

Antipatharian corals of Ascension Island

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Seven species of antipatharian corals (Cnidaria: Anthozoa: Antipatharia) are recorded from Ascension Island; five of these for the first time. Tanacetipathes spinescens and Stichopathes occidentalis were the two most commonly collected species.

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INTRODUCTION

Prior to this publication, only two species of antipatharian corals, *Taxipathes recta* Brook (1889) and *Cladopathes plumosa* Brook (1889) were recorded from Ascension Island. A third species from Ascension, *Dendrobrachia fallax*, originally thought to be an antipatharian, was later shown to be a gorgonian coral (Opresko & Bayer, 1991). Both *T. recta* and *C. plumosa* are deep-water species that were collected during the voyage of HMS ‘Challenger’. In this paper a third deep-water species, as well as four shallow-water antipatharian species are described from Ascension for the first time, and the relationship of the shallow-water fauna to the eastern Atlantic fauna is discussed.

MATERIALS AND METHODS

In addition to a review of the pertinent literature, the collections of the U.S. National Museum of Natural History (USNMNH) of the Smithsonian Institution, Washington, DC, were surveyed for records of antipatharian corals collected at Ascension Island. Eleven specimens were found in the USNMNH collections, nine from shallow-water at depths of 32 m or less (Note: USNMNH catalogue numbers are prefixed with USNM). The survey of the open literature revealed records of two, primarily deep-water species that were reported as being collected near Ascension Island, one from within 10 km of the island (a subsample of one of these is also in the USNM collection). In total, there are twelve records of specimens from the area, representing seven species in six genera and four families.

RESULTS

SYSTEMATICS

ANTIPATHIDAE

Stichopathes occidentalis (Gray, 1860) (Figure 1A)

Three Ascension Island specimens of this species are in the USNMNH collections; two were collected off Boatswain Bird Rock, one from the vertical face of a drop-off at 28 m

depth (USNM 99872), the second growing from the side of a large boulder at 30 m (USNM 99546). The third specimen was found south of Southwest Bay at a depth of 32 m (USNM 1229810).

The species *S. occidentalis* was originally described from Turk’s Island in the West Indies (Gray, 1860). It was later reported from the west coast of Africa (Islas das Rolas) by Broch (1920). The Ascension Island specimens differ from the type of *S. occidentalis* in having spines that are slightly more acute, although in respect to size (about 0.2 mm) and surface ornamentation, they are quite similar. A similar



Fig. 1. (A) *Stichopathes occidentalis* (USNM 99872); (B) *Antipathella wollastoni* (USNM 78686).

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morphotype occurs in Bermuda at depths of 73–110 m (unpublished observations).

MYRIOPATHIDAE

Antipathella wollastoni (Gray, 1857) (Figure 1B)

Two Ascension Island specimens of this species are in the USNMNH collection, one collected off the east end of the island at a depth of 6 m (USNM 78686) and the other south of Southwest Point at 32 m (USNM 79389). The species is only known from the eastern Atlantic; it has been recorded from Madeira, Cape Verde, the Azores and the Canary Islands (see Brito & Ocaña, 2004), as well as from the western Mediterranean (Ocaña *et al.*, 2006). It forms rather large bushy colonies with elongate branchlets. It is similar in

general morphology to *Antipathella subpinnata* which is known primarily from the Mediterranean.

Tanacetipathes spinescens (Gray, 1857) (Figure 2)

Three Ascension Island specimens of this species are in the USNMNH collections; one collected off the south-west end of the island in 20 m (USNM 78687); the second from south of Southwest Bay in 32 m (USNM 79390); and the third from off Portland Point in 24 m (USNM 99680). This species forms bushy, densely pinnulated colonies. Branches arise from all parts of the colony. The species was originally described from Cape Palmas (Gray, 1857). A very similar if not identical species is *Tanacetipathes squamosa* (Koch, 1886) described from Islas das Rolas in the Gulf of Guinea. The two species were synonymized by Broch (1920).

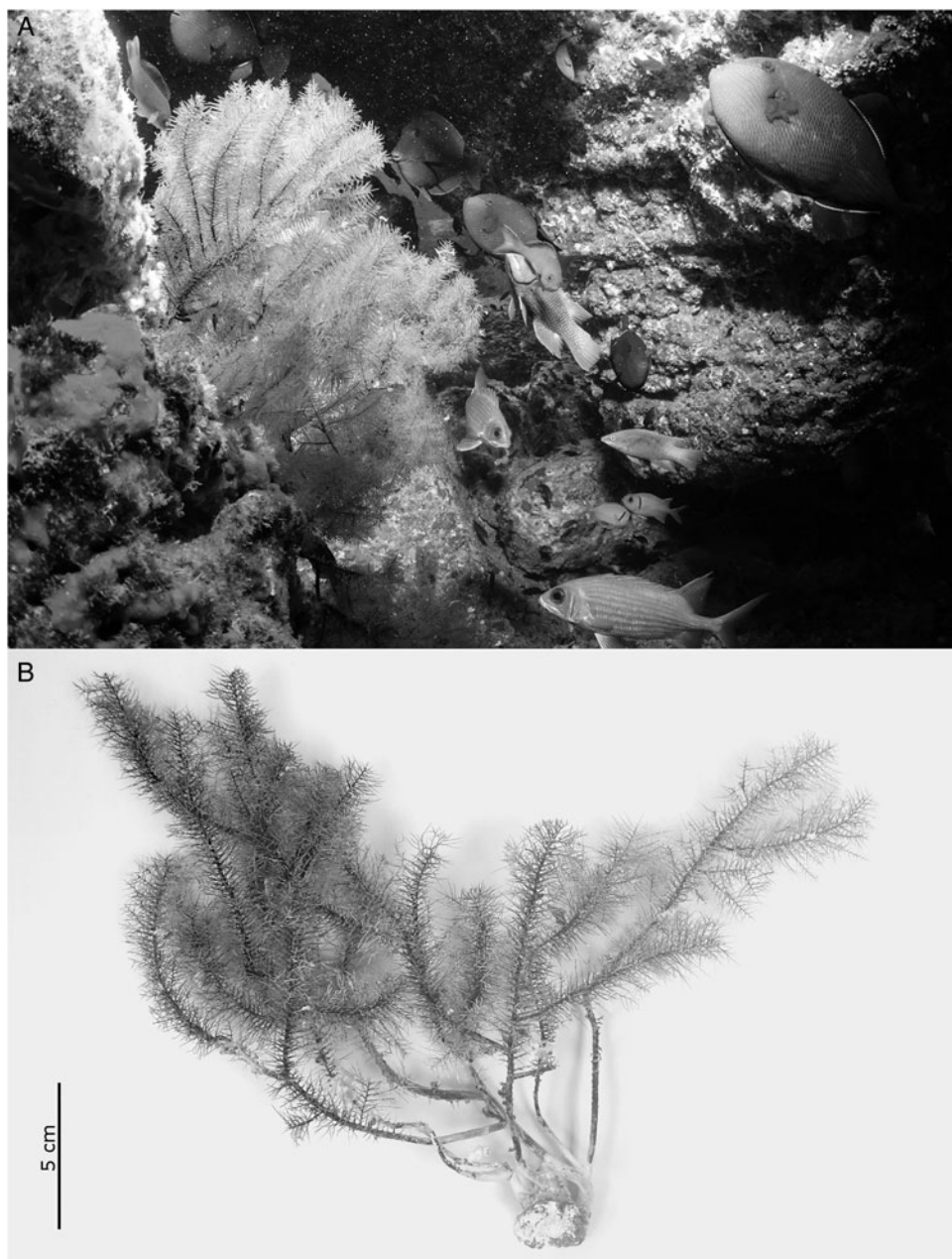


Fig. 2. *Tanacetipathes spinescens*. (A) *In situ* (photograph: Shallow Marine Surveys Group); (B) USNM 99680.

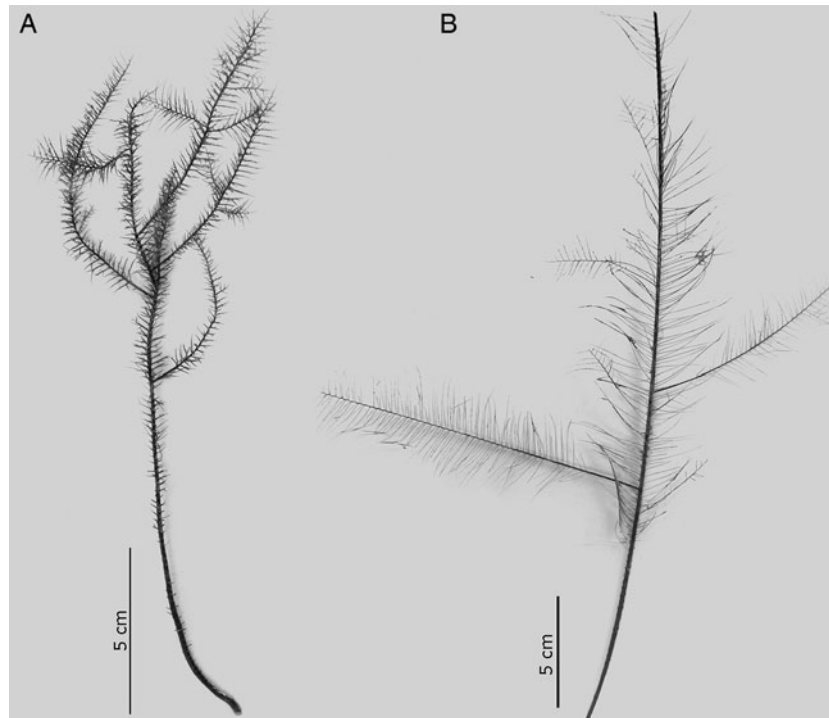


Fig. 3. (A) *Tanacetipathes cf. cavernicola* (USNM 78688); (B) *Lillipathes sp.* (USNM 91419).

Tanacetipathes cf. cavernicola Opresko, 2001 (Figure 3A)

Tanacetipathes cavernicola was originally described from Madeira where it was found growing in an underwater cave at a depth of 9–10 m (Opresko, 2001). It has also been reported from the Canary Islands (Brito & Ocaña, 2004). The specimen from Ascension Island was collected off the east end of the island (USNM 78688; depth not recorded). It differs from the type in having more secondary pinnules on the posterior primary pinnules.

SCHIZOPATHIDAE

Lillipathes sp. (Figure 3B)

The genus *Lillipathes* Opresko (2002) is known primarily from the Pacific. This is the first published record from the Atlantic. The specimen from Ascension Island (USNM 91419) was collected in 586 m by the RV ‘Oman Sea I’ (6 August 1991); however, the exact location was not recorded. Species of *Lillipathes* are characterized by having simple pinnules arranged in four longitudinal rows along the stem and branches, and also with the pinnules grouped together in alternating pairs. Species are differentiated by the length and density of the pinnules, and size of the polyps and spines. The specimen from Ascension Island resembles *L. wingi* Opresko, 2005, in terms of the length and density of the pinnules; however, it differs from that species in having slightly smaller spines (0.06 vs 0.1 mm).

Taxipathes recta Brook, 1889 (Figure 4A)

This species was originally described in the ‘Challenger’ Report (Brook, 1889). The type was collected approximately 6.5 km west of Ascension Island (7°54′20″S 14°28′20″W) at a depth of 420 fathoms (768 m). It has not been reported from any

other locality. The species forms branched, pinnulated colonies with simple pinnules arranged bilaterally and in alternating semispiral groups of three. The arrangement of the pinnules is very similar to that which occurs in colonies of *Parantipathes*.

CLADOPATHIDAE

Cladopathes plumosa Brook, 1889 (Figure 4B)

According to the records of the Natural History Museum, London, a specimen identified as this species (Reg. No. 1889.7.9.9a) was collected off Ascension Island during the ‘Challenger’ Expedition (see Opresko, 2003). The depth and exact locality were not recorded. The species was first described by Brook (1889) from the Prince Edward Islands in the Indian Ocean. It was collected at a depth of 310 fathoms (558 m). The species forms large, branched, pinnulated colonies (see Opresko, 2003, for detailed description). The pinnulation pattern varies in regularity. The primary pinnules are arranged mostly in clusters of three (rarely two or four). The anterior-most primary pinnules usually have one or two secondary pinnules (range 0–4), and the posterior primary pinnules are usually simple (rarely subpinnulate). Tertiary pinnules are sometimes present on secondary pinnules. Subpinnules may occur in subopposite pairs. In the specimen from Ascension Island the pinnules are more evenly spaced than in the type, the secondary pinnules sometimes occurring in groups of three as well as in subopposite pairs, and some of the secondary pinnules have subopposite pairs of tertiary pinnules.

DISCUSSION

The shallow-water antipatharian fauna of Ascension Island shows its closest affiliation to the fauna of the eastern Atlantic. Of the four shallow-water species, three are only

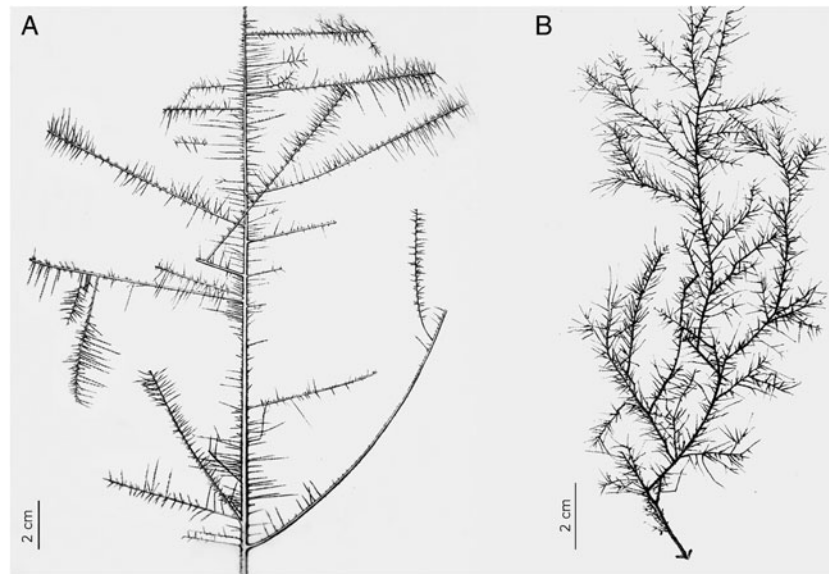


Fig. 4. (A) *Taxipathes recta* Brook, 1889, digital scan of original illustration (Brook, 1889, pl. 7, fig. 1); (B) *Cladopathes plumosa* Brook, 1889, digital scan of original illustration (Brook, 1889, pl. 2, fig. 3).

known from the eastern Atlantic and one is amphi-Atlantic. *Tanacetipathes spinescens* and *Stichopathes occidentalis* were the two most commonly collected shallow-water species.

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