

Black corals (Antipatharia) of New Caledonia

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Antipatharians or black corals are colonial anthozoans characterized by small polyps possessing 6 tentacles and a horny, non-calcareous skeletal axis. The polyps of antipatharians are around or elongated transversally. In most species they are only 1-3 mm in diameter, but in some deep-water forms polyps can reach up to 6-8 mm in transverse diameter. All hitherto known species of antipatharians produce a horn-like, non-calcareous skeletal axis which can be unbranched or branched, bushy, flabellate, or pinnulate. The skeletal axis is usually brown or black in color and covered with small spines. Spines range in size 0.02 to 0.5 mm and can be of various form: triangular, conical, horn-shaped, cylindrical, bifurcated and sometimes dendritic. The surface of the spines can be smooth, papillose, or covered with tubercles. The features used for taxonomy are the size and structure of polyps as well as skeleton morphology, including mode of branching and/or pinnulation and also size, morphology and arrangement of spines.

Up to date more than 200 nominal species of antipatharians grouped in six families (Antipathidae, Aphanipathidae, Cladopathidae, Leiopathidae, Myriopathidae and Schizopathidae) are known worldwide and most of them (> 150 nominal species) are known from the tropical and subtropical waters of Indo-West Pacific region.

The information about black coral of New Caledonia is practically absent. Despite a rich collection of black corals collected in a number of cruises and deposited in MNHN, up to now only two species of deep-sea antipatharians are reported off New Caledonia: *Asteriopathes arachniformes* Opresko, 2004 (fam. Aphanipathidae) reported without precise locality, and *Saropathes margarita* Molodtsova, 2005 (fam. Schizopathidae) described from the northern part of Norfolk Ridge (Molodtsova, 2005) and also three deep-sea species of family Cladopathidae have to be described soon (Molodtsova in prep.). *A. arachniformes* is also known from Palau (Opresko, 2004), *S. margaritae* is up to now known from the type locality only.

The shallow-water antipatharians of New Caledonia are even worse studied. No special attention was focused at shallow-water antipatharians of New Caledonia so far. The only authors provided any list of black corals are Laboute & Richer de Forges (2004) that pictured 17 species of black corals in their colorful book on fauna and flora of lagoons and reefs of New Caledonia. Only four of antipatharians are determined to species level and remaining 13 species are referred to the genus *Antipathes* (12 spp.) and genus *Cirripathes* (1 sp.). From the photo provided it is possible to see that at least one species (*Antipathes* sp. 2) represents a gorgonian and 5 species reported as *Antipathes* spp. 4-8 have close affinity to genera *Cupressopathes* Opresko, 2003 (*A.* sp. 6 and *A.* sp. 7) and *Myriopathes* Opresko, 2003 (*A.* sp. 4, *A.* sp. 5 and *A.* sp. 8). However more precise determination requires thorough of actual material from the region. The list of antipatharians provided below does not pretend to be complete and detailed study of shallow and deep-sea black corals of New Caledonia is needed.

List of Antipatharia reported of New Caledonia

FAM. ANTIPATHIDAE

Antipathes cf. *reticulata* (Esper 1795)

Antipathes sp. 1

Antipathes sp. 3

Antipathes sp. 9

Antipathes sp. 10

Antipathes sp. 11

Antipathes sp. 12

Cirripathes cf. *anguina* Dana 1846 (= *Cirripathes anguinus* in Laboute & Richer de Forges, 2004)

Cirripathes spiralis (Linnaeus, 1758)

Cirripathes sp.1

FAM. APHANIPATHIDAE

Asteriopathes arachniformes Opresko, 2004

FAM. MYRIOPATHIDAE

Cupressopathes cf. abies (Linnaeus, 1758)

Cupressopathes sp.1 (= *Antipathes* sp. 6 in Laboute & Richer de Forges, 2004)

Cupressopathes sp.2 (= *Antipathes* sp. 7 in Laboute & Richer de Forges, 2004)

Myriopathes sp.1 (= *Antipathes* sp. 4 in Laboute & Richer de Forges, 2004)

Myriopathes sp.2 (= *Antipathes* sp. 5 in Laboute & Richer de Forges, 2004)

Myriopathes sp.3 (= *Antipathes* sp. 8 in Laboute & Richer de Forges, 2004)

FAM. SCHIZOPATHIDAE

Saropathes margaritae Molodtsova, 2005

FAM. CLADOPATHIDAE

Hexapathes sp. 1

Hexapathes sp. 2

Trissopathes sp.

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