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DESCRIPTION OF A NEW GENUS AND SPECIES OF  
GOBY FROM CALIFORNIA WITH NOTES ON  
RELATED SPECIES

BY CARL L. HUBBS

One of the most unexpected discoveries made by the writer during his explorations in central and southern California in 1916 was the discovery of a young goby which cannot be identified with any other American species or genus. It is here made the type of *Aprolepis barbarae*, new genus and species. Notes on related genera and species are included.

**Aprolepis**, new genus

First dorsal small, composed of five spines, widely separated from the second dorsal of 14 rays; anal rays 11; pelvis completely united, not adnate to abdomen. Scales rather small (in 55 series), lacking on head and anterior part of body, their margins dentate. Head compressed, transversely rounded, not widely dilated behind the orbits; the median crest of

cranium inconspicuous. Shoulder girdle without dermal flaps; chin without barbels.

This genus combines characters of *Garmannia* and *Ilypnus*. In the reduced size of the first dorsal fin and its wide separation from the second, it differs from *Garmannia paradoxa* and resembles *Garmannia spongicola* Radcliffe.<sup>1</sup> The latter, differing further from the type-species of *Garmannia* in having the scales confined to the ventral half of the caudal peduncle, may be made the type of another new genus, *Radcliffella*.

*Genotype*.—*Aprolepis barbarae*, new species.

***Aprolepis barbarae*, new species**

*Holotype*.—A young specimen 15 mm. long to caudal, collected by the writer in a small muddy tidal slough, in the salt marsh about El Estero, near Carpenteria, Santa Barbara County, California, on July 4, 1916; Cat. No. 55054, Museum of Zoology, University of Michigan.

Body moderately slender, the contours little curved; anterodorsal profile convex, decurved from eye to mouth. Body and head both compressed, the greatest width of the head being 0.7 of the depth; greatest depth of body, 5.35 in total length to caudal. Length of head, 3.5. Eyes facing largely outward, separated by half the orbital length. Snout moderately obtuse, as long as orbit; tip of premaxillaries slightly above horizontal passing through lower margin of orbit. Mouth comparatively small, strongly oblique; the upper jaw not quite reaching vertical from anterior border of pupil; lower jaw a little shorter than upper. Teeth in a rather wide villiform band in the lower jaw; apparently none enlarged as canines. Head not very abruptly widened behind eye, convex in cross section posteriorly; a low median ridge extended forward to between the eyes. No flaps on shoulder girdle.

<sup>1</sup> *Proc. U. S. Nat. Mus.*, 52, 1917, p. 423.

Scales covering the entire tail of the fish, as well as a triangular thoracic area, with its apex opposite the middle of the pectoral fin; none above, below and before this scaly area; scales becoming smaller toward margin of scaly area. Each scale small, round, and imbricate, with dentate margins; in 55 transverse series. Dorsal rays, V, 14; anal, 11. Spinous dorsal reduced not only in the number of rays, but also in size: the first two spines, the longest, not quite two-thirds as long as the interspace between the two dorsals, which is about as long as the first dorsal base. Anal inserted posteriorly, its origin equidistant from isthmus and from base of caudal.

Body crossed by about seven dark shades, or irregular vertical bars, which become wider and doubled posteriorly. Head with conspicuous spots. Dorsal spines blackish; second dorsal and anal fins with dark spots; caudal with a dark base; paired fins clear.

Measurements of type in millimeters (being made by use of an eye-piece micrometer, the measurements are of the horizontal projection of each structure): total length to caudal, 15.0 mm.; greatest depth of body, 2.8; least depth of caudal peduncle, 1.5; length of head, 4.8; depth of head, 2.7; width of head, 1.9; width of bony interorbital, 0.6; width of sub-orbital, 0.5; length of orbit, 1.2; length of snout, 1.0; length of upper jaw, 1.5; distance from tip of snout to origin of dorsal, 6.2; length of first or second dorsal spine, 1.7; distance between origins of dorsal fins, 2.7; height of second dorsal, 2.1; snout to origin of anal fin, 9.8; length of first anal ray, 1.1; length of longest anal ray, 1.8; snout to insertion of ventral, 4.8; length of ventral, 3.0.

*Gillichthys detrusus* Gilbert and Scofield

*Gillichthys mirabilis* Evermann and Jenkins, *Proc. U. S. Nat. Mus.*, 14, 1891, p. 162; Starks and Morris, *Publ. Zool. Univ. Cal.*, 3, 1907, p. 227 (in part).

*Gillichthys detrusus* Gilbert and Scofield, *Proc. U. S. Nat. Mus.*, 20, 1897, p. 498, pl. 38; Jordan and Evermann, *Bull. U. S. Nat. Mus.*, 47, pt. 3, 1898, p. 2251.

A series of *Gillichthys*, 28 to 62 mm. long to caudal, were collected for the Field Museum by Edmund Heller at San Filipe Bay, Lower California. The color is dark, the back with traces of darker bars. Dorsal fins marked with horizontal lines, or light basally and blackish distally; caudal dusky or crossed by dark lines; anal dark, becoming blackish distally but with the margin pale.

*Gillichthys detrusus* of the Gulf of California appears to differ from the Californian *G. mirabilis* constantly in one important cranial character, the supraorbital rim of the skull lacking the posterior wing-like processes developed in *mirabilis*.

*Quietula y-cauda* Jenkins and Evermann

Two specimens, 25 and 28 mm. long to caudal base, were taken by Mr. Heller at San Filipe Bay, on the Gulf of California. Head, 3.0; eye, 3.5; dorsal rays, V, 14 or 15; anal, 13 or 14; body with a dark reticulated pattern, but without whitish spots; dorsals and anal with dark markings; caudal base with a blackish bar emarginate posteriorly.

Genus *Ilypnus* Jordan and Evermann

This genus is closely related to *Clevelandia*, differing however in the development of a comparatively long slender process on the shoulder girdle, and in the small size of the mouth;

and from *Evermannia* and *Clevelandia* (these genera possibly identical) in not having the first dorsal spine nor the maxillary produced, and in the more regular squamation.

*Ilypnus gilberti* Eigenmann and Eigenmann

Specimens of this goby were secured by the writer in the *esteros* at Carpenteria and Goleta, in Santa Barbara County, California. Another was secured in the fresh tide-water of San Gabriel River, with several of *Clevelandia ios*.

*Clevelandia ios* Jordan and Gilbert

Specimens of this goby were caught in the *esteros* at Goleta and Carpenteria, Santa Barbara County; in Morro Bay, and in the fresh tide-water of Morro Creek, San Luis Obispo County.

*Eucyclogobius newberryi* Girard

Numerous breeding specimens of this estuarine goby of California, the largest 40 mm. long to caudal, were collected at each of the following localities: small lagoon of brackish water at mouth of a stream between San Simeon and Cambria. May 31; fresh tide-water of Morro Creek, June 8; fresh tide-water at mouth of Chorro Creek, near Morro, June 10; lagoon of slightly brackish water at mouth of Santa Inez River, at Surf or Lompoc Junction, June 22. The last locality becomes the southernmost record-station for the species.





