



Diversity and distribution of fiddler crabs (Brachyura: Ocypodidae: *Uca*) from China, with new records from Hainan Island in the South China Sea

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Abstract

The fiddler crab fauna (Brachyura: Ocypodidae: *Uca*) of China is reviewed. Thirteen species are recognised here, viz. *Uca acuta* (Stimpson, 1858), *U. annulipes* (H. Milne Edwards, 1837), *U. arcuata* (De Haan, 1835), *U. borealis* Crane, 1975, *U. coarctata* (H. Milne Edwards, 1852), *U. crassipes* (Adams & White, 1848), *U. dussumieri* (H. Milne Edwards, 1852), *U. lactea* (De Haan, 1835), *U. paradussumieri* Bott, 1973, *U. tetragonon* (Herbst, 1790), *U. triangularis* (A. Milne-Edwards, 1873), *U. typhoni* Crane, 1975, and *U. vocans* (Linnaeus, 1758). Two females of *U. typhoni* collected from southern Hainan Island represent the first record of this species from China and East Asia. Two males of *U. tetragonon* collected from southern Hainan also represent a new record for China. The *Uca* fauna of southern Hainan is biogeographically distinct being different from those of northern Hainan and continental China, with *U. annulipes*, *U. tetragonon*, *U. typhoni*, and *U. vocans* common in Southeast Asia. In addition, continental China also lacks some insular species such as *U. coarctata*, *U. formosensis* Rathbun, 1921, *U. jocelynae* Shih, Naruse & Ng, 2010, *U. perplexa* (H. Milne Edwards, 1837), and *U. tetragonon* which are common in the East Asian islands of Taiwan and the Ryukyus.

Key words: taxonomy, biogeography, China, Hainan Island, new record, *Uca demani*, *U. typhoni*, *U. tetragonon*

Introduction

Fiddler crabs (Brachyura: Ocypodidae: *Uca*) are the dominant brachyuran group in many tropical and subtropical coastal areas, with 106 species now being recognised globally (updated from Ng *et al.* 2008). There are more than 40 species forming six subgenera the Indo-West Pacific region, viz. *Australuca* Crane, 1975; *Austruca* Bott, 1973; *Cranuca* Beinlich & von Hagen, 2006; *Gelasimus* Latreille, 1817; *Paraleptuca* Bott, 1973; and *Tabuca* Bott, 1973 (Rosenberg 2001; Beinlich & von Hagen 2006; Ng *et al.* 2008; Shih *et al.* 2009, 2010; Naderloo *et al.* 2010).

The *Uca* fauna of China was reviewed by Crane (1975) using old specimens and/or records, but she did not visit China; although she stayed in Hong Kong. Crane (1975) identified six Chinese species: *U. acuta* (Stimpson, 1858) from Hong Kong (a specimen was selected as the neotype), Fujian (Xiamen, Fuzhou, Ningde) and Shandong (Jiaozhou); *U. arcuata* (De Haan, 1835) from Hong Kong, Fujian (Xiamen, Fuzhou, Ningde), and Zhejiang (Wenzhou); *U. borealis* Crane, 1975, from Hong Kong (as the holotype) and Fujian (Xiamen); *U. crassipes* (Adams & White, 1848) from Hong Kong and Fujian (Xiamen, based on Cano, 1889, but questioned by her; see Remarks under *U. crassipes*); *U. lactea* (De Haan, 1835) from Hong Kong and Fujian (Xiamen); and *U. paradussumieri* Bott, 1973, from Hong Kong, Macao, and Fujian (Xiamen and Fuzhou). Subsequently, Dai *et al.* (1986) and Dai & Yang (1991) treated the *Uca* species from China, adding *U. annulipes* (H. Milne Edwards, 1837) from Hainan, *U. dussumieri* (H. Milne Edwards, 1852) from