

DESCRIPTION OF HYMENOCEPHALUS TENUIS, A NEW MACRUROID FISH FROM THE HAWAIIAN ISLANDS.

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During the course of their studies on the macruroid fishes of the Japanese and Philippine faunas, the authors have reexamined several of the Hawaiian species of this group, resulting in the discovery of an undescribed species of *Hymenocephalus*, widely different from any of the described forms. The description of this new species forms the basis of the present paper.

HYMENOCEPHALUS TENUIS, new species.

Hymenocephalus striatulus GILBERT, Bull. U. S. Fish Comm., 1903 (1905), sec. 2, p. 665 (in part, including only the specimen from Station 3920).

Type-specimen.—75 mm. long to end of tail, 20 mm. long to anus; dredged off the southern coast of Oahu, one of the Hawaiian Islands, at *Albatross* station 3920; depth, 265 to 280 fathoms; bottom temperature, 44.6 Fahr.; Cat. No. 78177, U.S.N.M.

In its form this species differs from all others, being the only one in which the head is not compressed. The width of the cylindrical head is half its length and is just equal to its greatest depth, which is also the greatest depth of the body. Preocular length of snout, 1.3 in orbit, 3.6 in length of head. The length of the orbit is a little greater than its vertical height, and is contained 1.15 times in the postorbital, or 2.65 times in the entire length of the head. The hinder margin of the pupil is equidistant from the tip of the snout and from the end of the opercle. The sides of the interorbital area are strongly concave; its least width is contained 6 times in the head; the least suborbital width is about 0.3 the orbital length. The barbel is not quite half the length of the orbit. The upper jaw extends from below the front of the nasal fossa backwards and slightly downwards almost to below the hinder margin of the orbit. Length of upper jaw 2.25 in that of head. The gill-rakers are tubercular and are fewer in number than in any other

species, there being only about 10 in the similar double series of the outer two arches. They are scarcely less rudimentary than in the species of the genera related to *Coryphaenoides* and *Lionurus*. The structure of the head is comparatively firm.

The distance between anus and base of ventral fins equals that between tip of snout and hinder margin of pupil, and is a little longer than the distance from base of ventral to fold of the gill-membranes where they cross the isthmus. Laterally the gill-membranes are free from the isthmus.

The lens-like structure before the anus is longitudinally elliptical in outline, and is a little longer than the similar but more nearly circular organ on the midventral line before the ventral fins.

The scales are largely lost, but several are retained along the sides and on the belly. They are all smooth and are marked with numerous concentric striae. About three rows of scales seem to separate the lateral line from the front of the first dorsal fin.

The distal portion of the second dorsal spine is weakly but distinctly denticulate, as in no other described species of the genus. The base of the first dorsal fin is contained 1.8 times in the interdorsal space, 1.3 times in the postocular length of the head. The rays of the paired fins are slender and weak; the outer ventral ray extends not quite to the anus and is contained 1.7 in the head; the inner ventral rays are shorter than the orbit and extend but half-way to the anus. The first anal rays are also shorter than the orbit. There are 8 rays in the ventral fin.

The ground color is yellowish brown, darkest about the base of the first dorsal fin; a median silvery streak is evident along the tail; the sides of the head and trunk to above the pectoral base are bright silvery in color, separated by an indistinct darker streak from the color of the back. The region before the ventral fins is blackish, with coppery luster near the isthmus. The head is marked by a dark streak along the front of the snout, one along the inner margin of the jaw next the teeth, and one along the crest forming the side of each mandibular ramus. The gular membrane is crossed regularly by fine parallel black lines, which are not separated by silvery streaks and are not to be confounded with the true striae of the abdominal region, which are of rather restricted development in this species. These fine striae extend forward from immediately above the ventral base, fading out along the sides of the isthmus. Behind the ventrals, they can barely be distinguished for a short distance. There are none immediately in front of the ventral base, and none immediately below the bases of the pectorals. The abdominal region is punctulate with very large chromatophores with pearly centers. The sides of the trunk above the silvery region are finely and densely punctulate. The chromatophores on the tail are coarser and sparser, occurring

largely in oblique rows which follow the grooves between the myotomes. A similar metameric arrangement is apparent in the squamation of the tail. The buccal and branchial cavities are wholly lined with silvery or white, with the exception of a few scattered spots on the inner surface of the opercles.

Only the one specimen is known. It is evidently immature but can not represent the young stage of any other species, as we have examined much smaller specimens of numerous other species and find that they do not in the least resemble this form.