

into fields, as it is also all over the neck and in all those other parts of the trunk which are not covered by the shields of the back and the lower side. The epidermis of the legs varies very much, from the thin layer of the Trionychidæ, in which it is only in some single places thickened into hard plates, to the horny, scaly, or plated stiff coat of the massive feet of the sea and land Turtles, Chelonia and Testudo, where there is very little or no motion of the different parts of the legs. In the Chelonioidæ the epidermis of the last phalanges appears as a nail only in the thumb, while in Sphargis there is not even a trace of a nail to be found; in the Trionychidæ it forms sharp, long, slim claws, in three fingers and in three toes; in the aquatic Emyds (Nectemyds) there are similar nails in all the fingers and in the toes. On the contrary, in the more terrestrial members of the family of Emydoidæ, in Glyptemys insculpta, and still more in Cistudo, whose fingers and toes are less movable and frequently used for walking on land, the claws appear shorter and stouter, while in Testudo the whole coat of the fingers and toes has become a hoof, almost as in Pachydermis, serving as in the latter to carry the heavy load of the body. These epidermal formations in the legs and particularly those in the last phalanges, in connection with the epidermal formations of the jaws, are very important for the classification, as they indicate more clearly than any other external organ the mode of life of the animal in all its relations to the outer world. That the consideration of these parts leads really to natural divisions is seen not only in Turtles, but more distinctly still in Birds and Mammalia; and the system of Linnæus, founded upon such details, has assumed the character of a natural combination in the classification of these two classes, though, as he understood them, they still appear as artificial as his system of plants.

The epidermis of the tail is mostly wrinkled or covered only by small scales, thus allowing to this organ a great movability. In the family of Chelydroidæ only do we find, along the top of their long, powerful tail, a row of hard tubercles strengthening and protecting it as an organ of locomotion, and by no means interfering with its movability. In some land Turtles and in the genus Cinosternon, the end of the tail has a flat, rounded sheath, as in Testudo indica, or it has a pointed nail-like or even crooked tip, as in Cinosternon, particularly in the males.

The most important features of the epidermis, and those most peculiar to Turtles, are found in the back and the lower shield. It is scarcely developed in two families, the Trionychidæ (soft-shell Turtles) and the Sphargididæ, in which it forms only a thin continuous layer upon the corium, as in naked Batrachians, while it is thick, horny, and divided into fields in all other Testudinata, that is to say, in all those Turtles in which the corium is entirely ossified. In the Trionychidæ and Sphargidæ there lies always a thick layer of soft, unossified corium, under