

Ichthyosauri, the Plesiosauri, the Pterodactyli, the Dinosauri, etc., as constituting several additional orders, these groups, as zoölogical divisions, have in themselves the character of orders, that is to say, they exhibit, when compared with one another, various degrees of complication of their structure, and stand, with reference to one another, higher or lower. It cannot be doubted, for instance, that compared with Lizards, the Snakes are an inferior group, and that the Chelonians, in which the different regions of the body are so distinctly marked and in which the head for the first time acquires a greater movability upon the neck, stand above the others, approaching indeed, in many respects, the class of Birds, especially the lower families of aquatic Birds, both in their form and in their mode of existence.

Now, this gradation, acknowledged by all, inasmuch as all herpetologists place the Chelonians at the head of this class and next to them the Saurians, while the Ophidians occupy a lower position, will serve as an illustration of my definition of orders as natural groups, characterized by the different degrees of complication of the special structure of their class, which complications determine their relative rank or standing. I would not, however, in this connection forget that some naturalists, Strauss¹ among others, have of late considered the Chelonians as a distinct class, and not as an order among Reptiles. Now, let us apply the test of our rules to this suggestion, remembering here again that these rules have been drawn from those classes of the animal kingdom, such as the Echinoderms, Acalephs, and Polyps, in which the orders are still more distinctly marked out in nature than in the one now under consideration.

To constitute a class apart from Ophidians and Saurians, the structure of Chelonians ought to be built up in a different way and with different means from that of Saurians and Ophidians. And now, is this the case? The Chelonians, like Saurians and Ophidians, undergo a development so identical, that we need only compare the investigations of Rathke upon that subject with those contained in this volume, to settle any doubts on that point. And as to structure, what difference is there, except differences in complication of structure, between Ophidians, Saurians, and Chelonians, both in their nervous systems and organs of senses, in their locomotive apparatus and in their intestines? Is not even the skeleton truly homological in all of them?² We cannot fail, therefore, to consider the view as fully sustained, that Chelonians represent an order, and nothing but an order, in the class of true Reptiles.

¹ STRAUSS-DURKHEIM, (IL,) *Théologie de la Nature*, Paris, 1852, 3 vols. 8vo.; vol. 1, p. 99 and 398.

² For further evidence that the structure of the Chelonians is truly homological with that of Saurians

and Ophidians, and that the position of their limbs and the frame of their shield does not place them in an exceptional position, with reference to the other Reptiles, see below, Sect. 6 of this chapter.