

First record of the soft coral associated crab *Hoplophrys oatesi* Henderson, 1893 (Crustacea: Decapoda: Epialtidae) in Taiwanese waters

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Abstract

The soft coral associated crab, *Hoplophrys oatesi* Henderson, 1893, is reported from coral reefs within southwestern Taiwan for the first time. Color illustration and line drawings are provided for the Taiwanese specimen

Key words: soft coral associated crab, new record, Taiwan

Introduction

There are more than 550 species of brachyuran crabs recorded from Taiwan (Ng *et al.*, 2001). However, some species with wide Indo-West pacific distributions have never been found. Recently, the authors started a coral reef survey by SCUBA diving and collected some crabs associated with other invertebrates. We report here the first record of *Hoplophrys oatesi* Henderson, 1893, associated with soft coral, *Dendronephthya* sp. in Taiwan. The present work fills the gap of geographical distribution of this species from Philippine to Japan and also indicates

that the biodiversity of Taiwan fauna is higher than previously thought.

Materials and Methods

The materials used in the present study is deposited in the collections of the National Museum of Marine Biology and Aquarium (NMMBA). Superfamily and family arrangements follow Ng *et al.* (2008). Measurements of specimens, given in millimeters, are provided for maximum carapace length (cl) from the level of the base of the rostral spines to the posterior margin by carapace width (cw). Specimens were fixed with 90% ethanol and preserved in 75% ethanol.

Systematic account

Superfamily Majoidea Samouelle, 1819

Family Epialtidae MacLeay, 1838

Subfamily Pisinae Dana, 1851

Hoplophrys oatesi Henderson, 1893

(Fig 1-3)

Hoplophrys oatesi Henderson, 1893: 347, pl. 36, figs 14.

Hoplophrys ogilbyi McCulloch, 1908: 51, pl. 12, figs 2, 2a.

Parazewa palauensis Miyake, 1939: 195, figs 1213..

Material examined.

----S.W. Taiwan, Pingtung County,

Kenting. SCUBA diving, 24 m, 14 Mar. 2011, 1 male 9.2 by 7.0 mm (NMMBCD 4003); Kenting, SCUBA diving, 15 Oct. 2011, 1 male 9.3 by 6.2 mm; 26 Feb. 2013, 1 male 10.0 by 7.0 mm (NMMBCD 4004).

Diagnosis:

Carapace subpyriform, with the regions well defined. Rostrum bearing two acute, flattened, and divergent spines. The preocular spine well developed, directed obliquely forwards. The epigastric region with two distinct spines behind the preocular spine; gastric region with two rows of spines, the anterior row with seven

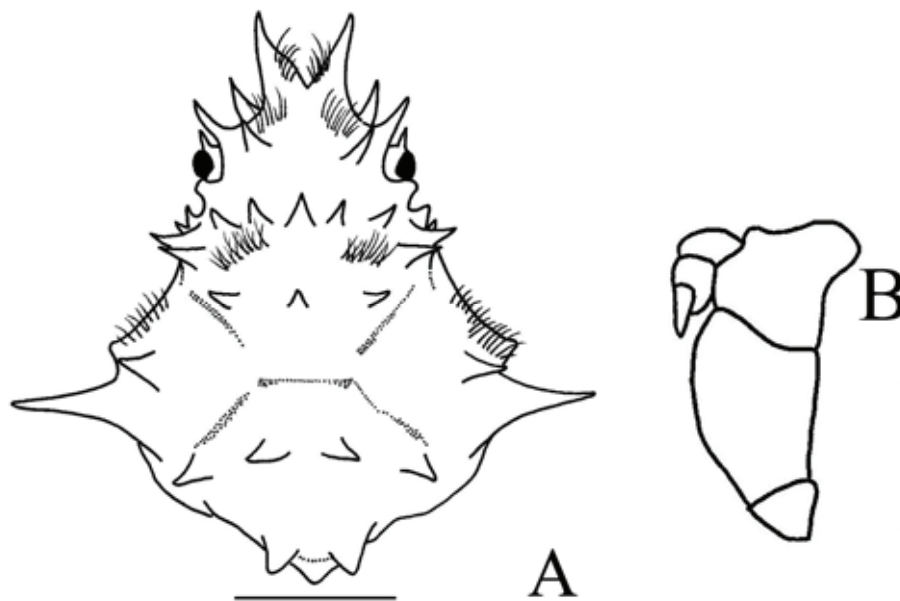


Fig. 1. *Hoplophrys oatesi* Henderson, 1893. male 9.2 by 7.0 mm (NMMBCD 4003). A. Carapace, dorsal view; B. Third Maxilliped, lateral view. Scales: A = 3 mm, B = 1 mm.



Fig. 2. *Hoplophrys oatesi* Henderson, 1893. male 9.2 by 7.0 mm (NMMBCD 4003), fresh specimen, dorsal view.

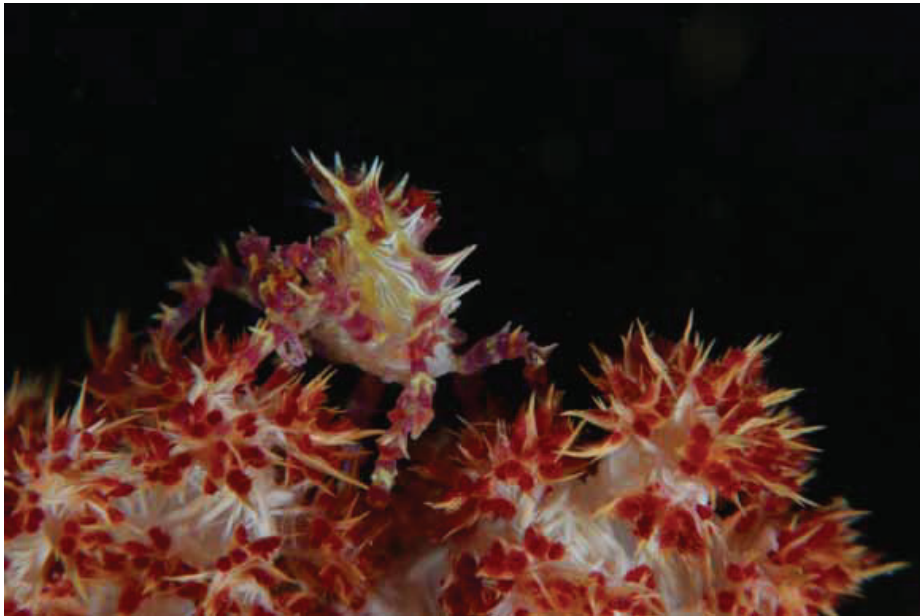


Fig. 3. *Hoplophrys oatesi* Henderson, 1893. in situ photograph.

spines, three small spines on each side and the central one largest, the posterior row with three spines. One curved hepatic spine near the cervical groove. Four equal size spines in cardiac region. The intestinal region with two large tubercles directed obliquely backwards. Two spines in the branchial region, the lateral one more distinct and larger. A group of short hooked hairs on the rostrum, frontal, gastric and latero-branchial region, otherwise the surface is smooth between spines.

The eyestalk short, with an acute spine on the anterior border of cornea.

Basal antennal segment rather slender, disto-external angle strongly prolong into an acute spine as easily to be seen from above.

Third maxilliped smooth; ischium with a longitudinal median groove; the disto-external angle of the merus produced into a round projecting lobe.

Chelipeds slender; with three spines on the outer margin of the merus, the distal one more prolonged; carpus with two outer spines and one small dorsal spine; palm with a superior and inferior basal articular tubercles at the carpal articulation, and a single tubercle about the middle of the outer margin; the finger smooth, the outer margin of the fixed finger with hairs.

Ambulatory legs spinose superiorly, the spines more prominent at the distal end of the meri and carpi; dactyli curved,

with spinules on the proximal half of the posterior margin.

Coloration:

Carapace translucent with a red and white line running up the spines and rostrum, chelipeds and ambulatory legs with crossing transversely bands.

Distribution:

Widely distributed in the Indo-West Pacific Ocean. At depths of 2–93 m (Griffin and Tranter, 1986)

Remarks:

The specimens from Taiwan agree with the description by McCulloch (1908), but the fingers of cheliped are without any tooth and carpus is only with few obtuse spines on its upper surface. *Hoplophrys oatesi* is widely distributed over the Indo-West Pacific Ocean and is always associated with various species of soft coral from the genus *Dendronephthya*. It also camouflages itself by mimicking the colors of the soft coral and attaching polyps on the carapace (Kato & Okuno, 2001). It was named “candy crab” due to its coloration and is a favorite target of underwater photography enthusiasts. We note that the existence of these crabs were known by the Taiwanese underwater photography community but no specimens were collected. The present paper is the first time to confirm its record.

Acknowledgements

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台灣軟珊瑚共生蟹之一新紀錄種

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摘 要

在台灣南部珊瑚礁水域發現的軟珊瑚共生蟹，奧氏櫻珠蟹為首次在台灣被記錄到，本篇報告也提供彩色生態照與重要特徵之現繪圖。

關鍵詞：珊瑚共生蟹，新紀錄，台灣