

very unequal sizes. The plates of the sternum grow broader as the animal grows older, just the opposite of what we see in the Amydæ. This is, however, much more extensively the case with the two median rows than with the lateral rows of the bridge, which latter are nearly as broad in the hatching *Caouana* as the median ones; while in the adult, their transverse diameter is hardly more than one third of that of the median ones. The connection of this change of the form of the plates with the change of the whole shape of the trunk, as described in this section for the *Chelonioidæ*, and above (p. 294) for the *Emydoidæ*, is self-evident. The sculpture of the plates is exceedingly fine in the hatching *Th. Caouana*. This sculpture is preserved in some land Turtles and some *Emydoidæ* throughout life, but soon fades away in the sea Turtles. As this sculpture of the plates rests merely in the epidermal plates, it is not to be confounded with the wart-like excrescences which we meet with in the hatching *Chelydroidæ* and *Cinosternoidæ*. The latter consist in real thickenings of the corium, which ossify on a very large scale in *Gypochelys*, and are homologous to the rows of tubercles in *Caouana* which have been described above.

The tail of the young sea Turtles is exceedingly short; not any longer, in proportion to their size, than in the adult. This, again, is different from what we see in hatching *Amydæ*, where the tail of the young is so remarkably long; in the *Emydoidæ*, nearly as long as the whole carapace. If we attempt to give an explanation for this strange discrepancy, we are led to the conclusion that it must be owing to the circumstance, that, as in young *Emydoidæ* all the four feet serve as paddles and the tail acts as a rudder, while in sea Turtles the front feet only are paddles and the hind feet serve as rudder, the *Chelonioidæ* do not need such a strong rudder tail as the young *Emydoidæ*, which have no rudder but the tail, their hind feet being paddles. In relation to this use of the hind feet as rudders in sea Turtles, we refer to Pl. 6, fig. 13, 15, and 16, which show the green Turtle in a swimming attitude. The hind feet of *Thalassochelys Caouana*, when hatching, are very broad, and the front feet also are broader and much longer in comparison than in the adult. The claws of the thumb and the first finger are long and strong, while in the adult they fade nearly entirely away.

Having thus described the young *Thalassochelys Caouana* as the most accessible representative of the family of *Chelonioidæ* at the time of hatching, and compared it with the adult as we have before described the changes which the *Amydæ* undergo from the time of their birth to adult age, exemplifying these metamorphoses in our common *Chrysemys picta*, we may now proceed to compare the earlier changes which Turtles undergo in the egg, with a view of ascertaining how the differences exhibited by the two sub-orders of Testudinata are to be understood.