



Article

urn:lsid:zoobank.org:pub:7717229C-362F-4E19-A055-09D637B9D425

***Gelasimus splendidus* Stimpson, 1858 (Crustacea: Brachyura: Ocypodidae), a valid species of fiddler crab from the northern South China Sea and Taiwan Strait**

HSI-TE SHIH^{1,4}, PETER K. L. NG², KINGSLEY J. H. WONG³ & BENNY K. K. CHAN³

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

²Tropical Marine Science Institute and Department of Biological Sciences, National University of Singapore, Kent Ridge, Singapore 119260, Republic of Singapore

³Biodiversity Research Center, Academia Sinica, Taipei 115, Taiwan

⁴Corresponding author. E-mail: htshih@dragon.nchu.edu.tw

Abstract

The fiddler crab, *Uca splendida* (Stimpson, 1858) has been synonymized under *Uca crassipes* (White, 1847) since Crane (1975). Studies of specimens from the Hong Kong type locality and adjacent areas of China, Taiwan and Vietnam show that *U. splendida* is a valid species, with a characteristic suite of carapace and gonopod features as well as a distinct cytochrome oxidase I (COI) signature. Genetic work shows that *U. splendida* belongs to a well-supported clade and is the sister species of *U. crassipes*. The distribution of *U. splendida* is restricted to continental East and continental Southeast Asia, in contrast to the oceanic distribution of *U. crassipes*. Both species, however, are sympatric in Penghu Islands, western Taiwan and Dongsha Island (=Pratas Island).

Key words: *Uca splendida*, *U. crassipes*, *U. chlorophthalmus*, South China Sea, Taiwan Strait, cytochrome oxidase I, taxonomy

Introduction

Uca crassipes (White, 1847) is a common broad-fronted species of fiddler crab distributed widely in the western and central Pacific Ocean and the eastern margin of the Indian Ocean (Crane 1975). It was regarded as a subspecies of *U. chlorophthalmus* (H. Milne Edwards, 1837) by Crane (1975) but has been treated as a distinct species in recent years (Jones & Morton 1994; Rosenberg 2001; Beinlich & von Hagen 2006; Ng *et al.* 2008; Shih *et al.* 2010b). *Uca chlorophthalmus* and *U. crassipes* are very similar morphologically and can only be effectively separated by subtle differences in the structures of the major chela, ambulatory leg, first gonopod and female gonopore (Crane 1975). Together with *U. inversa* (Hoffmann, 1874) and *U. sindensis* (Alcock, 1900), they were placed in the subgenus *Paraleptuca* Bott, 1973 (= *Amphiuca* Crane, 1975) by von Hagen (1976) and Rosenberg (2001). Beinlich & von Hagen (2006) later synonymized the Indo-West Pacific members of *Celuca* Crane, 1975, with *Paraleptuca*, but considered *U. inversa* to belong to its own subgenus, *Cranuca* Beinlich & von Hagen, 2006. We keep with the original concept of *Paraleptuca* Bott, 1973, and retain *U. chlorophthalmus*, *U. crassipes* and *U. sindensis* in this subgenus, especially since Beinlich & von Hagen's (2006) definition of *Paraleptuca* seems to be paraphyletic (Naderloo *et al.* 2010).

There are several junior synonyms of *U. crassipes*: *Gelasimus gaimardi* H. Milne Edwards, 1852 (type locality: Tongatabou = Tongatabu, Tonga), *G. latreillei* H. Milne Edwards, 1852 (type locality: Bora Bora, French Polynesia), *G. splendidus* Stimpson, 1858 (type locality: Hong Kong), *G. pulchellus* Stimpson, 1858 (type locality: Tahiti, French Polynesia) and *Uca novaeguineae* Rathbun, 1913 (type locality: New Guinea) (cf. Crane 1975). Of these synonyms, *G. splendidus* is unique because its type locality, Hong Kong, is on continental Asia instead of being on oceanic islands like the others. In describing the species, Stimpson (1858, 1907) emphasized that *G. splendidus* is characterized by the coloration and morphology of the carapace. In fact, Crane (1975) had also noticed that there were