



<http://dx.doi.org/10.11646/zootaxa.4058.4.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:8DF67C47-10A4-4E92-90C3-AB914F2A313F>

A new species of *Macrophthalmus* Desmarest, 1823 (Crustacea: Decapoda: Brachyura: Macrophthalmidae) from Taiwan, with notes on four new records

SHAO-JYUN TENG¹ & HSI-TE SHIH^{1,2}

¹Department of Life Science, National Chung Hsing University, 250, Kuo Kuang Road, Taichung 402, Taiwan

²Corresponding author. E-mail: htshih@dragon.nchu.edu.tw

Abstract

A new species of sentinel crab (family Macrophthalmidae), *Macrophthalmus (Mareotis) purpureocheir* sp. nov., from coral reefs is herein described from southern and eastern Taiwan. The new species can be distinguished from other species by a suite of characters, including the narrower and more convex carapace, the first anterolateral tooth protruding forward, the short and stout chelipeds, and the male first gonopod with short apical process, as well as the distinctive reddish purple chelae of the male. The identity of this new species is also supported by molecular evidence using the mitochondrial 16S rDNA and cytochrome oxidase subunit I (COI). Three additional species of *Macrophthalmus*, viz. *M. crinitus* Rathbun, 1913, *M. definitus* Adams & White, 1849, and *M. milloti* Crosnier, 1965, as well as *Ilyograpsus paludicola* (Rathbun, 1909) of the subfamily Ilyograpsinae Števc̆ić, 2005, are also confirmed from Taiwan.

Key words: 16S rDNA, COI, *Ilyograpsus paludicola*, *Macrophthalmus crinitus*, *Macrophthalmus definitus*, *Macrophthalmus milloti*, *Macrophthalmus purpureocheir* sp. nov., new records

Introduction

Sentinel crabs are members of the family Macrophthalmidae and mainly inhabit the intertidal and subtidal areas in the Indo-West Pacific region. It includes 78 species belonging to three subfamilies: Macrophthalminae Dana, 1851, Ilyograpsinae Števc̆ić, 2005, and Tritodynamiini Števc̆ić, 2005 (Barnes & Davie 2008; Komai & Wada 2008; Naruse & Kosuge 2008; Ng *et al.* 2008; Davie 2009, 2012; Mendoza & Naruse 2009; Barnes 2010; Poupin & Bouchard 2010; Naderloo & Türkay 2011; Rahayu & Nugroho 2012; Naderloo 2013). Ng *et al.* (2008) listed 55 species within eight subgenera of *Macrophthalmus*, but with a note that the subgenera were less than satisfactory. Barnes (2010) revised the grouping of this genus by considering the molecular results of Kitaura *et al.* (2006), although the subgenera *Macrophthalmus*, *Paramareotis*, and *Mareotis* are clearly not monophyletic. Davie (2009) and McLay *et al.* (2010) have suggested that the subgenera *Chaenostoma*, *Hemiplax* and *Tasmanoplax* should be raised to the generic level. Davie (2012) formally treated *Chaenostoma* and *Tasmanoplax* as full genera, and moved *Hemiplax* to the family Varunidae. *Chaenostoma orientale* Stimpson, 1858, and *C. crassimanus* Stimpson, 1858 have been validated, based on the morphological and molecular evidence (Teng *et al.*, submitted; Shih *et al.*, in press).

A total of 15 species of macrophthalמידs have been reported from Taiwan, including two species of *Chaenostoma* (*C. orientale* and *C. crassimanus*), 13 species of *Macrophthalmus* (*M. abbreviatus* Manning & Holthuis, 1981, *M. banzai* Wada & K. Sakai, 1989, *M. barnesi* Serène, 1971, *M. boteltobagoae* Sakai, 1939, *M. ceratophorus* Sakai, 1969, *M. convexus* Stimpson, 1858, *M. erato* De Man, 1888, *M. latreillei* (Desmarest, 1822), *M. pacificus* Dana, 1851, *M. philippinensis* Serène, 1971, *M. quadratus* A. Milne-Edwards, 1873, *M. serenei* Takeda & Komai, 1991 and *M. tomentosus* Eydoux & Souleyet, 1842) (Barnes 1970, 2010; Ng *et al.* 2001; Shen & Jeng 2005; Teng *et al.* submitted; Shih *et al.*, in press). The records of *M. barnesi*, *M. pacificus*, and *M. philippinensis* from Taiwan (Barnes 1970, 2010) were confirmed to be from the Ryukyu Islands, where is ‘near’, rather than ‘in’, Taiwan (R.S.K. Barnes, personal communication). As a result, the three species were excluded from the present number of Taiwanese species.