



A new species of *Anoplodactylus* (Arthropoda: Pycnogonida) from the Great Barrier Reef and discussion on the *A. tenuicarpus*-complex*

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* To the memory of Joel W. Hedgpeth† (1911–2006)

Abstract

A new species of sea spider is described from the Great Barrier Reef, Australia. *Anoplodactylus perissoporus* n.sp. is in a species complex of extremely slender and tenuous forms that have serrated heel spines and are known to inhabit Indo-West Pacific coral reefs. The new species is characterized by the multiple cement gland pores on femora of males. Otherwise the species is very similar to, and probably closely related to *A. tenuicarpus*. The species boundaries within the *A. tenuicarpus* complex are difficult to discern and are not clearly defined, especially for females. Other character sets seem necessary to indicate affinities and distribution patterns of the *tenuicarpus* complex.

Key words: Sea spiders, *Anoplodactylus*, coral reefs, Australia

Introduction

The sea spiders or pycnogonids, a group of arthropods of controversial affinities (Dunlop & Arango 2005; Jager *et al.* 2006 and literature therein) of more than 1300 species known, are found in all marine habitats. Species from warm shallow waters tend to be neglected owing to their small size, infrequent occurrence and cryptic habits. In coral reefs, pycnogonids are rarely seen by naked eye, even though they are widely distributed and relatively diverse in these environments (e.g. Müller 1989; 1990a; 1990b; 1990c; 1992a; 1992b; Child 1990; Arango 2003). Reef sea spiders are found in a variety of microhabitats and can be associated with different groups of sessile and slow-moving organisms (revision in Arnaud & Bamber 1987). Established populations actively feed on invertebrates such as opisthobranch mollusks (Rogers *et al.* 2000; Arango & Brodie 2003), fire corals and zoanths (Arango 2001), and very likely on hydroids and bryozoans, as their temperate counterparts (e.g. Staples & Watson 1987; Sheerwood *et al.* 1998), it also seems they could be exploited as prey (as in Krapp & Nieder 1993).

Anoplodactylus is a cosmopolitan genus with around 150 species described. It is morphologically homogeneous and possibly a monophyletic group (Arango & Wheeler in press). Several species complexes have been proposed within the genus (Stock 1975; 1979; Nakamura & Child 1991; Arango & Maxmen 2006) which can be characterized by few morphological traits and a more or less defined geographical pattern.

Anoplodactylus tenuicarpus Child, 1991 was originally described as *A. attenuatus* Child, 1988 based on a male specimen from the Philippines (Child, 1988b). The earlier name was preoccupied by *Phoxichilidium attenuatum* Hodge, a synonym of *A. petiolatus* (Krøyer). The extremely slender appearance of the species