PHYLUM: HEMICHORDATA

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Citation


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Phylum: **HEMICHORDATA**

*Cephalodiscus gilchristi*

Hemichordates form a small phylum of only a few hundred species, most commonly known being the acorn worms. Some DNA-based studies of evolution suggest that hemichordates are actually closer to echinoderms than to true chordates.

The Hemichordate phylum currently consists of two classes: Enteropneusta (acorn worms, not dealt with in this guide) and Graptolithoidea (previously Pterobranchia). Graptolithoidea consist of seven orders, of which only Cephalodiscoidea is addressed in this guide, represented by a single species, *Cephalodiscus gilchristi*.

Approximately 100 hemichordates have been described with at least 11 species recorded in South Africa.

Graptolithoidea mostly form colonies in which the individuals are interconnected by stems or stolons. Almost all species create and live within a network of tubes. These tubes are made up of collagen protein, secreted by special glands. Individuals, or zooids, that live within the tubes are often less than one millimeter long.

**Collection and preservation**

Specimens should be frozen immediately with a portion (± 30 mm) of the animal preserved in 96% ethanol. Care should be taken to ensure the minute zooids are retained with the tube network.

**References**


Distinguishing features
Very little is known about this unusual animal. Colonial species harbouring polypides (zooids) within the branched tubes make up the structure of the animal. Tubes joined together at base are thought to provide attachment to substratum. Base larger in diameter than tubes and without spines. Zooids reside in cavities of the branched tubes (tubarium). Juveniles are believed to move through the structures to form new branches. Solid spines occur on the tubarium along with ostia (apertures). *Cephalodiscus* means 'disk-head'.

Colour
Red-orange to brown.

Size
Largest recorded 190 mm in length and 110 mm wide.

Distribution
South African endemic. Mostly South Coast of South Africa but specimens have been recorded from West Coast.

Similar species
None.

References