Records of the Australian Museum (1983) Vol. 35: 167-180. ISSN-0067-1975.

The New Zealand and South-east Australian Species of *Aora* Krøyer (Amphipoda, Gammaridea)

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ABSTRACT. Six species of *Aora* are reported from New Zealand and south-east Australia: *Aora typica* Krøyer, *A. maculata* (Thomson), *A. mortoni* (Haswell), *A. hebes* n.sp., *A. hircosa* n.sp., and *A. adpressa* n.sp. A key is given to the males of *Aora* species of the world.

MYERS, A.A., & P.G. MOORE, 1983. The New Zealand and south-east Australian species of *Aora* Krøyer (Amphipoda:Gammaridea). Records of the Australian Museum 35(4): 167–180.

The genus *Aora* Krøyer was first recorded in New Zealand waters by Thomson (1879), who erected the species *Microdeutopus maculatus* Thomson. In the same year, Haswell recorded the genus from Australian waters under the names *M. mortoni* Haswell and *M. tenuipes* Haswell. Apart from a further paper by Haswell (1882) in which these latter two species were redefined, no further work has been published on Australian species. In New Zealand, Chilton (1885) recorded the occurrence of two 'forms' of male *Aora,* but placed both as forms of *A. typica* Krøyer, a species originally described from Chile. Stebbing (1906) synonymized all the then known world *Aora* species with *A. typica* Krøyer, thereby stifling critical analysis of the genus for over half a century, although Schellenberg (1926) and K.H. Barnard (1932) both erected further 'forms' of *A. typica*. Myers (1969) and J.L. Barnard (1972) both suggested that the variously described 'forms' of *A. typica* warranted specific status, and fourteen species are now recognized in world seas. J.L. Barnard (1972) reported two species of *Aora* from New Zealand waters, but although he attributed one species to *A. maculata* (Thomson), he was unable to allocate the other to a known species, probably owing to his not having fully adult males of the latter species before him. It is clear from his excellent figures of a juvenile male that his latter species was referable to *A. typica* Krøyer.

We have had the opportunity to study several collections of *Aora* from New Zealand and Australia (including Tasmania) and have found six species to be present: *A. mortoni* (Haswell) (of which *M. tenuipes* Haswell represents the female), *A. typica* Krøyer, *A. maculata* (Thomson), *A. hircosa* n.sp., *A. hebes* n.sp., and *A. adpressa* n.sp.

In general, *Aora* species are morphologically very uniform except for the highly diagnostic male gnathopoda. During the course of the present work, the appendages (including the mouthparts) of all six species were compared and numerous small differences were noted. However, material from a wider range of localities is required before the specific significance of these differences can be ascertained by more detailed morphometric analysis. Many of the differences observable are apparently correlated with size, so that the appendages of small species agree closely in morphology with the corresponding appendages of small specimens of larger species. It is premature to attempt to compare the detailed morphology of the various species but we feel that a valuable contribution can be made by establishing the presence of at least six species in the region, elucidating the synonymy of previously recorded *Aora* material, and facilitating the identification, at least of males, of the New Zealand and SE Australian species. To this end, the paper concentrates on the morphology of the highly diagnostic male gnathopoda, although female gnathopoda and selected mouthparts are also figured, as are lateral views of entire male specimens.

In live material, colour patterns will almost certainly be of great value in segregating the species. Where known, the colour pattern of living material is described, otherwise the pattern observed in preserved material is given. The reader should be aware that because of differential fading of pigments in the pattern mosaic, preserved material may appear very different from live material.

A key to the males of all world species of *Aora* is provided.

Some of the material on which this study is based was collected by one of us (A.A.M.) but the greater part was made available to us by the generosity of Ms M. Drummond, National Museum of Victoria (NMV), Dr J.K. Lowry, Australian Museum (AM), Mr T.M. Walker and Mr G. Edgar, University of Tasmania (UT) and Prof. S. Ruffo, Museo Civico di Storia Naturale, Verona (VM).