

division. He could not have done better, says Cuvier,¹³ if his object had been to turn into ridicule all artificial methods, and to show to what absurd combinations they may lead.

Cuvier himself, who always pursued natural systems with a singularly wise and sagacious consistency, attempted to improve the ichthyological arrangements which had been proposed before him. In his *Règne Animal*, published in 1817, he attempts the problem of arranging this class; and the views suggested to him, both by his successes and his failures, are so instructive and philosophical, that I cannot illustrate the subject better than by citing some of them.

“The class of fishes,” he says,¹⁴ “is, of all, that which offers the greatest difficulties, when we wish to subdivide it into orders, according to fixed and obvious characters. After many trials, I have determined on the following distribution, which in some instances is wanting in precision, but which possesses the advantage of keeping the natural families entire.

“Fish form two distinct series;—that of *chondropterygians* or *cartilaginous fish*, and that of *fish* properly so called.

“The *first* of these series has for its character, that the palatine bones replace, in it, the bones of the upper jaw: moreover the whole of its structure has evident analogies, which we shall explain.

“It divides itself into three ORDERS:

“The CYCLOSTOMES, in which the jaws are soldered (*soudées*) into an immovable ring, and the bronchiæ are open in numerous holes.

“The SELACIANS, which have the bronchiæ like the preceding, but not the jaws.

“The STURONIANS, in which the bronchiæ are open as usual by a slit furnished with an operculum.

“The second series, or that of *ordinary fishes*, offers me, in the first place, a primary division, into those of which the maxillary bone and the palatine arch are dovetailed (*engrenés*) to the skull. Of these I make an order of PECTOGNATHS, divided into two families; the *gymnodonts* and the *scleroderms*.

“After these I have the fishes with complete jaws, but with bronchiæ which, instead of having the form of combs, as in all the others, have the form of a series of little tufts (*houppes*). Of these I again form an order, which I call LOPHOBRANCHS, which only includes one family.

¹³ p. 108.

¹⁴ *Règne Animal*, vol. ii. p. 110.