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Two tropical species of *Stephanotheca* (Bryozoa, Cheilostomata, Lanceoporidae) from the Gulf of Carpentaria, Australia

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Abstract

Two new species of *Stephanotheca* are described from the southeast Gulf of Carpentaria, northern Australia, providing the first tropical records of this genus. *Stephanotheca ipsum* n. sp. is provisionally placed in the genus on the basis of a low ridge of calcification around the edge of the ooecium, which differs from the fully pseudoporous ooecium of *Calyptotheca* (Lanceoporidae) and resembles the ‘crowned’ ooecium of *Stephanotheca*, with a central porous area surrounded by a nodular imperforate area. *Stephanotheca ipsum* and *Stephanotheca romajoyae* n. sp. are the only species in the genus with more than one avicularium on some zooids. The latter species is distinguished by high variability in avicularium size, shape, position and orientation; it also shares dimorphic avicularia with *S. ochracea* (Hincks) and is the only species in which they sometimes occur together on the same zooid. This study increases the number of Australian *Stephanotheca* species to four. The Australian species all have smaller primary orifices and variations in ovicell morphology compared with other, all European, species. In *S. ipsum* n. sp. the ooecia are ridged, those of *S. victoriensis* Reverter-Gil *et al.* have a single row of pseudopores forming an arch, and those of *S. ambita* (Waters) and *S. romajoyae* n. sp. have a relatively large pseudoporous area and smaller, lower nodular imperforate area. None of the Australian species have vicarious avicularia, which are known only from the type species, *S. barrosoi* Reverter-Gil *et al.*

Key words: Tropical Australia, Indo-West Pacific, *Calyptotheca*

Introduction

Stephanotheca Reverter-Gil, Souto & Fernández-Pulpeiro, 2012 was erected for nine temperate species previously assigned to *Schizomavella* Canu & Bassler, 1917 (Bitectiporidae), six from the Mediterranean, one from the North Atlantic and two from southern Australia (Victoria and New South Wales). *Stephanotheca* was placed in the Lanceoporidae on the basis of cleithral ovicells, dimorphic orifices, vicarious avicularia (in the type species) and the structure of the ovicell. Within the Lanceoporidae, *Stephanotheca* is closest to *Calyptotheca* Harmer, 1957, with which it shares a sinus, adventitious avicularia and vicarious avicularia. *Emballotheca* Levinsen, 1909 lacks a sinus, and *Lanceopora* d’Orbigny, 1851 lacks adventitious avicularia and has erect, stalked and rooted colonies. The most obvious distinguishing character for *Stephanotheca* is the ooecium, which is ‘crowned’, having a circular or semicircular nodular ridge of calcification that resembles a crown, and perforations in a central area only (Reverter-Gil *et al.* 2012), whereas the ooecium of *Calyptotheca*, *Emballotheca* and *Lanceopora* is evenly perforated.

Only a handful of bryozoan species have been described from tropical Australia west of Torres Strait, which is more than a quarter of Australia’s coastline (Cumming & Tilbrook 2014). Cumming & Tilbrook (2014) described six species of *Calyptotheca* from the Gulf of Carpentaria (GoC) Collection held at Museum of Tropical Queensland, Townsville. This study describes two species of *Stephanotheca* from this collection, and is the first record of tropical species of *Stephanotheca*.

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