

**DESCRIPTION OF A NEW EMBRIOTOCOID (*ABEONA AURORA*),
FROM MONTEREY, CALIFORNIA, WITH NOTES ON A RELATED
SPECIES.**

By **DAVID S. JORDAN** and **CHARLES H. GILBERT.**

Body very elongate, with dorsal and ventral outlines evenly curved; caudal peduncle very long, thick at base; snout blunt and rounded, top of head everywhere transversely convex and the occipital region but little depressed.

Mouth small and oblique, the lower jaw somewhat shorter than the upper and included. The maxillary reaches but two-thirds the distance to front of orbit; premaxillaries anteriorly about on a level with lower rim of orbit.

Teeth long and strong, somewhat compressed and incisor-like, arranged in a close series; each tooth with three short-rounded lobes near the end, the middle lobe the longest; their form precisely as in *Abeona minima*. These incisor teeth are crowded, with the lobes overlapping, and often with one slipped entirely behind the others.

Scales of cheeks in three distinct series below, in one posteriorly. Behind this outer row and well separated from it are, in the upper jaw, from two to several distinct canines, there being usually a pair near the middle of the jaw. Gill-rakers rather feeble, of moderate length. Lower lip thin, with a frenum.

Dorsal fin with the spines from the fifth or sixth to the eleventh, longer than the others, about equal to each other and to the longest soft ray. Pectorals not reaching as far as do the ventrals, which scarcely reach the vent. Caudal forked for nearly half its length. Ventral groove almost obsolete; the distance from ventrals to vent about equals the length of the anal fin.

Lateral line with 40 to 45 scales (4-43-13).

Color bluish black above, becoming lighter on lower half of sides silvery below. Opercles and lower half of sides punctate with black dots and shaded with light orange or rose red, the latter here more intense on the centers of the scales. A broad grayish area extending backward from the axil of the pectorals, without orange tints and darkened by black punctulations on the edges of the scales; this area ends opposite the origin of the anal fin; above it the orange shade forms a rather distinct band from the lips to the base of the caudal. Axil of pectorals black, especially above. Fins plain, speckled with blackish. Anal somewhat yellow.

Fin rays: D. VIII, 17; A. III, 20.

The intestines were filled with a species of *Ulva*, indicating a vegetable diet.

This species is known to us from fifteen examples taken in the bay of Monterey, and purchased by us in the San Francisco market.

It agrees with *Abeona minima* in the peculiar dentition characteristic of that genus, as well as in the large scales and shortened fins. Its form is, however, quite different, resembling more the genera *Brachyistius* and *Cymatogaster*. It is a considerably larger fish than *Abeona minima*; its dorsal spines are weaker and the number of fin rays is greater. (D. IX, 14; A. III, 16—in *Abeona minima*.)

From *Cymatogaster aggregatus* it is widely separated by the different dentition; with *Brachyistius frenatus* Gill it has closer affinities, but the two species belong to different genera.

This latter species has been but once observed, and no description has been yet published, merely a brief note enumerating some of its peculiarities. We therefore subjoin a fuller account, drawn from a fine specimen obtained by us at Santa Barbara.

BRACHYISTIUS FRENATUS Gill.*

(Proc. Acad. Nat. Sci. Phila., 1862, 275.)

Body elongate, compressed, the body proper regularly elliptical, with long caudal peduncle. Head long, very slender and pointed, much depressed above the eyes, the snout projecting. Mouth very small, terminal oblique, the small maxillary falling much short of the orbit. Lips rather thin, the lower with a frenum. Teeth long and slender, somewhat lanceolate, few in number, arranged in a single series.

Preorbital broad. Checks with about two rows of scales; opercles with three. Eye large, anterior, about 3 in head.

Gill-rakers numerous, long and slender.

Scales large, 42 in the course of the lateral line. Dorsal spines high and rather strong, the first low, the others rapidly increasing to the sixth and seventh, the eighth shorter, the soft rays a little higher than the highest spines.

Caudal peduncle nearly as long as the head, not very slender. Caudal fin rather deeply forked.

Anal spines feeble, the fin elevated in front. Ventrals reaching soft rays of anal. Pectorals reaching first anal spine. Ventral groove very short.

D. VIII, 15; A. III, 22.

Color dark olive-brown above, with lighter stripes along the rows of scales. Below everywhere a brilliant light coppery red; each scale with a light blue spot and dark punctulations. Head colored like the body. Fins all light reddish, plain, the dorsal somewhat dusky. A streak of sky-blue spots below and in front of the eye.

Measurements of *Abeona aurora*.

Extreme length	6.93 inches	
Length to base of caudal.....	5.57 inches =	100

* We have since obtained this species in very great numbers at various places along the coast from Los Angeles to Vancouver's Island. *Ditrema brevipinne* Günther is undoubtedly the same species.

Body :	
Greatest depth.....	36
Least depth of tail.....	14
Length of caudal peduncle	21
Head :	
Greatest length	25.5
Width of interorbital area.....	9
Length of snout.....	7
Length of maxillary.....	6
Diameter of eye.....	7
Dorsal :	
Distance from snout.....	37.5
Length of base.....	43.5
Height of longest spine.....	12
Height of highest soft ray	12
Anal :	
Length of base.....	16.5
Height of longest ray	9
Caudal :	
Length of middle rays.....	13.2
Length of outer rays	25
Pectoral, length.....	24
Ventral, length	19
Dorsal rays	VIII, 17
Anal rays.....	II, 20
Scales	4-43-13
Transverse series below lateral line	35

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DESCRIPTION OF A NEW FLOUNDER (PLATYSOMATICHTHYS STOMIAS), FROM THE COAST OF CALIFORNIA.

By **DAVID S. JORDAN** and **CHARLES H. GILBERT.**

Body extremely elongate for the family, thin, and strongly compressed. Head rather long and slender; the snout somewhat pointed. Mouth extremely large and oblique, the lower jaw included; the maxillary very long and slender, reaching much beyond the eye, its length about half that of the head. Premaxillary in front above the level of the lower eye.

Teeth in the upper jaw anteriorly long, slender, and wide-set. Some of the teeth very freely depressible, the larger ones scarcely movable. Posteriorly the teeth are much smaller, close-set, and fixed in two rows; the inner row continuous with the larger anterior series, the outer row extending outside of some of the enlarged teeth.

Teeth in the lower jaw very sharp and slender, long, and wide-set, alternating with shorter ones, which are very freely depressible. Outside of the larger teeth is a series of small, fixed, close-set teeth. The larger teeth in each jaw are distinctly arrow-shaped. Pharyngeal teeth apparently in one row.