Stenurothripidae

Australian fauna

No member of this Family is known from Australia.

Biology

The members of this family are all flower-living. The four species of *Holarthrothrips* breed in the male flowers of *Phoenix* species, including the Date Palm. The single species of *Oligothrips* breeds in the flowers of *Arctostaphylus* in California, but the biology of the single species of *Heratythrips* in California remains unknown.

Geographic distribution

The members of *Holarthrothrips* are found between India and the Mediterranean area including the Canary Islands. In contrast, *Oligothrips* and *Heratythrips* are both known only from western North America.

Recognition

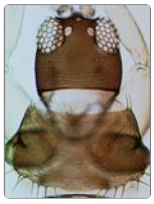
Stenurothripidae species all have nine antennal segments, of which the distal segments are fully distinct from each other, segments II-IX bear transverse rows of prominent microtrichia, and the sensoria on segments III and IV are broadly conical. Other characters of the body vary considerably between the three genera. *Heratythrips* differs from the other two in that the tentorium is not apparent within the head, and there are no long setae on the head or pronotum. However, *Heratythrips* resembles *Oligothrips* in having the metanotum reticulate, antennal segment IX about twice as long as wide, and abdominal tergite VIII without a posteromarginal fringe of microtrichia. In contrast, the species of *Holarthrothrips* have the metanotum with concentric rings of sculpture bearing microtrichia, antennal segment IX is about five times longer than wide, and tergite VIII bears a prominent posteromarginal comb.

Holarthrothrips tenuicornis, female

Oligothrips ? oreios, female

Oligothrips ? oreios, antenna

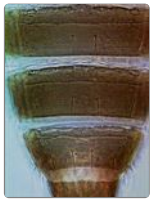
Oligothrips ? oreios, antennal segments III-V



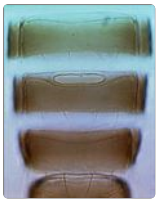
Holarthrothrips tenuicornis, head and pronotum

Holarthrothrips josephi, forewing

Holarthrothrips tenuicornis, meso and metanotum



Oligothrips ? oreios, abdominal tergites VI-VIII



Holarthrothrips tenuicornis, male sternites

Genus and species diversity

Only three genera of living species are recognised in the family Stenurothripidae (= Adiheterothripidae). *Adiheterothrips* is now recognised as a junior synonym of *Holarthrothrips* (Mound *et al.*, 1980), and this genus includes four species (Bhatti, 1986). *Oligothrips* and *Heratythrips* each include a single species (Mound & Marullo, 1999; Mound *et al.*, 2019). A further nine genera and 18 species of Stenurothripidae are known only from fossils (ThripsWiki, 2020).

Family relationships

The family Stenurothripidae possibly does not represent a single clade, and the only analysis of morphological data indicated that *Holarthrothrips* might be sister-genus to the Heterothripidae (Mound & Marullo, 1999). Molecular data derived from the gene 18S rDNA also suggested a close relationship between these taxa (Mound & Morris, 2007). The family Stenurothripidae was discussed by Bhatti (2006), but *Stenurothrips* Bagnall is based on a fossil specimen on which many structural details cannot be studied.

Thysanoptera systematics

The classification adopted here is a compromise between practicality and the ideal of a classification based on phylogenetic relationships. The two sub-orders, Terebrantia and Tubulifera, are probably sister-groups (Buckman *et al.*,

2013), but relationships among the eight families of Terebrantia remain far from clear (and there are also five families based on fossils - see ThripsWiki 2020). A radically different classification was proposed by Bhatti (1994, 1998, 2006) that recognised two Orders, 10 superfamilies and 40 families. This classification is based on autapomorphies rather than synapomorphies, and thus is essentially phenetic rather than phylogenetic.

References

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