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Aglaopheniid hydroids (Cnidaria: Hydrozoa: Aglaopheniidae) from bathyal waters of the Flemish Cap, Flemish Pass, and Grand Banks of Newfoundland (NW Atlantic)

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Abstract

Five species of aglaopheniid hydroids (*Aglaophenopsis cornuta*, *Cladocarpus diana*, *C. formosus*, *C. integer*, and *Nematocarpus ramuliferus*) were collected from the Flemish Cap, Flemish Pass, and Grand Banks of Newfoundland during surveys with bottom trawls, rock dredges, and scallop gear. All are infrequently reported species, with *C. diana* being discovered for the first time since its original description from Iceland. We document here the southernmost collections of *C. diana* and *N. ramuliferus*, both previously unknown in the western Atlantic. Each of the five species is described and illustrated based on fertile material, a key is provided for their identification, and bathymetric distributions are noted. Known depth ranges are extended for *A. cornuta*, *C. diana*, and *C. integer*. *Aglaophenopsis* and *Nematocarpus* are recognized as genera distinct from the polyphyletic *Cladocarpus*, based on the unique structure of the phylactocarp in the former, and the existence of appendages with nematothecae (ramuli) on almost all thecate internodes of hydrocladia in the latter. These appendages occur even in the absence of gonothecae, and are here considered defensive structures that protect the hydranths. In differing from typical phylactocarps, we accept the contention that they are characters of generic value.

Key words: *Aglaophenopsis*, *Cladocarpus*, *Nematocarpus*, deep-sea, northwestern Atlantic

Introduction

The hydrozoan family Aglaopheniidae Marktanner-Turneretscher, 1890 is a speciose taxon comprising around 248 valid species worldwide (see Bouillon *et al.* 2006). Division of genera within the group is based mainly on the gonosome, because reliable differential characters are lacking in the trophosome (Leloup 1932). Aglaopheniids have been reported infrequently in the western Atlantic northwards of the 40°N parallel, and especially so in waters off the east coast of Canada.

While the hydroid fauna of shallow waters off the Atlantic coast of Canada is relatively well known (Fraser 1944), that of deeper neritic and bathyal waters has received little attention and is consequently poorly known. At such depths off Newfoundland, only two species of aglaopheniids have been recorded previously. *Aglaophenopsis cornuta* (Verrill, 1879) was reported from two locations north of the island (53°34'N–52°01'W, ca. 1792 m; 52°25'N–52°12'W, ca. 296 m) by Jäderholm (1919: 11), while *A. cornuta* and *Cladocarpus integer* (G.O. Sars, 1874) were found in collections from a station to the northeast of Newfoundland (51°22'30"N–50°31'30"W, 457 m) by Calder (1970: 1540). Two other aglaopheniid species penetrating into bathyal waters, *Lytocarpia myriophyllum* (Linnaeus, 1758) and *Cladocarpus formosus* Allman, 1874, range both north and south of Newfoundland along the North American Atlantic coast (Fraser 1944, 1946) but have yet to be reported from that locale.

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