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A new species of *Megaesthesius* Rathbun, 1909 (Crustacea: Brachyura: Chasmocarcinidae) from deep water off Western Australia

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Abstract

A new species of *Megaesthesius* Rathbun, 1909, *M. westralia*, is described from shelf waters off Western Australia. It can be separated from its two congeners by differences in carapace shape and dentition, as well as differences in the male abdomens and gonopods.

Key words: Chasmocarcinidae, *Megaesthesius*, Western Australia, new species, taxonomy, continental shelf

Introduction

The genus *Megaesthesius* Rathbun, 1909, was established for a curious little crab, *Megaesthesius sagedae* Rathbun, 1909, found in shallow, soft bottoms in the waters around Singapore. Yokoya (1933) reported two males of "*Megaesthesius* sp." from deeper waters off Japan (110 and 240 m), and these were later recognised as a valid second species, and named in his honour, *Megaesthesius yokoyai* Sakai, 1939. There have been few records of either species in the intervening years. Serène (1964) recorded a single female of *M. sagedae* from a depth of about 40 m, to the north-east of Malaysia, just outside of the Gulf of Thailand (7°00'15"N, 105°27'40"E), and provided the first accurate figures, though the shapes of the male abdomen and gonopods have remained undescribed for Southeastern Asia material. Crosnier (1975) recorded a male and a female of *M. sagedae* from off Madagascar in about 72 m depth, and provided excellent figures of a male (Figs. 3N, 4C, D, F, G, I).

Megaesthesius Rathbun, 1909, was placed into a new subfamily Chasmocarcininae (at that time placed within the Goneplacidae) by Serène (1964), although with some reserve. The Chasmocarcininae was established to accommodate genera such as *Camatopsis* Alcock & Anderson, 1899, *Chasmocarcinus* Rathbun, 1898, *Hephthopelta* Alcock, 1899, *Megaesthesius* Rathbun, 1909, and *Scalopidia* Stimpson, 1858 (the last now removed to its own family, see Ng *et al.* 2008). Davie & Guinot (1996: 285) discussed the composition of the Chasmocarcininae and decided to exclude *Megaesthesius* from the subfamily. They recommended investigating its relationships further, but they did not reassign it to any other family, thus leaving it as an *incertae cedis*. More contemporary opinions (Števc̆ić 2005; Ng *et al.* 2008) elevated the Chasmocarcininae to full family status, with Števc̆ić (2005) further splitting it into two subfamilies, creating the monotypic Megaesthesiinae for *Megaesthesius*. Although Števc̆ić (2005) provided a diagnosis, he did not however discuss the unique apomorphies that might justify the split. Ng *et al.* (2008) subsequently added the Troglaplacinae Guinot, 1986, as a third subfamily in the Chasmocarcinidae. I here follow Ng *et al.* (2008) in tentatively recognising Megaesthesiinae as a distinct subfamily. Peter Castro & Peter Ng (personal communication) are currently undertaking a revision of the Chasmocarcininae, and will revise *Megaesthesius* and its generic relationships at the same time.

The present single male specimen is the first record of *Megaesthesius* from Australian waters. It was collected as part of a *Southern Surveyor* voyage (SS10-2005) to explore the shelf edge and slope off south-western Australia (Poore *et al.* 2008).

Abbreviations: MV = Museum Victoria, WAM = Western Australian Museum. G1 and G2 = male first and second gonopods respectively; P1–P5 = pereopods 1–5. Measurements are of carapace breadth followed by carapace length; all measurements are in millimeters.