

# Natural History Snippets

Brief reports by members based on their observations of nature

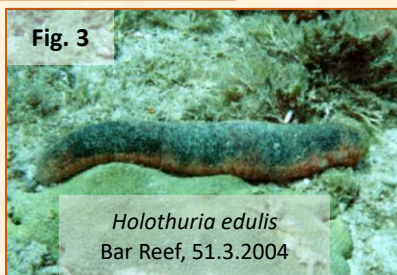
## Sea cucumbers in Sri Lanka ECHINODERMATA, HOLOTHUROIDEA



Fig. 2



Fig. 3



*Holothuria edulis*  
Bar Reef, 51.3.2004

Fig. 2a



Fig. 3a



Two common sea cucumbers, often collected for the aquarium trade. They are usually covered with sediment in their natural habitat (Figures 2 & 3) and show their real colours when cleaned and placed in an aquarium (Figures 2a & 3a).

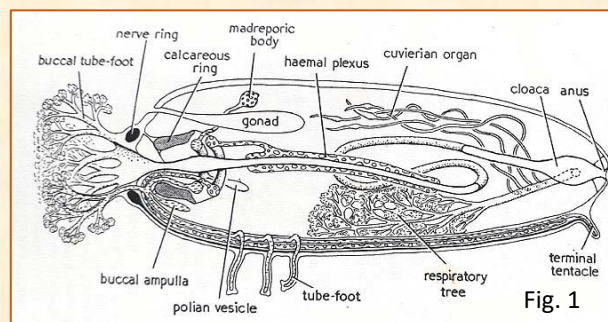


Fig. 1

Basic anatomy of a holothuroid shown in a vertical section. - from Nichols, 1969, p. 75.

Holothurians live on the sea floor, on soft or hard substrates, using their tube-feet for locomotion; the tube-feet around the mouth being modified into *buccal tube-feet* used for feeding. Some members have a burrowing habit, and yet others are pelagic—mostly in very deep waters. Tube-feet can be seen sticking out all around the animal like bristles in Figure 2a. The order Apodida is a group in which the tube-feet are suppressed. Some members are burrowing forms while others are surface dwellers that move in a concertina-like manner similar to earthworms (see figures 5 to 8).

Figure 4 shows a spiny-looking animal that is of the genus *Stichopus* or *Thelenota*. Many were seen on the rocks in the Hikkaduwa lagoon at night in 2003. These animals are not to be seen during the day.

The 'spines' are not calcareous structures but fleshy outgrowths with tube-feet at the summits.



Fig. 4

Saman Liyanage



Figures 5 & 6. This is probably the Sponge synaptid sea cucumber named *Synaptula lamperti* Heding, 1928. They are small and quite sticky, usually living in colonies on sponges (Figure 5). The small one (Figure 6) was about 25 cm long and solitary. Uppuveli, 4 m deep, 13.9.2005.



Fig. 5

Malik Fernando



Fig. 6

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Fig. 7

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Fig. 8

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Figures 7 & 8. A long banded synaptid, (cf. *Synapta maculata*) about 2 metres or more in length, that was slowly moving and feeding on the substrate. The flower-like feeding tentacles are seen in Fig. 8. Uppuveli, 7 m, 14.9.2005.

Figure 9 shows the Royal sea cucumber *Pseudocolochirus*, that is a protected genus in Sri Lanka. Two species are recorded.



Fig. 9

PROTECTED

Source - Wood & Rajasuriya (1996)

#### Processing sea cucumbers: Kalmunai 1998



a



b



c



d



e

There is a commercial fishery for sea cucumbers in Sri Lanka using divers with SCUBA gear. Collected animals are first eviscerated (a), boiled (b), drained (c), and laid out to dry in the sun (d, e). Sometimes they are boiled twice, being buried, or salted for a time in between. The processed product is exported to the Far East.

A recent development is sea cucumber farms: either fattening of wild-caught stock or breeding them.

Conand, C., (1998). Holothurians, K. Carpenter & V. Niem eds. in FAO species identification guide: 1157-1190.

Dissanayake, D.C.T., & Stefansson, G. (2010). Abundance and distribution of commercial sea cucumber species in the coastal waters of Sri Lanka. Cambridge University Press, online.

Nichols, David (1969). *Echinoderms*, Hutchinson, London.

Wood, E., & Rajasuriya, A. (1996). Handbook of Protected Marine Species in Sri Lanka, Marine Conservation Society (UK) and National Aquatic Resources Agency (SL).

#### How many species in Sri Lanka?

The Provisional Checklist of Crinoidea, Ophiuroidea and Holothuroidea by Malik Fernando in the Red List of 2012 lists 59 species in 8 families. The list was compiled from published literature. A survey off the east and north-west coasts in 2008 had revealed the presence of twenty-five (commercially important) sea cucumber species belonging to seven genera:

*Actinopyga*, *Bohadschia*, *Holothuria*,  
*Pearsonothuria*, *Stichopus*,  
*Thelenota*, and *Acaudina*

- Dissanayake & Stefansson, 2010  
A checklist based on recent studies has not been located.

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