



Chirostylidae of Australia's western continental margin (Crustacea : Decapoda : Anomura), with the description of five new species

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Abstract

Five new species from the squat lobster family Chirostylidae are described from the continental margin of western Australia: *Uroptychus albus* **sp. nov.**, *Uroptychus bardi* **sp. nov.**, *Uroptychus jawi* **sp. nov.**, *Uroptychus taylorae* **sp. nov.**, and *Uroptychus worrorra* **sp. nov.** New records of Indo-West Pacific species for Australia are: *Gastroptychus brachyterus* Baba, 2005, *Gastroptychus investigatoris* Alcock, 1899, *Uroptychodes grandirostris* (Yokoya, 1933), *Uroptychodes mortenseni* (Van Dam, 1939), *Uroptychus scandens* Benedict, 1902, *Uroptychus ciliatus* (Van Dam, 1933) and *Uroptychus vandamae* Baba, 1988. New distributional records are given for species previously recorded from Australia: *Uroptychus flindersi* Ah Yong & Poore, 2004, *Uroptychus hesperius* Ah Yong & Poore, 2004, *Uroptychus joloensis* Van Dam, 1939, *Uroptychus nigricapillis* Alcock, 1901, and *Uroptychus spinirostris* (Ah Yong & Poore, 2004). These new records expand the number of chirostylid species in Australia from 34 to 46. Keys to Australian species of the genera *Gastroptychus*, *Uroptychodes* and *Uroptychus* are provided.

Key words: Crustacea, Decapoda, Anomura, Western Australia, new species, squat lobster, keys, *Gastroptychus*, *Uroptychodes*, *Uroptychus*

Introduction

The Chirostylidae, commonly referred to as deep-sea squat lobsters, are a highly diverse family of anomuran crustaceans that inhabit outer shelf, slope and seamount habitats across the world (Baba *et al.* 2008). Taxonomic and ecological interest in squat lobsters generally (belonging to superfamilies Galattheoidea and Chirostyloidea) has increased considerably in recent years. A checklist of all valid species was recently presented by Baba *et al.* (2008), and from these records of distribution a biogeographic analysis of the Pacific was undertaken (Macpherson *et al.* 2010). The squat lobsters are rapidly advancing our understanding of deep-sea environments (Rowden *et al.* 2010) and therefore keeping up to date with the taxonomy and distribution of these animals is a priority.

The present study is based on material collected using beam trawl or epibenthic sled during the Commonwealth Scientific and Industrial Research Organisation (CSIRO) FRV *Southern Surveyor* "Voyages of Discovery" in 2005 and 2007 along Australia's western continental margin. Covering more than 23 degrees of latitude, the surveys revealed a diverse and relatively undiscovered decapod crustacean fauna (Poore *et al.* 2008; McCallum 2011). Of more than 850 species of decapods identified, one-third are suspected to be new species (McCallum 2011).

According to the recent revision of the classification of Chirostyloidea by Schnabel & Ah Yong (2010), the family Chirostylidae includes five genera: *Chirostylus* Ortmann, 1892, *Gastroptychus* Caullery, 1896, *Hapaloptyx* Stebbing, 1920, *Uroptychodes* Baba, 2004 and *Uroptychus* Henderson, 1888. Prior to this study, the Australian chirostylid fauna comprised 35 described species from four genera; *Chirostylus* (1), *Gastroptychus* (3), *Uroptychodes* (1) and *Uroptychus* (30) (Davie 2002; Ah Yong & Baba 2004; Ah Yong & Poore 2004; Poore & Andreakis 2011). Here, we add five new species, record seven Indo-West Pacific species for the first time in