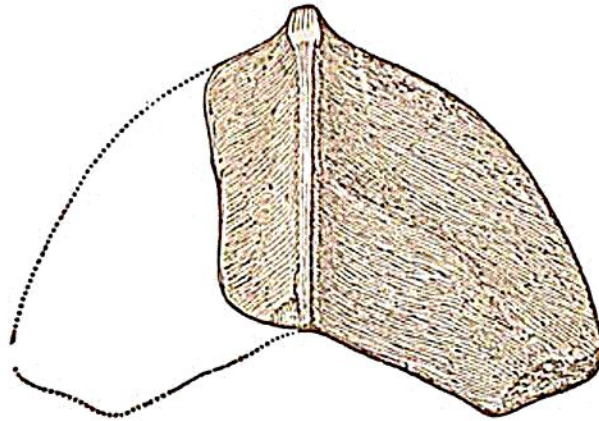


Fig. 46.



HYOID PLATE OF RUSSIAN ASTEROLEPIS.

(One twelfth the natural size, linear.)

encompassed by the sweep of the lower jaw which it took, in the Russian specimen, a hyoid plate twenty-four inches in breadth to fill, could be filled in the two-and-a-half-foot cod by a plate whose breadth equalled but an inch and a half. Thus, in the not unimportant circumstance of size, the most ancient Ganoids yet known, instead of taking their places, agreeably to the demands of the development hypothesis, among the sprats, sticklebacks, and minnows of their class, took their place among its huge basking sharks, gigantic sturgeons, and bulky sword-fishes. They were giants, not dwarfs.

But what of their organization? Were they fishes low or high in the scale? On this head we can, of course, determine merely by the analogies which their structure exhibits to that of fishes of the existing period; and these point in three several directions;—in two of the number, directly on genera of the high Ganoid order; and in the third, on the still higher Placoids and Enaliosaurs. No trace of vertebræ has yet been found; and so we infer—lodging, however, a precautionary protest, as the evidence is purely negative, and therefore in