



# Article

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## Review of the New Caledonian species of *Paroxyethira* Mosely, 1924 (Trichoptera: Hydroptilidae)

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### Abstract

New Caledonian representation of the New Zealand-New Caledonian hydroptilid caddisfly genus *Paroxyethira* Mosely, 1924, is reviewed on the basis of a considerable collection from widespread New Caledonian localities. Description of 8 new species brings to 10 the known fauna for the island. Males of all New Caledonian species are illustrated, a key to adult males is provided, and the associated females are described for 6 species.

**Keywords:** caddisflies, New Caledonia, new species, revised diagnoses, key

### Introduction

The New Caledonian hydroptilid caddisfly fauna at present comprises 28 described species in the genera *Acritoptila* Wells, 1982 (9 species), *Caledonotrichia* Sykora, 1967 (5 species), *Oxyethira* Eaton, 1873 (10 species), *Hellyethira* Neboiss, 1977 (1 species), *Hydroptila* Dalman, 1819 (1 species) and *Paroxyethira* Mosely, 1924 (2 species) (Sykora 1967, Kelley 1989, Wells 1995, Oláh & Johanson 2011). The genus, *Paroxyethira* Mosely, 1924, erected for 3 species, was described originally as a New Zealand endemic. Subsequently, the known New Zealand fauna was increased to 5 species by Leader (1972) and the distribution was extended with description by Kelley (1989) of 2 species from New Caledonia. More recently, Ward & Henderson (2004) described another 10 New Zealand species.

As a result of several field trips to New Caledonia by one of us (KAJ) and his associates (in 2001, 2003–2004 and 2006), an interesting collection of hydroptilids, including new species of *Paroxyethira*, is now available. The extensive material constitutes around 120 male and 240 female *Paroxyethira* specimens collected in light traps or Malaise traps and includes also many species in the genera *Caledonotrichia*, *Oxyethira*, *Hellyethira* and *Acritoptila*. These genera will be treated in separate papers. Here we described 8 new species of *Paroxyethira*, revise diagnoses and provide new figures for Kelley's 2 species. In addition, females of 6 of the New Caledonia species are described and illustrated and a key is supplied to males of all New Caledonian *Paroxyethira* species.

*Paroxyethira* was assigned by Marshall (1979) to the subfamily Hydroptilinae, tribe Hydroptilini, with which members it conforms in presence of ocelli, reduced tentorial arms, form of antennal segments, tibial spur count, shapes of the mesoscutellum and metascutellum, somewhat reduced wing venation (forks 1 and 2 present on forewing, 2 on hind wing), and absence of the jugal lobe on the forewing. Holzenthal *et al.* (2007), following Mosely (in Kelley 1989) and Morse (2011), listed *Paroxyethira* in Hydroptilini and this is undoubtedly a correct assignment of the genus. Known larvae are hydroptiline in morphology, according to Leader (1972), separated only with difficulty from larvae of *Oxyethira*. The 'oblong, purse-shaped cases' are quite readily distinguished from the characteristic flask-shaped cases of all known *Oxyethira* larvae, but indistinguishable from those of some species of *Acritoptila* or the mostly Australian genus *Hellyethira*.

Despite our confidence in placement of *Paroxyethira* in Hydroptilini, the remarkable convergence in form of some of the male genitalic structures with those of males in other Hydroptilinae tribes is unsettling. For example, the