

On a New Record of an Intertidal Chiton *Acanthochitona defilippii* (Tapparone-Canefri, 1874) (Mollusca: Polyplacophora) from Taiwan

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Abstract. An intertidal chiton, *Acanthochitona defilippii* (family Acanthochitonidae), is reported for the first time from Taiwanese waters. Morphological and ecological information of this species is also noted.

Key words: *Acanthochitona defilippii*, new record, Taiwan.

INTRODUCTION

Studies on the Polyplacophora of Taiwan and nearby islands were sporadically conducted in past decades. In total, 18 species were documented by those studies (Taki, 1938, 1962; Kuroda, 1941; Reigle, 1963; Habe, 1965; Wu, 1969, 1975; Lin, 1974; Wang and Tan, 1979; Chang *et al.*, 1983; Lai and Ou-Yang, 1996; Wu *et al.*, 2000; Lee, 2002, 2003; Yeh *et al.*, 2005). Among them, six species were recorded from the Penghu Archipelago, Taiwan, namely *Acanthopleura spinosa* Bruguiere, 1792, *Liolophura japonica* (Lischke, 1873), *L. loochoana* (Broderip and Sowerby, 1873), *Onithochiton hirasei* Pilsbry, 1901, *Chiton* (not *Rhyssoplax*) *komaiana* Taki, Is & Iw, 1929, and *Ischnochiton comptus* (Gould, 1859), (Kuroda, 1941; Chang *et al.*, 1992, 1993; Fong *et al.*, 1993; Lai and Ou-Yang, 1996). The present study reports a newly recorded intertidal chiton, *Acanthochitona defilippii* (Tapparone-Canefri, 1874) from this geographic region. Specimens of the present study are deposited at the National Museum of Natural Science, Taichung, Taiwan. All specimens are described by measurements in millimeters (mm). Abbreviations: BL, body length; BW, body width.

Family Acanthochitonidae

Acanthochitona defilippii (Tapparone-Canefri, 1874) (Fig. 1A-I)

Acanthochitona defilippii (Tapparone-Canefri, 1874) (not seen); Is. & Iw. Taki, 1931: 219 (list); Higo *et al.*, 1999: 29 (list); Saito, 2000: 23, pl. 11; Slieker, 2000: 100, pl. 38.

Materials examined: 4 specimens (BL x BW: 34.8 x 17.7, 30.5 x 21.6, 25.6 x 19.9, 24.8 x 18.3) (NMNS5007-001), south of Whale Cave (23° 38.9'N, 119° 30.9'E), Penghu County, rocky low intertidal, Coll. T.-Y. Yeh, 3 Apr. 2005.

Description: Animal of medium size, body elongate oval (Fig. 1A, B); valves small, head valve semicircular, posterior margin almost straight, slightly concave in central area, insertion plate with 5 slits (4 clearly and 1 barely visible; Fig. 1C), shape of intermediate valves varying from pentagonal to semicircular, jugal sinus absent, growth lines distinct, surface of jugum smooth, sutural laminae large and wing-like (Fig. 1D, E), tail valve semi-oval, with large wing-like sutural laminae whose lower outer margins reach posterior end of tail valve (Fig. 1F), girdle wide and fleshy, with 9 pairs of sutural tufts and numerous short spicules, colors of spines of sutural tufts varying from dark brown, green, to white (Fig. 1G-I).

Remarks: All 3 members of the genus *Acanthochitona*, *A. defilippii*, *A. dissimilis*, and *A. achates*, known as the "Japanese species", have also now been collected from Taiwanese waters (Slieker, 2000; Wu *et al.*, 2000; Yeh *et al.*, 2005). *Acanthochitona dissimilis* is most readily separated from the other 2 species by the presence of a leathery-like girdle and circular sutural tufts

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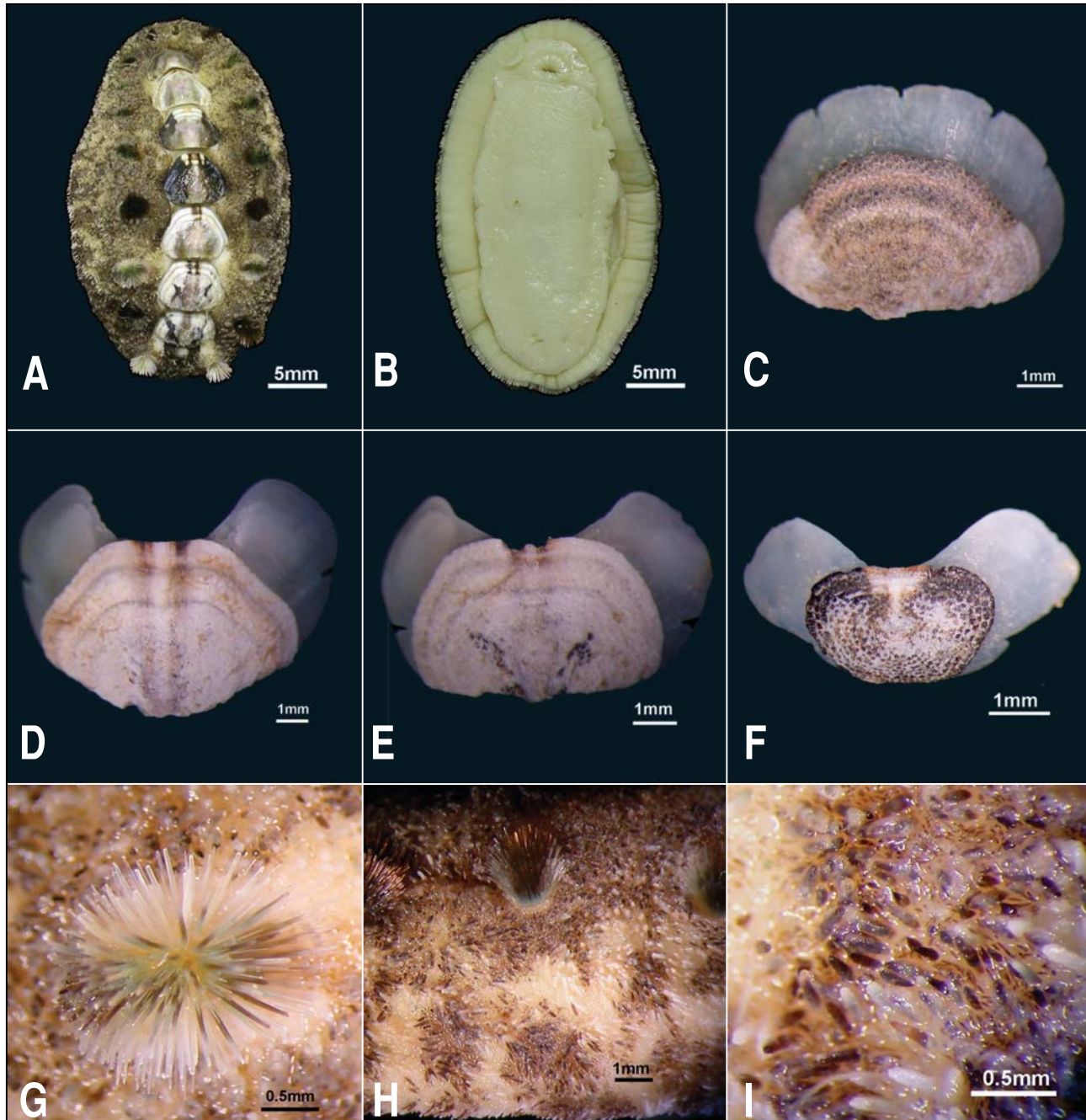


Fig. 1. *Acanthochitona defilippii* (Tapparone-Canefri, 1874). A, B, dorsal and ventral view (34.8 x 17.7 mm; NMNS5007-001); C-I, head, fifth, seventh, and tail valves, sutural tuft, girdle, and spicules on the girdle (24.8 x 18.3 mm; NMNS5007-001).

that are formed by extremely fine spicules with a silky sheen. *Acanthochitona defilippii* and *A. achates* have similar appearances, but the former species has a relatively wider girdle and shorter spicules on the girdle than those of the latter species.

Acanthochitona defilippii is commonly found in the rocky intertidal of central Honshû (Boso Peninsula, about 35°N) to Kyûshû (about 31°~34°N) (Saito, 2000; Slieker, 2000). The finding of this species in the present study extends its southerly distribution to about 23°N.

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臺灣產潮間帶石蠶之新記錄

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本文報導一種臺灣產潮間帶石蠶之新記錄，*Acanthochitona defilippii* (family Acanthochitonidae)。這種石蠶之外部型態與生態資訊亦一併於文中述及。

關鍵詞：*Acanthochitona defilippii*，新記錄種，臺灣。