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A reassessment of the pycnogonid genus *Cheilopallene* (Arthropoda, Callipallenidae) with description of a new species from Papua New Guinea

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Abstract

The genus *Cheilopallene* is reviewed. Three species are assigned to species *incertae sedis* pending further analysis. Specimens from Lizard Island, Queensland, previously identified as *C. nodulosa* are reassigned to *C. brevichela*. Suspected sexual dimorphism represented by the presence of a chelifore scape node in female *C. nodulosa* is supported by the finding of the same dimorphism in *C. brevichela* and in a new species from Milne Bay, Papua New Guinea. It is likely that the presence of a chelifore scape node is a diagnostic character of all females in the genus *Cheilopallene*. An amended diagnosis is provided.

Key words: Milne Bay, Lizard I., Queensland

Introduction

The genus *Cheilopallene* (Stock, 1955) was established based on a single type specimen *Cheilopallene clavigera* Stock, 1955 collected off the western coast of Thatch Is. in the Caribbean. Stock characterized the genus by six-segmented ovigers, projecting petal-like jaws and a distinctive immovable chela finger which he described as compact and irregularly denticulated. The genus is now represented by seven species ranging from the tropics to the Antarctic at approximate depths of 0.3 to 610 metres. These species are: *C. clavigera* Stock, 1955, (Thatch I. near Virgin Islands, Caribbean); *C. brevichela* Clark, 1961 (Maldive Islands); *C. trappa* Clark, 1971 (Snares Is., Campbell Plateau, New Zealand); *C. gigantea* Child, 1987 (Weddell Sea, Antarctic); *C. nodulosa* Hong and Kim, 1987 (Korea; Japan; Lizard I., Qld, Australia); *C. hirta* Child, 1988 (Japan; Aldabra Atoll, Seychelles) and *C. coralliophila* Müller, 1992 (Malaysian coral reefs).

Stock (1955) was uncertain about the sex of the *C. clavigera* holotype but concluded that it was a recently spawned female based on its soft and flabby legs and what he perceived to be genital pores on the second coxa of all legs. He noted however that the long, clubbed-shaped oviger segment 5 was indicative of a male. Femoral cement glands were not recorded. Nakamura & Child (1991) subsequently established that male specimens of *C. nodulosa* possess six-segmented ovigers also, confirming that Stock's specimen was not an aberrant form but rather a character trait peculiar to some species. Of the remaining five species the male ovigers are ten-segmented. The female of *C. nodulosa* has ten-segmented ovigers but the female of *C. clavigera* is still not recorded. It is probable that the ovigers of all females are ten-segmented regardless of whether the male ovigers are six or ten segmented however this is only confirmed for three species where females are known.

The oviger spines of all *Cheilopallene* species form a single row but both compound and simple spines are recorded. *Cheilopallene brevichela*, *C. trappa*, *C. hirta* and *C. gigantea* have compound spines whereas *C. nodulosa* and *C. coralliophila* have simple spines. Until such time as a female of *Cheilopallene clavigera* is recorded the type of oviger spine in that species will remain unknown but should it be consistent with the only other species having six-segmented ovigers (*C. nodulosa*), then it too will have simple spines.

The genus *Cheilopallene* can be split into two groups. The first group consists of species that conform to the original generic diagnosis provided by Stock (1955). These species are small in size with a trunk length of 0.73 to 1.32 mm and share glabrous, protruding jaws; a truncate immovable chela finger that is armed distally with