



Five new species and new records of Hydroptilidae (Trichoptera) from the Wet Tropics of northeastern Queensland

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Abstract

Five new species of Hydroptilidae are described from the Wet Tropics of northeastern Queensland: *Orphnino-trichia barbarae* **sp. nov.**, *O. desleyae* **sp. nov.**, and *O. alata* **sp. nov.**; and *Orthotrichia rentzi* **sp. nov.** and *O. andicairnsae* **sp. nov.** New records extend the known distribution of one species in each of these genera, and brief comments are given on probable classification of the genus *Orphnino-trichia* and on biology as deduced from collecting data.

Key words: Trichoptera, Hydroptilidae, *Orphnino-trichia*, *Orthotrichia*, new species, new records, relationships

Introduction

Among Australian Trichoptera, the family Hydroptilidae is the second most speciose of the 26 families recognised in the fauna, with some 140 described species in 15 genera (ABRS 2009). Moreover, even after more than 50 years of intensive collecting of Trichoptera throughout Australia, adults of new hydroptilid species are taken from time to time, especially if different collecting methods are employed; and, as yet, very little is known of the life histories of most species. Here 5 new species from northeastern Queensland are described in 2 hydroptilid genera, *Orphnino-trichia* Mosely (3 spp.) and *Orthotrichia* Eaton (2 spp.). The new species are known from few specimens and were collected from sites at which Trichoptera have been collected previously, often on numerous occasions, and usually at lights. The *Orthotrichia* species were taken at lights at night, most of the *Orphnino-trichia* by sweep netting during the day. One species of *Orphnino-trichia*, *O. barbarae* **sp. nov.**, was swept at a site close to where a light has been run regularly for around 2 years. Clearly the adults of this species either move little from the riparian area or are not attracted to lights. Such behaviour is probably common to most of the other 14 species presently described in *Orphnino-trichia*, larvae of which are usually found on the face of waterfalls and cascades, where they feed by scraping off micro-algae and other organic material (Wells 1997).

Material and methods

Specimens were prepared for examination by maceration in 10% alcoholic KOH, and mounted on slides in Canada Balsam. Figures were prepared electronically. For consistency, terminology follows that recently applied to Hydroptilidae (Cairns and Wells 2008), with the exception that the term tergite X is used rather than ‘dorsal plate’. Except where otherwise stated, specimens are in the Australian National Insect Collection, Canberra, Australia (ANIC). Other abbreviations used for museum collections are BMNH (= The Natural History Museum, London); NMV (= Museum Victoria); and QM (= Queensland Museum).