



***Austrotinodes* Schmid, a South and Central American caddisfly genus, newly recorded in Australia, with the description of new species (Trichoptera: Ecnomidae)**

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Abstract

Descriptions, keys and a checklist are provided for males of 11 ecnomid caddisfly species, all new to Australia. Females of 4 species are also described. These are placed in the genus *Austrotinodes* Schmid. The new species are: *Austrotinodes bibu*, *A. bifurcatus*, *A. camurus*, *A. doota*, *A. glaya*, *A. gorom*, *A. mubar*, *A. pandus*, *A. theischingeri*, *A. varus* and *A. yalga*. *Austrotinodes* with a total of 38 species previously recorded from South and Central America and southern USA, is here recorded from Australia for the first time.

Key words: Trichoptera, caddisflies, Ecnomidae, *Austrotinodes*, Australia

Introduction

This paper continues the review of the Australian ecnomid genera. The adults of three genera, *Ecnomus* McLachlan (40 species), *Ecnomina* Kimmins (36 species) and *Daternomina* Neboiss (16 species) have previously been revised (Cartwright 1990, 2008). The study of ecnomid larvae has long been recognized as critical to elucidating the relationships between groups of species, and in Australia a distinct larval type has long been recognized, as ecnomid genus D (Cartwright and Dean 1982) and later as the *Ecnomina* D group (Cartwright 1997) and more recently as Ecnomidae Genus D (Dean *et al.* 2004). Larvae have only recently been associated with adults, and the species are herein placed in the genus *Austrotinodes*. The genus has previously only been recorded from central and southern American, and is recorded from Australia for the first time. The description of 11 new species takes the known Australian ecnomid fauna to 4 genera and 103 species and the world ecnomid fauna to a relatively large total of at least 10 genera and over 400 species.

Austrotinodes was established by Schmid (1955) to accommodate two new species and two previously described species (Navás 1934), all from Chile. Additional species were described by Schmid (1958, 1964), Flint (1969, 1973, 1983, 1996), Kumanski (1987), Flint and Denning (1989), Botosaneanu (1990), Munos-Quesada and Holzenthal (1993), Angrisano (1994) and Bowles (1995), bringing the total number of described species to 38.

Flint (1973) and Li and Morse (1997) have both attempted phylogenetic studies on the family Ecnomidae. Flint's (1973; diagram 1, p. 131) study was limited to wing and male genitalia characters. In his phylogenetic tree, he placed *Psychomyiellodes*, *Ecnomus* and *Parecnomina* on one branch and *Ecnomina* and *Austrotinodes* on the other. He was unable to find character states to distinguish the latter two genera and suggested that they may ultimately be synonymized. Flint did however, split the genus *Austrotinodes* into a Chilean group and a Central American-northern South America group, based on a small difference in the hindwing. Li and Morse (1997; tables 2 and 3, pp 117–118) listed thirteen wing, male and female genitalia and larval characters in their phylogenetic analysis. In their findings, they also stated that there were two branches; the first branch contained *Ecnomus* and *Psychomyiellodes*, and the second *Ecnomina*, *Austrotinodes* and *Parecnomina*. Ward