

Two newly recorded crab genera (Crustacea: Decapoda: Brachyura)
from Taiwan: *Platypilumnus* (Goneplacidae)
and *Trachycarcinus* (Atelecyliidae)

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摘 要

黃禎麟 陳天任 臺灣寬杵蟹屬 (*Platypilumnus*) 及粗黃道蟹屬 (*Trachycarcinus*) 之新記錄 臺灣省立博物館半年刊 50(2): 107–112

本研究首次報導臺灣兩種深海蟹類扁平寬杵蟹 (*Platypilumnus soelae* Garth, 1987; 長腳蟹科) 和華麗粗黃道蟹 (*Trachycarcinus elegans* Guinot et Sakai, 1970; 近圓蟹科), 這兩屬蟹類均為臺灣之新記錄。扁平寬杵蟹以往僅發現於澳洲和印尼, 華麗粗黃道蟹以往都認為是日本的特有種, 本報告使得這兩種深海蟹類之分佈更為廣泛。

關鍵詞: 寬杵蟹、粗黃道蟹、臺灣新記錄、甲殼類。

Abstract

Two genera of deep water brachyuran crabs, *Platypilumnus* (Goneplacidae) and *Trachycarcinus* (Atelecyliidae) are recorded from Taiwan for the first time. *Platypilumnus soelae* Garth, 1987, is previously known only from northern Australia and southern Indonesia. *Trachycarcinus elegans* Guinot et Sakai, 1970, was previously regarded as a Japanese endemic.

Key words: Deep water brachyuran crabs, new records, *Platypilumnus*, *Trachycarcinus*.

Introduction

Some 360 species of brachyuran crabs are currently known from the island of Taiwan (see Jeng, 1994; Ng *et al.*, 1996; Ng and Huang, 1997). Recently, two interesting deep water

genera were obtained from inshore trawlers from the northeastern coast of Taiwan, both of which are new to the Taiwanese decapod crustacean fauna. One species, *Platypilumnus soelae* Garth, 1987 (Goneplacidae), has previously been reported only from northern Australia and

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southern Indonesia, and the present record is a substantial northern extension of its known range. The other species, *Trachycarcinus elegans* Guinot et Sakai, 1970 (Atelecyclidae) has been reported only from Japan.

The present note serves to record these two genera from Taiwan for the first time. Opportunity is also taken to provide colour photographs of fresh specimens of both species. Specimens examined are deposited in the crustacean collection of the National Taiwan Ocean University (NTOU), Keelung, Taiwan; Zoological Reference Collection (ZRC), National University of Singapore; and Muséum National d'Histoire Naturelle (MNHN), Paris. Measurements provided are of the carapace widths and lengths respectively.

Taxonomy

Family Goneplacidae

Platypilumnus soelae Garth, 1987

(Fig. 1a, b)

Platypilumnus soelae Garth, 1987: 35, Figs. 1, 2;
Richer de Forges, 1996: 4, Fig. 2A.

Material examined: One male (41.4 × 37.2 mm) (NTOU 1985-4-20), trawl, inshore port, Nang-Fang-Au, I-Lan County, northeastern Taiwan, 300–500 m depth, 20-IV-1985. One male (36.6 × 33.1 mm) (ZRC 1997.781), trawl, inshore port, Ta-shi, I-Lan County, northeastern Taiwan, about 400 m depth, 14-I-1997.

Remarks: *Platypilumnus soelae* was described from three male specimens from the North West Shelf of Australia (Garth, 1987) and has since been reported from Indonesia (Richer de Forges, 1996). The present specimens agree very well with the type description by Garth (1987). The only major discrepancy seems to be in the proportions of the last pair of ambulatory legs, which in the holotype male drawn by Garth (1987: Fig. 1), seems to be proportionately shorter, especially with regards to

the propodus and dactylus. Whether the drawing is accurate or if the segments concerned were not drawn with the structures level with the ground could not be ascertained. Richer de Forges (1996), however, who reviewed the genus *Platypilumnus* Alcock, 1894, provided an excellent photograph of a paratype male which has leg proportions which match those of the present Taiwanese specimens exactly. In all other respects, the Taiwanese specimens closely match the descriptions and figures of Garth (1987) and Richer de Forges (1996).

The discovery of two specimens of *P. soelae* at such a substantial distance from its next nearest locality (Indonesia) is of some interest. The genus *Platypilumnus* has never been reported so far north before. The most northerly record for the genus previously was represented by a specimen of *P. gracilipes* Alcock, 1894, from Vietnam by Richer de Forges (1996: 2).

Colour: In freshly collected specimens, the anterior half of the carapace is pale to dirty orange, with the posterior half dirty-white. The ambulatory legs and chelipeds are pale to dirty orange, with the tips of the fingers horn-coloured.

Family Atelecyclidae

Trachycarcinus elegans Guinot et Sakai, 1970

(Fig. 2)

Trachycarcinus elegans Guinot and Sakai, 1970: 201, Figs. 1–6; Sakai, 1976: 312, text fig. 174, pl. 103, fig. 1; Ohta, 1983; Guinot, 1989: 350 (list only; Takeda, 1997: 243.

Material examined: One male (28.9 × 24.4 mm) (NTOU 1996-9-24), trawl, inshore port, Ta-Shi, I-Lan County, northeastern Taiwan, about 400 m depth, 24-IX-1996. One male (26.9 × 25.1 mm, left spine broken) (holotype) (MNHN B5409), trawl, off Mikawa Bay, Japan, 100–150 m depth.

Remarks: *Trachycarcinus elegans* was described from three males and two females from



Fig. 1. *Platypilumnus soelae* Garth, 1987. a. male (41.4×37.2 mm) (NTOU 1985-4-20); b. male (36.6×33.1 mm) (ZRC 1997.781).

off Mikawa Bay, and one female from Sagami Nada, in Japan (Guinot and Sakai, 1970), and the species has also been reported from Kii Minabe (Sakai, 1976) and Suruga Bay (Ohta, 1983; Takeda, 1997). It has not been reported outside Japan thus far.

The present specimen agrees in general with the descriptions and figures by Guinot and Sakai (1970) and Sakai (1976). Especially diagnostic in this species is the dense pubescence on the carapace and the three short frontal teeth which are subequal in length (median one slightly longer) and which are subparallel in position. Direct comparisons with the holotype male nevertheless shows several differences, none of which we believe, are significant. The left last anterolateral spine in the holotype is broken but the right one is well developed. All the anterolateral spines of the Taiwanese specimen are more curved anteriorly compared to the

holotype which are generally straighter and directed obliquely laterally. The lateral margins of the anterolateral spines of the holotype are lined with small spines or granules, whilst in the Taiwanese specimen, distinct accessory spines are present. The lateral frontal teeth of the holotype male are also directed slightly obliquely outwards whereas in the Taiwanese specimen, the lateral frontal teeth are directly anteriorly. The form of the granulation on the posterior part of the carapace of the Taiwanese specimen differs from the holotype in that there are more and smaller granules appearing more pearl-like (larger, fused granules in the holotype). The suborbital spine in the holotype is acutely triangular with the lateral margins uneven. In the Taiwanese specimen, the suborbital spine is bifurcated distally as there is a distinct sharp subdistal tubercle present. The most significant difference, however, is in the



Fig. 2. *Trachycarcinus elegans* Guinot et Sakai, 1970. Male (28.9×24.4 mm) (NTOU 1996-9-24) (setae partially denuded).

form of the inner margin of the carpus of the major cheliped. In the holotype, the inner angle of the carpus has a low, triangular tooth with a rounded tip, the surfaces being covered with scattered small granules. In the Taiwanese specimen, this angle is almost sub-lamelliform in structure and covered with numerous distinct granules. Most of these differences can probably be attributed to variation. The male first and second pleopod structures of the specimens, as well as the forms of their anterior thoracic sternites and abdomens are almost identical.

The present record of this species from northeastern Taiwan is a noteworthy southerly extension of the range of the species. It is also the first record of a member of the genus *Trachycarcinus* from Taiwan. Guinot and Sakai (1970) and Sakai (1976) recorded the species from depths of 100 to 150 m, with Ohta (1983) and Takeda (1997) reporting it from depths of between 298 and 405 m in Japan. The present specimen from Taiwan was obtained from about 400 m depth.

Colour: In the freshly collected specimen, the carapace itself is generally dirty- to yellowish white, the covering setae being brown to yellowish-brown. The major chela is white to dirty white. The corneas of the eyes are bright red in life.

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