

BATHYPLOTES PATAGIATUS, new species.

Plate LXXII, figs. 1, 1a-k.

Body rather long and narrow, truncately rounded at either end; ventral surface flattened; dorsal somewhat arched in life. Mouth terminal but ventral; anus dorsal. Tentacles 19 to 20, rather small; crown subcircular, peltate. Median ventral ambulacrum without pedicels. A single, somewhat irregular series of numerous small pedicels along each ventrolateral ambulacrum, and immediately above these, on edge of body, another series of numerous small, warty excrescences, terminating each in a slender papilla. These form a narrow, overhanging brim to body, especially well marked at anterior end. On dorsal surface are widely scattered, fair-sized conical protuberances, terminating in a long, slender papilla. In life body wall is rather of a thick "jelly-fish" consistency, the external perisome being easily rubbed off. Deposits: In ventral perisome tables with small annular disk, sometimes incomplete, and a spire composed of four upright pieces, three to five crossbars and a crown ending in four simple teeth; in the dorsal perisome disk is transformed into a four-armed cross, perforated at tips, and the spire is frequently spiny along uprights. At base of papillæ disks are greatly enlarged, the ends of the four-armed crossbeam being much dilated, and the spires are also stouter and spiny on uprights. In papillæ the spires are very tall, with as many as nine or ten crossbeams, the disk becoming reduced by degrees to the annular form. In papillæ curved, spiny supporting rods in addition to tables; in pedicels well-developed terminal plates and small tables, similar to those of ventral perisome, in addition to a very few supporting rods near the end plate. In subcutaneous muscle layer, in walls of gonad, of cloaca, and intestine numerous C-shaped bodies are present. Color in life, outside jellylike tissue transparent grayish, with a tinge of pink, the central "core" of animal being bright rose pink, with a yellowish shade in places. Length, 155 mm.; breadth, 14 to 20 mm.

Localities.—Type (Cat. No. 21216, U.S.N.M.) from Station 4041, west coast of Hawaii Island, 382 to 253 fathoms, gray mud, foraminifera; bottom temperature 41.6°. Cotype (deposits), 3994, vicinity of Kauai Island, 330 to 382 fathoms, fine gray sand, foraminifera. Taken also at the following stations, 14 specimens, most of them in very poor condition:

List of stations.

Station.	Locality.	Depth.	Nature of bottom.
3824	South coast of Molokai Island	<i>Fathoms.</i> 222-498	Coral rocks, broken shells.
3988	Vicinity of Kauai Island	469-165	Gray foraminiferous sand, pebbles.
4021do	286-399	Coral sand, foraminifera.
4134do	324-225	Fine coral sand and volcanic sand.
4140do	339-437	Fine gray sand.

some, but whether they are confined wholly to this region it is impossible to say on account of the condition of available specimens. Tables of the dorsal perisome are of the type shown in fig. 1*a*, Plate LXXII. The disk is a four-armed cross, with the tips of the arms slightly expanded and one to five times perforated. The spire rods are toothed on the upper half, the spire itself being about 0.12 to 0.15 mm. high, with five crossbeams. Rarely the teeth are absent. At the bases of the large dorsal papillæ, and to a less extent of the laterals also, are relatively very large tables with four-armed disks and robust spiny irregular spires. (Plate LXXII, fig. 1*c, e, g.*) The disks are from 0.3 to 0.47 mm. in diameter, and the ends of the arms are much expanded and perforated. The general form of the tables is sufficiently indicated by the figures. The spire of this table is 0.2 mm. high, but there is considerable range on both sides of the dimension. The tables in the papillæ proper are more of the type of those of ventral perisome, although much exaggerated in height (fig. 1*f*). They are usually numerous and grade into the type of *a* and *e* at base of papilla. The spire is usually about 0.17 to 0.2 mm. high. Scattered among these tables are relatively few supporting rods with spiny tips (1*i, k*) about 0.5 mm. long. So far as examined the pedicels have scattered tables similar to fig. 1*d*, but with only one or two crossbeams. Frequently two or three supporting rods are present near terminal plate, though they may be entirely absent. The terminal plate is large, circular, and perforated.

This species is characterized by the distribution of the ambulacral appendages, by the presence of a narrow but easily detected margin or brim to body, by the form of the tables, and by the form of the calcareous ring. It differs from all known species by the form of the calcareous deposits. Sluiter (Siboga Holothurioidea) has described *B. sulcatus*, *B. rubicundus*, *B. monochus*, and *B. phlegmaticus* from the East Indian region. The present species is apparently nearer *phlegmaticus* than any of the others, but differs in all the categories of characters mentioned above, besides having 20 tentacles while *phlegmaticus* has 15. Kœhler and Vaney have described from the *Investigator* collections, *B. profundus*, *B. crenulatus*, *B. assimilis*, *B. variabilis*, and *B. papillosus*. The deposits of all of these are different from those of *patagiatus*.

Patagiatus is more or less closely related to *B. natans* (Sars) which it resembles in the marginal papillæ and brim, but differs in numerous details of deposits, etc. (for figures of *natans*, see Östergren).^a

^aZur Kenntniss der Subfamilie Synallactinæ unter den Aspidochiroten.

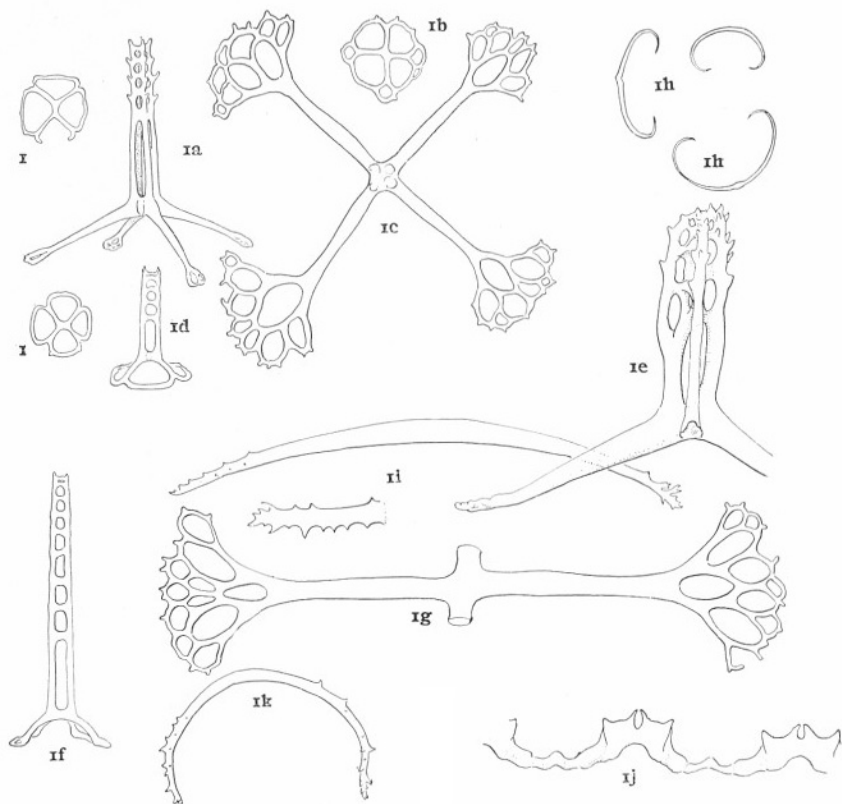


Fig. 1. *Bathyploetes patagiatus*. Disks of tables from ventral perisome. 1a. Table from dorsal perisome. 1b. Disk of table from ventral perisome. 1c. Disk of large table from base of the large dorsal papillae. 1d. Side view of table from ventral perisome. 1e. Side view of large table from base of dorsal papillae. 1f. Table from dorsal papilla proper. 1g. Two arms of a disk of table from perisome at base of a large dorsal papilla. 1h. C-shaped rods in subcutaneous layer of body wall. 1h'. From wall of gonad (lower figure). 1i. Supporting rods from dorsal papillae. The lower figure shows a tip viewed from a flat side, $\times 175$. 1j. Calcareous ring, radial piece directly over figure, $\times 4$. 1k. Supporting rod from dorsal papilla, $\times 175$.