

## SOME NEW HAWAIIAN CEPHALOPODS.

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The following brief notices of additional new forms of cephalopods from the United States Bureau of Fisheries steamer *Albatross* Hawaiian collections are offered in advance of the publication of the main report. A previous paper on the fauna has appeared in these Proceedings.<sup>1</sup>

### LAETMOTEUTHIS, new genus.

Finned Octopods close to *Cirroteuthis*, but with the paired cirri apparently wanting. The well-developed radula has seven rows of teeth. The umbrella is ample as in *Cirroteuthis*; there is no "intermediate web."

*Type*.—*Laetmotheutis lugubris*, new species.

### LAETMOTEUTHIS LUGUBRIS, new species.

Body large, rounded posteriorly; a pair of small, transversely elongate fins attached one at either side. Funnel very large.

Arms long, appearing merely as thickenings in the very extensive umbrella. Suckers large, flattened, distant; placed in a single somewhat zigzag series; paired cirri indistinguishable.

Beak large and powerful. Radula large and perfect, comprising seven rows of teeth, of which the tricuspid medians are conspicuously the largest.

Color a dark livid brown (chocolate colored when captured).

*Type*.—Cat. No. 214385, U.S.N.M. [S. S. B. 211]. From *Albatross* station 3904, off the north coast of Molokai.

Length of right dorsal arm, 430 + mm.; of umbrella between dorsal arms, 300 mm.; of extracted radula, 22 mm.

This specimen is very fragmentary and was taken from the surface. A second similar specimen was taken at station 3898.

<sup>1</sup> Vol. 37, pp. 407-419, published December 30, 1909.

## SCAEURGUS PATAGIATUS, new species.

Body small, short, rounded, compact; dorsal surface heavily tuberculate with small rounded papillæ which often coalesce to form longitudinal ridges, the arrangement of the latter showing a greater or less bilateral symmetry; a narrow keel bounds the periphery of the body on the sides but is discontinuous posteriorly; there is a large cirrus over each eye opening, with a smaller one just in front.

Head broad, but narrower than the body; eyes large. Funnel organ W-shaped.

Arms stout, somewhat over twice as long as the head and body taken together; subequal, the second pair slightly the longest. Umbrella well developed, especially between the dorsal arms. Third left arm in the male conspicuously hectocotylyzed; calamus very long and slender; the ligula spoon shaped, its inner face deeply excavated.

General color of living animal, pale green; of alcoholic specimens, a brownish buff marbled with chocolate.

*Type*.—Cat. No. 214379, U.S.N.M. [S. S. B. 204]. From *Albatross* station 4079, off the island of Maui.

Length (total), 152 mm.; posterior tip of body to base of dorsal arms, 46 mm.

## EUPRYMNA SCOLOPES, new species.

Body small, sepioliform, of variable outline. Fins large, semicircular, attached in advance of the middle of the body. Nuchal commissure wide.

Head short, about the same width as the mantle; eyes large.

Arms short, stout, about as long as the mantle, their order of relative length 2, 3, 4, 1. Umbrella rudimentary between the dorsal arms and those of the ventral pair, but elsewhere better developed. Suckers on all the arms in four rows except at the extreme base and tip, where they are in two rows; pedicels short, stout; cups spherical, with small apertures; horny rings smooth. In the female the suckers on all the arms are relatively minute and subequal, but in the male some 6 to 10 suckers in each marginal row on the second, third, and fourth arms undergo a conspicuous enlargement; left dorsal arm of male hectocotylyzed—the first four pairs of suckers at the base in two rows, these succeeded by 10 quartets of small suckers, the two basal-most of the ventral row of which are reduced to slender papillæ; beyond its basal third the arm becomes much swollen, while the suckers of the two ventral rows are replaced by an irregular crowded series of transversely compressed papillæ, which continue to the tip, each bearing a minute aperture at its inner apex with a minutely toothed horny ring; the suckers of the two dorsal series undergo modification a little later than their ventral neighbors, finally appearing as a crowded double series of swollen tubercles which are neither so com-

pressed nor so closely palisaded as the latter. Tentacles of variable length; inner aspect of club of a villous appearance due to the exceeding minuteness of the numerous long-pediceled suckers which it bears.

*Type*.—Cat. No. 214380, U.S.N.M. [S. S. B. 320]. From *Albatross* station 3905, off the island of Molokai.

Length (total), 63 mm.; length of mantle (dorsal), 25 mm.

*E. scolopes* is a near ally of *E. stenodactyla* (Grant), but differs in the details of the hectocotylized arm and other secondary sexual characters in the male.

TELEOTEUTHIS COMPACTA, new species.

Small; mantle nearly cylindrical, ending posteriorly in an acute point. Fins enormous, broadly sagittate; their total width about equal to the length of the mantle; length a little more than half that of the mantle.

Head squarish, narrower than the body; eyes little prominent.

Arms short, stout, their order of length 3, 2, 4, 1; suckers in two widely interspaced rows; umbrella wanting. Tentacles little longer than the arms; clubs not thickened and bearing four series of acetabula, those of the medio-ventral series being transformed to hooks; the latter 10–11 in number, the first 5 quite small, next 3 larger, distal ones diminishing again; the two dorsal rows of suckers irregular, the first 5 pairs small and closely placed, the succeeding ones slightly larger and more distant, becoming smaller again distally; those of the inner dorsal row persist to the tip of the club, but the marginal series becomes obsolete distally and comprises only about 8 suckers; suckers of ventral row exceedingly minute, especially distally where they are placed very far apart; fixing apparatus well developed, comprising a quadruple series of small suckers and pads in alternation, about 12 of the former to 8 of the latter.

*Type*.—Cat. No. 214381, U.S.N.M. [S. S. B. 238]. From *Albatross* station 3989, vicinity of the island of Kauai.

ABRALIA TRIGONURA, new species.

Mantle short, wide and inflated in front, tapering to a point posteriorly. Fins large, a little over half as long as the mantle.

Head small; eyes large and prominent.

Arms over two-thirds as long as the body; nearly equal, but the dorsal pair distinctly the shortest; each bears two rows of small alternating hooks, succeeded by suckers at the extremities.

Structure of tentacles unknown.

Buccal membrane papillose and uniformly pale within; its outer surface dotted with small reddish chromatophores.

Photogenic organs of the ventral aspect of the head and mantle of two main types differing both in size and pigmentation; on the lower surface of the mantle the larger organs are arranged in longitudinal series, with the smaller organs irregularly scattered between them. The ventral surface of the funnel shows two large triangular groups of organs symmetrically disposed; four of these are of the larger type but do not lie in a single transverse series.

*Type*.—Cat. No. 214387, U.S.N.M. [S. S. B. 275]. From *Albatross* station 4087, northeast entrance to Pailolo Channel.

The single specimen seen is badly macerated, but does not seem to be conspecific with *A. andamanica* Goodrich, which it undoubtedly much resembles. The chief differences appear in the detailed distribution of the photogenic organs. In the present species the two median series of large organs which adorn the ventral aspect of the mantle are an especially conspicuous feature.

PTERYGIOTEUTHIS MICROLAMPAS, new species.

Body small, cylindro-conical, terminating posteriorly in a sharp spine-like process extending well past the rather large circular fins; fins attached along their inner margins for less than half their total length.

Head large, rounded; eyes large and prominent.

Arms short, nearly equal, their order 3, 2=4, 1; suckers in two rows, on the dorsal arms about 14 pairs, the ventral members of the eighth to tenth pairs transformed into hooks; second and third arms similar; ventral arms without hooks, their suckers very minute and confined to the more distal portion of the arm. Tentacles stout, but little longer than the arms; stalk thickened but constricted at base; club not expanded, bearing four series of minute suckers, of which the five proximal members of the dorsal row are distinctly the largest; two suckers and two pads in the fixing apparatus on the carpus. Subocular photogenic organs 14 in number; arrangement very similar to that described for *P. giardi* Fischer, but four instead of five small anterior organs, and the most anterior of these displaced laterally so that it is not in line with the others.

*Type*.—Cat. No. 214386, U.S.N.M. [S. S. B. 277]. From *Albatross* station 4105, in the Kaiwi Channel.