

Observations of two *Holothuria* species (*H. theeli* and *H. portovallartensis*) from the Galapagos

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Following the FAO workshop in the Galapagos Islands, we and some other participants observed several sea cucumbers with similar characteristics as *Holothuria leucospilota*. Following up on discussions within the PEET (Partnerships for Enhancing Expertise in Taxonomy) list, we hope that these observations will provide some interesting information on these little known species. Unfortunately, we were not allowed to take any samples or dissect specimens. We compared our observations with those of Hickman's (1998) on Galapagos echinoderms.

Holothuria theeli

A species we first assumed was *H. leucospilota*, turned out to be *H. theeli* (Deichmann 1938). This species occurred in several locations: Santa Cruz, Bachas Bay (25 November 2007); Espagnola, Gardner Bay (27 November 2007); and Floreana, Punta Cormorant and Post Office Bay (28 November 2007).

Characteristics that differentiate *H. theeli* from *H. leucospilota* are:

- very tough body wall that appears thicker than that of *H. leucospilota*;
- no cuvierian tubules ejected, despite several trials;
- large triangular papillae on the bivium;
- white, very thin pedicellariae on the trivium among ordinary black papillae;
- bivium black and trivium often redish;
- buccal tentacles appearing as in *H. leucospilota*.

Other characteristics observed:

- mostly 17 cm in length, some rare 5–7 cm;
- found among blocks (often not fully exposed) at intertidal level and up to 5 m from the high-water mark;



Holothuria theeli (Photo: Sven Uthicke)

- very abundant in Gardner Bay (around 3 ind m⁻²);
- possible asexual reproduction in Bachas Bay.

Holothuria portovallartensis

A second species was observed, which had characteristics of *H. portovallartensis* (Caso 1954). It was observed at low tide on Espagnola Gardner Bay (27 November 2007) and Floreana, Punta Cormorant and Post Office (28 November 2008).

Characteristics leading to differentiate *H. portovallartensis* from *H. theeli* and *H. leucospilota* were:

- soft body wall (similar to *H. leucospilota*), which appears to be thinner than that of *H. theeli*;
- no cuvierian tubules ejected, despite several trials;
- no large triangular papillae on the bivium;
- no white thin pedicellariae on the trivium, but many brown tube feet of equal size;
- bivium brown and trivium brownish-yellow;
- buccal tentacles appearing more digitated than those of *H. leucospilota*.

Other characteristics observed:

- mostly 18–22 cm in length;
- found among blocks with *H. theeli* (often not fully exposed) at intertidal level;
- possible asexual reproduction in Floreana Post Office (one specimen regenerating anterior end).

Reference

Hickman Jr., C.P. 1998. A field guide to sea stars and other echinoderms of Galapagos. Lexington, VA: Sugar Spring Press. 83 p.



Holothuria portovallartensis (Photo: Sven Uthicke)