



A new Antarctic species of *Aristias* Boeck (Crustacea, Amphipoda, Aristiidae), with remarks on the genus in Antarctica

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Abstract

A new species of aristiid, *Aristias excavatus* **sp. nov.**, is described from an Antarctic sponge. The systematics of the genus is discussed. There are now 28 known species in the genus *Aristias*, with just three recorded from Antarctic waters. The actual number of Antarctic species is likely to be higher, however, because many of these records were probably incorrectly attributed to *A. antarcticus*.

Key words: Aristiidae, *Aristias excavatus*, new species, Antarctica, sponge associate

Introduction

The lysianassoid genus *Aristias* Boeck, 1871 is found in all oceans and at depths ranging from the infralittoral to the abyssal. Barnard & Karaman (1991) listed 21 species within the genus. Since that publication, a further five species have been described by Lowry & Stoddart (1993, 1994, 1997), and one by Ortiz *et al.* (2007). *Aristias excavatus* **sp. nov.**, an Antarctic sponge-associate described below, brings the total number of known *Aristias* species to 28. Three of these species have been recorded from Antarctica, although the actual number of *Aristias* species from that area is likely to be higher because many specimens have been incorrectly attributed to *A. antarcticus*. These records are discussed below.

Many aristiids are inquilinous, and are associated with several marine invertebrate taxa including sponges (Chevreux 1900; Stephensen 1942; Vader 1984a, 1984b), tunicates (Chevreux & Fage 1925; Shoemaker 1955; Vader 1984b), sea anemones (Vader 1984c), echinoderms (Vader 1978), and less frequently, with only three recorded examples, brachiopods (Vader 1970). The nature of these associations is unclear, that is, whether the amphipods live as parasites in the host, or whether they are commensal, living within the host and suspension feeding from the water passing through. The latter is known to be the case for the aristiid *Perrierella audouiniana*, an inquiline of certain sponges (Connes *et al.* 1971; Costello & Myers 1987).

Materials and methods

The specimen length was measured along the dorsal line from the base of antenna 1 to the tip of the telson. A Leica™ MZ12.5 stereomicroscope was used for examination and dissection. Pereopods and gnathopods were temporarily mounted in glycerol, while the smaller appendages (mouthparts, uropods, and the telson) were permanently mounted using Faure's solution. The dissected appendages were drawn under a Zeiss Axioskop 2 plus compound microscope with a camera lucida attached. Drawings were then compiled into plates and digitally inked following a method modified from that described by Coleman (2003), using the open source vector graphics programme 'Inkscape'. The following abbreviations are used in the illustrations: A, antenna; E, epistome; G, gnathopod; LL, lower lip; Md, mandible; Mp, maxilliped; Mx, maxilla; P, pereopod; T, telson;