



## ***Zealantha thorpei* gen. et sp. nov. (Diptera: Anthomyzidae), first family representative from New Zealand**

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### **Abstract**

The first representative of the family Anthomyzidae discovered in New Zealand, viz. *Zealantha thorpei* sp. nov., is described and illustrated. *Zealantha* gen. nov. is diagnosed and its relationship to other known genera of Anthomyzidae is discussed on the basis of morphological features including characters of the male and female internal genitalia. Notes on the habitat association and distribution of the new species are given.

**Key words:** Anthomyzidae, *Zealantha* gen. nov., *thorpei* sp. nov., taxonomy, relationships, biology, distribution, New Zealand

### **Introduction**

The Anthomyzidae is a small group of acalyprate Diptera (20 genera and 94 species described to date including 2 fossil genera and species) with most species associated with larger graminoids (Poaceae, Cyperaceae, Typhaceae, Juncaceae) in damp habitats; only a few species are known to develop in dicotyledonous plants or in sporocarps of fungi (Roháček 2006). Larvae of Anthomyzidae have been found to feed in partly rotting plant tissues and the formation of their cephalopharyngeal skeleton suggests they are probably microsaprophagous.

No species of the acalyprate family Anthomyzidae has been described from the Australasian Region up to the present (see Vockeroth 1989; Roháček 1998); only Colless & McAlpine (1970, 1991) refer to the occurrence of unidentified species of *Amygdalops* Lamb, 1914 in northern Australia but there has been no evidence of the family in New Zealand. The nearest records of Anthomyzidae (3 species of the genus *Amygdalops*) are from Indonesia (Java – de Meijere 1916; Vockeroth 1977; Sueyoshi & Roháček 2003) and my current revision (Roháček, in prep.) has revealed *Amygdalops* species also in Australia (Queensland), Papua New Guinea, Mariana Is., Palau Is., Ponape Is. and the Philippines apart from more distant areas of the Oriental and Oceanian Regions.

During the years 2006–2007 Stephen E. Thorpe collected a good series of an unknown species of Anthomyzidae in several localities in the Auckland metropolitan area (New Zealand). This species, considered by him probably to be introduced, surprisingly was found not to belong to *Amygdalops* or any other genus of the family known from the adjacent biogeographical regions. Externally the species is reminiscent of an unusually coloured *Anthomyza* species but closer examination revealed it is not closely related to this group (which also is represented in the Oriental Region), nor to any other genus hitherto recognized in the world fauna.

The discovery of a member of the family Anthomyzidae in New Zealand is considered highly important from a biogeographical point of view. Not only does it substantially extend the world distribution of the family but also represents the first endemic anthomyzid genus in the Australasian Region. For all these reasons the new New Zealand genus and species are described below along with discussion of relationships and notes on biology and distribution.