

Australian Thaumaleidae (Insecta: Diptera)

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ABSTRACT. For the first time Thaumaleidae from Australia are named and classified. They are placed in two genera, *Austrothaumalea* Tonnoir and *Niphta* n. gen. The following new species are described: *Austrothaumalea australis* n. sp., *A. barrydayi* n. sp., *A. capricornis* n. sp., *A. cervulus* n. sp., *A. commoni* n. sp., *A. denticulata* n. sp., *A. fusca* n. sp., *A. macalpinei* n. sp., *A. minnamurrae* n. sp., *A. similis* n. sp., *A. simplex* n. sp., *A. sinuosa* n. sp., *A. spinosa* n. sp., *A. tasmanica* n. sp., *A. tonnoiri* n. sp., *A. uptoni* n. sp., *A. victoriae* n. sp., *A. zentae* n. sp., *Niphta bickeli* n. sp., *N. collessi* n. sp., *N. farecta* n. sp. A key is given to the males of all recognized Australian species and to the females so far as identifiable. New combinations are *Niphta halteris* (Edwards) and *Niphta nudipennis* (Edwards) from South America, both originally described under *Austrothaumalea*.

THEISCHINGER, G. 1986. Australian Thaumaleidae (Insecta: Diptera). Records of the Australian Museum 38(6): 291-317.

The Thaumaleidae comprise a homogeneous family of small (wing length 1.5-7.5 mm) (Fig. 1) stoutly built flies with shiny yellow to black bodies. Their eyes are holoptic in both sexes, their antennae short and slender. The wings have a characteristic venation and tend to fold downwards across a transverse line of weakness near the apex of the subcosta. The adults are diurnal and usually frequent wet rocks or vegetation near streams in wet forest. The larvae are aquatic and amphipneustic. The family (about 100 described species) is possibly mainly holarctic in distribution with less than a dozen species having been described previously from the southern hemisphere.

Tonnoir (1927) was the first to record Thaumaleidae from Australasia. He described a new genus, *Austrothaumalea*, with two species, *A. neozealandica* Tonnoir and *A. appendiculata* Tonnoir, from New Zealand. Tonnoir (1927) also recorded *Austrothaumalea* from Australia (including Tasmania) and announced the description of eight species from this region. However, Tonnoir published no descriptions of Australian members of *Austrothaumalea*. Referring to Tonnoir (1927) several authors (e.g. Edwards, 1929, 1930; Stuckenberg, 1960, 1961; Stone, 1966; Colless &

McAlpine, 1970; Arnaud, 1977; McLellan, 1983) mentioned the existence of undescribed species of *Austrothaumalea* in Australia. Of these, only Colless & McAlpine (1970) were more specific. They regarded the Australian species of Thaumaleidae as belonging to *Austrothaumalea* with one exception which appeared to be a member of the South African genus *Afrothaumalea* Stuckenberg.

Materials and Methods

For this paper I have studied all Australian Thaumaleidae made available from the Australian National Insect Collection (ANIC) in Canberra (which also holds Tonnoir's unpublished notes and collection), from the Australian Museum (AM) in Sydney, from the Museum of Victoria (MV) in Melbourne, and my own material (GT). This enabled me to present descriptions of 21 species. Whereas 18 belong to *Austrothaumalea*, 3 represent a new genus, perhaps close to but different from *Afrothaumalea*. The available larvae agree morphologically with the description which McLellan (1983) gave for *A. neozealandica* but cannot be specifically identified. From comparing the area covered