

THYSANOPTERA OF FOREST AND ORNAMENTAL WOODY PLANTS
IN ISRAEL WITH A LIST OF THE SPECIES RECORDED FROM ISRAEL*

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ABSTRACT

Thirty four species of Thysanoptera on forest and ornamental trees and shrubs are reported from Israel, five of them for the first time: *Dolicholepta micnira* (Bagnall, 1914), *Hydatothrips arenarins* (Priesner, 1964), *Melanthrips trifasciatus* Priesner, 1961, *Odontothrips meridionalis* Priesner, 1919, *Parascolothrips priesneri* Mound, 1967. *Sericothrips arenarius* Priesner is transferred to *Hydatothrips*. A check list is given of all Thysanoptera species recorded so far from Israel.

INTRODUCTION

Thrips (Thysanoptera) have been collected in Israel over the past two decades by the senior author, mainly from forest and ornamental trees and shrubs. This material, kept in the Division of Entomology, Agricultural Research Organization, Ilanot (ARO), has now been identified by the second author. Most of the reference specimens collected will be deposited at the Senckenberg Museum at Frankfurt am Main. Additional records were obtained from the material deposited in most cases in the Senckenberg Museum (SMF), including the collection of H. Priesner, and in one case the collection of J. Pelikan (Brno). In this review the reported species are arranged in alphabetical order. Details are given for each species as to their world distribution and plant hosts, as recorded in the files of the second author. The paragraph "Material examined" includes data on the collections made by the first author, unless stated otherwise. The abbreviations used for the regions of Israel are: Ca, Carmel Ridge; CP, Coastal Plain; DS, Dead Sea area; GH, Golan Heights; JD, Judean Desert; JU, Judea; JV, Jordan Valley; LG, Lower Galilee; S, Samaria; UG, Upper Galilee; VY, Valley of Yizre'el; WN, Western Negev.

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Aeolothrips gloriosus Bagnall

Distribution: Turkey, Cyprus, Israel, Sardinia, Corsica, Southern France, Portugal, Morocco, Azores, Britain.

Hosts: Various ligneous plants, mainly Oleaceae such as *Fraxinus ornus* L., *Olea euro-paea* L., *Phillyrea* spp.; also on Fabaceae (= Papilionaceae), and Rosaceae.

Material examined: Kadoori (Tavo'r) (LG), 19 (SMF), *Amygdalus communis* L. [= *Pmnus dulcis* (Miller) Webbl], 11.III.1938, E. Rivnay.

Contribution from the Agricultural Research Organization, Bet Dagan, Israel, No. 240E. 1981 series.

Apterygothrips priesneri zur Strassen

The species was formerly misidentified by Bagnall in 1927 as *Cephalothrips hispanicus* Bagnall, and by Priesner in 1966 as *Apterygothrips hispanicus* (Bagnall), which is a different species occurring in the Iberian Peninsula (zur Strassen, 1966).

Distribution: Georgia S.S.R., Turkey, Israel, Yugoslavia (Dalmatia), southern France.

Hosts: *Pinus halepensis* Miller, *Pinus pinaster* Aiton (= *P. maritima* Poiret), and other *Pinus* species.

Material examined: Jerusalem, 3♀ (SMF), 20.VIII.1934, F.S. Bodenheimer; Atlit (CP), 2 larvae (ARO), 13.XI.1975; Kefar Menahem (JU), 3♀ (ARO, SMF), 24.II.1964; Nahshon (JU), 6♀ (ARO, SMF), 29.XII.1975; Sha'ar Hagai (JU), 1♂, 12♀ (ARO), 24.XI.75 and 9.III.76; Netanya (CP), 3 larvae (ARO), 13.II.1976. All samples were taken from *Pinus halepensis*.

Ceratothrips pallidivestis (Priesner)

Distribution: Kazakhstan, Iran, Georgia, Crimea, Turkey, Cyprus, Syria (new record, material in SMF), Israel, Rumania, Bulgaria, Greece, Albania, Yugoslavia, Hungary, Austria, Italy, Sardinia, Sicily, France.

Hosts: Different plants, including ligneous ones, such as *Cytisus*, *Rosa* and *Prunus*.

Material examined: Jerusalem, 1♂, 1♀ (SMF), *Rosa* sp. (without date); Qiryat Anavim (JU), 1♂ (SMF), *Cistus incanus* L. 9.VI.1930, F.S. Bodenheimer.

Discussion: Reported by Gerling and Kugler (1973) from *Convolvulus arvensis* L., under the name of *Taeniothrips frici* Uzel.

Cryptothrips nigripes (O.M. Reuter)

Distribution: Mongolia, Tadzhikistan, Georgia, Russia (European part), Bessarabia, Turkey, Israel, Rumania, Bulgaria, Yugoslavia, Italy, France, Madeira, Austria, Hungary, Czechoslovakia, Poland, Switzerland, Germany, the Netherlands, Britain, Denmark, Norway, Sweden, Finland.

Hosts: Spores of fungi growing on dead branches of various trees.

Material examined: Evron (CP), 5♀ (SMF), *Ulmus* sp., 28.V.1969; Jabata (GH), 1♂, 2♀ (ARO), *Pinus halepensis*, 28.IV.1968.

Dolicholepta micrura (Bagnall)

Distribution: Seychelles Islands, Saudi Arabia, Sudan, Uganda, Egypt, Algeria, Morocco.

Hosts: Various trees and shrubs, particularly *Acacia* and *Zizyphus* species. Perhaps a predator on small arthropods.

Material examined: Nahal Qilt (JD), 4♂, 19♀ (ARO, SMF), *Zizyphus spina-christi* (L.) Desfontaines, 8.XI.1978.

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Hosts: Spores of fungi growing on dead branches of various trees.

Material examined: Evron (CP), 5♀ (SMF), *Ulmus* sp., 28.V.1969; Jabata (GH), 1♂, 2♀ (ARO), *Pinus halepensis*, 28.IV.1968.

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Distribution: Seychelles Islands, Saudi Arabia, Sudan, Uganda, Egypt, Algeria, Morocco.

Hosts: Various trees and shrubs, particularly *Acacia* and *Zizyphus* species. Perhaps a predator on small arthropods.

Material examined: Nahal Qilt (JD), 4♂, 19♀ (ARO, SMF), *Zizyphus spina-christi* (L.) Desfontaines, 8.XI.1978.

Franklinothrips megalops (Trybom)

The species was reported by Avidov and Ben-Haim (1951) under the name *F. myrmicaeformis* Zanon, as a predator on *Heliothrips haemorrhoidalis* (Bouché) and *Retithrips syriacus* (Mayet) in Israel. *F. myrmicaeformis* is a synonym of *F. megalops* (Stannards 1952).

Distribution: Bhutan, southern India, Israel, Libya, Tunisia, Somalia, Kenya, Uganda, Tanganyika, Nigeria, Glorioso Island (north of Madagascar), Mozambique, South Africa.
Hosts: Various ligneous plants and herbs, collected, *inter alia*, from *Morus alba* L. and *Olea europaea*. Predaceous on small arthropods.

Material examined: Tel Aviv, 1♂, 7♀ (SMF), 2.VIII.1935, A. Rabinovitch (host not recorded).

Gynaikothrips ficorum (Marchal)

Distribution: Common in the subtropics, mainly of the Northern Hemisphere.

Host: *Ficus microcarpa* L. (= *F. nitida* Thunberg), causing leaf roll.

Material examined: Bene Braq, Ilanot (CP) (ARO), Rehovot (CP), (SMF), and many other sites where *Ficus microcarpa* trees are growing at the sides of roads and in gardens.

Discussion: Its biology in Israel was investigated by Rivnay (1947).

Haplothrips amygdali Priesner

Distribution: Israel, Egypt (Sinai Peninsula).

Hosts: *Amygdalus communis*, *Populus alba* L.

Material examined: Qiryat Anavim (JU), 1♀ (SMF, holotype), *A. communis*, 28.I.1935, F.S. Bodenheimer.

Haplothrips andresi Priesner

Distribution: Southern India, Israel, Cyprus, Egypt, Sudan.

Hosts: Various plant species including ligneous ones, such as *Quercus*, *Retama*, *Tamarix*.

Material examined: Gan Hayim (CP), 3♀ (SMF) from non-ligneous plants, 1938, E. Rivnay.

Haplothrips atriplicis Priesner

Distribution: Jordan, Israel.

Host: *Atriplex halimus* L.

Material examined: Newe Zohar (DS), 5♂, 11♀ (ARO), 11.IV.71; Nahal 'Og (JD), 3♂, 12♀ (ARO, SMF) 15.III.78. Both from *A. halimus*.

Haplothrips clarisetis Priesner

Distribution: India, Saudi Arabia, Jordan, Israel, Egypt, Algeria, Sudan, South Africa, Angola.

Hosts: Polyphagous on many plant species, including *Anabasis setifera* Moquin-Tandon and *Vitex agnus-castus* L.

Discussion: The species was found (by J.H.) together with *H. amygdali* and *H. cahirensis* (Trybom) on 1.VIII.74 in the gardens of the St. Katharine Monastery (Sinai Peninsula) on *Populus alba*. (*H. cahirensis* has not yet been found in Israel.) Was mentioned by Gerling and Kugler (1973) from *Sorghum halepense* (L.).

Haplothrips gowdeyi (Franklin)

Distribution: Tropics and subtropics; in the Mediterranean region recorded from Turkey, Cyprus, Israel, Egypt and Spain.

Hosts: Many plant species, mainly Poaceae (= Gramineae), often on Fabaceae, but also on *Bignonia*, *Lantana*, *Verbena*, *Bougainvillea*.

Material examined: Ilanot (CP), 1♀ (ARO), *Agonis flexuosa* (Sprengel) Schauer, 4.V.1974; Ilanot, 1♀ (ARO), *Dodonaea viscosa* (L.) Jaquin, 28.IX.76.

Discussion: Priesner (1950) recorded *H. gowdeyi* from Palestine, from *Verbena hybrida* Voss (14.III.36), from flowers of *Lantana camara* L. (20.II.38) and from *Bignonia* (17.II.38). Gerling and Kugler (1973) found this species on *Prosopis farcta* Macbrides, *Sorghum halepense* and *Convolvulus arvensis* L.

Haplothrips phyllireae Bagnall

Distribution: Turkey, Cyprus, Lebanon (SMF), Israel, Italy, Sardinia (SMF), southern France, Spain, Portugal, Morocco.

Hosts: Numerous deciduous and evergreen trees and shrubs of various families, such as *Acacia*, *Retama*, *Tamarix*, *Salix*, *Schinus*, *Styrax*.

Material examined: 'Amir (UG), 2♂ (SMF), *Platanus orientalis* L., 4.VI.1970; Carmel, 2♀, 1 larva (ARO, SMF), *Phillyrea latifolia* L., 4.IV.1977; *ibid.*, 3 larvae (ARO), *Pistacia paleastina* Boissier, 30.IV.1977; Qsif (CP), 3♂, 2♀, 1 larva (SMF), *Platanus orientalis*, 10.VIII.1969; Yoqneam (Ca), 1♀ (ARO), *Quercus ithaburensis* Decaisne (= *Q. aegilops* L. v. *ithaburensis* (Decaisne) Boissier), 27.VIII.1974.

Discussion: *H. phillyreae* was misidentified by Bodenheimer (1937) as *H. cypriotes* Priesner.

Haplothrips rabinovitchi Priesner

Distribution: Israel.

Hosts: some ligneous plants, such as *Amygdalus*, *Mangifera*.

Material examined: Tel Mond (CP), 1♂, 8♀ (SMF, type series) by sweeping, 16.VIII.1935, A. Rabinovitch; Rehovot (CP), 1♀ (SMF), inflorescence of *Mangifera indica* L., 20.III.1938, E. Rivnay; 'En Kerem (Ju), 1♂ (ARO), *Pistacia palaestina*, 13.X.1975.

The species has been reported by Priesner (1950: 90) also from Zikhron Ya'akov, from *Amygdalus communis*.

Heliothrips haemorrhoidalis (Bouché)

Distribution: Tropics and subtropics; cosmopolitan in greenhouses in the temperate zones.

Hosts: A great variety of plant species.

Hosts in Israel: *H. haemorrhoidalis* is one of the most common thrips, feeding in spring, summer and autumn on many forest and ornamental woody plants, such as *Acacia saligna* Wendl, *Carissa grandiflora* A. de Candolle, *Dodonaea viscosa*, *Eugenia* spp., *Hibiscus rosa-sinensis* L., *Liquidambar styraciflua* L., *Myrtus communis* L., *Platanus orientalis*, *Pistacia* spp., *Populus alba*, *Pyracantha crenato-serrata* Rehder, *Rosa* sp., *Viburnum tinus* L. It has been recorded also from fruit trees, such as *Citrus* spp., *Mangifera indica*, *Persea americana* Miller.

Hydatothrips arenarius (Priesner) n. comb.

Distribution: Sudan.

Hosts: Not yet known.

Material examined: 'En Gedi (DS), 1♀, 1 larva (ARO), *Commicarpus boissieri* (Heimerl) Cufodontis, 3.VII.1977.

Discussion: The type specimens were swept from unidentified herbs. The species is transferred from *Sericothrips* to *Hydatothrips*, where it is more correctly placed, although it does not fit properly the diagnosis of the latter as interpreted by Bhatti (1973). In *Sericothrips* the posterior margin of the tergites has a complete row of microtrichia, whereas in *Hydatothrips* this row is widely interrupted in the middle part, as in the case of *arenarius*. Further on, the entire surface of each tergite is fully covered with densely set microtrichia in *Sericothrips*, whereas in *Hydatothrips* the central area, approximately between the seta S1 of each side, is smooth, without microtrichia. Finally, antennal segment VI has in *Sericothrips* no particularly long sensorial area, but in *Hydatothrips* there are laterally two (one each at the inner and outer margins) very long and narrow sensorial areas terminating in a sense-cone at their distal end.

Isoneurothrips australis Bagnall

Distribution: Widely distributed in the subtropics. In the eastern Mediterranean area, recorded from Turkey, Cyprus, Israel, Egypt.

Hosts: Various plants, including trees and shrubs, such as *Cotoneaster*, *Eucalyptus*, *Ligustrum*, *Pinus*, *Tamarix*.

Material examined: Zikhron Ya'aqov 1♀ (SMF), flower of *Amygdalus communis*, 22.II.1938, E. Rivnay; Ilanot (CP) 2♂, 5♀ (ARO), inflorescence of *Eucalyptus camaldulensis* Dehnhardt, 20.VII.73; Ilanot, 2♂, 10♀ (ARO), *Prunus* spp., 1.V.81.

Karnyothrips flavipes (Jones)

Distribution: Widely distributed in the subtropics.

Host: Many plant species, often ligneous ones; predacious on mites, aleurodids, coccids and psocids.

Material examined: Rehovot (CP), 2♀ (SMF), *Citrus* fruits, XI.1964; Tel Aviv, 1♀, 5 larvae (ARO), *Populus alba*, 23.III.76.

Liothrips oleae (Costa)

Distribution: Turkey, Israel, Yemen, Yugoslavia, Italy, Corsica, southern France, Spain, Portugal, Algeria, Morocco, Canary Islands.

Host: *Olea europaea*.

Reported by Bodenheimer (1937) from areas where *O. europaea* is cultivated.

Liothrips reuteri (Bagnall)

Distribution: India, Kazakhstan, Turkmenia, Iran, Saudi Arabia, South Yemen, Crimea, Israel, Egypt, Sudan, Albania, southern France, Spain, Algeria, Morocco, Canary Islands, Niger.

Host: *Tamarix* spp.

Material examined: Netanya (CP), 1♂, 4♀ (SMF), *Tamarix nilotica* (Ehrenberg), 8.VIII.1971; Nir Oz (WN), 11♂, 26♀ (ARO, SMF), *T. aphylla* L., 21.XI and 11.XII.1973. Ginnosar (JV), 2♂, 30♀ (ARO), *T. aphylla*, 30.X.74; En Feshha (DS), 2♂, 7♀ (ARO), *Tamarix* sp., 16.XI.77.

Discussion: The species is widely distributed in Israel on *Tamarix*.

Melanthrips rivnayi Priesner

Distribution: Turkey (new record, material in SMF), Israel, southern France.

Hosts: *Amygdalus communis*, *Prunus persica* (L.) Batsch, *Quercus*.

Material examined: Zikhron Ya'akov (Ca), 2♂, 1♀ (SMF, type specimens), *A. communis* 22.II.1932; *ibid.*, 1♂, 1♀ (SMF), *P. persica*, 27.II.1935. Kadoori (Tavor) (LG), 2♂, 3♀ (SMF), *A. communis*, 11.III.1938. All specimens leg. E. Rivnay; Alumot (LG), 2♀ (ARO), inflorescence of *Pistacia vera* L.

Melanthrips trifasciatus Priesner

Distribution: Turkey.

Host: *Fraxinus*.

Host: *Fraxinus ornus*.

Material examined: Nahal Admonit (Meron) (UG), 1♂ (ARO), *Arbutus andrachne* L., 20.IV.1976.

Neohydatothrips gracilicornis (Williams)

Distribution: Japan, southern Siberia, Iran, Trans-Caucasus, Crimea, Turkey, Israel, most parts of Europe, Morocco.

Hosts: Certain Fabaceae, particularly *Vicia* species, occasionally on ligneous plants, such as *Cedrus*, *Celtis*, *Pinus*, *Quercus*.

Material examined: 'Evron (CP), 1♂, 2♀ (SMF), *Celtis australis* L., 1.VI.69; Amir (UG) 1♂ (ARO), *Platanus orientalis*, 4.VI.70; Kefar Szold (UG) 1♂ (ARO), *P. orientalis*, 17.VI.71.

Odontothrips karnyi rivnayi Priesner

Distribution: Israel, Portugal.

Hosts: Various species of Fabaceae, such as *Retama raetam* (Forskål) Webb; occasionally also on *Acacia*, *Quercus*, *Rhus*.

Material examined: Zikhron Ya'aqov (Ca), 9♂ (SMF, type specimens), flowers of *Citrus medica* L., 28.XII.1931, E. Rivnay.

Discussion: Bytinski-Salz and Sternlicht (1967) recorded this subspecies from *Quercus calliprinos* Webb (= *Q. coccifera* L. v. *calliprinos* (Webb) Boissier) and *Q. ithaburensis*; Gerling and Kugler (1973) found it on *Sorghum halepense*.

Odontothrips meridionalis Priesner

Distribution: Israel, Cyprus, Turkey, Albania.

Hosts: Various species of Fabaceae, chiefly on *Spartium junceum* L.

Material examined: Jerusalem, 7♂, 34♀ (ARO, SMF), *S. junceum*, 11.IV.1977.

Oxythrips ajugae Uzel

Distribution: Siberia, Kazakhstan, Tadzhikistan, Transcaucasus, Turkey, most parts of Europe, Madeira; introduced into North America.

Hosts: Coniferae, but also various ligneous Angiospermae, and herbs.

Material examined: Ilanot (CP), 1♀ (SMF), *Pinus brutia* Tenore, 15.II.1969; *ibid.*, 3♀, 4 larvae (SMF), *P. pinaster*, and 2 larvae (ARO), *P. radiata* D. Don, both 19.III.1969.

Oxythrips uncinatus Priesner

Distribution: Israel.

Hosts: *Quercus* sp., *Allium* sp.

Material examined: Zikhron Ya'aqov (Ca), 2♂ (SMF), *Allium* sp., 22.II.1938; Kadoori (Tavor) (LG), 2♀ (SMF, type specimens), buds of *Quercus* sp., 11.III.1938; *ibid.*, 12♀ (SMF, type specimens), flowers of *Quercus* sp., 20.IV.1938. All samples leg. E. Rivnay.

Parascolothrips priesneri Mound

Distribution: Israel, Iraq, Iran (new record, material in SMF).

Hosts: Ligneous species of Rosaceae and *Punica granatum* L. Predaceous on mites.

Material examined: Ilanot (CP), 2♀ (ARO, SMF), *Pyracantha crenato-serrata*, 15.V. 1974.

Psilotriphs bimaculatus (Priesner)

Distribution: Israel, Egypt, Morocco.

Hosts: *Lycium*, *Nitraria*, *Euphorbia*.

Material examined: Jordan Valley, 3♀ (SMF), *Lycium* sp., I.1935, H. Priesner.

Retithriphs syriacus (Mayet)

Distribution: Java, India, Iran (new record, material in SMF), Iraq, Syria, Israel, Egypt, Libya, Morocco, Sudan, Somalia, Kenya, Uganda, Zaire, Nigeria, Togo, Ghana, Senegal, Tanganyika, Malawi, Mozambique (new record, material in SMF), South Africa; introduced into Brazil.

Hosts: Numerous plant species, including ligneous ones of various families.

Hosts in Israel: *R. syriacus* is one of the most common species, feeding in summer and autumn on many forest and ornamental woody plants, such as: *Acacia saligna* Wendl, *Acalypha tricolor* Seemen, *Agonis flexuosa*, *Ampelopsis aconitifolia* Bunge, *Carissa grandiflora*, *Cercis siliquastrum* L., *Cotoneaster* spp., *Dodonaea viscosa*, *Eucalyptus* spp., *Eugenia* spp., *Ficus carica* L., *Hibiscus rosa-sinensis*, *Lagerstroemia indica* L., *Liquidambar styraciflua*, *Lonicera* spp., *Melia azedarach* L., *Myrtus communis*, *Pistacia* spp., *Platanus orientalis*, *Populus* spp., *Rhus* spp., *Robinia pseudacacia* L., *Rosa* spp., *Schinus molle* L., *Ulmus* spp., *Viburnum tinus*.

Rivnay (1939, 1962) recorded it also from various fruit trees such as *Cydonia oblonga* Miller (= *C. vulgaris* Delarbre), *Diospyros kaki* L., *Persea americana*, *Psidium guajava* L. and *Vitis vinifera* L.

Taeniothriphs inconsequens (Uzel)

Distribution: Palaearctic, introduced into North and South America; in the Mediterranean area recorded from Turkey, Yugoslavia, Italy, Sardinia, southern France, Portugal, Morocco.

Hosts: Many plant species, such as *Acer*, *Euonymus*, *Juglans*, with preference for ligneous Rosaceae, such as *Crataegus*, *Prunus*.

Material examined: Yiftah (UG) 2 larvae (ARO, SMF), *Prunus pissardii* Carrière (= *P. cerasifera* v. *pissardii* (Carrière) Koehne, 23.III.1977).

Taeniothriphs meridionalis Priesner

Distribution: Nepal, Iran, Georgia and Armenia, Turkey, Cyprus, Israel, Jordan, Crimea, Bessarabia, Rumania, Bulgaria, Greece, Albania, Yugoslavia, Italy, Sardinia, southern France, Spain.

Hosts: Great variety of plants, including various ligneous species, such as *Fraxinus*, *Pistacia*, *Quercus*, *Robinia*, *Tamarix*.

Material examined: Jerusalem, 3♀ (SMF), *Rosa* sp., 17.V.1933; Qiryat Anavim (Ju) 1♀ (SMF), *Amygdalus communis*, 28.I.1935, F.S. Bodenheimer; Ilanot (CP), 3♀ (ARO), *Pyracantha crenato-serrata*, 26.IV.1981.

Discussion: Common on flowers of various plants.

Bytinski-Salz and Sternlicht (1967) reported this species from *Quercus ithaburensis*.

Thrips major Uzel

Distribution: Holarctic.

Hosts: Many plants, including ligneous species, such as *Acacia*, *Arbutus*, *Fraxinus*, *Ligustrum*, *Rhamnus*, *Styrax*; often on Rosaceae, such as *Rosa*.

Material examined: Yatir (JD), 1♀ (ARO), *Cupressus sempervirens* L., 14.VIII.68; Ben Shemen, (CP) 3♀ (ARO), *Casuarina torulosa* Dryander, 3.XII.69; En haShofet (S) 15♀ (ARO), *Styrax officinalis* L., 4.IV.76; Carmel, 2♀ (ARO), *Arbutus andrachne*, 30.IV.76; Ilanot (CP), 10♀ (ARO), *Pyracantha crenato-serrata*, 26.IV.81.

Discussion: The species is widely distributed in Israel on various herbs.

Thrips tabaci Lindeman

Distribution: Cosmopolitan.

Hosts: Polyphagous, recorded from several hundred species of plants with preference for *Allium cepa* L., *Gossypium*, certain Asteraceae (= Compositae), Brassicaceae (= Cruciferae) and Solanaceae. In Egypt, recorded also from *Acacia*, *Melia*, *Morus*, *Salix* (Ghabn, 1948).

Material examined: 'Akko (CP), 7♀ (ARO), *Populus euramericana* (Dode) Guinier, mines of *Japanagromyza salicifoli* (Collin), 13.V.71; Ilanot (CP), 1♀ (ARO), *Agonis flexuosa*, 4.V.74; Ilanot, 23♀ (ARO), *Ligustrum ovalifolium* Hasskarl, 30.IV.74; Masua (JV), 1♀ (ARO), *Vitex agnus-castus* L., 25.VI.74.

Discussion: One of the most abundant species throughout the country.

DISTRIBUTION AND FEEDING HABITS

Of the 34 species of Thysanoptera found on forest and ornamental woody (ligneous) plants in Israel, and dealt with in the present paper, 16 species seem to be restricted to the Mediterranean area. Of the latter, six species are (holo-) Mediterranean, five are east-Mediterranean, one is south-Mediterranean, and four are endemic (*Haplothrips amygdali*, *H. atriplicis*, *H. rabinovitchi* and *Oxythrips uncinatus*). Four are Indo-Mediterranean or Indo-Mediterranean-Ethiopian. Seven species are subtropical or tropical, six are palaearctic to a certain extent, one is holarctic and one cosmopolitan.

Five of the species discussed are obviously confined to specific hosts, such as *Atriplex halimus* (*Haplothrips atriplicis*), *Ficus microcarpa* (*Gynaikothrips ficorum*), *Olea europaea* (*Liothrips oleae*), *Pinus* spp. (*Apterygothrips priesneri*), and *Tamarix* spp. (*Liothrips reuteri*). Further more, eight species are oligophagous, 16 are polyphagous, one species (*Cryptothrips nigripes*) is known to feed on fungus spores, while four species are predators (*Franklinothrips megalops*, *Karnyothrips flavipes*, *Parascolothrips priesneri*, and perhaps *Dolicholepta micrura*). Three species (*Heliothrips haemorrhoidalis*, *Retithrips syriacus* and *Thrips tabaci*) are regarded as pests because of their wide distribution, high reproduction rate, and ability to breed on a wide range of plant species utilized by man.

The species so far found on forest and ornamental woody plants comprise about 40% of the hitherto known species of Thysanoptera of Israel (see check list below).

CHECK LIST OF THE THYSANOPTERA SPECIES OF ISRAEL

(New records are marked with an asterisk)

SPECIES

SUB-ORDER: TEREBRANTIA

REFERENCES**

Aeolothripidae

Aeolothrips asturus Priesner, 1926

collaris Priesner, 1919

deserticola Priesner, 1929

ghabni Priesner, 1938

gloriosus Bagnall, 1914

linarius Priesner, 1948

propinquus Bagnall, 1924

Franklinothrips megalops (Trybom, 1912)

Bhr

Bhr, G-K

Bhr

Pr 1948

H-zS

Pr 1940

Pr 1948

A-H, Bhr (as *F. myrmicaeformis* Zanon)

Melanthrips fuscus (Sulzer, 1776)

Bhr

pallidior Priesner, 1919

rivnayi Priesner, 1936

separandus Priesner, 1936

 **trifasciatus* Priesner, 1961

tristis Priesner, 1936

Pr 1936

Bhr

Bhr

new record (SMF)

Bhr

Thripidae

Anaphothrips obscurus (Mueller, 1776)

G-K

sudanensis Trybom, 1911

G-K

Ascirothrips antilope (Priesner, 1923)

Pr 1964

Ceratothrips discolor (Karny, 1907)

Bhr, G-K (as *Thaeniothrips*)

palidivestis (Priesner, 1926)

G-K (as *T. frici*), H-zS

Chirothrips kurdistanus zur Strassen, 1967

G-K

manicatus Haliday, 1836

G-K

meridionalis Bagnall, 1927

G-K

**Dendrothrips saltator* Uzel, 1895

new record (SMF)

Eryngothrips eryngii (Priesner, 1940)

Pr 1940 (as *Oxythrips*)

Frankliniella schultzei (Trybom, 1912)

Bhr (as *F. dampfi*)

tenuicornis (Uzel 1895)

G-K

Heliothrips haemorrhoidalis (Bouche, 1833)

A-H, Bhr, By, H-zS

Hercinothrips femoralis (O.M. Reuter, 1891)

A-H, Bhr, By

**Hydatothrips arenarius* (Priesner, 1964)

new record

Isoneurothrips australis Bagnall, 1915

H-zS

Kakothrips priesneri (Pelikan, 1965)

Pe

robustus (Uzel, 1895)

Bhr, By

Limothrips cerealium Haliday, 1836

Bhr, G-K, H

** A-H = Avidov and Harpaz, 1969

H-zS = Halperin and zur Strassen, present

Bhr = Bodenheimer, 1937

M-P = Mound and Palmer, 1974

By = Bytinski-Salz, 1966

Pe = Pelikan, 1965

B-S = Bytinski-Salz and Sternlicht, 1967

Pr = Priesner

G-K = Gerling and Kugler, 1973

sZ = zur Strassen

H = Halperin, unpublished

<i>Microcephalothrips abdominalis</i> (D.L. Crawford, 1910)	Bhr
<i>Neohydatothrips gracilicornis</i> (Williams, 1916)	H-zS, zS, 1973
<i>Odontothrips karnyi</i> Priesner, 1924	B-S, G-K
* <i>meridionalis</i> Priesner, 1919	new record
<i>viciae</i> Priesner, 1951	Pr 1951
<i>Oxythrips ajugae</i> Uzel, 1895	H-zS, Pr 1964
<i>umbraticornis</i> Priesner, 1940	Pr 1940
<i>uncinatus</i> Priesner, 1940	Pr 1940
* <i>Parascolothrips priesneri</i> Mound, 1967	new record (ARO, SMF)
<i>Peladothrips biunculatus</i> Priesner, 1940	Pr 1940
<i>Plesiothrips perplexus</i> (Beach, 1896)	G-K, M-P
<i>Prosopothrips nigriceps</i> Bagnall, 1927	Pr 1964
<i>Psilothrips bimaculatus</i> (Priesner, 1932)	Bhr
<i>Retithrips syriacus</i> (mayet, 1890)	A-H, Bhr, H-zS
<i>Rubiothrips vitis</i> (Priesner, 1933)	Bhr
<i>Scirtothrips mangiferae</i> Priesner, 1933	new record
<i>Sitothrips arabicus</i> Priesner, 1931	M-P
<i>Taeniothrips inconsequens</i> (Uzel, 1895)	Bhr, H-zS
<i>meridionalis</i> Priesner, 1926	Bhr, B-S
<i>simplex</i> (Morison, 1930)	A-H, By
<i>Thrips angusticeps</i> Uzel, 1895	Bhr, G-K, H
<i>major</i> Uzel, 1895	Bhr, H-zS
<i>mareoticus</i> (Priesner, 1932)	Bhr
<i>minutissimus</i> L. 1758	Pr 1964
<i>tabaci</i> Lindeman, 1888	A-H, Bhr, By, G-K, H-zS

SUB-ORDER: TUBULIFERA

Phlaeothripidae

<i>Apterygothrips priesneri</i> zur Strassen, 1966	ZS 1966
<i>Chiraplothrips graminellus</i> Priesner, 1939	G-K, M-P
<i>Cryptothrips nigripes</i> (O.M. Reuter, 1880)	H-zS, zS 1973
* <i>Dolicholepta micrura</i> (Bagnall, 1914)	new record
<i>Gynaikothrips ficorum</i> (Marchal, 1908)	A-H, By, H-zS
<i>Haplothrips amygdali</i> Priesner, 1950	Pr 1950
<i>andresi</i> Priesner, 1931	Bhr
<i>anthemidinus</i> Priesner, 1950	Pr 1950
<i>articulosus</i> Bagnall, 1926	Bhr (also as <i>H. jordanicus</i> Pr.)
<i>atriciplicis</i> Priesner, 1936	Bhr, H-zS
<i>cerealis</i> Priesner, 1939	H, Pr 1960
<i>clarisetis</i> Priesner, 1931	Bhr, G-K, H-zS
<i>distinguendus</i> (Uzel, 1895)	Bhr, H
<i>eothriplinus</i> Priesner, 1936	Pr 1936
<i>eragrostidis</i> Priesner, 1931	Pr 1936
<i>flavicinctus</i> (Karny, 1910)	G-K, M-P (as <i>H. cingulatus</i> Karny)
<i>gowdeyi</i> (Franklin, 1908)	Bhr, G-K, H-zS

<i>hispanicus</i> Priesner, 1924	Bhr
<i>hukkineni</i> Priesner, 1939	Bhr (as <i>H. juncorum</i> Bagn.)
<i>palaestinensis</i> Priesner, 1936	Bhr
<i>phyllirea</i> Bagnall, 1933	Bhr (as <i>H. cypriotes</i> Pr), H-zS
<i>rabinovitchi</i> Priesner, 1936	Bhr, H-zS
<i>reuteri</i> (Karny, 1907)	Bhr
<i>rivnayi</i> Priesner, 1936	Bhr
<i>tardus</i> Priesner, 1936	Bhr
<i>tritici</i> (Kurdjumov, 1912)	Bhr
<i>Karnyothrips flavipes</i> (Jones, 1912)	Pr 1964
<i>Liothrips oleae</i> (Costa, 1857)	Bhr
<i>reuteri</i> (Bagnall, 1913)	G-K, H-zS
<i>vaneckeai</i> Priesner, 1920	By
<i>Neoheegeria dalmatica</i> Schmutz, 1909	Bhr
<i>Treherniella afra</i> Priesner, 1935	Pr 1960

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