

***Cardomanica andersoni* n.gen., n.sp. from the Western Tasman Sea with Notes on Species from the Tropical Western Atlantic Ocean (Crustacea: Ascothoracida: Synogogidae)**

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ABSTRACT. *Cardomanica andersoni* n.gen., n.sp. is described from the western Tasman Sea where it lives on the gorgonacean *Chrysogorgia orientalis* Versluys. This is the first record of a synogogid ascothoracidan from the South Pacific Ocean. The recently described synogogid, *Isidascus longispinatus* Grygier from the western Atlantic Ocean, is transferred to *Cardomanica* and split into two species, *C. longispinata* (Grygier) and *C. quadricornuta* n.sp.

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KEYWORDS: Ascothoracida, Synogogidae, *Cardomanica*, Tasman Sea, Atlantic Ocean, taxonomy.

During a recent ground fish survey off south-eastern Australia Mr Ken Graham (Division of Fisheries, New South Wales Department of Agriculture) collected sediment and benthic invertebrates from demersal trawls. From this collection, Mr Phil Colman (Malacology, Australian Museum) sorted an interesting bivalved animal which he recognized as a crustacean. These ascothoracidan specimens were living in an inverted orientation on the branches of the small, bushy gorgonacean, *Chrysogorgia orientalis* Versluys. They are described below as a new genus and species, *Cardomanica andersoni*, in the ascothoracidan family Synogogidae. Grygier (1984) recently described *Isidascus longispinatus* from the tropical western Atlantic Ocean. Based on his detailed description I am transferring *I. longispinatus* to *Cardomanica* and splitting his material into two species, *C. longispinata* and *C. quadricornuta* n.sp.

***Cardomanica* n.gen.**

Diagnosis. Based on female. Carapace completely enclosing body, forming a large dorsal brood chamber; ventral margins rounded, opening to the outside through a slit; anterior margin produced into a sleeve-hinge which is sealed from the body by a partition, and which overlaps a branch of the gorgonacean host to form a permanent attachment. Antennules large, obviously 6-articulate and prehensile; article 3 oblong; article 4 with 2 setae; article 5 as long as article 6; article 6 with 2 posterodistal processes close together behind sharp

falcate claw. Oral cone bellows-like with styliiform tip; mandibles and maxillules complexly armed, maxillae smooth with bifid tip, but no hook, medial languette present. Thoracic segments 2 to 4 or 5 each with a dorsomedial 'horn'. Thoracopods biramous. First thoracopod with 2-articulate exopod and endopod; coxa with lateral seta and with long attenuated filamentary appendage at base. Thoracopods 2 to 5 with 2-articulate exopod and 3-articulate endopod; coxa 2 to 4 with lateral seta. Sixth thoracomere bearing large epaulet; thoracopod small; coxa without lateral seta. Abdomen 5-segmented; first segment with large slender biramous penis; fifth segment with 2 large telsonic spines; furcal rami tapered, blunt and downturned, each with some terminal setae, no ventral setae and many medial setae.

Type-species. *Cardomanica andersoni* n.sp.

Etymology. The generic name is derived from the Latin words 'cardo' (sleeve) 'manica' (hinge) and alludes to the attachment mechanism of the ascothoracidan to its gorgonacean host.

Remarks. *Cardomanica* is most closely related to *Gorgonolaureus* Utinomi, 1962 (redefined, Grygier, 1981), *Isidascus* Moyse, 1983 and *Thalassomembracis* Grygier, 1984. All of these genera have a fused bivalve carapace which completely encloses the body, forming a large dorsal brood chamber in the female, and with a ventral aperture to the outside. In *Cardomanica*, *Gorgonolaureus* and *Isidascus* there is a large dorsomedial 'horn' on at least the second thoracomere. The styliiform mouthparts in all three genera are very