

*Echiostoma*, Lowe.<sup>1</sup>*Echiostoma barbatum* (Pl. LIII. fig. B).*Echiostoma barbatum*, Lowe. Proc. Zool. Soc. Lond., 1843, p. 88.

" " Günth., Fish., vol. v. p. 427.

" " Goode and Bean, Bull. Essex Instit., vol. xi. p. 128.

B. 12. D. 12-15. A. 16-18. P. 3-5. V. 8.

The head and body of this fish are compressed, scaleless; its greatest depth is one-eighth of the total length, the length of the head nearly one-seventh. The upper part of the head is short, the cleft of the mouth very wide, extending to the angle of the præoperculum, the hind margin of which consequently descends backwards in a strongly oblique direction. The opercular portion is very narrow, and the whole gill-cover formed by thin, almost membranous plates. The width of the interorbital space much exceeds that of the orbit, the diameter of which is one-sixth of the length of the head, and a little less than that of the snout. Lower jaw but slightly projecting beyond the upper. Nostrils, two round openings on each side, situated in a cavity on the upper side of the snout, and separated from the orbit by a slight crenulated projection; also the median ridges on the upper side of the head are indistinctly crenulated.

The formidable dentition consists of pointed teeth unequal in size, chiefly arranged uniserially, all the larger ones being depressible backwards or inwards. The two large front teeth of the upper jaw leave a wide space for the reception of the lower teeth. When complete, the intermaxillary dentition consists of ten teeth, of which the first is the smallest and readily lost, the third and sixth the largest. The maxillary dentition is peculiar, inasmuch as its proximal third consists of six teeth of moderate size, while the two distal thirds are formed by uniformly small teeth, there being no gradual transition from the larger to the smaller teeth. The mandibular teeth are uniserial in front, biserial behind; the seven anterior teeth are larger than the rest, and the third and sixth exceed the others. Vomer with a fang on each side; palatine with a series of small teeth. Two pairs of fangs, strongly curved backwards, on the tongue. Also the upper pharyngeals bear some teeth of rather small size.

The gill-laminæ are well developed, except on the hinder part of the horizontal

<sup>1</sup> This genus seems to have been re-named *Hyperchoristus* (Gill, Proc. U.S. Nat. Mus., vol. vi. 1884, p. 256); its dentition is described thus:—"Teeth on the jaws nearly uniserial, but in several groups, of which the successive teeth (about four) rapidly increase in size backwards, and teeth on the palate enlarged, one on each side of the vomer, and several on the palatines." A single specimen, named *Hyperchoristus tanneri*, of which the size is not stated, was obtained by the U.S. Fish Commission in the North Atlantic (lat. 40° 26' N., long 66° 58' W.), at a depth of 956 fathoms; but as the specimen is said to have been "so lively when brought to the surface that it twisted itself round in its attempt to bite the commander of the vessel," it is more likely to have been captured much nearer to the surface of the water.