



## New records of two species of the coral reef shrimp genus *Thor* Kingsley, 1878 (Crustacea: Decapoda: Thoridae) from the Ryukyu Islands, Japan

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### Abstract

The caridean shrimp genus *Thor* Kingsley, 1878 (Thoridae) is currently represented by 14 species distributed in shallow tropical to subtropical waters in the Indo-Pacific, East Pacific and West Atlantic oceans. In this study, two species of the genus are reported on the basis of material from Okinawa and Kume islands in the Ryukyu Archipelago, southern Japan. *Thor leptochelus* (Xu & Li, 2015) n. comb., recently described from Xisha Islands, China and originally assigned to *Thinora* Bruce, 1997, is transferred to *Thor*. Relationship of the species to three congeneric species (*T. cordelli* Wicksten, 1996, *T. spinipes* Bruce, 1983 and *T. spinosus* Boone, 1935) is discussed. The second is *T. marguitae* Bruce, 1973, representing the rediscovery since the original description and new record for Japanese waters. The four specimens of *T. leptochelus* were all free-living, whereas the single specimen of *T. marguitae* was found to be associated with a solitary fungiid coral, as previously reported.

**Key words:** *Thor leptochelus*, *marguitae*, taxonomy, rediscovery, symbiotic association

### Introduction

*Thor* Kingsley, 1878 is the nominotypical genus of Thoridae Kingsley, 1878, a caridean family proposed to be resurrected from the synonym of the Hippolytidae by Christoffersen (1987), and recently recognized as a valid family based on molecular phylogenetic analysis by De Grave et al. (2014). Fourteen species are represented in the genus worldwide (De Grave & Fransen 2011; updated by Xu & Li 2014, 2015): *T. algicola* Wicksten, 1987 (East Pacific), *T. amboinensis* (De Man, 1888) (Indo-West Pacific), *T. cocoensis* Wicksten & Vargas, 2001 (East Pacific), *T. cordelli* Wicksten, 1996 (East Pacific), *T. dobkini* Chace, 1972 (West Atlantic), *T. floridanus* Kingsley, 1878 (West Atlantic), *T. hainanensis* Xu & Li, 2014 (West Pacific), *T. intermedius* Holthuis, 1947 (West Pacific), *T. manningi* Chace, 1972 (West Atlantic), *T. marguitae* Bruce, 1978 (West Pacific), *T. paschalis* (Heller, 1862) (Indo-West Pacific), *T. singularis* Xu & Li, 2015 (West Pacific), *T. spinipes* Bruce, 1983 (West Pacific) and *T. spinosus* Boone, 1935 (Indo-West Pacific). Of them three species, *T. amboinensis*, *T. paschalis* and *T. spinosus*, are known from Japanese waters (Hayashi 1994). One of the representative diagnostic characters of the genus is the possession of a triangular movable plate on the third segment of the antennular peduncle. Such a movable plate is not seen in other confamilial genera except for *Thinora* Bruce, 1998, which was established to accommodate *Thor maldivensis* Borradaile, 1915 (Bruce 1997, originally as *Thorina*). Recently, Xu & Li (2015) described a new species under *Thinora*, *T. leptochelus*, based on a single female specimen from the South China Sea. As discussed by Bruce (1997), *Thor* is differentiated from *Thinora* by the possession of one or more dorsal and ventral teeth on the rostrum (versus one dorsal and none on the ventral margin), non-sexually dimorphic first pereopod (versus hypertrophic in males in *Thinora*), commonly three to six flexor spinules on the dactyli of the third to fifth pereopods and the presence of a normally developed appendix masculina in the male (versus even no vestige of an appendix masculina is present in *Thinora*).

During investigations of the shallow subtidal shrimp fauna in the Ryukyu Islands by the authors and colleagues, some specimens representing species of *Thor* or *Thinora*, not previously known from Japanese waters,