



***Gnathia masca* sp. nov. (Crustacea, Isopoda, Gnathiidae) from Lizard Island, Great Barrier Reef, Australia**

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Abstract

Gnathia masca sp. nov. is described from material collected off Coconut Beach, Lizard Island, Great Barrier Reef, Australia. Males are characterised by a cephalosome with a shallow dorsal sulcus that stretches half its length, a slightly produced frontal border with two conical superior fronto-lateral processes and a conical inferior medio-frontal process. Male mandibles have 6 processes on the dentate blade and a distinct internal lobe with 6 or 7 crenulations and a single large distal process. Live males, females and larvae are characterized by brown pigmentation especially in the male where it forms a dark band that stretches between the eyes, giving it the appearance of a mask.

Key words: Isopoda, Gnathiidae, *Gnathia*, Great Barrier Reef, description, morphology, taxonomy

Introduction

Recent years have seen an increase in publications on gnathiids, a unique group of isopods in which the juvenile stages are fish ectoparasites and the adults are free living. These reports have focused on their ecology (Chambers & Sikkil 2002), hosts (Jones *et al.* 2007; Nagel & Grutter 2007), behaviour (Munday *et al.* 2003; Nagel *et al.* 2008), roles in cleaning symbiosis (Grutter 2002), potential as vectors of fish blood parasites (Davies & Smit 2001; Smit & Davies 2004; Smit *et al.* 2006), and the description of a number of new genera and species (see Svavarsson 2006; Hadfield & Smit 2008; Hadfield *et al.* 2008; Coetzee *et al.* 2008; Ferreira *et al.* 2010).

The majority of recent research on gnathiid ecology has been done on coral reefs, especially the Great Barrier Reef (GBR), Australia (Grutter & Poulin 1998; Grutter & Hendrix 1999; Grutter 2001; 2003; Grutter & Bshary 2004; Jones & Grutter 2005; Grutter & Jones, 2006; Nagel & Grutter 2007; Grutter *et al.* 2008). As mostly ectoparasitic juvenile gnathiids have been studied (Grutter 2002, 2006) and not the free-living adult males, on which the taxonomy of this family is based, none of these studies identified the gnathiids studied to species or even generic level.

Despite the use of narrow collecting techniques, 8 potentially different species of juveniles have been identified from material collected off Lizard Island, GBR. Of these, *Gnathia calmani* Monod, 1926, *G. falcipenis* Holdich and Harrison, 1980, *G. grandilaris* Coetzee, Smit, Grutter and Davies, 2008, *G. trimaculata* Coetzee, Smit, Grutter and Davies, 2009, *G. aureamaculosa* Ferreira and Smit, 2009 in Ferreira *et al.* 2009 and *G. grutterae* Ferreira, Smit and Davies, 2010 have been described (Holdich & Harrison 1980; Coetzee *et al.* 2008; 2009; Ferreira *et al.* 2009; Ferreira *et al.* 2010). The juveniles, adult males and females of one of the remaining two species, collected as juveniles and males in light traps, were found not to conform morphologically to any known gnathiid worldwide and are herein described as new to science. This is the same species referred to by Jones *et al.* (2007) as *Gnathia* sp. C.