

Thrips setosus

Distinguishing features

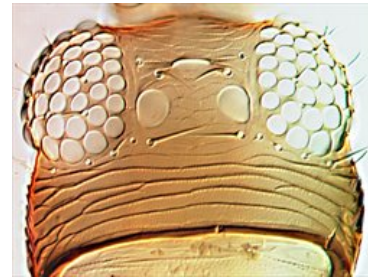
Both sexes fully winged. Body brown, tibiae, tarsi and antennal segment III yellow, IV and V yellow basally, femora variable but usually brown; fore wings usually dark with basal fifth and clavus pale. Antennae 7-segmented; III–IV slender each with forked sense cone. Head with 2 pairs of ocellar setae; pair III arising outside or on margin of ocellar triangle, almost as long as distance between two ocelli; postocular setae pair I as long as ocellar setae III, postocular setae pairs II and IV minute. Pronotum transversely striate, with 18–24 discal setae and 2 pairs of posteroangular setae; posterior margin with 3 (rarely 4) pairs of setae, median pair much longer than lateral 2 pairs. Mesonotum without sculpture lines close to anterior campaniform sensilla, median setae distant from posterior margin. Metanotum irregularly striate-reticulate medially; median setae distant from anterior margin; campaniform sensilla present. Fore wing first vein with 3 setae on distal half; second vein with about 10 setae. Abdominal tergites II–VIII without sculpture lines mesad of setae S1; tergite II with 3 lateral marginal setae; tergites V–VIII with paired ctenidia, on VIII posteromesad to spiracles; tergite VIII posteromarginal comb of evenly spaced microtrichia; tergite IX with two pairs of campaniform sensilla, setae S1 70–90 microns long; X with median split; pleurotergites each with 2–3 discal setae, small irregular microtrichia on posterior margin. Sternites without discal setae; VII with setae S1 in front of margin. Male similar to female but smaller; sternites III–VII each with relatively small transverse to oval pore plate.

Related species

Thrips setosus is very similar to *T. fulvipes*, from which it can be distinguished by the notably shorter S1 setae on tergite IX (Vierbergen & Loomans, 2016), and the presence of only three lateral marginal setae on tergite II. The genus *Thrips* is the second largest genus in the Thysanoptera, and currently includes, worldwide, over 300 species. All members of this genus lack ocellar setae I on the head, and they all have ctenidia on tergite VIII posteromesad to the spiracles. Other characters, such as number of antennal segments, number of setae on the fore wing veins, and number of discal setae on the sternites are variable between species (Palmer, 1992; Nakahara, 1994; Masumoto & Okajima, 2013).

Biological data

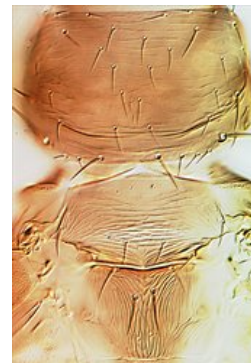
Feeding and breeding mainly on the leaves of its various herbaceous host plants. In Europe it was initially found on *Hydrangea* plants in the Netherlands and elsewhere across the European continent (e.g., EPPO Global Database, 2017b), but it has been seen on a wider range of plants. In England it has caused problems on crops including *Cyclamen*, *Impatiens*, primrose, basil and rosemary (Bennison & Bartel, 2022). In Japan, it is reported as a pest of tobacco and tomato production, on the latter acting as a vector of *Tomato spotted wilt*



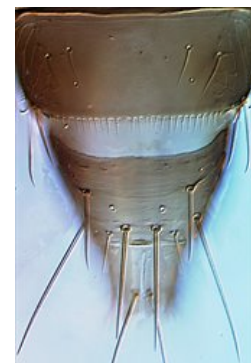
Head



Antenna



Pro, meso & metanota

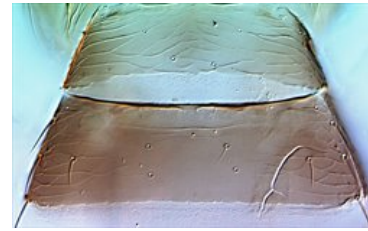


Tergites VIII-X

virus (TSWV) (Palmer, 1992; Murai, 2001).

Distribution data

Widespread throughout Japan in many habitats (Masumoto & Okajima, 2013), and reported from South Korea, this species is a recent arrival to Europe, and has been recorded so far from commercial glasshouses in the Netherlands (Vierbergen & Loomans, 2016), Belgium, France, Germany and Croatia. In Britain it was found for the first time in November 2016, on a crop of poinsettia, *Euphorbia pulcherrima*, in a glasshouse in West Sussex (EPPO Global Database, 2017a), with subsequent findings at other production sites primarily along the south coast of England.



Tergites I-II



Fore wing

Family name

THRIPIDAE - THRIPINAE

Species name

Thrips setosus Moulton

Original name and synonyms

Thrips setosus Moulton, 1928: 304

References

Bennison J & Bartel E (2022) 'New' thrips problems in protected ornamentals and herbs. Available at: <https://adas.co.uk/services/plant-health-in-horticulture/> (accessed 26/06/2022)

EPPO Global Database (2017a) EPPO Reporting Service no. 01 - 2017 Num. article: **2017/009**. <https://gd.eppo.int/reporting/article-5977>

EPPO Global Database (2017b) EPPO Reporting Service no. 09 - 2017 Num. article: **2017/157**. <https://gd.eppo.int/reporting/article-6125>

Masumoto M & Okajima S (2013) Review of the genus *Thrips* and related genera (Thysanoptera, Thripidae) from Japan. *Zootaxa* **3678** (1): 1–65.

Murai T (2001) Life history study of *Thrips setosus*. *Entomologia Experimentalis et Applicata* **100**: 245–251.

Nakahara S (1994) The genus *Thrips* Linnaeus (Thysanoptera: Thripidae) of the New World. *United States Department of Agriculture. Technical Bulletin* **1822**: 1–183.

Palmer JM (1992) *Thrips* (Thysanoptera) from Pakistan to the Pacific: a review. *Bulletin of the British Museum (Natural History) Entomology Series* **61** (1): 1–76.

Vierbergen G & Loomans AJM (2016) *Thrips setosus* (Thysanoptera: Thripidae), the Japanese flower thrips, in cultivation of *Hydrangea* in the Netherlands. *Entomologische Berichten* **76** (3): 103–108.