



Two new tretodictyids (Hexactinellida: Hexactinosida: Tretodictyidae) from the coasts of North America

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Abstract

Two new species of the hexactinellid family Tretodictyidae, both collected by submersible, have been discovered off the coasts of North America. The Pacific species, *Tretodictyum montereyensis* n. sp., has an unusual skeleton with a fused cortex added over the usual tretodictyid system of ridges and grooves on the dermal surface. The Atlantic species, *Hexactinella carolinensis* n. sp., is unusual among its congeners in having swollen nodes on the dermal skeleton. Diagnoses of both genera have been modified to accommodate the new findings. The fine diactins of both species are found to have shallow brackets and short barbs, confirming their uncinata nature. Addition of these two species raises the number of known North American tretodictyids from one to three.

Key words: taxonomy, hexactinellids, sponges, new species, Porifera, HBOI, MBARI

Introduction

The hexactinellid fauna of North American coasts is still known from the classical works of Schmidt (1870, 1880), Lambe (1893), Schulze (1899), and Wilson (1904). Detailed formal descriptions of one or two new species or range extensions were added by later workers, Wilson and Penney (1930), Tabachnick (1989), Reiswig and Mehl (1994) and Reiswig (1996, 1999, 2001) while informal unsupported additions were suggested in listings in many other reports.

Tretodictyids (family Tretodictyidae) are not important members of the North American hexactinellid fauna. To date only one described tretodictyid is certainly known from the North American coast – *Cyrtaulon sigsbeeii* Schmidt, 1880 from the Florida region. Here we describe two new tretodictyids from North America, a species of *Hexactinella* from the Atlantic coast off South Carolina and a species of *Tretodictyum* from the Pacific coast off Monterey Bay, California (Fig. 1).

Material and methods

One specimen of each new species was collected by either manned or remotely operated submersible. They both suffered serious breakage during collection/retrieval but they were not damaged by sediment infiltration