

## 104. Family NEUROCHAETIDAE

By Norman E. Woodley

The family Neurochaetidae, whose species are commonly known as upside-down flies, was erected for 3 concurrently described extant species in the genus *Neurochaeta* (McAlpine 1978b) and 2 species of *Anthoclusia* Hennig known from Baltic amber. Woodley (1982) described 2 additional species of *Neurochaeta* and discussed the phylogeny of species in the genus. McAlpine (1988a) recently described 3 additional species of *Neurochaeta* and placed *Nothoasteia*, a genus comprising 2 known species, in the family. Thus, there are 2 extant genera and a total of 10 species presently placed in the family; 4 species occur in the Australian Region.

*Neurochaeta inversa* has been relatively well studied for such a recently described fly. The biology of this species indicates that larval and adult neurochaetids are closely associated with specific

host plants. Adults are found primarily on leaves and inflorescences of *Alocasia macrorrhiza* (L.) G. Don (Araceae) and assume a head-downward orientation on vertical surfaces (McAlpine 1978b). Larvae develop in the watery medium around the infructescence of the host plant, apparently feeding on microorganisms (McAlpine 1978, Shaw *et al.* 1982). Adults have been observed feeding on pollen of the host plant (McAlpine, 1988b). *Neurochaeta magnifica* from Papua New Guinea was found associated with *Pandanus* sp. (Pandanaeae), and Oriental species of *Neurochaeta* have been collected on Musaceae and Zingiberaceae (McAlpine 1987b, 1988b).

*Refs.*: McAlpine (1978b; 1987b, biol.; 1988a, syst.; 1988b, biol.), Shaw *et al.* (1982, biol.), Woodley (1982, key, phylog.).

### Genus NEUROCHAETA McAlpine

NEUROCHAETA McAlpine, 1978b: 278. Type species: *Neurochaeta inversa* McAlpine, 1978, orig. des. *inversa* McAlpine, 1978b: 285. Australia (NSW); Australia (Qld). *magnifica* McAlpine, 1988a: 45. PNG (PNG).

### Genus NOTHOASTEIA Malloch

NOTHOASTEIA Malloch, 1936b: 259. Type species: *Nothoasteia platycephala* Malloch, 1936, orig. des. *clausa* McAlpine, 1988a: 55. Australia (WA). *platycephala* Malloch, 1936b: 259. Australia (Qld).