

Porcellidiidae of Australia (Harpacticoida, Copepoda). I. A Reassessment of the European Species of *Porcellidium*

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ABSTRACT. A new species, *Porcellidium rastellum*, is described from NSW bringing the total number of species in that genus for Australia to seven. Unlike other Australian genera in the Porcellidiidae, *Porcellidium* Claus, 1860 is ill defined. *Porcellidium viride* (Philippi, 1840) is considered the type species to the genus, but it has never been adequately characterized. This has led to considerable disagreement on the characters that define the genus. *Porcellidium viride* can be identified from a species specific character shown by Brady's (1880) drawing of the male antennules. Another species, *Porcellidium fimbriatum* Claus, 1863, can also be identified by species specific characters shown in the more complete description by Claus (1889). This enables new specimens of these two species to be identified with a high degree of certainty. In the present study, specimens collected from Oban, Scotland, identified as *P. viride* and *P. fimbriatum*, have been used to redescribe both species in detail and select species specific characters for a diagnosis of each species. A new diagnosis for the genus *Porcellidium* is given, based on the characters of *P. viride*. Extensive enquiry suggests that Philippi's and Claus' type material is lost. To ensure taxonomic stability of the genus *Porcellidium*, a neotype of *P. viride* is designated. From this study it is shown that *P. lecanoides* Claus, 1889 and *P. sarsi* Bocquet, 1948 are junior synonyms for *P. viride*. The new diagnosis for *Porcellidium* excludes many of the species originally placed in that genus. *Porcellidium tenuicauda* Claus, 1860 and *P. scutatatum* Claus, 1889 are examples of species that possess apomorphic characters excluding them from *Porcellidium* sensu stricto. A new genus, *Porcelloides* gen. nov. is proposed to take Claus' two species, as *Porcelloides tenuicaudus* (Claus, 1860) comb. nov., and *Porcelloides scutatatus* (Claus, 1889) comb. nov. Keys to the known species of *Porcellidium* and *Porcelloides* are given.

KEYWORDS: Porcellidiidae, *Porcellidium*, *Porcelloides*.

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Considerable progress has been made in our understanding of the family Porcellidiidae from recent studies on the fauna of the West Pacific Ocean. The works of Gamô (1969), Ho (1986), S. Kim & W. Kim (1996), Harris & Iwasaki

(1996a,b), Il-H. Kim & H.-S. Kim, (1997) and Harris & Iwasaki (1997, 2009) have described in detail 17 new species from Japan and Korea while another 23 new species have been described from Aotearoa (New Zealand) and Australia,