



A new genus and new species of symbiotic crab (Crustacea: Brachyura: Pinnotheroidea) from Okinawa, Japan

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Abstract

A new genus and new species of symbiotic pinnotheroid crab is described from Oura Bay, Okinawa, Japan. The new genus is superficially similar to the pinnotherine *Sakaina* and several pinnothereline genera (Pinnotheridae), but shares key diagnostic characters (third maxillipeds, orbits, ambulatory legs, male abdomen, telson and male first gonopod) with *Aphanodactylus* and *Gandoa*. Together with *Aphanodactylus* and *Gandoa*, the new genus is tentatively placed in the Pinnotheridae *sensu lato*.

Key words: Brachyura, Pinnotheridae, Pinnotheroidea, new genus, new species, taxonomy, Okinawa Island, Japan

Introduction

The Asthenognathinae Stimpson, 1858, has long been treated as a subfamily of Pinnotheridae De Haan, 1833. Unlike most pinnotherids which have highly modified third maxillipeds, asthenognathines are atypical in having the ischium and merus unfused, with the ischium larger than the merus, and the palp, consisting of the carpus, propodus and dactylus clearly demarcated and not enlarged. Tesch, with knowledge of its artificial grouping (Tesch, 1918: 275), recognized eight genera within Asthenognathinae (*Aphanodactylus* Tesch, 1918; *Asthenognathus* Stimpson, 1858; *Chasmocarcinops* Alcock, 1900; *Hapalonotus* Rathbun, 1897; *Mortensenella* Rathbun, 1909; *Opisthopus* Rathbun, 1893; *Tritodynamia* Ortmann, 1894; *Voeltzkowia* Lenz, 1905). This classification has changed considerably over the years. *Opisthopus* is clearly a pinnotherine (see Schmitt *et al.* 1973); *Chasmocarcinops* is a chasmocarcinid (see Schmitt *et al.* 1973; Ng *et al.* 2008); *Mortensenella* is a camptandriid (see Harminto & Ng 1991); *Hapalonotus* is a pilumnid (see Chia & Ng 1999); *Asthenognathus* is a varunid (subfamily Asthenognathinae Stimpson, 1858, *sensu stricto*) (see Cuesta *et al.* 2005; Ng *et al.* 2008); and *Tritodynamia* is a macrophthalmid (subfamily Tritodynamiinae Štević, 2005) (see Štević 2005; Ng *et al.* 2008). There are still systematic problems with *Asthenognathus* and *Tritodynamia*, genera which have the most species. Ng *et al.* (2008) have commented that there are two major groups of *Tritodynamia*, and not all are macrophthalmids, while Naruse & Clark (2009) noted that *Asthenognathus atlanticus* Monod, 1933, may represent an undescribed genus of Gaeticinae in the Varunidae.

The transfer of Asthenognathinae to the Varunidae has left the classification of the remaining two genera, *Aphanodactylus* and *Voeltzkowia*, uncertain as to their placement. Recently, *Voeltzkowia* Lenz, 1905, was recently shown to be a junior homonym of Boettger, 1893 [Reptilia] and was given the replacement name *Gandoa* Kammerer, 2006. Ng *et al.* (2008) argued that *Aphanodactylus* and *Gandoa* will probably need to be