Suborder II. TESTUDINATA.

Dorsal vertebræ and ribs immovably united and expanded into bony plates forming a carapace, which is bordered by a complete series of marginal bones. Epiplastra (clavicles) in contact with hyoplastra; entoplastron (interclavicle), if present, oval, rhom­boidal, or T-shaped. Sacral and caudal ribs articulating with the centrum and the neural arch. Digits with not more than three phalanges.

Series A. CRYPTODIRA.

Neck retractile by a sigmoid curve in a vertical plane. Pelvis not anchylosed to the carapace and plastron. Rarely one or two epidermic scutes (intergular) in addition to the normal six pairs.

Group A. Digitata.

Digits short or moderately elongate ; phalanges with condyles ; claws four or five. Neck completely retractile.

Family 1. Testudinidæ.

Plastral bones nine. Nuchal bone without costiform processes. Carapace with epidermic scutes. Caudal vertebræ procoelous. Tropical and temperate zones, with the exception of Australia.

Recent genera : *Dermatemys, Balagur, Clemmys, Pangshura, Geoemyda, Cycle- mys, Emys, Cistudo, Manouria, Testudo, Homopus, Cinyxis, Pyxis.*

Fossil genera: *Eurysternum* (Jurassic), *Chitracephalus* (Cretaceous), *Adocus* (Cretaceous), *Palæochelys* (Miocene), *Ptychogaster* (Miocene), *Colossochelys* (Plio­cene).

Family 2. Platysternidæ.

Plastral bones nine. Nuchal bone without costiform processes. Carapace with epidermic scutes. Caudal vertebræ mostly opistho­cœlous. Indian region.

Genus : *Platysternum.*

Family 3. Baenidæ.

Plastral bones eleven, mesoplastra being present. Nuchal bone without costiform processes. Carapace with epidermic scutes. Caudal vertebræ opisthocœlous.

Fossil genera: *Platychelys* (Jurassic); *Baena* (Eocene).

Family 4. Chelydridæ.

Plastral bones nine. Nuchal bone with long costiform processes, extending below the marginals. Carapace with epidermic scutes. Caudal vertebræ mostly opisthocœlous. Northern and tropical American regions.

Recent genera : *Chelydra, Macroclemmys.*

Fossil genus: *Tretosternum* (Cretaceous).

Family 5. Staurotypidæ (Boulenger).

Plastral bones nine. Nuchal bone with short costiform pro­cesses, extending below the marginals. Carapace with epidermic scutes. Caudal vertebræ procoelous. Central-American district.

Genera : *Staurotypus, Claudius.*

Family 6. Cinosternidæ.

Plastral bones eight, the entoplastron being absent. Nuchal bone with short costiform processes, extending below the marginals. Carapace with epidermic scutes. Caudal vertebræ procoelous. Northern and tropical American regions.

Genera: *Aromochelys, Cinoslernum.*

Family 7. Pseudotrionychidæ (Boulenger).

Shell without epidermic scutes.

Fossil genera: *Pseudotrionyx* and *Anostira* (Eocene).

Group B. Pinnata.

Limbs paddle-shaped; phalanges without condyles; claws one or two. Neck imperfectly retractile; cervical vertebræ short, mostly articulated by amphiarthrosis.

Family 8. Chelonidæ.

Plastral bones nine. Nuchal without costiform processes. Carapace with epidermic scutes. Hyo- and hypo-plastra not meet­ing mesially. Pelagic.

Recent genera : *Chelone, Caouana, Caretta.*

Fossil genus : *Puppigerus* (Miocene and Eocene)

Series B. PLEURODIRA.

Neck not retractile, bending laterally. Pelvis anchylosed to the carapace and plastron. When epidermic scutes are present, one or two intergulars in addition to the normal plastral scutes.

Family 1. Chelydidæ.

Plastral bones nine. Carapace with epidermic scutes. Limbs with four or five claws. Australian and tropical American regions.

Recent genera; *Platemys, Chelymys, Elseya, Chelodina, Hydraspis, Hydro­medusa, Chelys.*

Fossil genera: *Plesiochelys* (Jurassic), *Craspedochelys* (Jurassic), *Idiochelys* (Jurassic), *Nolomorpha* (Eocene).

Family 2. Pelomedusidæ.

Plastral bones eleven, mesoplastra being present. Carapace with epidermic scutes. Limbs with four or five claws. African and tropical American regions.

Recent genera : *Pelomedusa, Sternothærus, Dumerilia, Podocnemis, Pelto- cephalus.*

Fossil genera : *Pleurosternum* (Cretaceous, Eocene), *Bothremys* (Cretaceous), *Taphrosphys* (Cretaceous).

Family 3. Carettochelydidæ.

Plastral bones nine. No epidermic scutes on the shell. Limbs paddle-shaped, with only two claws. New Guinea.

Genus: *Carettochelys.*

Family 4. Miolaniidæ (Boulenger).

Caudal vertebræ opisthocœlous ; tail long and. encased in a bony sheath. Australia.

Fossil genus : *Miolania* (Pleistocene). Suborder III. TRIONYCHOIDEA.

Dorsal vertebræ and ribs immovably united, forming a carapace ; no pygal plate ; marginal plates absent or forming an incomplete series. Plastron formed of nine bones, epiplastra separated from the hyoplastra by the entoplastron, which is ˄-shaped, without longitudinal process. Sacral and caudal ribs attached to transverse processes of the neural arch. Fourth digit with four or five phalanges.

Family 1. Trionychidæ.

No epidermic scutes. Limbs with three claws. Indian, African, and American regions.

Genera : *Chitra, Heplathyra, Trionyx, Cyclanosteus, Emyda.*

We add a few notes on such of the genera enumerated in this synopsis as have some special interest attached to them, either from a scientific or an economic point of view.

The family Sphargidæ is represented in the recent fauna by a single species, Dermatochelys or Sphargis coriacea, the Leathery Turtle, the range of which extends over the tropical and subtropical seas of both hemispheres, and which occasionally strays into the northern parts of the Atlantic, its occurrence on the British coast having been recorded three or four times within the last century. It differs from all other Chelonians by its carapace being formed by ossifications of the skin only. Neither the vertebræ nor the ribs enter into its formation ; the latter remain free, and are not particularly dilated. During the life of the animal the carapace is flexible like thick leather, the bony deposits being arranged like mosaic, w’ith several longitudinal ridges of larger osseous tubercles. The limbs are, as in other marine turtles, paddle- or fin-shaped, the anterior much longer than the posterior, and all destitute of claws. This turtle is probably the largest living Chelonian, exceeding 6 feet in length. The names Testudo lyra, Sphargis mercurialis, &c., have reference to the myth that the shell of this or some other turtle was used by Mercury in his construction of the lyre.

The family Testudinidæ is composed of an unbroken series, from thoroughly aquatic freshwater tortoises like Dermatemys and Batagur to the tortoises which live exclusively on land and are perfectly helpless in water. In the Central-American genus Der­matemys the digits are very broadly webbed, the epidermic scutes are thin, and the nose is much produced,—characters which, together with the strong depression of the shell, give these terrapins some­what the aspect of the freshwater turtles or Trionychidæ. They feed exclusively upon leaves, grass, and especially fruit, and are eaten by the natives. Of the freshwater tortoises of the Old World the most thoroughly aquatic are the Batagurs, which inhabit the East Indies, and attain to a length of 2 feet. Like their American representative, Dermatemys, they are essentially herbivorous, and their flesh is eaten. The genus Clemmys is extremely abundant in species, most of which are of small size, and elegantly ornamented with symmetrical markings of bright colour. The majority of the species occur in North America and Mexico, and are of amphibious habits. Only one species, C. leprosa, inhabits southern Europe. A second European species belongs to the genus Emys, E. orbi­cularis, which, towards the end of the Quaternary period appears to have been distributed over a great part of northern Europe, remains having been found in peat in England, Belgium, Denmark, and Sweden. Its habitat is now restricted to southern Europe, south-western Asia, aud north-western Africa; but singularly it has survived in a few isolated northern stations, for instance, in the neighbourhood of Berlin and Königsberg, although it is there on the verge of extinction. The mobility of the lobes of the plastron, w’hich distinguishes Emys from Clemmys, is carried a degree further in the North-American genus Cistudo, the Box Tortoise ; this terrapin possesses a hinge in the plastron, rendering its anterior and posterior portions movable, and converting them into lids by which the openings of the shell can be completely closed when the head and limbs are retracted. A similar protective apparatus exists in the tortoises of the genus Cino sternum. In the African terrestrial genus Cinyxis it is the posterior portion of the carapace that is movable, and separated from the anterior by a hinge. True land tortoises, Testudo, occur in Africa, southern Europe, southern Asia, South America, and the southern parts of North America. Those best known in Europe are Testudo græca and the Moorish Tortoise, Testudo mauritanica, large numbers of which are imported into the United Kingdom, chiefly from Morocco. But the most interesting are the gigantic tortoises which formerly inhabited in extreme abundance the Mascarene and Galapagos Islands, and are now on the verge of extinction, or have actually