

Liothrips invisus

Distinguishing features

Both sexes fully winged. Body and legs dark brown, tarsi slightly paler, antennal segment III with pedicel yellow; major setae light brown, tergite IX setae paler; fore wing deeply shaded but slightly paler in distal area. Antennae 8-segmented; segment III with one sense cone, IV with 3 sense cones; VIII short and broad at base. Head longer than wide with eyes not protruding; maxillary stylets retracted to eyes, close together medially; post ocular setae shorter than dorsal length of eyes, with apices rounded; mouth cone long and pointed, extending beyond fore coxae. Pronotum with five pairs of major setae with rounded or weakly capitate apices; epimeral sutures complete; prosternal basantra not developed, ferna present, mesopresternum divided into paired lateral triangles. Fore tarsus without a tooth. Metanotum with elongate reticulations medially, median setae not long. Fore wing parallel sided, with about six duplicated cilia; three weakly capitate sub-basal setae sub-equal in length. Tergite IX setae S1 bluntly pointed, slightly shorter than tube. Male similar to female; tergite IX setae S2 short and bluntly pointed; sternite VIII without a pore plate.



Male (holotype)



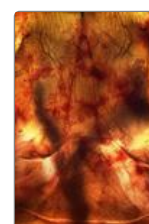
Antenna (holotype)



Pronotum (holotype)



Head (holotype)



Metanotum & pelta (holotype)



Fore wing (holotype)

Related species

L. invisus is unusual in this genus because of the short and dark third antennal segment. The head shape is also unusual, with the cheeks and compound eyes forming a single smooth outline, and the elongate mouth cone extending well beyond the fore coxae. Currently, there are almost 280 species listed in the genus *Liothrips*, although 30 of these are placed in two sub-genera known only from Asia. As a result, this is larger than either *Thrips* or *Haplothrips*, these three being the largest genera of Thysanoptera. However, in comparison to both *Thrips* and *Haplothrips* there are far greater problems in *Liothrips* in species recognition. A particularly high proportion of the described species are known from single samples, or even single individuals, resulting in little knowledge of variation within and between species, and thus the general assumption that most members of the genus are host-specific requires extensive testing. Stannard (1957) listed 32 species of *Liothrips* from North America, and subsequently (Stannard, 1968) included 14 of these in his keys to the Illinois fauna. Cott (1956) treated 11 species from California, two of which he placed in *Rhynchothrips*, but currently from this State there are 13 *Liothrips* species listed (Hoddle *et al.*, 2004) of which several cannot at present be recognized.

Biological data

Probably feeding on green tissues, adults and larvae being recorded in association with green oak galls on *Quercus* sp. [Fagaceae].

Distribution data

Known only from California.

Family name

PHLAEOTHIRIPIDAE, PHLAEOTHIRIPINAE

Species name

Liothrips invisus (Cott)

Original name and synonyms

Rhynchothrips invisus Cott, 1956: 65

References

Cott HE (1956) Systematics of the suborder Tubulifera (Thysanoptera) in California. *University of California, Berkeley, Publications in Entomology* **13**: 1–216.

Hoddle M, Mound LA & Nakahara S (2004) Thysanoptera recorded from California, USA: a checklist. *Florida Entomologist* **87**: 317–323.

Stannard LJ (1957) The phylogeny and classification of the North American genera of the sub-order Tubulifera (Thysanoptera). *Illinois Biological Monographs* **25**: 1–200.

Stannard LJ (1968) The Thrips, or Thysanoptera, of Illinois. *Bulletin of the Illinois Natural History Survey* **29**: 213–552.