Studies on the Thysanoptera of Antalya I. Aeolothripidae Uzel*

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Summary

Thysanoptera fauna of Antalya province has been studied in the years 1988-1990. Fourteen species belong to Aeolothripidae were recorded. The information related to the habitat and distribution of each species, and the seasonal distribution of some species is provided. The descriptions of Rhipidothrips flavus n. sp. and the first discovered male of Aeolothrips gloriosus Bagnall are given.

Introduction

Antalya province has the potential to harbour a major part of Turkish fauna as its territory falls under the influence of continental and mediterranean climates that are the two most prevailing climate types of Turkey. Besides, the possibility to encounter the representatives of different biogeographical regions of the world also put some additional weight on the significance of the studies on the fauna of Antalya.

However the objectives of the present study are not limited to the faunistic interests but also emerged as to meet agricultural needs. The Thysanoptera fauna of subtropical crop growing areas of Turkey is little known. The information related to the species composition of thrips and to their position as potential pests on valuable crops like citrus, banana, cotton, olive, sesame, groundnut, greenhouse vegetables and cutflowers is lacking.

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Material and Method

The Thysanoptera specimens were collected from all counties of Antalya province between February 1988 and February 1990. The number of sampling sites and sampling frequency of these sites in each county were arranged in respect to the counties' agricultural potential and floral richness. Samplings were made all year around in the coastal areas where Thysanoptera can be found thriving on plants any time of the year, but between March and October in inland.

Thysanoptera were collected at weekly intervals in general, but fortnightly in winter in coastal areas. There were 185 collection sites totally and a total of 1278 samples were collected. All kinds of plants, cultivated or wild were examined and those which were found to harbour thrips belong to 54 families and about 177 species. These figures do not include the unidentified ones. Plant species were identified mainly by Solmaz Sözeri (University of Ankara Faculty of Agriculture, Ankara) and Doz.Dr. Ibrahim Baktür (University of Akdeniz Faculty of Agriculture, Antalya).

The total number of Thysanoptera specimens examined is 9846. The species are arranged in alphabetical order in the text.

The information related to the habitats and distributions in Turkey and the world is provided for each species in order to reflect the recent discoveries and to facilitate the integration of new data to the existing one. Some conclusions are made on the seasonal distribution and specific hosts of some species where the relevant data permitted. Most information on the world distributions and habitats come from zur Strassen 1986, 1987 and 1988. The studies of Priesner (1948) and Bailey (1940) have been referred to for the descriptions of Aeolothrips gloriosus Bagnall male and Rhipidothrips flavus n. sp.

All the material is deposited in Plant Protection Department, Faculty of Agriculture, Akdeniz University, Antalya, Turkey except for some parts that have already been transferred to Senckenberg Museum, Frankfurt a.M., Germany.

THYSANOPTERA

Aeolothripidae

Aeolothrips collaris Priesner

Material examined : Kumluca, 1 female, Pyrus eleagnifolia (flowers) 6.IV.1988-Turuçova, 1 male, Matricaria chamomilla, 6.IV.1988-Mavikent, 1 male, Citrus sp. (flowers), 6.IV.1988-Yazır (Kumluca), 1 female, Triticum aestivum (pre-earing stage), 6.IV.1988-Duraliler, 1 female, Triticum aestivum (ears); 1 male, 1 female, Prunus persica (flowers), both 11.IV.1988-Yenice, 1 female, Arbutus andrachne, 13.IV.1988-Aksu, 1 male, Rapistrum sp., 20.IV.1988- Serik, 1 male, Vicia sativa (flowers), 20.IV.1988-Beşkonak, 1 male, 4 females, Hordeum vulgare (ears); 1 male, 1 female, Scandix pecten-veneris, both 20.IV.1988-

Habitat: Probably omnivorous, larvae predatory, on many kinds of plants.

Distribution: Indo-Mediterranean. All over Turkey.

Remarks: In the period of March-August in the coast and in April-August in inland.

**Aeolothrips ericae** Bagnall


Habitat: Flower inhabiting, preferably Fabaceae.

Distribution: West Palaearctic. Almost all over Turkey.

**Aeolothrips gloriosus** Bagnall


**Habitat**: Mainly on flowers of ligneous plants.

**Distribution**: Mediterranean, Marmara, Aegean and Mediterranean regions of Turkey.

**Remarks**: In the period of February-July in the coast. Very rare in inland.

**The description of male (fig.1)**

The male of *A. gloriosus* remained unknown up to now. Therefore the description of the male is provided herewith. The data relevant to the unique male specimen is given above. It is kept in author's collection.

**Diagnosis**: Antennal segments I and II, and more than basal third of III yellow, abdominal tergites V-VII with light brown shadings, the scale of fore-wing darkened. Abdominal segments IX and X dark brown. No dorsal plates on the intermediate abdominal segments and no claspers on segment IX. Abdominal segment IX rather setose, with an oblique row of curved bristles between dorsal plate and lateral margins.

**Description**: male (macropterous): Body and legs yellow, abdominal segments IX and X dark brown. Vertex with light brown shading. Mesonotum, metanotum and first abdominal segment light brown. Abdominal tergites V-VII with bandlike, broad, light brown shadings. Antennal segments I and II and more than basal third of segment III yellow, the rest brown, VI-IX light brown. Scale of fore-wing darkened, the two bands longer than broad. Majority of body bristles dark.

Head transverse 126 μm long, 158 μm wide across the cheeks. Intercellular bristles and those behind the hind ocelli slightly longer. The measurements of antennal segments
in μm, length/width: I 24/28, II 30/23, III 60/23, IV 64/19, V 54/19, VI-IX 38. Sensory areas on segment III do not reach the middle of segment, but those on segment IV extend beyond the middle; their lengths in μm: 26 and 36, respectively.

Pronotum broader than head, 113 μm long and 184 μm wide. Bristles on posterior margin relatively longer. Length/width of meso- and metanotum in μm: 88/122 and 73/129, respectively.

Dorsal plates of intermediate abdominal segments and claspers of segment IX absent (fig.1). Two bristles on either side of dorsal plate, inner one being much shorter. Segment IX rather setose with a row of four longer and curved bristles on each side of tergum starting from dorsal plate and reaching lateral margin on a straight oblique line. The row continues on the lateral and ventral side of segment with 1-3 more bristles. The first bristle (the most central) longest, the others gradually become shorter towards the margin. Three shorter bristles before this line of bristles; two medians close to each other, the lateral one wide apart from them. One lateral strong bristle (103 μm long) on the sides of tergum IX. Total body length (distended): 1214 μm.

Distinction: The male of *A. gloriosus* can easily be distinguished from the males of other *Aeolothrips* species which have no claspers on abdominal segment IX, by the coloration of the first three antennal segments, by the size and shape of dark bands on fore-wings and by the morphology and chaetotaxy of abdominal segment IX.

*Aeolothrips intermedius* Bagnall


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Habitat: Larvae predaceous, an omnivorous species. Mainly on flowers of various plants.

Distribution: Palaeartic. All over Turkey.

Remarks: Between February and September in the coast, and April and August in inland.

* Aeolothrips melaleucus Haliday


Habitat: Predaceous. Ligneous plants.
Distribution: Holoarctic. Aegean and Mediterranean regions of Turkey,

**Aeolothrips versicolor** Uzel


Habitat: Predaceous. Ligneous plants.
Distribution: Euro-Siberian. Its distribution in Turkey not known to the author.

**Ankothrips mavromoustakisi** Priesner


Habitat: Graminivorous.
Distribution: Mediterranean. Mediterranean region of Turkey.

**Melanthrips fuscus** Sulzer


Habitat: Flowers of cruciferous plants.

Distribution: West Palaeartic. Not recorded yet from Black Sea and Eastern Anatolia regions of Turkey.

Remarks: Very abundant on the cruciferous plants under citrus and medlar trees in the period between December and April.

**Melanthrips pallidior** Priesner


Habitat: Flowers of various plants.

Distribution: Turano-European. The all regions of Turkey, except Black Sea and Eastern Anatolia.

**Melanthrips trifasciatus** Priesner

Habitat: Ligneous plants.
Distribution: Israel, Greece and Turkey. Central Anatolia and Mediterranean regions of Turkey.

*Orothrips priesneri* Titschack


Habitat: Ligneous plants, particularly *Crataegus*.
Distribution: Mediterranean. Central Anatolia region of Turkey.

*Rhipidothrips brunneus* Williams


Habitat: Graminivorous.
Distribution: Holarctic. Mediterranean region of Turkey.
Remarks: Only in coastal and transitional areas, in the period of February-May.

*Rhipidothrips flavus* n.sp. (figs.2, 3)

Holotype: Female, Turkey, Prov. Antalya, Gündoğmuş, 900 m from ears of *Triticum aestivum* L., 27.IV.1989, Leg.İ.Tunç.

Paratypes: 3 females together with holotype, as above; 1 female, Antalya, Burmancı, sea level, *T. aestivum* (ears), 7.IV.1989; 3 females, Antalya, Akyar, 1150 m cereal (pre-earing stage), 4.V.1989. Holotype and 4 paratypes are deposited at Akdeniz University, Faculty of Agriculture, Plant Protection Dept., Antalya, Turkey. 3 females paratypes were transferred to Forschungsinstitut Senckenberg, Frankfurt a.M.

Diagnosis: Body uniformly yellow; first two antennal segments yellow; intercellular bristles between anterior and posterior ocelli, close to each other; no prominent bristles on fore margin of pronotum; bristles on hind margin short; two brownish spots anteriorly on each side of abdominal tergites II-VII.

Description: Female (macropterous): Body and legs uniformly yellow, legs being very slightly darker. Wings pale. Antennal segments I and II yellow; III and VI ventrally whitish yellow, dorsally shaded with brown colour; V-IX brown, V lighter than the rest.
Abdominal tergites II-VII (only III-V in holotype) with two brownish spots on each side just behind the anterior margin, which gradually fade away towards the tip of abdomen. In some paratypes two brownish spots also on pronotum, placed close to the posterior margin. All body bristles pale.

Head slightly transverse, 169-174 µm long, 184-188 µm broad (across cheeks), slightly arched at the sides, few short thick spines behind eyes, weak striations at the posterior part which become more conspicuous, and anastomise along the posterior margin. Anterior ocellus smaller than the posterior ocelli. Intercellular bristles placed between anterior and posterior ocelli and close to each other (the distance between them 11-13 µm), 26-30 µm long (fig.2). Mouthcone extends up to the middle of prothorax.

Antennae 337-341 µm long. Length (width) of antennal segments in µm: I 30-32 (31-34), II 45-47 (24-25), III 66-68 (17-19), IV 53-58 (19-21), V 43-47 (19-22), VI 34-38 (21), VII 32-34 (17-19), VIII 13 (11), IX 9-11 (6). The sensory area at the distal of antennal segment III smaller, round, that on IV occupies the ventral half of the circumference of the segment. Two simple sense-cones on each of segment VI, VII and one on VIII (fig.3).

Pronotum transverse, broader than head. 129-142 µm long and 227-233 µm wide, weakly striated and with sparsely distributed small setae. No prominent bristles on the fore margin. One long bristle on each posterior lateral angle, 50-54 µm long; three short bristles on either side of hind margin, their lengths in µm: S₁ 26-29, S₂ 26-30, S₃ 19-23. Lateral sutures on pronotum present. The length of fore tibiae 146-156 µm. Hooks on fore tarsi as usual. Length/width of meso-and metathorax (holotype) in µm: 103/263 and 178/273. Forewings 84-938 µm long and 105-113 µm wide at middle.


Male unknown.

Relation to the other species: The new species is unique in the genus by its uniformly yellow body colour. It is similar to *R. brunneus* Williams in the shape of sensory areas on antennal segments III and IV, and in the relatively short bristles on the head and the prothorax, in the position of intercellular setae (which are widely seperated from each other in *R. brunneus*); in the yellow first two antennal segments (which are dark brown in *R. brunneus*); in having no prominent bristles on the fore margin, but having longer ones on the hind margin of pronotum.

*Rhipidothrips gratiosus* Uzél

Habitat: Graminivorous.

Distribution: West Palaearctic. Central Anatolia and Mediterranean regions of Turkey.

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Özet

Antalya’nın Thysanoptera Faunası Üzerinde Çalışmalar I. Aelothripidae Uzel


References


Figure 1-3. 1. The IXth and Xth abdominal segments of male of *Aeolothrips gloriosus* Bagnall (dorsal). 2. Head and prothorax of *Rhipidothrips flavus* n. sp. female (dorsal). 3. The right antenna of the same (dorsal)