

The Holothurians Collected During the Cruises of the M/S „Monsunen“ in the tropical Pacific in 1934.

By
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The collection of Holothurians brought home by the M/S “Monsunen” includes the following eighteen species, two of which are new to science, and one *Halodeima pertinax* (Ludwig) is of special scientific interest.

All the zoological material of the expedition, has been given to the Zoological Museum of Copenhagen.

- 1) *Bohadschia argus* Jäger.
Suva Harbour, Fiji.
- 2) *Actinopyga mauritiana* (Quoy & Gaimard).
Apia Harbour, Samoa.

The specimens are all reddish brown without the characteristic white lateral areas found in all the specimens from the Red Sea and adjacent parts of the Indian Ocean.

- 3) *Holothuria vagabunda* Selenka.
Takaroa, Samoa.
- 4) *Holothuria monacaria* Lesson.
Takaroa, Samoa—Mallekulo, New Hebrides.
- 5) *Holothuria impatiens* (Forskål),
Post Office Bay, Gallapagos.
- 6) *Holothuria gelatinosa* n. sp.

Diagnosis: Aspidochirote Holothurians with 20 tentacles. Adambulacral appendages: ventrally tube feet in three broad rows, dorsally

small scattered papillae and minute tube feet. Tentacle ampullae, respiratory trees and cuvierian organs present; genital organs not found, partly due to the contraction of the single specimen at hand, partly due to its young age. One large polian vesicle and one short stone canal with solid spherical madreporite.

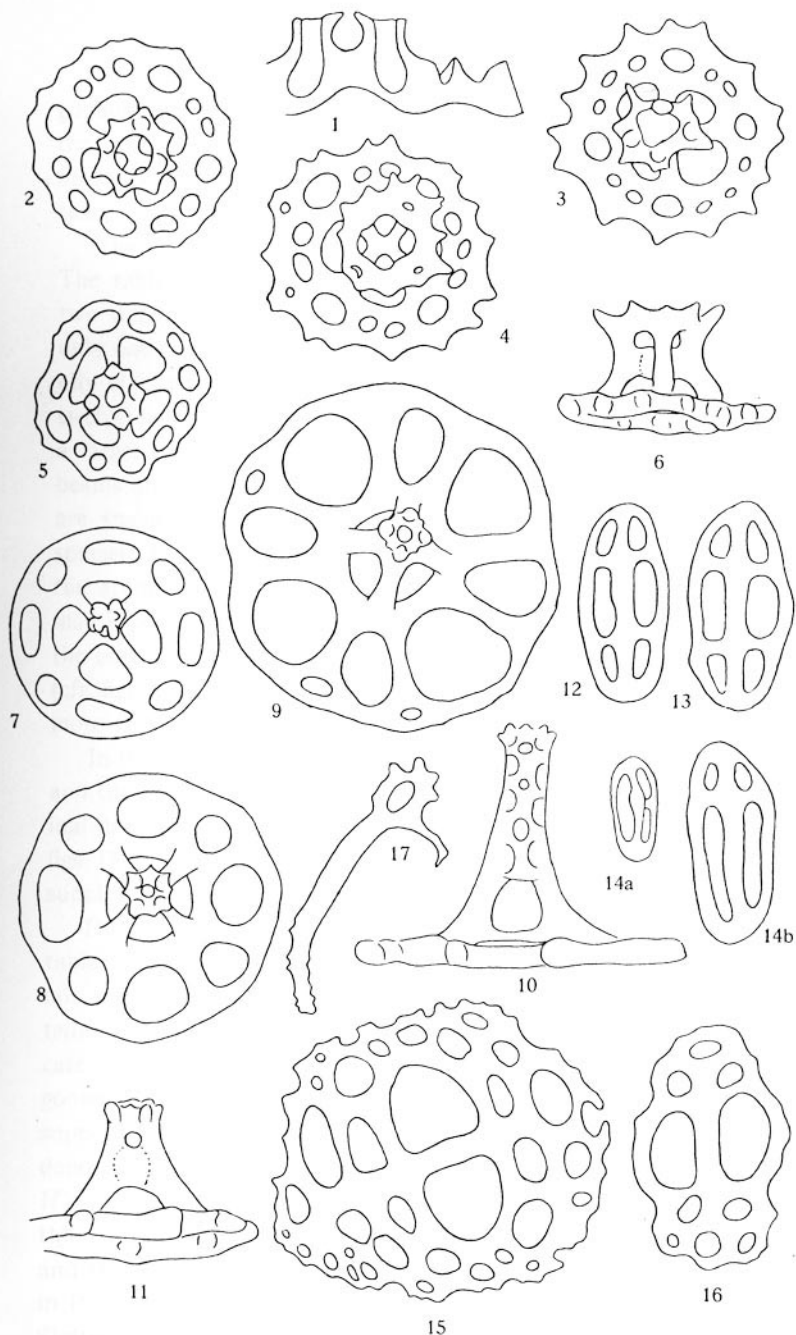
Calcareous deposits of the body wall: high tables with smooth disk and little crown and low tables with spiny disk and large crown (about one high table for each 15—20 low ones), and very few smooth buttons with normally three pairs of holes. In the tube feet supporting rods are lacking, except close to the terminal disk, where some large smooth polypore plates may be found. In the papillae there are no terminal disk, but numerous irregularly shaped often perforated flat rods.

Locality: The tropical area of the Pacific Ocean.

Description: The single specimen at hand measures abt. 4 cm. in length and 2 cm. in diameter and is strongly contracted. The colour is uniformly faintly pink (in formalin), and the skin is relatively thick, and is now in alcohol, unusually gelatinous (in formalin it was as in the most Holothurians, especially those from deep water, quite slimy). Owing to the appearance, one is inclined to think that the specimen was obtained from rather deep water, but as there is no label, and the "Monsune" expedition only used the dredge very little, the specimen at hand most likely originates from a coral reef.

On account of the contraction it is very difficult to ascertain the arrangement of the tube feet. These are however large, supplied with a large terminal disk and are, as far as can be seen, arranged into three broad rows. On the dorsal side of the specimen there are but few and small papillae, and a microscopical examination definitely shows two different sorts 1) some without terminal disk and supplied with supporting rods, i. e. real papillae and 2) some smaller ones with terminal disk and no rods, i. e. minute pedicells.

The calcareous ring fig. 1 consists of ten pieces of which the radials are rather high and supplied with a deep notch for the nerves, and large grooves for the insertion of the tentacle ampullae. The number of the tentacles I have not been able to ascertain, but according to the shape of the calcareous ring there must be twenty. There is one large thin-stalked polian vesicle and one short stone canal with a well developed spherical madreporite. The intestine is totally filled with coral sand, so that it has been impossible to find any traces of the



Holothuria gelatinosa n. sp. 1. Calcareous ring, radial and interradial pieces ($\frac{6}{1}$). 2—5 low tables seen from above, 6 the same seen from the side. 7—9 high tables from above, 10—11 the same from the side. 12—13 Normal buttons, 14 a—b irregular buttons. 15—16 poly-pore thin plates from the end of the tube feet. 17 deposit from a papilla. 2—17 ($\frac{430}{1}$).

gonads, which may however also be lacking or nearly lacking, since the specimen must be very young. The respiratory trees are very much branched and reach to the calcareous ring, and in the cloaca there are a few thick and fat cuvierian organs.

The calcareous deposits of the body wall are tables and buttons. The tables are rather varying in shape, but there are at any rate two different sorts. The main part of the tables are low ones with only one cross beam. They have a large, usually irregular, but normally eight-pointed, crown and a serrated, but not spiny, plate with twelve holes cfr. figs. 2—6. For each 15—20 of these tables there is a larger one with a smooth plate and a high spire with 3—5 cross beams and a little crown (cfr. figs. 7—11). The buttons (figs. 12—13) are smooth and supplied with six holes. They are scattered very sparsely between the tables, so sparsely that they may easily escape the attention of the examiner, or if finding only a single one, he may suppose that it originates from another specimen. Now and then the buttons are malformed with fewer holes, or they may be reduced (cfr. figs. 14 a—b). In the base of the papillae there are buttons with more than six holes.

In the walls of the tube feet there are no deposits other than tables, and these are often somewhat malformed. At the margin of the terminal disk there are some few large and very thin polypore plates (cfr. figs. 15—16). In the papillae there are irregular rodlike plates usually supplied with a single perforation (fig. 17).

Remarks: *Holothuria gelatinosa* must on account of the high tables which are scattered among the low ones in the bodywall and not connected to the papillae, be placed in Panning's group Abteilung B Reihe 4. As there are however many features which indicate that this specimen is a juvenile one, f. i. the apparently lacking gonads and the numerous developmental stages of tables, one might suppose that the high tables with the smooth plates are juvenile deposits; in fact they are rather like those known from other species. If we might think that they would disappear in the mature specimen, this species would be characterized only by the shape of the low tables and the smooth buttons, and in that case the species must be placed in Panning's Abt. B Reihe 1 and very closely to *Holothuria oxurropa* Sluiter from which species it then only differs in having supporting rods in the dorsal papillae.