

## Superfamily CHIRONOMOIDEA

### 23. Family THAUMALEIDAE

By B.V. Peterson & Gunther Theischinger

**T**haumaleidae compose a small, homogenous family of rather small flies with wing lengths of ca. 1.5 to 7.5 mm and stocky, shiny yellow to dark brown bodies. Eyes are holoptic in both sexes, and the antennae are short, with the flagellomeres slender and arista-like. Wings have a characteristic venation and can fold downward from near their bases to a slanting rooflike position much as in Psychodidae. The primarily diurnal adults are not strong fliers and frequent damp areas near the habitats of the immature stages. Larvae are amphipneustic and somewhat resemble larvae of *Lutzomyia* França (Psychodidae) and *Forcipomyia* (Ceratopogonidae). They usually occur in shaded areas in cooler, flowing waters on rocks. They are found frequently on the vertical surfaces of rocks, but where the surface is covered by a film of water, that is thin enough not to submerge them completely. A few species have been reported from warmer waters varying from 18 to 28° C (Vaillant 1955, Andersson 1967). At least some species can overwinter as larvae and actively feed at water temperatures as low as 4° C (Gillespie 1971). Larvae apparently feed on diatoms and other organic

matter (Leathers 1922). Pupation occurs in wet moss or leaves, buried in mud, or on the undersides of rocks in stream beds. The larva and pupa of an unnamed species, misidentified as *Austrothaumalea neozelandica*, were recently described by McLellan (1983). For a discussion of other literature on the immature stages see Arnaud (1977).

This enigmatic family contains ca. 121 described species in 8 genera. They are mainly Holarctic in distribution, with 3 genera and 30 species named from the Southern Hemisphere [*Afrothaumalea* Stuckenberg (1 sp. plus 1 unnamed sp.), *Austrothaumalea* (24 spp.), and *Niphtha* (5 spp.)]. Only the last 2 genera have been reported within the geographical limits of this catalog. The New Zealand fauna is currently being revised and apparently contains an additional new genus and several new species (McLellan, pers. comm.).

*Refs.*: Bezzi (1913d, key, rev.), Edwards (1929c, 1930b, rev.), Martinovsky & Rozkošný (1976, general dist.), Stone & Peterson (1981, general treatment), Stuckenberg (1961, Afrotrop. dist.), Vaillant (1978, 1981, European dist., keys), Theischinger (1986, keys, rev. Australian spp.).

#### Genus AUSTROTHAUMALEA Tonnoir

**AUSTROTHAUMALEA** Tonnoir, 1927: 109. Type species: *Austrothaumalea neozelandica* Tonnoir, 1927, orig. des.

**appendiculata** Tonnoir, 1927: 112. NZ (NZ).

**australis** Theischinger, 1986: 296. Australia (WA).

**barrydayi** Theischinger, 1986: 297. Australia (NSW).

**capricornis** Theischinger, 1986: 298. Australia (NSW).

**cervula** Theischinger, 1986: 298. Australia (NSW).

**communi** Theischinger, 1986: 300. Australia (NSW).

**denticulata** Theischinger, 1986: 301. Australia (Tas); Australia (NSW, Qld, Vic).

**fusca** Theischinger, 1986: 301. Australia (Tas).

**macalpinei** Theischinger, 1986: 301. Australia (NSW).

**minnamurrae** Theischinger, 1986: 304. Australia (NSW); Australia (?Qld).

**neozelandica** Tonnoir, 1927: 110. NZ (NZ).

**similis** Theischinger, 1986: 305. Australia (Tas).

- longirostre** Smart, 1972: 613 (n. n. for *rostrata* Smart & Clifford). PNG (PNG).  
*rostrata* Smart & Clifford, 1965: 587. PNG (PNG). [Preocc. Lundström, 1911.]
- mackerrasorum** Colbo, 1976: 261. Australia (Qld); Australia (NT, WA).
- mafuluense** Smart & Clifford, 1965: 586. PNG (PNG).
- matokoense** Smart & Clifford, 1965: 585. PNG (PNG).
- melatum** Wharton, 1949: 406. Australia (NSW); Australia (Qld, Vic).
- mendiense** Smart & Clifford, 1965: 562. PNG (PNG).
- minji** Smart & Clifford, 1965: 555. PNG (PNG).
- mussauense** Delfinado, 1971: 137. PNG (Bismarck Arch).
- nicholsoni** Mackerras & Mackerras, 1948: 251. Australia (Qld); Australia (NSW, Vic).
- oculatum** Enderlein, 1936b: 121 (*Pselaphochir*). PNG (PNG).
- papuense** Wharton, 1948: 359. PNG (PNG).
- purosae** Smart & Clifford, 1965: 560. PNG (PNG).
- raunsimnae** Smart & Clifford, 1965: 569. PNG (Bismarck Arch); PNG (Bougainville I, PNG).
- rounae** Smart & Clifford, 1965: 539. PNG (PNG).
- saihoense** Smart & Clifford, 1965: 549. PNG (PNG).
- sherwoodi** Stone & Maffi, 1971: 299. Solomon Is.
- standfasti** Colbo, 1976: 259. Australia (Qld).
- tafae** Smart & Clifford, 1965: 578. PNG (PNG).
- torresianum** Mackerras & Mackerras, 1955: 106. Australia (Qld).
- wamena** Smart & Clifford, 1965: 584. PNG (PNG).
- wantootense** Smart & Clifford, 1965: 537. PNG (PNG).
- wilhelmlandae** Smart, 1944: 132 (n. n. for *pygmaea* Enderlein). PNG (PNG).  
*pygmaea* Enderlein, 1922a: 70 (*Wilhelmia*). PNG (PNG). [Preocc. Zetterstedt, 1838.]

#### Subgenus NEVERMANNIA Enderlein

- NEVERMANNIA** Enderlein, 1921a: 199 (as gen.). Type species: *Simulium annulipes* Becker, 1908 [= *Simulium ruficorne* Macquart, 1838], orig. des.
- CHELOCNETHA** Enderlein, 1936b: 117 (as gen.). Type species: *Chelocnetha biroi* Enderlein, 1936 [= *Simulium ornatipes* Skuse, 1890], orig. des.
- neornatipes** Dumbleton, 1969b: 213. New Caledonia (New Caledonia).
- norfolkense** Dumbleton, 1969b: 220 (*ornatipes* ssp.). Norfolk I.
- ornatipes** Skuse, 1890d: 632. Australia (NSW); Australia (Qld, SA, Vic, WA), PNG (PNG).  
*biroi* Enderlein, 1936b: 117 (*Chelocnetha*). Australia (NSW).