



## ***Kaurimymia* gen. nov.: discovery of Apsilocephalidae (Diptera: Therevoid clade) in New Zealand**

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### **Abstract**

A new genus (*Kaurimymia thorpei* gen. et sp. nov.) of the enigmatic fly family Apsilocephalidae (Asiloidea) is described from New Zealand. *Kaurimymia thorpei* gen. et sp. nov. is described and figured from male and female specimens, one of which was collected in Kauri forest near Auckland (North Island). While superficially similar to *Apsilocephala* Kröber, this new genus shows closer affinities to *Clesthentia* White (= *Clesthentiella* Nagatomi, Saigusa, Nagatomi et Lyneborg syn. nov.) from Tasmania based on genitalic characters such as aedeagus shape and non-articulated surstyli. Apsilocephalidae is presently known from just a few extant species in North America and Tasmania (Australia), although extinct species are recorded from the Holarctic and Oriental regions. This is the first description of the family from New Zealand.

**Key words:** Apsilocephalidae, New Zealand, Kauri

### **Introduction**

The therevoid clade consists of four families of Asiloid flies (Lower Brachycera): Therevidae, Scenopinidae, Evocoidae and Apsilocephalidae. The clade has been poorly defined in a phylogenetic sense due to numerous plesiomorphies in the adults and lack of information on immatures of two of the families (Apsilocephalidae and Evocoidae). Scenopinidae and Therevidae have been long established as family groups, while Evocoidae was only recently described based on a single species from Chile (Yeates *et al.* 2003). Apsilocephalidae are an enigmatic group comprising three extant genera, one described from North America (*Apsilocephala* Kröber) and two monotypic genera described from Tasmania (Australia) (*Clesthentia* White and *Clesthentiella* Nagatomi, Saigusa, Nagatomi & Lyneborg (Nogatomi *et al.* 1991a). An extinct monotypic genus (*Burmap-silocephala* Gaimari & Mostovski) was described from Burmese amber (Gaimari & Mostovski 2000) while Hauser & Irwin (2005) recently transferred the fossil species, *Apsilocephala vagabunda* (Cockerell) described from Florissant shale, from Therevidae to Apsilocephalidae.

Apsilocephalidae are diagnosed in the context of Asiloidea by the presence of surstyli on the male epan-drium, three sclerotised spermathecae and antennal and wing venational characteristics. The presence of hind coxal knobs and a spermathecal sac in the female reproductive system of all Apsilocephalidae places this family in the Therevoid clade (Winterton *et al.* 1999b; Yeates 2002). The family status of Apsilocephalidae has remained highly contentious until recently. *Clesthentia* was originally described in Leptidae (= Rhagionidae) by White (1915) and subsequently transferred to Therevidae by Hardy (1921). Placement of both *Apsilocephala* and *Clesthentia* in Therevidae was questioned by Irwin (1976) and Irwin & Lyneborg (1981, 1989) until Nagatomi *et al.* (1991a) erected Apsilocephalidae for these genera and described *Clesthentiella*. Sinclair *et al.*