

*Bregmaceros atlanticus*. Six specimens, the largest nearly 50 mm. long, were obtained by the "Blake," at depths varying from 90 to 305 fathoms. This occurrence, taken together with the facts that the Challenger obtained a young specimen in the open sea in the Pacific, that *Bregmaceros maclellandii* has a black-coloured pharynx, and that *Bregmaceros maclellandii* and *Bregmaceros punctatus* possess deeply sculptured cranial bones with wide muciferous cavities, proves that these fishes inhabit the open sea, and descend to considerable depths, although they seem not rarely to be met with close to the shore.

I have mentioned above that I agree now with Mr. Hutton in regarding the New Zealand form as the type of a distinct genus; Mr. Hutton adopted the second generic name given to *Bregmaceros maclellandii*, *Calloptilum*, for the genus which he established for the New Zealand fish, but according to a generally accepted rule of nomenclature, this course is not admissible, and a new name has to be given to the latter. It is not possible at present to determine to which of the two genera the young specimens obtained by the Challenger and "Blake" should be referred. The dorsal and anal fins are but little differentiated in the young of all these species, and the structure and changes of their ventral fins are very imperfectly known.

I proceed first to give the distinctive characteristics of the two genera :—

*Bregmaceros*, Thomps. = *Calloptilum*, Rich. = *Asthenurus*, Tick.

Body fusiform, compressed posteriorly, covered with cycloid scales of moderate size. Two dorsal fins, the anterior reduced to a single long ray on the occiput; the second and the anal more or less depressed in the middle, in adult specimens the middle rays becoming more or less obsolete, so that the fin appears to be divided into two. Ventral fins well developed, composed of five rays, the three outer of which are dilated and much elongated. Minute teeth in the jaws and on the vomer. Air-bladder large. Pyloric appendages few in number (two). Gill openings very wide, the gill membranes being united below the throat, and not attached to the isthmus. Pseudobranchiæ none. Branchiostegals seven.

*Auchenoceros*, Gthr. = *Calloptilum*, Hutt. nec Rich.

Head and body compressed, elongate, covered with small, exceedingly delicate and deciduous scales. Two dorsal fins, the anterior reduced to a single long ray on the neck, above the pectoral; the second more or less depressed in the middle; one anal. Ventral fins rudimentary, each composed of two slender elongate rays. Minute teeth in the jaws, none on the vomer. Air-bladder small. Pyloric appendages in moderate number (eight). Gill openings very wide, the gill membranes not being attached to the isthmus. Pseudobranchiæ none.