

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. İbrahim Bakur (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. The 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 eleagrifolia* (flowers) 6.IV.1988-Turunçova, 1 male, *Matricaria chamomilla*, 6.IV.1988-Mavikent, 1 male, *Citrus* sp. (flowers), 6.IV.1988-Yazır (Kumluca), 1 female, *Triticum aestivum* (pre-earring 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-

Yenice, 3 males, 8 females, *Hordeum* sp., 5.V.1988-Yazır (Korkuteli), 1 female, *Hordeum vulgare* (ears); 1 female, *Prunus avium* (flowers), both 5.V.1988-Elmalı, 1 female, *Triticum aestivum* (pre-eating stage), 5.V.1988-Beyler, 2 females, *Triticum aestivum*, 5.V.1988-Duraliler, 2 females, *Nerium oleander*, 26.V.1988-Göynük, 1 male, *Phaseolus vulgaris*, 27.V.1988-Beldibi, 2 females, *Daucus* sp., 27.V.1988-Hurma, 1 male *Nerium oleander* (flowers), 27.V.1988-Campus, 2 females, *Crepis* sp., 9.VI.1988-Bekirler, 2 females, *Gossypium hirsutum*; 2 males, 8 females, *Prunus persica* (leaves); 9 females, *Zea mays*, all 9.VI.1988-Elmalı, 6 males, 6 females, *Pimpinella anisum*, 16.VI.1988-Varsaklı, 9 males, 15 females, *Medicago sativa*, 23.VI.1988-Düzlerçamı, 1 male, 2 females, *Vitex agnus-castus*, 30.VI.1988-Korkuteli, 7 males, 3 females, *Pimpinella anisum*; 1 female, *Phaseolus vulgaris*, both 30.VI.1988-Elmalı, 1 female, *Vitis vinifera*, 30.VI.1988-Yakaçiftlik, 2 males, *Phaseolus vulgaris*, 30.VI.1988-Fersin, 1 male, 2 females, *Sesamum indicum*, 14.VII.1988-Manavgat, 3 males, 3 females, *Sesamum indicum*, 14.VII.1988-Kumköy, 1 male, 1 female, *Gossypium hirsutum*, 21.VII.1988-Manavgat, 1 male, *Gossypium hirsutum*, 21.VII.1988-Göynük, 4 females, *Zea mays*, 4.VII.1988-Adrasan, 2 females; *Zea mays*, 4.VIII.1988-Altunkaya, 2 males, 2 females, *Sesamum indicum*, 4.VIII.1988-Kemerağzı, 1 male, *Gossypium hirsutum*, 18.VIII.1988-Korkuteli, 1 male, *Prunus persica*, 25.VIII.1988-Gökpinar, 1 male, *Capsicum annum*; 3 males, 9 females, *Daucus carota*, both 25.VIII.1988-Akçapınar, 1 male, *Prunus persica*, 17.III.1989-Abdurrahmanlar, 1 female, *Amygdalus communis*; 1 male, *Vicia faba*, both 17.III.1989-Kayaburma, 1 female, *Asphodelus* sp.; 2 males, composit, both 7.IV.1989-Burmacı, 1 female, *Triticum aestivum*, 1 male, *Colutea* sp., both 13.IV.1989-Korkuteli, 1 female, cereal, 13.IV.1989-Kumluca, 2 females, *Triticum aestivum* (ears), 20.IV.1989-Serik, 1 male, *Citrus sinensis*, 27.IV.1989-Güneycik, 4 males, 3 females, *Trifolium* sp., 27.IV.1989-Güneydoğmuş, 1 male *Pyrus communis*, 27.IV.1989-Söğütçük, 3 females, *Triticum aestivum* (ears), 4.V.1989-Bayat, 1 female, *Populus* sp., 4.V.1989-Korkuteli, 1 male, *Pyrus communis* (leaves), 4.V.1989-Akyar, 2 males, 4 females, cereal, 4.V.1989-Akyar, 5 females, *Hordeum vulgare* (ears), 4.V.1989-Bahtılı, 1 female, *Zea mays*; 1 male, *Anthemis* sp., both 11.V.1989-Çakırlar, 5 males, 4 females, *Hypericum* sp.; 1 male, 1 female, *Olea europaea*, both 11.V.1989-Kumluca, 1 male, 1 female, *Nerium oleander*; 1 female, *Triticum aestivum* (ears), both 11.V.1989-Yeşilbayır, 3 males, 3 females, *Solanum tuberosum* (flowers); 1 male, 1 female, *Olea europaea*, 1 female, *Triticum aestivum* (ears), all 18.V.1989-Kovanlık, 1 male, 3 females, *Avena sativa* (ears), 18.V.1989-Ekşili, 3 males, 2 females, *Nerium oleander*, 18.V.1989-Yukarıkaraman, 1 male, 2 females, *Zea mays*, 25.V.1989-Gökpinar, 1 female, *Triticum aestivum* (ears), 25.V.1989-Yeşilöz, 1 male, 1 female, *Nerium oleander*, 1.VI.1989-Çolaklı, 1 male, 2 females, *Capsicum annum*, 1.VI.1989-Düzlerçamı, 1 male, 2 females, *Vitex agnus-castus*, 16.VI.1989-Korkuteli, 1 male, *Prunus persica*, 16.VI.1989-Öküzgözü, 3 female, *Triticum aestivum* (ears), 16.VI.1989-Gölova, 1 male, *Vitis vinifera*, 16.VI.1989-Finike, 2 females, *Daucus* sp., 22.VI.1989-Cevizli, 1 female, *Vitis vinifera*; 1 male, 3 females, *Verbascum* sp., both 29.VI.1989-Geriş, 1 male, 2 females,

Vitex agnus-castus; 2 males, 2 females, *Helianthus annuus*, both 29.VI.1989-Hatıplı, 1 male, 1 female, *Sesamum indicum*; 2 males, *Gossypium hirsutum*; 1 male, *Gossypium hirsutum*, all 6.VII.1989-Kurşunlu, 1 male, *Hibiscus esculentus*, 6.VII.1989-İhca, 1 female, *Gossypium hirsutum*, 6.VII.1989-Bucakşeyhler, 1 male, *Vitex agnus-castus*, 6.VII.1989-Mamatlar, 1 female, *Phaseolus vulgaris*; 2 males, 6 females, *Pimpinella anisum*; 1 male, 1 female, *Solanum tuberosum*, all 11.VII.1989-Mamatlar, 1 male, *Arachis hypogaea*; 1 female, *Gossypium hirsutum*, both 27.VII.1989-Çukurca, 1 female, *Beta vulgaris*; 1 male, *Capsicum annuum*, both 3.VII.1989-Hurma, 2 males, *Sesamum indicum*, 10.VIII.1989-Gedelme, 1 female, *Malus communis*, 10.VIII.1989-Koyunlar, 1 female *Arachis hypogaea*, 17.VIII.1989.

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

Material examined : Akseki, 1 female, *Vitis vinifera*, 14.VII.1988-Fersin, 1 female, *Vitis vinifera*, 14.VII.1988-Güzelbağ, 1 female, *Vitis vinifera*, 21.VII.1988-Serapsu, 1 female, *Erica* sp. (flowers), 10.XI.1988-Geyikbayırı, 1 female, *Calycotome villosa* (flowers), 23.II.1989-Kayaburma, 1 female, composit, 7.IV.1989-Güneycik, 1 female, *Trifolium* sp., 27.IV.1989-Gündoğmuş, 1 female, *Ligustrum* sp., 27.IV.1989-Geriş, 2 females, *Vitex agnus-castus*; 1 male, 1 female, *Clematis* sp., both 29.VI.1989-Yenice, 1 male, 2 females, *Genista* sp., 11.VII.1989-Yenice, 1 female, *Phyllirea* sp., 3. VIII. 1989.

Habitat : Flower inhabiting, preferably Fabaceae.

Distribution : West Palaearctic. Almost all over Turkey.

Aeolothrips gloriosus Bagnall

Material examined : Gazipaşa, 1 female, *Calycotome villosa* (flowers), 2.III.1988-Kumluca, 1 female, *Citrus sinensis* (flowers); 2 females, *Mercurialis annua*; 1 females *Asphodelus* sp., all 23.III.1988-Nigit, 1 female, *Pyrus elaeagnifolia* (flowers); 1 female, *Crateagus* sp. (flowers), both 30.III.1988-Yenice, 12 females, *Olea europaea* (flowers); 5 males, *Quercus coccifera*, both 5.V.1988-Kepez, 3 females, *Citrus sinensis* (flowers), 5.V.1988-Doyran, 1 females, *Olea europaea*(leaves), 27.V.1988-Kızılot, 1 female, *Olea europaea*, 9.VI.1988-Kaş, 5 females, *Myrtus communis*, 16.VI.1988-Çolaklı, 1 female, *Arachis hypogaea*, 14.VII.1988-Murtıçı, 1 female, *Myrtus communis*, 14.VII.1988-Geyikbayırı, 1 female, *Asphodelus* sp., 23.II.1989-Hurma, 2 females, *Citrus* sp. (flowers); 1 female, *Vicia faba*, both 10.III.1989-Çandır, 2 females, *Calycotome villosa*, 10.III.1989-

Beşikçi, 1 female, *Calycotome villosa*, 10.III.1989-Akçapınar, 4 females, *Prunus domestica*, 17.III.1989-Gebiz, 1 female, *Calycotome villosa*, 17.III.1989-Düzlerçamı, 1 male, 3 females, *Euphorbia* sp.; 2 females, *Pyrus elaeagnifolia*; 2 females, *Ribes* sp.; 1 female, *Colutea* sp., all 24.III.1989-Söğütçük, 1 female, *Prunus domestica*, 24.III.1989-Yazır (Korkuteli), 1 female, *Prunus persica*, 24.III.1989-Kuşlar, 1 female, *Pyrus elaeagnifolia* (flowers), 7.IV.1989-Yenice, 1 female, *Calycotome villosa*, 13.IV.1989-Söğütçük, 1 female, *Pyrus elaeagnifolia*, 13.IV.1989-Yazır (Korkuteli), 1 female, *Prunus domestica* (leaves), 13.IV.1989-Korkuteli, 1 female, *Prunus avium* (flowers), 13.IV.1989-Eymir, 1 female, *Prunus cerasus*, 13.IV.1989-Beldibi, 1 female, *Citrus sinensis* (flowers), 20.IV.1989-Çolaklı, 3 females, *Olea europaea*, 27.IV.1989-Kepez, 1 female, *Olea europaea*, 4.V.1989-Yenice, 1 female, *Paliurus spina-christi*, 4.V.1989-Kumluca, 1 female, *Nerium oleander*, 11.V.1989-Yeşilbayır, 1 female, *Olea europaea*; 1 female, *Phaseolus vulgaris*, both 18.V.1989-Kovanlık, 1 female, *Amygdalus communis*, 18.V.1989-Yukarıkaraman, 1 female, *Solanum tuberosum*, 25.V.1989-Macar, 1 female, *Punica granatum*, 1.VI.1989-Yeşilöz, 2 females, *Ceratonia siliqua*, 1.VI.1989-Mahmutlar, 1 female, *Solanum melongena*, 1.VI.1989-Düzlerçamı, 1 female, *Vitex agnus-castus*, 16.VI.1989-Geriş, 2 females, *Myrtus communis*; 1 female, *Clematis* sp., both 29.VI.1989-Ekşili, 1 female, *Prunus persica*, 6.VII.1989-Yenice, 1 female, *Nerium oleander*, 11.VII.1989.

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 upto 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 birstles 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. Interocellar 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

Material examined : Konaklı, 1 female, *Pisum sativum* (flowers), 17.II.1988-Yenice, 1 female, *Anthemis* sp.; 1 female, *Cardaria* sp, both 5.V.1988-Yazır (Korkuteli), 1 female, *Hordeum vulgare* (ears), 5.V.1988-Çobanisa, 1 female, *Malus communis* (flowers), 5.V.1988-Gökçam, 2 females, *Solanum melongena*; 1 female, *Cucumis sativus*; 2 females, *Cucurbita pepo*, all 27.V.1988-Göynük, 2 males, 6 females, *Zea mays*, 27.V.1988-Bekirler, 3 females, *Lycopersicon esculentum*, 9.VI.1988-Korkuteli, 2 females *Cardaria* sp.; 5 females, *Triticum aestivum* (ears), 16.VI.1988-Elmalı, 3 females, *Beta vulgaris*, 16.VI.1988-Gömbe, 1 female, *Euphorbia* sp., 16.VI.1988-Kaş, 1 female, *Myrtus communis*, 16.VI.1988-Akınlar, 1 female, *Capsicum annuum*, 23.VI.1988-Perakende, 1 female, *Citrullus lanatus*; 1 female, *Myrtus communis*, both 23.VI.1988-Göynük, 1 male, *Vitex agnus-castus*, 4.VIII.1988-Tekirova, 1 male, 2 females, *Zea mays*, 4.VIII.1988-Çalka, 1 female, *Zea mays*; 1 male, *Arachis hypogaea*, 4.VIII.1988-Hacıveliler, 1 male, 3 females, *Sesamum indicum*, 4.VIII.1988-Havaalanı, 1 female, *Sesamum indicum*, 18.VIII.1988-Kuzköy, 1 female, *Phaseolus vulgaris*; 4 males, 6 females, *Medicago sativa*, both 25.VIII.1988-Gökpınar, 1 female, *Lycopersicon esculentum*, 25.VIII.1988-Kuzdere, 1 male, 2 females, *Zea mays*; 1 male, 2 females, both 15.IX.1988-Adrasan, 2 males, *Zea mays*; 3 females, *Sesamum indicum*, both 15.IX.1988-Turunçova, 3 females, *Zea mays*, 15.IX.1988-Hacıveliler, 2 females, *Ranunculus* sp., 24.III.1989-Yenice, 1 female, *Euphorbia* sp., 13.IV.1989-Söğütçük, 1 female, *Pyrus elaeagrifolia*, 13.IV.1989-Yazır (Korkuteli), 1 female, *Malus com-*

munis (flowers), 13.IV.1989-Korkuteli, 2 females, *Prunus persica* (flowers), 13.IV.1989-Eymir, 1 male, cereal, 13.IV.1989-Elmalı, 1 male, *Malus communis*; 1 female, cereal, 13.IV.1989-Kemer, 3 females, *Trifolium* sp., 20.IV.1989-Finike, 1 female, *Euphorbia* sp., 20.IV.1989-Kavak, 1 female, *Anchusa* sp., 20.IV.1989-Çolaklı, 1 female, *Anthemis* sp., 27.IV.1989-Gençler, 5 females, *Hordeum vulgare* (ears), 27.IV.1989-Gündoğmuş, 5 females, *Triticum aestivum* (ears), both 27.IV.1989-Kepez, 1 female, *Olea europaea*, 4.V.1989-Düzlerçamı, 2 females, *Nerium oleander*, 4.V.1989-Yenice, 2 females, *Hordeum vulgare*, 4.V.1989-Bayat, 1 female, *Cydonia vulgaris* (leaves), 4.V.1989-Korkuteli, 1 male, *Prunus cerasus* (leaves), 4.V.1989-Kırgözhan, 2 females, *Zea mays*, 18.V.1989-Kovanlık, 1 female, *Morus alba*, 18.V.1989-Düden, 8 females, *Prunus persica* (leaves), 18.V.1989-Yukarıkaraman, 1 female, *Phaseolus vulgaris*, 25.V.1989-Gömbö, 2 females, *Triticum aestivum* (ears), 25.V.1989-Macar, 1 female, *Phaseolus vulgaris*; 1 female, *Zea mays*, both 1.VI.1989-Yeşilöz, 1 female, *Cerastion siliqua*; 6 females, *Thymus* sp., both 1.VI.1989-Korkuteli, 1 female, *Vitis vinifera*; 1 female, *Althea* sp.; 2 males, 1 female, *Prunus persica*, all 16.VI.1989-Karaköy, 1 male, 6 females, *Triticum aestivum* (ears), 16.VI.1989-Gölova, 2 males, 2 females, *Vitis vinifera*; 5 males, 2 females, *Isatis* sp., both 16.VI.1989-Cevizli, 1 female, *Triticum aestivum* (ears), 29.VI.1989-Geriş, 1 female, *Clematis* sp., 29.VI.1989-Ekşili, 1 male, *Zea mays*; 1 male, *Vitex agnus-castus*, both 6.VII.1989-Oymapınar; 1 male, *Helianthus annuus*, 6.VII.1989-Bucakşeyhler, 2 females, *Sesamum indicum*, 6.VII.1989-Korkuteli, 1 male, *Populus* sp., 11.VII.1989-Mamaclar, 3 males, 6 females, *Medicago sativa*; 4 females, *Beta vulgaris*; 2 females, *Solanum tuberosum*, all 11.VII.1989-Sülekler, 2 males, 1 female, *Avena sativa*; 1 female, *Malus communis*; 1 male, 5 females, *Pimpinella anisum*; 3 females, *Prunus persica*, all 11.VII.1989-Çukurova, 1 male, 1 female, *Zea mays*; 1 male, 2 females, *Capsicum annuum*, both 3.VIII.1989-Çobanisa, 1 male, *Vitis vinifera*, 3.VII.1989-Doyran, 1 female *Verbascum* sp., 10.VIII.1989-Hurma, 1 male, 1 female, *Arachis hypogaea*; 2 females, *Sesamum indicum*, both 10.VIII.1989-Koyunlar, 1 male, *Paspalum* sp., 17.VIII.1989-Elmalı, 4 males, 3 females, *Zea mays*, 31.VIII.1989-Kuzköy, 1 female, *Beta vulgaris*; 3 males, 4 females, *Medicago sativa*, both 31.VII.1988-Gökpınar, 1 male, 3 females, *Daucus carota*; 1 male, 1 female, *Raphanus sativa*, both 31.VIII.1989-Bayatbademlisi, 1 female, *Medicago sativa*, 21.IX.1989-Koyunlar, 1 female, *Vicia faba*, 27.XI.1989.

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

Distribution : Palaearctic. All over Turkey.

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

Aeolothrips metaleucus Haliday

Material examined : Yenice, 2 females, *Quercus coccifera*, 5.V.1988-Göynük, 1 male, 1 female, *Vitis vinifera*, 27.V.1988-Gündoğmuş, 1 male, 1 female, *Malus*

communis, 27.IV.1989-Akyar, 1 female, *Jasminum fruticans*; 1 male, 4 females, *Amygdalus communis*, both 4.V.1989-Bahtlı, 1 female, *Vitis vinifera*, 11.V.1989.

Habitat : Predaceous. Ligneous plants.

Distribution : Holarctic. Aegean and Mediterranean regions of Turkey,

Aeolothrips versicolor Uzel

Material examined : Kızılot, 3 females, *Amygdalus communis*; 1 female, *Vitis vinifera*, both 9.VI.1988-Yenice, 1 female, *Pistacia* sp., 13.IV.1989-Yazır (Korkuteli), 1 female, *Pyrus elaeagrifolia*, 16.VI.1989-Akseki, 1 female, *Malus communis*, 29.VI.1989.

Habitat : Predaceous. Ligneous plants.

Distribution : Euro-Siberian. Its distribution in Turkey not known to the author.

Ankothrips mavromoustakisi Priesner

Material examined : Bahtlı, 1 female, grass, 7.XII.1989.

Habitat : Graminivorous.

Distribution : Mediterranean. Mediterranean region of Turkey.

Melanthrips fuscus Sulzer

Material examined : Alara, 1 female, *Dinathus caryophyllus* (greenhouse), 17.II.1988-Gazipaşa, 1 female, *Calycotome villosa* (flowers); 9 males, 5 females, *Raphanus raphanistrum* (flowers), both 2.III.1988-Bahtlı, 1 male, *Citrus* sp., (flowers); 2 males, 4 females, *Raphanus raphanistrum* (flowers), both 23.III.1988-Göynük, 1 female, *Calycotome villosa*, 23.III.1988-Kumluca, 1 female, *Triticum aestivum* (pre-earring stage), 23.III.1988-Kumluca, 1 female, *Raphanus raphanistrum* (flowers), 6.IV.1988-Aksu, 7 males, 7 females, *Rapistrum* sp., 20.IV.1988-Çolaklı, 1 male, *Olea europaea* (flowers), 20.IV.1988-Finike, 1 female, *Eriobotrya japonica* (flowers), 22.XII.1988-Varsak, 1 male, *Anemone* sp., 5.I.1989-Hasyurt, 4 males, 16 females, crucifer; 4 females, *Lamium* sp., 19.I.1989-Kumluca, 1 male, *Euphorbia* sp., 19.I.1989-Koyunlar, 1 female, *Prunus persica* (flowers), 2.II.1989-Geyikbayır, 1 male, *Cornus mas* (flowers); 1 female, *Asphodelus* sp., both 23.II.1989-Topallı, 1 female, *Vicia faba*, 23.II.1989-Hurma, 1 male, *Phlomis armeniaca*; 1 male, 2 females, *Capsella bursa-pastoris*, both 10.III.1989-Çandır, 1 female, *Prunus persica*; 1 male, *Allium cepa*; 1 male, *Calycotome villosa*; 10 males, 13 females, *Sinapis* sp.; 8 males, 5 females, *Raphanus raphanistrum*; 1 female, *Cupressus sempervirens*, 10.III.1989-Akçapınar, 1 female, *Prunus domestica* (flowers), 17.III.1989-Abdurrahmanlar, 1 female, *Pisum sativum*, 17.III.1989-Çalkaya, 1 female, *Pisum sativum*; 3 males, 12 females, *Raphanus raphanistrum*, both 17.III.1989-Karaçalı, 1 male, *Asphodelus* sp.; 1 male, *Calycotome*

villosa, both 17.III.1989-Kemerağzı, 1 male, 1 female, *Petroselinum sativum*, 17.III.1989-Düzlerçamı, 1 male, *Euphorbia* sp., 24.III.1989-Maarif, 1 female, *Triticum aestivum*; 1 female, crucifer, both 24.III.1989-Hacıveliler, 1 male, 1 female, *Raphanus raphanistrum*; 1 male, *Ranunculus* sp., both 24.III.1989-Korkuteli, 2 females, *Euphorbia* sp., 13.IV.1989-Göynük, 1 male, *Citrus nobilis deliciosa*; 1 male, 1 female, *Citrus limonium*, 20.IV.1989-Çamyuva, 2 males, 2 females, *Alyssum murale*, 20.IV.1989-Serik, 1 female, *Triticum aestivum* (ears), 27.IV.1989-Çolaklı, 3 females, *Phaseolus vulgaris*; 1 female, *Triticum aestivum* (ears), 27.IV.1989-Bayat, 1 male, *Pyrus communis* (leaves), 4.V.1989-Alaylı, 1 male, *Taraxacum* sp., 21.XII.1989-Koyunlar, 1 female, *Pisum sativum*; 1 male, 1 female, *Raphanus raphanistrum*, both 25.I.1990-Kircamisi, 1 female, *Calendula officinalis*; 4 males, 1 female, *Mercurialis annua*, both 25.I.1990-Bahtılı, 1 female, *Capsella bursa-pastoris*; 1 female, *Raphanus raphanistrum*; 1 male, *Euphorbia* sp, all 9.II.1990-Çakırlar, 4 males, 2 females, *Capsella bursa-pastoris*; 4 females, *Mercurialis annua*, both 9.II.1990-Kızıllarık, 1 female, crucifer, 21.II.1990-Perge, 1 male, *Anthemis* sp.; 1 male, cereal, 21.II.1990-Dumanlar, 1 male, *Apium graveolens* var *dulce*, 21.II.1990.

Habitat : Flowers of cruciferous plants.

Distribution : West Palaearctic. 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

Material examined : Kumiuca, 1 female, *Chrysanthemum* sp., 6.IV.1988-Beşkonak, 1 male, *Hordeum vulgare* (ears); 3 males, 2 females, *Scandix pecten-veneris*, both 20.IV.1988-Göynük, 1 female, *Phaseolus vulgaris*, 27.V.1988-Beldibi, 1 female, *Daucus* sp., 27.V.1988-Arif, 1 male, cereal, 24.III.1989-Kayaburma, 1 male, *Tripleurosperma* sp.; 3 females, composit, 7.IV.1989-Çamyuva, 1 female, *Alyssum murale*, 20.IV.1989-Finike, 1 female, *Trifolium* sp., 20.IV.1989-Gençler, 2 males, 1 female, *Cistus* sp., 27.IV.1989-Güneycik, 1 female, *Phlomis armeniaca*; 2 females, *Trifolium* sp., both 27.IV.1989-Gündoğmuş, 1 female, *Triticum aestivum* (ears), 27.IV.1989.

Habitat : Flowers of various plants.

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

Melanthrips trifasciatus Priesner

Material examined : Yenice, 6 females, *Quercus coccifera*, 5.V.1988-Yenice, 5 males, 2 females, *Laurus nobilis*, 13.IV.1988-Söğütçük, 1 female, *Pyrus elaeagrifolia* (flowers), 13.IV.1989-Düzlerçamı, 1 female, *Quercus* sp., 4.V.1989.

Habitat : Ligneous plants.

Distribution : Israil, Greece and Turkey. Central Anatolia and Mediterranean regions of Turkey.

Orothrips priesneri Titschack

Material examined : Elmalı, 1 female, *Crataegus* sp. (flowers), 5.V.1988-Söğütçük, 2 females, *Pyrus elaeagrifolia*, 13.IV.1989.

Habitat : Ligneous plants, particularly *Crataegus*.

Distribution : Mediterranean. Central Anatolia region of Turkey.

Rhipidothrips brunneus Williams

Material examined : Göyntük, 9 females (brac.), *Triticum aestivum* (pre-earring stage), 23.III.1988-Yazır (Kumluca), 4 females (brac.), *Triticum aestivum* (pre-earring stage), 6.IV.1988-Çakırlar, 4 females (brac.), cereal, 23.II.1989-Yenice, 4 females (brac.), *Triticum aestivum*, 13.IV.1989-Gündoğmuş, 1 female (mac), *Pyrus communis*, 27.IV.1989-Yenice, 14 females (mac), *Hordeum vulgare* (ears), 4.V.1989-Kumluca, 1 female (mac), *Triticum aestivum* (ears), 11.V.1989-Çakırlar, 4 females (brac.), *Asphodelus* sp., 9.II.1990-Perge, 2 females (brac.), cereal, 21.II.1990-Alaylı, 3 females, cereal, 21.II.1990.

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.I.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-earring 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; interocular 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. Interocellar 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 : S_1 26-29, S_2 26-30, S_3 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 848-938 μm long and 105-113 μm wide at middle.

Ovipositor 349-371 μm long. The length of posterior bristles of abdominal tergites in μm : IX : S_1 156-178, S_2 180-201; X : S_1 176-184, S_2 188-191. Total body length 1708 μm (holotype).

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 interocellar setae (which are widely separated 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 Uzel

Material examined : Yazır (Kumluca), 1 female, *Triticum aestivum* (pre-earring stage), 6.IV.1988-Yenice, 1 female, *Triticum aestivum*, 13.IV.1989-Elmalı, 1 male, cereal, 13.IV.1989-Belen, 1 female, *Triticum aestivum* (ears), 20.IV.1989-Gündoğmuş, 7 females, *Triticum aestivum* (ears), 27.IV.1989-Bayat, 1 female, *Populus* sp., 4.V.1989-Akyar, 4 females, cereal, 4.V.1989-Bozova, 1 male, cereal 4.V.1989.

Habitat : Graminivorous.

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

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Özet

Antalya'nın Thysanoptera Faunası Üzerinde Çalışmalar I. Aeolothripidae Uzel

Antalya ilinin Thysanoptera faunası üzerindeki araştırmalar 1988-1990 yıllarında yapılmıştır. Antalya il sınırları içinde 185 yerden toplam 1278 örnek toplanmıştır. Bu örnekler 54 familyaya bağlı 177 bitki türünden alınmıştır. Çalışmalar sırasında incelenen Thysanoptera bireylerinin sayısı 9846'dır. Çalışmanın birinci kısmını oluşturan bu makalede Aeolothripidae familyasına bağlı 14 türe ait faunistik kayıtlara; bunların habitatlarına, dünyadaki ve Türkiye'deki dağılımlarına ilişkin bilgiler verilmekte, bazılarının da mevsimlik dağılımlarına değinilmektedir. Ayrıca *Rhipidothrips flavus* n. sp. ile ilk defa bulunmuş olan *Aeolothrips gloriosus* Bagnall'un erkeği tanımlanmaktadır.

References

- Bailey, F.S., 1940. A review of the genus *Rhipidothrips* Uzel. Pan-Pacif. Entomol., 33 (3) : 209-220.
- Priesner, H., 1948. Contributions towards a knowledge of the Thysanoptera of Egypt. XIV. Bull.Soc.Fouad Entom., 32 : 317-341.
- zur Strassen, R., 1986. Thysanopteren auf Inseln der Nördlichen Sporaden in der Agäis (Griechenland). Senck. Biol., 67 (1/3) : 85-129.
- zur Strassen, R., 1987. On some Thysanoptera of an agricultural area located on woody slopes in Northern Umbria, Italy. Redia, 70 : 203-228.
- zur Strassen, R., 1988. The biogeographical character of the Thysanoptera fauna (Insecta) of Andalusia, Spain. Acta Phyto. Entomol. Hungarica, 23 (3-4) : 351-359.

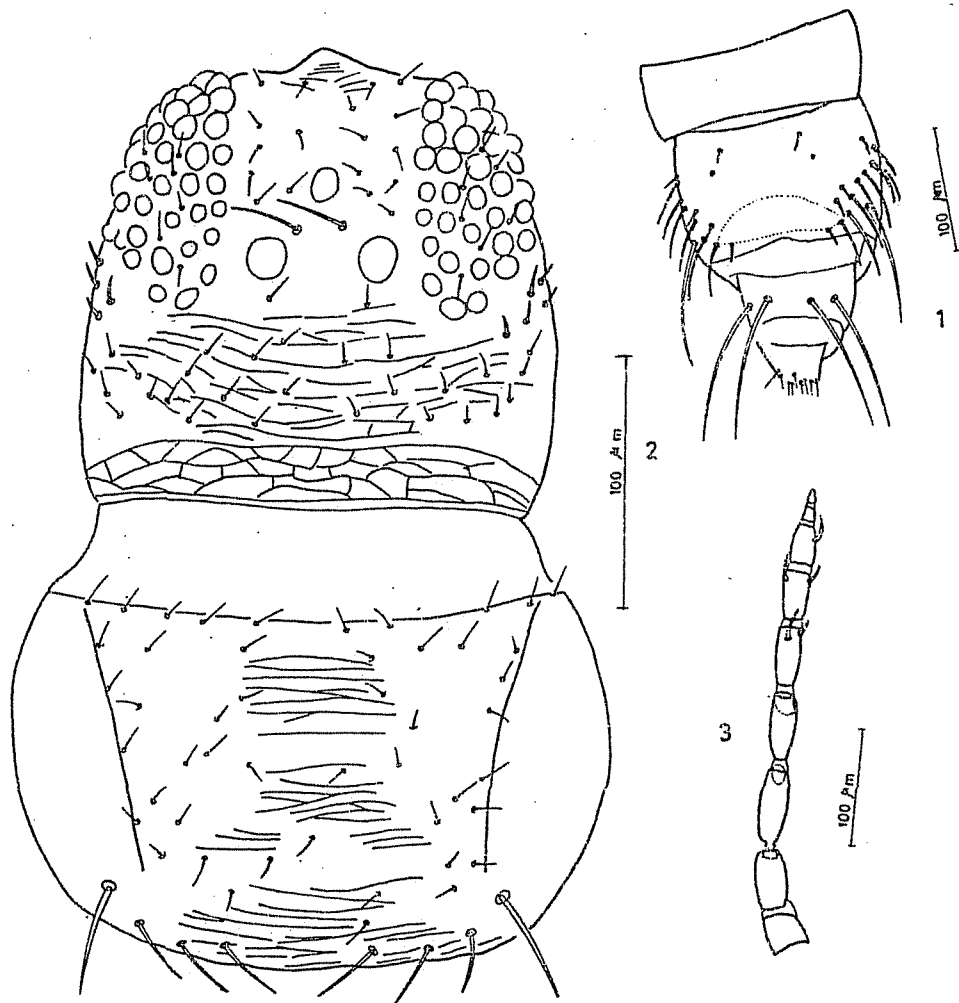


Figure 1-3. 1. The IXth and Xth abdominal segments of male of *Aeolothrips gloriosus* Bagnall (dorsal). 2. Head and prothorax of *Rhipidothrips flavus* n. sp. female (dorsal). 3. The right antenna of the same (dorsal)