



New records of the genus *Crispatotrochus* (Scleractinia; Caryophylliidae) from New Caledonia, with description of a new species

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Abstract

During the expeditions Bathus 4 and Norfolk 2 off New Caledonia, three species pertaining to the genus *Crispatotrochus* were collected: *C. rubescens*, *C. rugosus*, and *C. septumdentatus* sp. nov. This study presents the new records describing and illustrating all species. Also, citation synonyms, type locality, type material, and distribution are provided. A brief revision of the 13 valid Recent species belonging to this genus (plus *C. sp. cf. C. cornu* and *C. sp. A*) and an identification key are proposed.

Key words: *Crispatotrochus septumdentatus*, deep-sea, stony coral, Scleractinia, azooxanthellate

Introduction

Belonging to the family Caryophylliidae Dana, 1846, the genus *Crispatotrochus* Tenison–Woods, 1878 was described at the end of the 19th century to accommodate the species *C. inortatus* Tenison–Woods, 1878 collected off Port Stephens, Australia, which, as described by the author, differs from *Ceratotrochus* Milne Edwards and Haime, 1848, in being broadly adherent with very simple costae, having a broad and deep fossa, and having small septa (Tenison–Woods 1878). Known from the Miocene (Wells 1956) and with 12 Recent valid species (Table 1), the genus *Crispatotrochus* is recorded worldwide and is characterized by having a ceratoid to turbinate solitary corallum, which is firmly attached through a robust pedicel; theca costate or porcellaneous; septa symmetry hexamerous or decamerous; pali absent, and columella fascicular and usually robust, composed of 2–30 twisted laths (Cairns 1991).

Unaware of the resemblance to *Crispatotrochus*, three years later (Moseley 1881) described the genus *Cyathoceras* (junior synonym of *Crispatotrochus*) comprising two species: *Crispatotrochus cornu* (= *Cyathoceras cornu* Moseley, 1881), and *Crispatotrochus rubescens* (= *Cyathoceras rubescens* Moseley, 1881), both collected during the voyage of H.M.S. *Challenger*, in the years 1873–1876. Twenty-one years later, using the specimens collected in the Indian Ocean, Alfred Alcock described *Cyathoceras tydemani* Alcock, 1902, and subsequently, Vaughan described *Cyathoceras diomedae* Vaughan, 1907 from Hawaii, both species being synonymized as *Crispatotrochus rubescens* by Cairns (1991).

The next description of a species belonging to this genus, *C. niinoi* (Yabe and Eguchi, 1942), was made from a single specimen collected in Japanese waters, off Taitō-zaki, Tiba-ken, followed by the description of the rarely collected species from Aleutian Chain, *Crispatotrochus foxi* (Durham and Barnard, 1952), known from only three specimens. Studies on the ahermatypic corals from Queensland, Australia, done by John