



New species and new records of sea spiders (Arthropoda: Pycnogonida) from deep waters in Western Australia

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Abstract

New species and new records of sea spiders for Australia were collected by the RV Southern Surveyor from deep waters off Western Australia during November and December 2005. This study reports fifty-three specimens from five families: Colossendeidae is represented by three species, one of them new to science, *Hedgpethia calva* n. sp.; there are eight species of the Callipallenidae, including *Pseudopallene difficile* n. sp.; two species of the Pallenopsidae, one of them a new record for Australia, and a single species of the Nymphonidae, *Nymphon rotnesti*. Ammotheids are represented by a juvenile of a *Cilunculus* and two new species, *Paranymphon bifilarium* n. sp. and *Tanystylum zuytdorpi* n. sp.

Key words: Pycnogonida, *Pseudopallene*, *Hedgpethia*, *Paranymphon*, *Tanystylum*, Western Australia, deep-sea

Introduction

The present paper reports on some of the deepest records of sea spiders in Australia, particularly from Western Australia. Fifty-three specimens from 17 species were collected during the Australian Commonwealth Scientific and Industrial Research Organization (CSIRO) 'Voyage of Discovery' survey, on board the R/V Southern Surveyor from November 2005 to January 2006. Benthic organisms were sampled along the Western Australian coast and sea spiders were found between Ningaloo Reef in the north (22°S 113°E) and Bald Island in the south (34°S 118°E) (Fig. 1), and from between 100 and 1000 m depth.

The pycnogonid fauna from Western Australia, at least that found in deeper waters, follows a similar pattern to that from South and Southeastern Australia, especially in the relatively high diversity of callipallenids, according to published material and museum collections (see also Child 1975). Ammotheid forms were unusual, represented by one young specimen of *Cilunculus* at more than 750 m depth, a single male of a new species of *Tanystylum*, a genus usually found in shallower waters, from 97 m depth, and a mature male of a new species of *Paranymphon*. The genus *Paranymphon*, a rare genus traditionally considered an ammotheid and known mostly from the northern hemisphere, is recorded for the first time in Australia and the new species, *P. bifilarium*, is described.

There have been a few reports of the pycnogonid fauna from Western Australia (WA), the most recent being by Bamber (2005) reporting 15 species found in intertidal and subtidal waters around Esperance. Other previous reports included species from Rottnest Island (Williams 1940), and the most extensive study by Child (1975) listing 29 species for the coast of WA, between Broome in the North West to Cheyne Beach in the south (as well as the Pearson Islands in South Australia). However, most of the work on sea spiders in Australia has been on shallow water species and mostly from the Eastern coast (see literature in Arango 2003). The present collection represents a contribution to the knowledge not only of the understudied marine invertebrate fauna from Western Australia but also from the little-known Australian deep-sea.