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Taxonomic revision and systematics of continental Australian pygmy water boatmen (Hemiptera: Heteroptera: Corixoidea: Micronectidae)

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Abstract

The pygmy water boatmen (Hemiptera: Heteroptera: Micronectidae) of continental Australia are revised. The two genera and 17 species occurring in Australia are fully described and keyed. The following species are transferred to *Austronecta* gen. nov.: *Micronecta australiensis* Chen, *M. micra* Kirkaldy, and *M. carinata* Chen. *Austronecta bartzarum*, sp. nov., is newly described. Within *Micronecta* Kirkaldy, thirteen species are recorded, including *M. paragoga* sp. nov. The following new synonymies are proposed: *Micronecta illiesi* Wróblewski, *Micronecta concordia* King and *Micronecta dixonia* King are junior synonyms of *Micronecta annae* Kirkaldy. A lectotype is designated for *Micronecta tasmanica* Wróblewski. *Micronecta ludibunda* Breddin is newly recorded for Australia, based on one male examined from Queensland. Within Australia, range extensions are recorded for the following species: *Austronecta australiensis* (New South Wales, Queensland); *A. micra* (Western Australia); *Micronecta lansburyi* Wróblewski (Western Australia); *M. adelaidae* Chen (Western Australia); *M. major* Chen (Queensland); *M. halei* Chen (South Australia); *M. virgata* Hale (Northern Territory); *M. quadristrigata* Breddin (Northern Territory); and *M. queenslandica* Chen (Northern Territory). All species are described and illustrated. Discussion and documentation of all primary type material is provided and where available, type specimens are illustrated. All male genitalic structures are illustrated with scanning electron micrographs. Line drawings are included for all other diagnostic characters, along with color habitus illustrations for both sexes of all species. Distribution maps are included for the following species: *Austronecta micra*, *A. bartzarum*, *Micronecta paragoga*, *M. lansburyi*, *M. adelaidae*, *M. major*, *M. virgata*, *M. halei*, *M. quadristrigata*, and *M. queenslandica*. Diagnostic morphology and variation is discussed for all treated species. A phylogenetic analysis of Australasian micronectid generic relationships is presented. Discussion is provided on zoogeographic relationships of Australian Micronectidae.

Key word: Heteroptera, Corixoidea, Micronectidae, pygmy water boatmen, water bug, morphology, biogeography