

New and Little-known Podoceridae (Peracarida: Amphipoda) of Southern Australia

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ABSTRACT. Thirteen taxa in the family Podoceridae are documented for southern Australia, including five new species, three new records and five redescriptions. The redescription of *Cyrtophium minutum* Dana, 1852; *Podocerus dentatus* (Haswell, 1879); *Podocerus hystrix* Stebbing, 1910; *Podocerus inconspicuus* (Stebbing, 1888) and *Podocerus lobatus* (Haswell, 1885) helps clarify existing knowledge of these old taxa.

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Prior to this study, nine species of podocericid were known from southern Australia; *Cyrtophium minutum* Haswell, 1879; *Laetmatophilus dabberi* Barnard & Drummond, 1981; *L. hystrix* (Haswell, 1880); *Leipsuropus parasiticus* (Haswell, 1879); *Podocerus dentatus* (Haswell, 1879); *P. hystrix* Stebbing, 1910; *P. inconspicuus* (Stebbing, 1888); *P. laevis* (Haswell, 1885) and *P. lobatus* (Haswell, 1885). With the exception of *Laetmatophilus dabberi*, the Australian fauna is described in the literature before 1911. *Podocerus laevis*, is considered an unidentifiable taxon (Kilgallen, 2009). The following work clarifies the taxonomy of taxa recognized more than a century ago and describes a further five new species. Extensive material housed in state museum collections has provided a valuable resource to investigate variation in podocericid morphology. During this study, material of one historic podocericid taxon was unfortunately not encountered: *Laetmatophilus hystrix* (Haswell, 1880), with the type locality of Port Jackson, Sydney. Based on the original descriptions *L. hystrix* is still considered valid and identifiable.

Podocerids are sexually dimorphic as with most corophiideans, however female podocerids have clearly recognizable species level characters. This is somewhat unusual in the corophiideans where such groups as amphithoid

and ischyrocerids show strong sexual dimorphism but little variation in the female form between species (Barnard, 1965).

Characters most useful for species level identification include: pereonite and pleonite carination; gnathopod 1 propodus shape; gnathopod 2 propodus shape, palm sculpting and setal ornamentation. Dorsal carination although highly useful for identification, is not always a species level character and this has contributed to confusion within the family (Pirlot, 1938; Rabindranath, 1972; Ledoyer, 1984).

Species level characters which alter with growth stage include: the relative size of dorsal carination; gnathopod 1 propodus palm number of robust setae and dactylus posterior margin serrations; and gnathopod 2 propodus palm tooth size (see K. H. Barnard, 1937; Pirlot, 1938; Ledoyer, 1986). All these characters increase in size/number with development. For *P. akanthius* sp. nov. specimens between 3.3–4.5 mm, showed no variation in the number of robust setae on the gnathopod 1 propodus palm. However in *P. dentatus* specimens between 5.0–7.0 mm had five or six palmar robust setae and one individual 5.1 mm with nine robust setae. Variation of gnathopod 2 propodus palm sculpting and tooth development, for the species studied here, did not vary to the degree reported for the well documented *P. chelonophilus* (Chevreux & de Guerne, 1888), (see Baldinger, 2001).