POLYDECTUS CUPULIFER (LATREILLE, 1812) (DECAPODA, XANTHIDAE): FIRST RECORD FROM TAIWAN

BY

SHOU-YU CHEN1 and PAN-WEN HSUEH1,2

1) Department of Life Sciences, National Chung Hsing University, 250 Kou Kuang Road, Taichung 402, Taiwan

ABSTRACT

The unusual xanthid reef crab, *Polydectus cupulifer* (Latreille, 1812), is characterized by possessing a very thick covering of setae all over its external surfaces and its habit of carrying a large sea anemone on each of its chelae. It is here recorded for the first time from Taiwan as well as from the Chinese seas in general.

RÉSUMÉ

Le crabe Xanthidae inhabituel, *Polydectus cupulifer* (Latreille, 1812), est caractérisé par la présence d’une couverture très épaisse de soies sur toutes ses surfaces externes et son habitude de porter une grande anémone de mer sur chacune de ses pinces. Il est ici signalé pour la première fois de Taiwan aussi bien que des mers de Chine en général.

INTRODUCTION

Among the many unsorted specimens in the National Museum of Natural Science (NMNS), Taichung, Taiwan, Republic of China, we recently found a specimen of a monotypic genus, *Polydectus*, viz., the xanthid reef crab, *Polydectus cupulifer* (Latreille, 1812) (subfamily Polydectinae). This unusual species is characterized by a very dense covering of soft setae (tomentum) all over its carapace and appendages, and has been called the “teddy-bear crab” in popular literature. Only two other species of polydectine crab have previously been reported from Taiwan: *Lybia caestifera* (Alcock, 1898) and *L. tessellata* (Latreille, 1812) (cf. Ho et al., 2000; Ng et al., 2001).

2) Corresponding author; e-mail: pwhsueh@dragon.nchu.edu.tw

© Koninklijke Brill NV, Leiden, 2007

Crustaceana 80 (4): 411-415

Also available online: www.brill.nl/cr
TAXONOMY

Family XANTHIDAE

Subfamily POLYDECTINAE Dana, 1851

Genus *Polydectus* H. Milne Edwards, 1837

*Polydectus cupulifer* (Latreille, 1812) (fig. 1A-C)


*Polydectus villosus* Dana, 1852a: 81; 1852b: 227; 1855, pl. 13 fig. 3a-e.

Material examined. — One female (carapace length 9.9 mm, carapace width 10.6 mm; with chelae still gripping sea anemones) (NMNS 5213-001), Wanlitung (22°00′N 120°42′E), Pingtung County, Taiwan, low intertidal area on dead coral reef, coll. S.-M. Chao, 18 June 1997.

Remarks. — In their review, Guinot et al. (1995) commented that of all brachyuran crabs, only members of two genera, *Lybia* and *Polydectus*, have evolved the unusual habit of carrying sea anemones with their chelae. Species of these two genera are easily to be distinguished, with *Polydectus* almost entirely covered with dense tomentum whilst *Lybia* is far more glabrous. The specimen examined in the present study carries a rather large sea anemone on each of its chela. Guinot et al. (1995) state that *Polydectus cupulifer* shows a symbiotic relationship with the large sea anemone, *Bunodactis nigrescens* Verrill, 1928. *Polydectus cupulifer* appears to be a species indigenous to coral reefs (Sakai, 1976; Serène, 1984). The biogeographic data available for this species indicate a close association with warm oceanic islands, with a range extending from Okinawa (southern Japan) to Hawaii, French Polynesia, as well as various parts of the Indo-West Pacific and Indian oceans (Sakai, 1976; Serène, 1984). The discovery of this species on the southwestern coast of Taiwan marks the first record of its distribution in Chinese waters (cf. Dai & Yang, 1991).

Not much is known about the ecology of this species, except that it carries the anemones for defence, probably for the same reasons as its better-studied relatives in the genus *Lybia* (see Guinot et al., 1995). In Hawaii it is not rare, and it has been caught for the aquarium trade. Also, in Hawaii, the species has been caught from shallow intertidal pools under rocks in areas where there are strong currents (P. K. L. Ng, pers. comm.).