

Porcellidiidae of Australia (Harpacticoida, Copepoda). III. Synopsis of Genera and Species

Vernon A. Harris

138/99 Doolong Road, Kawungan Queensland 4655, Australia
vaharris@bigpond.com

ABSTRACT. Three new species belonging to the Porcellidiidae are described. A species from NSW possessing massive honeycomb-like dorsal growths of cuticle, and other features not found elsewhere in the family, has been placed in a new genus, *Cereudorsum verrucosum* gen. et sp. nov. A second species from Queensland, characterized by unusual features of the male antennule, has been placed in a new genus, as *Geddesia quadrata* gen. et sp. nov. *Porcellidium trisetosum* Geddes, 1968 does not fit the diagnosis for *Porcellidium* and is transferred to *Geddesia* gen. nov., as *G. trisetosa* (Geddes, 1968) comb. nov. A third species from the Cocos Keeling Islands is unique in having only one seta on the maxillule endopod. It has been referred to a new genus, as *Chunia cocosensis* gen. et sp. nov. This brings the total number of genera described from eastern coast of Australia to 16.

A key to the genera, a list of the apomorphic or unique characters of each genus and a check list of the identifiable species of Porcellidiidae is given. The geographical distribution of species along the east coast of Australia is outlined.

KEYWORDS: Porcellidiidae, *Cereudorsum*, *Chunia*, *Geddesia*, *Porcellidium*.

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It is now recognized that the family Porcellidiidae has more than one genus, although there is some disagreement as to their number. Bodin (1997) lists eight but Wells (2007) only recognizes six and considers *Acutiramus*, *Kensakia*, *Kioloaria*, *Murramia* and *Mucrorostrum* synonyms for *Porcellidium* on the grounds that they were not defined according to the Hennigian system. The real problem, however, was the lack of agreement between authors over the concept of *Porcellidium*. Our knowledge of these characters is based on Brady's (1880) incomplete and inaccurate description of his *Porcellidium viride*. However, Brady does show one unique species specific feature on the male antennule that allows the species to be identified with certainty. This fact has been used to redescribe the male *Porcellidium viride* in detail and give a definitive diagnosis for the genus (Harris, 2014a). The new diagnosis highlights

the fact that more than half of the species formerly placed in *Porcellidium* no longer belong to that genus and must be moved elsewhere. The five genera listed above each possess apomorphic characters, not found on the type species *P. viride*, which exclude them from the genus *Porcellidium*. By 2002 ten genera had been described and prior to this paper another three had been added (Harris, 2014a,b). The three new species described here present a similar problem: they possess characters considered apomorphic which exclude them from all previously described genera.

Based on over 60 species for which reliable data on the male antennule are now available, a reassessment of all the proposed genera can be made to determine their validity. Walker-Smith (2001) pointed out that the genera proposed by Harris & Robertson (1994), Harris (1994) and Harris & Iwasaki (1996) were defined on a collection of characters