No. 23 - 5 pages

# Natural History Snippets

## Sri Lanka Natural History Society

## CORALS THAT ARE NOT CORALS

### Soft corals and allies

Snippet #17 titled '*Getting close to hard corals*' of June 2023 was about hard corals, also called stony corals. They are characterised by possessing hard calcareous skeletons. This snippet is about a group of related marine organisms that are not true stony corals, although some produce calcified skeletons. They also differ in the structure of the animal. Hard corals (Anthozoan corals) are produced as secretions of polyps that are all similar. Hydrozoan corals, on the other hand, have different types of polyps that have different functions. Table 1 shows the principal groups of the Class Hydrozoa. The animals possess a polypoid body form, essentially with a body wall consisting of two tissue layers separated by a non-tissue layer.

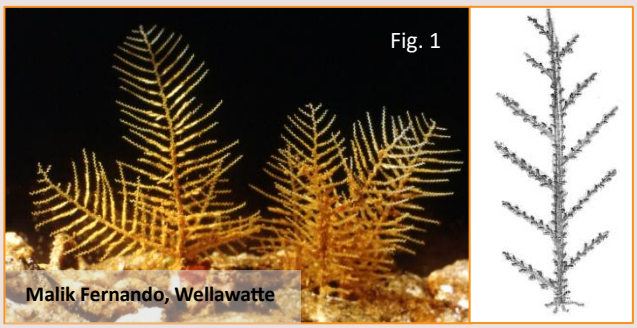
**Table 1**

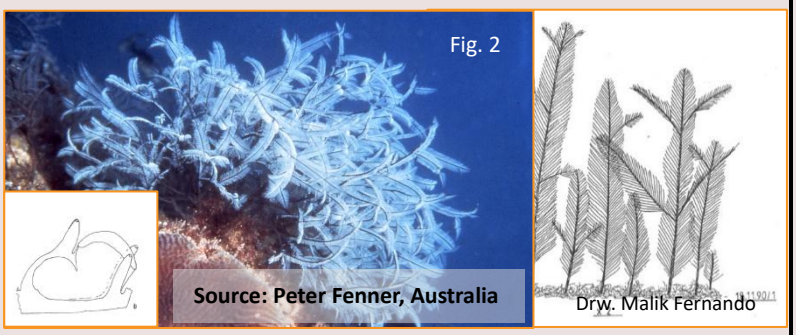
Class Hydrozoa
- Order Hydroidea (hydroids)
- **Order Milleporina** (including Genus *Millepora*)
- **Order Stylasterina** (including Genera *Distichopora* and *Stylaster*)

Class Scyphozoa (jellyfishes)
Class Cubozoa (Box jellyfish)
Class Anthozoa
- Subclass Octocorallia
  - **Order Helioporacea** (Genus *Heliopora*)
  - **Order Alcyonacea** (soft corals, *Tubipora*, sea fans)

**Figures 1 & 2: Hydroids**

Fig. 1 – *Sertularella*, photographed ex situ, Wellawatte. At right is a drawing showing the polyps distributed along the branches. Non-stinging. Fig. 2 – *Lytocarpus philippinus*, a stinging hydroid. At right is a drawing of a specimen from Wellawatte with an enlargement of a theca, the cup that holds the polyp, surrounded by three cylindrical thecae that contained the specialised stinging polyps.



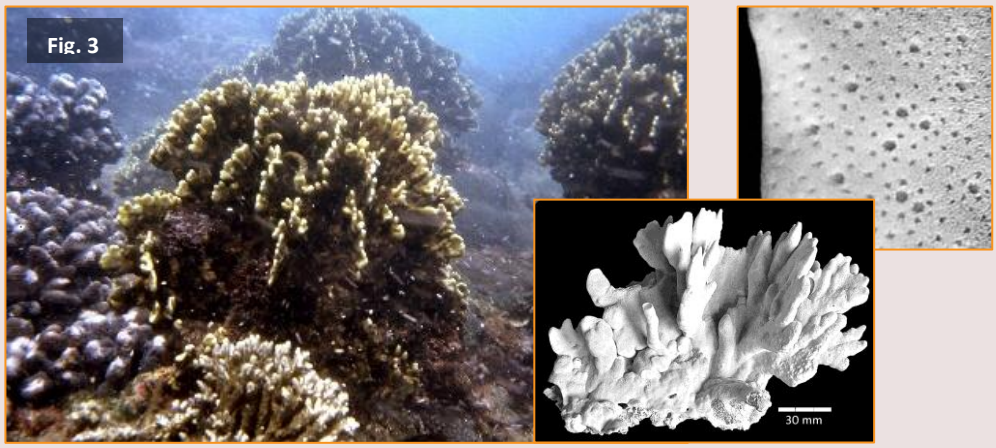
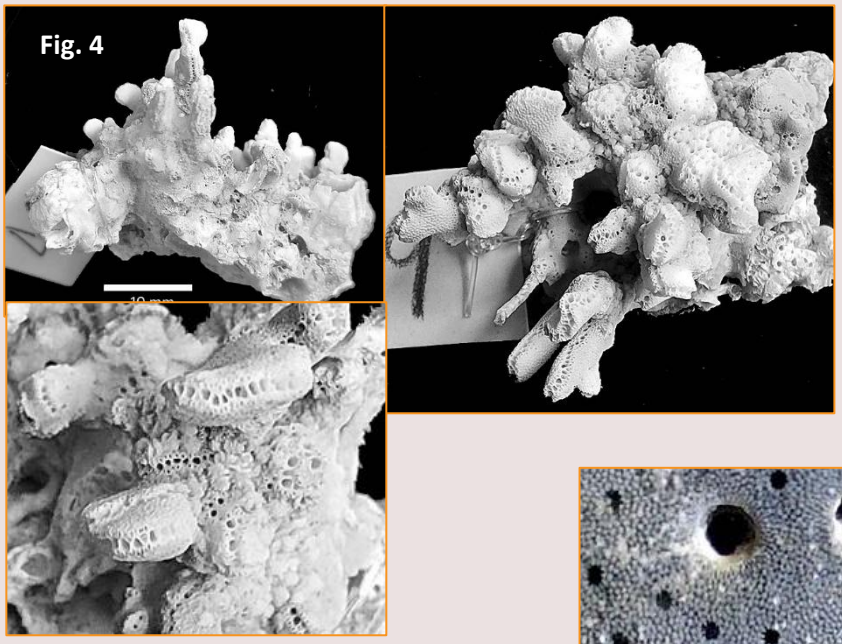
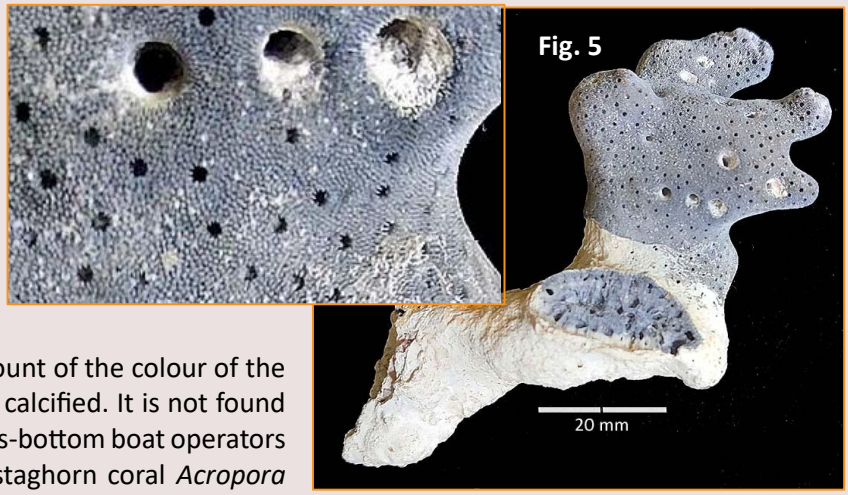




**Figure 3: *Millepora platyphylla***
Fire coral, underwater image at left, portion of skeleton at centre, close up at right. Was abundant at Unawatuna, wiped out following a major bleaching event. Fire coral is capable of stinging, with specialised stinging cells that occupy the small holes surrounding the large holes in which reside the main polyp (right-hand image).




The family Stylasteridae is represented in Sri Lanka by one species — ***Distichopora violacea*** (Figure 4). The images are of the cleaned skeletons – in life they are a deep purple colour. Found in cavities on the sandstone reef Palagala, 10m deep, off Colombo in 1986. They are very small, the corallites being placed terminally on the expanded, flattened branch tips. A single row of large *gastropores* (for the feeding polyps) with small *dactylopores* (for the prey gathering polyps) to either side.




Octocorallia (Class)
Helioporidae (Family)
***Heliopora coerulea*** **(Pallas, 1766)**

**Figure 5**: Commonly called Blue coral, on account of the colour of the skeleton, this is not a true coral although it is calcified. It is not found in Sri Lanka. The coral shown to visitors by glass-bottom boat operators at Hikkaduwa as 'blue coral' is, in fact, the staghorn coral *Acropora muricata*, with blue-tipped branches.

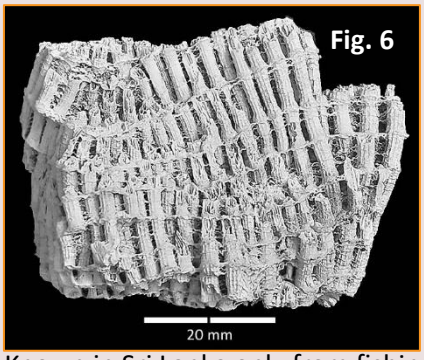
*Acropora muricata*
Photo: Susantha Udagedera

The specimen photographed is from the Maldives. The enlarged view at left shows the openings for the minute polyps.

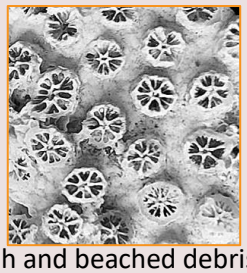
**Order Alcyonacea** (soft corals, *Tubipora*, sea fans). This order contains one family with a calcified skeleton—**Tubiporidae**.

***Tubipora musica*** **Linnaeus, 1758**

Red Organ pipe coral




The skeleton consists of calcified tubes 2mm in diam. held together by horizontal platforms. The interiors of the tubes have septa.



Known in Sri Lanka only from fishing trash and beached debris.

## Soft corals


These groups have not been studied in Sri Lanka, and their species names are not known. They are some of the most striking animal groups to be seen in the marine environment. They are all protected under the Fauna & Flora Protection Ordinance, together with hard corals.

**Figure 7:** A mushroom soft coral – *Sarcophyton* sp. The largest can be a metre in diameter. The minute polyps – seen as pale dots here – are embedded in a pedunculated leathery base.


**Figure 8:**
Leather coral – *Sinularia* sp.
Leather corals spread over the substrate, the upper surface being covered by short, finger-like branches.


**Figure 9:** The Sub-order Stolonifera includes soft corals in which the individual polyps bud off an encrusting stolon, rather than being immersed in a solid body as in the two previous examples. In life they look like a garden of miniature coconut trees, each with an erect trunk topped by a crown of eight feather-like branches—the white spots in the image.

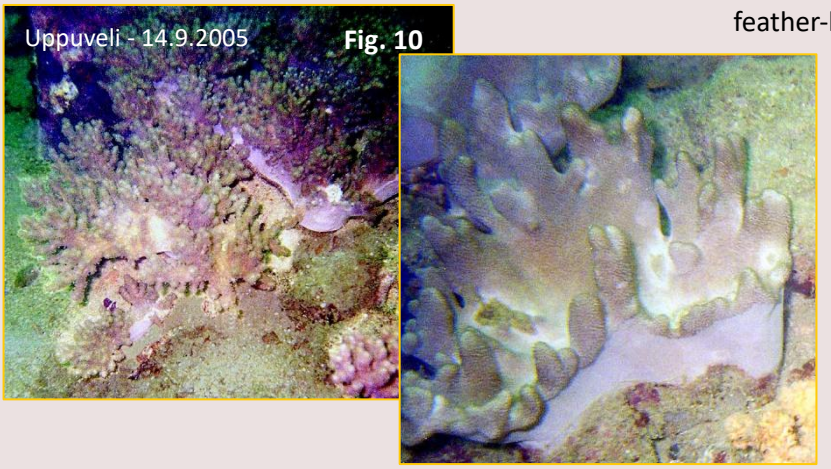



**Figure 10:** An unusual soft coral seen only on the one occasion at Uppuveli. Like a leather coral (*Sinularia*) but with the erect branches forking, as seen more clearly in the enlargement at right.


**Figure 11:** *Dendronephthya* sp. There are over 250 species of this attractive soft coral genus described. Fairly common on the reefs off Colombo, this specimen was photographed on the Vatiya Parai reef, at a depth of about 30 m. Orange is another common colour seen.

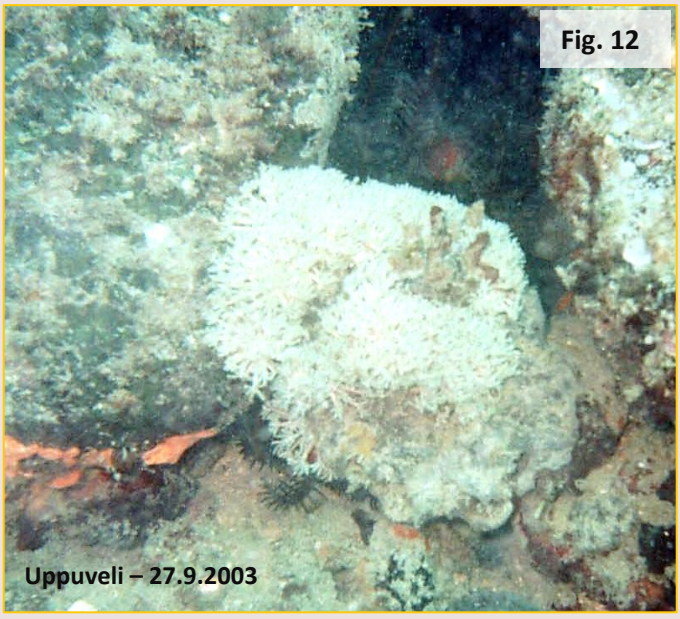



**Figure 12:** *Xenia* sp. Is a rare soft coral that was photographed at Uppuveli. Long polyps emerge from a rounded 'body'. There are many species described.

## Sea fans

Sea fans and sea whips are types of soft coral. They do not have a calcified skeleton like in stony corals but possess a skeleton that persists after the death of the animals that form the organism. As Wikipedia says: "…the term "gorgonian coral" is commonly handed to multiple species in the order Alcyonacea that produce a mineralized skeletal axis (or axial-like layer) composed of calcite and the proteinaceous material gorgonin only and corresponds to only one of several families within the formally (i.e. previously) accepted taxon Gorgoniidae (Scleractinia)." The classification has been revised in 2022 and some of the previous taxonomic categories are no longer valid. Gorgonian sea fans produce branching colonies, looking more like plants and sea whips form unbranching colonies that can be many metres tall.

A Sea whip playing host to two wing oysters (*Pteria penguin*) Kelani Gala, Colombo, 20 m 20.3.2004

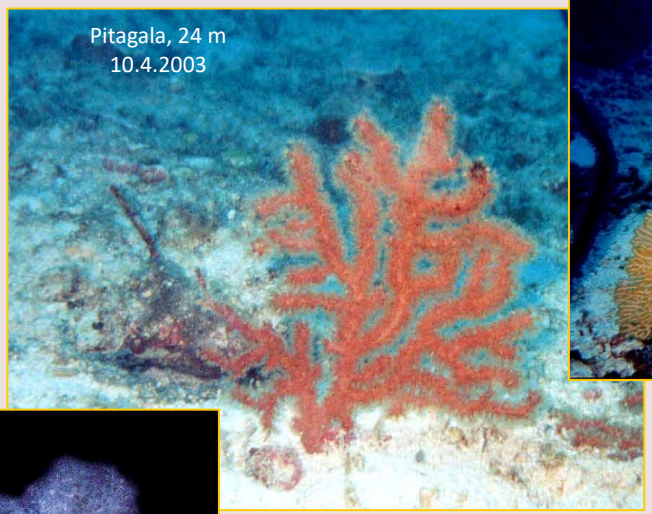
Blue sea fans off Colombo at Vatiya Parai, 28 m 4.4.2003

Red sea fans off Colombo, Vatiya Parai, 28 m 4.4.2003

Pitagala, 24 m 10.4.2003

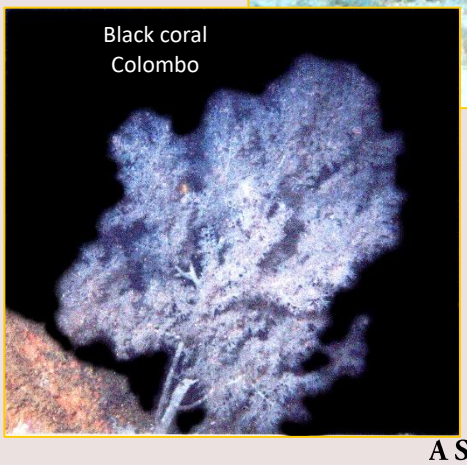
Close-up at left and below with polyps expanded, giving the fuzzy appearance.

Pitagala, 24 m 10.4.2003



Pitagala, 24 m 10.4.2003

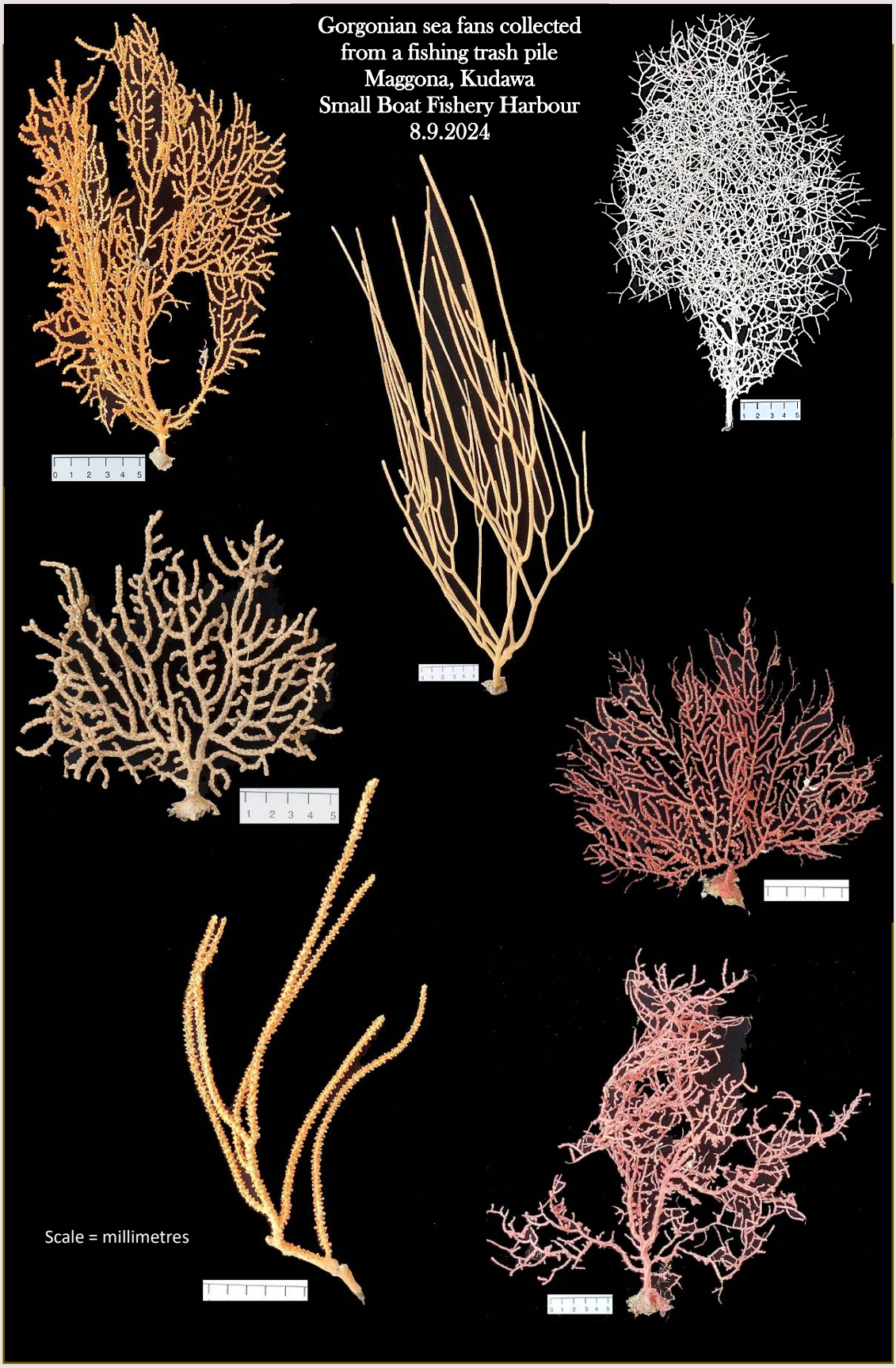
Pitagala, 24 m 10.4.2003



Black coral Colombo

Black coral skeletons

Black corals are placed in the Class Hexacorallia, Order Antipatheria. They have a jet-black skeleton made up of protein and chitin. The polyps are tiny, making the living colony appear white. The skeleton is hard, takes a polish and is used to make jewellery. They are protected in Sri Lanka.




All photography by Malik Fernando, except where otherwise stated. 21.10.2025

S. Krishnaraja (2012). *Provisional checklist of soft corals recorded in Sri Lanka*. The National Red List 2012 of Sri Lanka. Ministry of Environment.
K. D. Arudpragasam & S. Krishnaraja (1993). *Taxonomy and distribution of soft corals in Sri Lanka.* NSF Report.