys.* Ch. (*Chelodina*) *Longicollis*, Gray.  
*Testudo Longicollis*, Shaw. New Holland. t. 7.

Shell oblong flat; sternum yellow, shields brown edged.

III. *Jaws horny; sternum solid, intergular plate small, marginal; nostrils short, tubular.* Hydraspis. Bell.

*Species of the Old World or its Islands.*

*Cape Chelys.* Ch. (*Hydraspis*) *Subrufa*. n. *Test. Subrufa*, Lacep. Q. O. t. 12. *Test. Indica*, Daud.—Jun. *Test. Galeata*, Schoeff. t. 3. f. 1. *Test. Scabra*, Retz. T. *Senegalensis*, Daud.; and *Emys Olivacea*, Schw.

Shell oblong, low, pale brown, smooth; nuchal plate, none; vertebral plate depressed. Cape of Good Hope. Senegal.

*Adamson's Chelys.* Ch. (*Hydraspis*) *Adamsonii*, *Emys Adamsonii*. Schw.

Shell low, oval, very broad behind, yellow, black spotted; nuchal plate none; vertebral plates keeled, first urn-shaped, hinder triangular. Africa. Nigritia.

*Macquary's Chelys.* Ch. (*Hydraspis*) *Macquarii*. *Emys Macquarii*. Cuv. R. A.

Shell oval, depressed, contracted in front, behind subdentate, dark olive; shields rugulose; dorsal line sunk; nuchal plate narrow. New Holland.

*Species of America.*

*Flat Headed Chelys. Ch. (Hydraspis) Planiceps. Test. Planiceps, or T. Platycephala. Schm. Berb. Naturf. t. 16. T. Martinella, Cuv. R. A. Emys Discolor, Thumb. E. Caniculata? Spix, t. 8. E. Carunculata, Cuv. R. A. Emys Geoffroyana, Schw.*

Shell oblong, flattened, black brown, centre concave; nuchal plate narrow; sternum yellow edged. *E. Aspera*, Cuv. R.A. is a variety with larger warts in the neck.

*Depressed Chelys. Ch. (Hydraspis) Depressa, Gray. Test. Depressus. Pr. Max. t. not Spix.*

Shell elliptical, pale brown, black rayed; nuchal plates narrow; head and neck black spotted. Brazils.

*Radiated Chelys. Ch. (Hydraspis) Radiolata, Gray. Emys. Radiolata, Mikan. Pr. Max. T. Depressa, Spix, t. 3. f. 12.*

Shell oval, slightly narrowed before, yellowish, black rayed; nuchal plate distinct; neck beneath yellow, eyelids streaked. Brazils.

*Red Footed Chelys. Ch. (Hydraspis) Rufipes, Gray, Spix, t. 6, Jun. Emys Stenops, Spix, t. 9, f. 3, 4.*

Shell elliptical, keeled in front, brown, beneath yellowish; nuchal shield linear; head and neck thick, olive brown, beneath yellowish. South America.

*Green Chelys. Ch. (Hydraspis) Viridis, Gray. Emys Viridis, Spix, t. 2, f. 4.; t. 3, f. 1.*

Shell elliptical, olive green, brown dotted; nuchal shield linear; intergular shield large, cordate. Brazils.

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*Expanded Chelys. Ch. (Hydraspis) Expansa*, Gray. *Emys Expansa*, Schw. *E. Amazonica*, Spix, t. 1. *E. Tracaxa*, Spix, t. 5, f. 1. 2.

Shell ovate, depressed, brown, black spotted; margin very much expanded; nuchal shield none; nose longitudinally grooved, Var.  $\beta$  *Emys Erythrocephala*, Spix, t. 7, is perhaps the same. It is from a stuffed specimen. Brazils.

*Dumeril's Chelys. Ch. (Hydraspis) Dumerilliana*, Gray. *Emys Icterocephala*, Spix, t. 4.

Shell ovate, black, discal shields flat, hinder margin expanded; head globose; nose convex, smooth. Brazils.

*Cayenne Chelys. Ch. (Hydraspis) Cayennensis*, Gray, *Emys Cayennensis*, Schw.

Shell ovate, convex, tuberculately keeled; smooth, yellow green, black varied; nuchal shield none; head brown, with two yellow spots.  $\beta$  *Emys Gibba*, Schw. Shell black. Guiana.

*Demerara Chelys. Ch. (Hydraspis) Lata*, Bell MSS.

Shell suborbicular, depressed, black; head and neck black orange spotted. Demerara. Bell.

Consult also, 1, *Emys Bitentaculata*, Cuv. MSS.—2, *Emys Barbatula*, Gravenhorst, Delic. t. 5. f. 3. 4.—3, *Emys Constricta*, Cuv. MSS.—4, *E. Maximiliana*, Michan, and—5, *Hydraspis Pachyura*, Boie MSS.

IV. *The beak very broad, depressed, covered with soft lips; the nostrils long, tubular; intergular plate marginal; Chelys, Dumeril.*

*Brazilian Matamata. Chelys Matamata, Test. Matamata*, Brong. Jour. H. N. 7, t. 13. *Ch. Fimbriata*, Schn.

Shell oblong; shields elevated acute, forming three keels. South America.

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IV.—TRIONYX. Geoff.

Feet palmated, claws three, sharp; the shell covered with a soft skin expanded on the edge into a flexible margin. *Living in fresh water in tropical climates.*

I. *The margin of the shields cartilaginous and the sternum narrow.* Trionyx, Gray.

*Fierce Trionyx.* *Trionyx Ferox*, Merrem. Pen. Phil. Trans. lxi. t. 10. *Trionyx Georgicus*, Geoff.

Shell rather convex, obscurely keeled; front and hinder margin wanting; sternum callosities four, two hinder, large, united into one. *Trionyx Spiniferus*, Lesueur, Mem. Mus. xi. appears to be the young, as may also be *Test. Brongniartii*, Sch. and *T. Carinatus*, Geoffroy.

*Armless Trionyx.* *Trionyx Muticus*, Lesueur, Mem. Mus. xv. t.

Shell elliptical, confounded with the neck, and armless in the front; sternal callosities four, two hinder large, united together. North America.

*Egyptian Trionyx.* *Trionyx Ægyptiacus*, Geoff. Rept. Egypt. t. 1. *Test. Triunguis*, Forsk.

Green, white spotted; shell convex, slightly keeled; sternum callosities four, the hinder ones triangular, separate. Egypt.

*Indian Trionyx.* *Trionyx Indicus*, Gray, Illust. Ind. Zool. t.

Olive green, with black-edged irregular pale tortuous and forked streaks; sternal callosities four, the hinder ones rounded triangular. India.

*Hurum Trionyx.* *Trionyx Hurum*, Gray, Illust. Ind. Zool. *Trionyx Gangeticus*, Cuv. Oss. Fos.

Dull brown; head green, with two yellow spots on each side

CLASS REPTILIA.

over the eyes ; sternum with four callosities, the lateral truncate on the inner hinder angles, and the hinder ovate-triangular. India.

*Javan Trionyæ.* *Trionyæ Javanicus*, Geoff. Ann. Mus. xiv. t. Illust. Ind. Zool. t.

Dull green, with numerous narrow lines of minute white granular specks. Head green, with five or six diverging black lines, and a streak between the eyes. Sternal callosities two, linear, lateral. When young, back black ocellated. Java and India.

*Flat Trionyæ.* *Trionyæ Subplanus*, Geoff. Ann. Mus. xiv. Illust. Ind. Zool. t.

Shield nearly flat ; front edge smooth ; sternum without any callosities. India.

*Euphratic Trionyæ.* *Trionyæ Euphraticus*, Geoff. *Test. Rascht*, Oliv. Voy. t. 41. This needs a better description. Euphrates.

*Margin of the shield with a series of small bones in front and behind, limbs covered, when withdrawn, by the valves on the side of the sternum.* Emyda. Gray.

*Punctuated Trionyæ.* *Tri. (Emyda) Punctatus*, Lacep. Q. O. t. 7. f. 1. Schoepf. t. 30. A. B. *Trionyæ Coromandelicus*, Geoff. Gray, Illust. Ind. Zool. t.

Deep green, occiput white spotted ; sternum with seven large callosities, the hinder of them united. India.

N. B.—M. Cuvier informed me on his late visit to this country that there has been lately received at the Paris Museum a species of this genus, with 4 claws on each foot ; it will form a section (*Tetraonyæ*), and it may be indicated by the name of *Trionyæ (Tetraonyæ) Cuvieri*.

CLASS REPTILIA.

5. CHELONIA, Brongn.

Feet fin-shaped, compressed; shell with a bony margin all round, and a ring-like sternum.

*Living in the sea; eating algæ and mollusca.*

I. *Shell covered with a leathery skin. Sphargis*, Merrem.  
*Coriaceous Turtle, Ch. (Sphargis) Coriacea. Testudo*  
*Coriacea*. Lin. Pen. Brit. Zool. 4. t. 1.

Shell with three longitudinal dorsal ridges; when young the skin granular, and fins very long. See Schoepft. t. 29. Mediterranean Ocean.

II. *Shell covered with horny scales. Chelonia.*

*A. shields depressed. Chelonia.*

*Green Turtle. Chelonia Mydas. Testudo*, Lin. Lacep. 2. O.  
t. 1. f. 1

Shell cordate, greenish brown, slightly keeled, shelving on both sides; lower jaw deeply denticulated. Varies first in the number of the dorsal shields, and thus *Test. Atra*, Lin., and *Test. Multiscutata*, Kuhl. Second in the number of sternal shields, thus *Test. Cepediana*, Daud. Sometimes the shields are variously coloured, and thus *Chelonia Virgata*, Dumeril, and *Chelonia Radiata, Ch. Maculosa* and *Ch. Lachrymata*, Cuv., R. A. *Testudo Japonica*, Thunberg, appears to be only a variety with the shields so thin, that he mistook the sutures of the bones for the edge of the scales.

*Loggerhead Turtle, Chelonia Caretta, Testudo Caretta*,  
Lin. Schoepf. t. 16.

Shell convex, vertebral shields gibbous; head very large; when young the nose produced, *Testudo Nasicornis*, Lacep. Edw. t. 206, Var. Vertebral shields sometimes seven. *Chelonia Olivacea*, Eschscholtz Atlas, t. 3. Mediterranean and other seas.

CLASS REPTILIA.

B. Shields Imbricate.

4. *Imbricated Turtle.* *Chelonia Imbricata*, Schw. *Testudo*, Schoepf. t. 18, a.

Shell elliptically keeled; shields yellow, spotted and rayed. In the young, the ends of the shields are obliquely truncated, and scarcely imbricate, *Caretta Nasicornis*, Merrem. Schoepf. t. 17, f. 1. Indian and Atlantic Ocean.

Ord. 3. EMYDOSAURI.

Vertebrae of the back and the ribs free, mobile; the mouth toothed; the feet digitate, webbed; above and beneath covered with imbedded squarish plates, with small scales on the sides.

Gen. 1. CROCODYLUS.

Toes 4, 5, claws 3, 3; tail compressed, above keeled, serrated; teeth conical in a single series; tongue fleshy.

1. *The head depressed; the canine teeth of the lower jaw received in a pit in the upper jaw.* Alligator.

\* *Feet digitate.* South America.

*Spectacled Alligator.* *Croc. (Alligator) Sclerops*, Schw. Seba, 1, t. 104, f. 10, Spix. Braz.

With a cross rib between the orbits; nape with a band of shields. South America and Brazils. The frontal cross rib varies in shape.

*Eye-browed Alligator.* *Croc. (Alligator) Palpebrosus*, Cuv. Eyelids bony; nape with a band of shields, each bearing a crest. Var. the nuchal shields are sometimes irregular. *Croc. Trigonatus*, Seba, 1, t. 103, f. 3. Guiana.

† *Feet, subpalmated.* North America.

*Pike-muzzled Alligator.* *Cayman Croc. (Alligator) Lucius*. Cuv. *Croc. Curieri*, Leach Zool. Misc. t.

Head depressed, parabolic, nuchal shields 4. North America.