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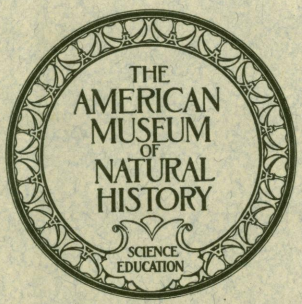
By John Treadwell Nichols

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# A HAWAIIAN RACE OF *CARANGOIDES GYMNOSTETHOIDES*

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The American Museum is in receipt of two specimens of *Carangoides* secured by Dr. B. W. Evermann in the Honolulu market, August 25, 1920, a little over a foot long to base of caudal.

In 'Fishes of the Hawaiian Islands,' 1905, Jordan and Evermann, two closely related species of this genus are recognized as *ferdau* (Forskal) and *gymnostethoides* Bleeker. Our two specimens are referred to the latter as there described, though they agree exactly with neither one. As a matter of fact, they do not agree exactly with each other. One of them has a longer dorsal lobe (1.8 in depth of body, 2.0 in base of fin) and the ventral surface little paler in color than the dorsal. The other has a shorter dorsal lobe (2.0 in depth, 2.2 in base of fin), the ventral surface pale, and also differs somewhat in outline. This may be a sexual difference.

It further seems not impossible that *ferdau* from the Hawaiian Islands, Jordan and Evermann, is a variation of the same fish. True *ferdau* from the Red Sea and East Indies has appreciably fewer fin-rays.

Leaving out of consideration proportional head and depth measurements which vary with age in this genus, length of the maxillary separates *gymnostethoides* from *orthogrammus* from off the West Coast of North America, the maxillary not reaching below orbit in the former and extending to nearly opposite front of pupil in the latter. In our two specimens the maxillary just reaches the anterior edge of orbit, but it is described for Hawaiian *gymnostethoides* by Jordan and Evermann as reaching opposite front of pupil.

The head of *orthogrammus* is given as $2\frac{3}{4}$, which would be large for a fish with the accompanying depth of $3\frac{2}{3}$, and this may be a good character for that species. Also, in Hawaiian *gymnostethoides* the dorsal lobe is about $\frac{1}{2}$ as high as the depth of body and base of the soft dorsal, this being higher than described for typical East Indian *gymnostethoides* or for *orthogrammus*.

From data which may be gleaned from the literature there seems little more reason for recognizing *orthogrammus* as distinct than for recognizing the Hawaiian fish. It is certain that we are dealing with variable and very closely related forms. Perhaps the best plan is to provisionally consider *orthogrammus* conspecific with *gymnostethoides* and to separate the same into three races.

The diagnostic characters of the inclusive species are: teeth on the palate and on both jaws, center of chest with a scaleless area, body mostly scaled, lobe of dorsal fin moderately elevated, not much more than half base of fin; slender, depth more than 2⅔ in length to base of caudal, dorsal soft rays 29–32, anal 25–27, arch of lateral line low, the scutes small, restricted to the posterior portion of the straight part, 25 more or less. The three races would be differentiated as follows.

1. Lobe of soft dorsal about ½ depth of body and base of fin. Naked area on chest narrow..... *C. g. evermanni*, new subsp. Honolulu.
   Lobe of soft dorsal considerably less than ½ depth of body or else base of fin....2.
2. Maxillary not reaching below orbit..... *C. g. gymnostethoides* Bleeker. Batavia.
   Maxillary to nearly opposite front of pupil. Scutes about 17.
   *C. g. orthogrammus* (Jordan and Gilbert). Clarion Id.

**Carangoides gymnostethoides evermanni,** new subspecies

The type, No. 7432, American Museum of Natural History, Honolulu market, August 25, 1920, B. W. Evermann, is 313 mm. long to base of caudal. Depth, 2.7 in this measure; head, 3.5. Eye, 5.2 in head; maxillary, 2.6; dorsal lobe, 1.4; anal lobe, 1.7; pectoral, 1.0 (right side) to 0.8 (left side). Maxillary to under front of orbit, not reaching pupil. Gill-rakers 21 on lower limb of first arch. Height of anterior lobe of soft dorsal 2.0 in base of that fin (not following curve of back), 1.8 in depth of body. Dorsal soft rays 30, anal 26. Chest before the ventrals narrowly naked. Color in alcohol dirty purplish gray, scarcely paler on the belly; fins, except pectoral which is paler, more or less dusky; dorsal, anal, and caudal lobes blackish.

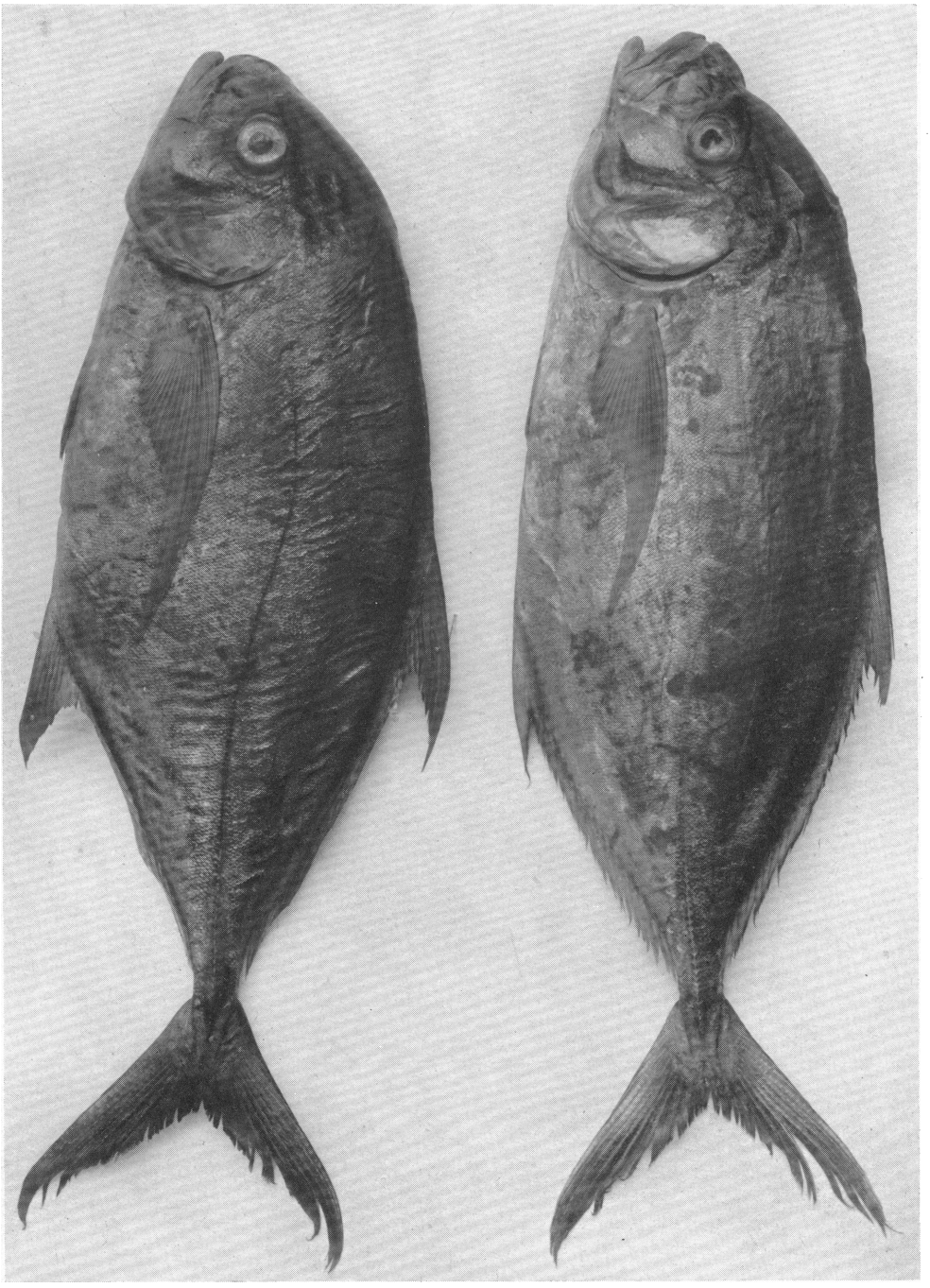

Fig 1. *Carangoides gymnostethoides evermanni*, new subspecies.
Type (left) and cotype (right).

## AMERICAN MUSEUM NOVITATES

FRANK E. LUTZ, Editor

Issued, as occasion requires, for the publication of preliminary announcements, descriptions of new forms, and similar matters.

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