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COMMONLY INTERCEPTED THRIPS AT U.S. PORTS-OF-ENTRY FROM AFRICA, EUROPE, AND THE MEDITERRANEAN. III. THE GENUS *THRIPS* LINNAEUS, 1758 (THYSANOPTERA: THRIPIDAE)

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Abstract.—A total of 130 species of thrips occurring in Africa, Europe, and the Mediterranean region were intercepted by U.S. agricultural quarantine officers in shipments of plants and cut flowers at the various ports-of-entry in the United States from 1983 to 1999. Of the 24 most intercepted species of thrips encountered by port identifiers during this period, 10 of them were species of the genus *Thrips* Linnaeus, 1758 (*T. tabaci* Lindeman, *T. fuscipennis* (Haliday), *T. major* (Uzel), *T. vulgatissimus* (Haliday), *T. meridionalis* (Priesner), *T. flavus* Schrank, *T. atratus* (Haliday), *T. simplex* (Morison), *T. nigropilosus* Haliday, and *T. australis* (Bagnall)). This is Part III of a guide to the identification of thrips intercepted from those regions. Included are keys, line drawings, and scanning electron micrographs to help identify the 18 commonly intercepted species of the genus *Thrips*, characterized by the presence of ctenidia located posteriad of abdominal spiracle VIII.

Key Words: thrips, pests of flowers, Europe, Africa

This paper is the third of a series intended to facilitate identification of thrips commonly intercepted at U.S. ports on a wide range of agricultural commodities from Africa, Europe, and the Mediterranean region. It focuses on the genus *Thrips* Linnaeus, the most speciose genus to be reviewed in this series; it lists the most commonly encountered species and presents an identification key to these species.

Part I (Nickle 2003) provided a checklist of 130 species of thrips commonly intercepted over a 15-year period from 1983 to 1999 and included an identification key to the 57 represented genera. Part II (Nickle 2004) focused on species of the genera *Frankliniella* Karny and *Iridothrips* Priesner, both of which are characterized by the presence of ctenidia located anteriad of abdominal spiracle VIII. A third paper (Nickle 2006) reviewed the genus *Thrips* to evaluate the number of species, their range, agroeconomic potential, and likelihood of dispersal into the U.S. through commerce.

Thrips is the largest genus of thripine Thysanoptera, with 38 Australasian, 23 Ethiopian, 38 Nearctic, 12 Neotropical, 25 Oriental, and 85 Palearctic species, with one species described and reported from Antarctica (Jacot-Guillarmod 1975). They include major agricultural pests, including several species that are vectors of various tospoviruses (Wijkamp et al. 1995). Since most species feed on pollens, they are often inter-

cepted at U.S. ports-of-entry in a wide variety of cut flowers.

Other genera with ctenidia located posteriad of abdominal spiracle VIII that could be confused with *Thrips* are *Microcephalothrips* Bagnall, *Plesiothrips* Hood, *Stenchaetothrips* Bagnall, and *Toxonothrips* Bhatti. *Thrips* is distinguished from these genera by the following characters. In species of *Plesiothrips* the head is produced forward beyond anterior margins of the compound eyes, females have very short ovipositors, and males have a pair of stout spines on tergite IX; in *Thrips* species the the front of the head is flat and does not extend forward of the eyes, females have longer ovipositors that extend beyond the apex of the abdomen, and males lack stout spines on tergite IX. In *Microcephalothrips*, the posterior margins of tergites II–VII are modified with numerous conical projections, and the pronotum has 5–7 pairs of posteromarginal setae rather (2–4 pairs in *Thrips*). The vertex of the head of species of *Toxonothrips* is broad and rounded, nearly as broad as the width of antennal segment 1 (in *Thrips* the vertex is flat and narrow, less than 1/2 the width of antennal segment 1). In *Stenchaetothrips* ocellar setae II are longer than ocellar setae III (in *Thrips* they are shorter than ocellar setae III).

As with previous contributions (Nickle 2003, 2004), this paper is based on adult females. Males seldom are encountered by port inspectors; nevertheless, the male apical abdominal segments of *T. tabaci*, *T. australis*, and *T. fuscipennis* are figured for the purpose of comparison (Figs. 1–6).

Materials and Methods

The same databases utilized by Nickle (2003) were used in this paper to provide information on the frequency of interceptions, host information, and geographic origin of the species covered. The first database contained a total of 2,437 interceptions, while the second database yielded a total of 497 specimens (405 identified to species level), providing a broad basis upon which to generalize.

Specimens used in scanning electron micrographs were obtained from recent incoming material for urgent identifications. Some of the specimens were cleared and slide mounted in Hoyer's mounting medium for preliminary identifications, then removed from the slides and placed in 80% ethanol for later preparation for scanning electron micrographs (SEMs). Specimens to be prepared for SEMs were transferred overnight into 100% ethanol. They were then critical point dried, using a Samway™ critical point dryer. Dried specimens were glued to SEM stubs and photomicrographed in an Amray 1810™ scanning electron microscope. The images were digitally captured and transferred to Adobe Photoshop 5.5© for MacIntosh, where they were edited for publication.

Line drawing figures of specimens were rendered from images observed through a camera lucida attached to a Zeiss Axioskop 2® microscope, using both transmitted pale and phase-contrast modes and modified using various methods with Adobe Photoshop®. Morphological features are those described by Mound and Nakahara (1993).

Results

Of the 157 species of *Thrips* (Jacot-Guillarmod 1974, Nakahara 1994), 101 species occur in Africa, Europe, and the Mediterranean region, and of these only 10 are regularly intercepted at U.S. ports-of-entry. The 1983–93 database (see table 1, Nickle 2003) was evaluated to determine the range of *Thrips* species intercepted from Africa, Europe, and the Mediterranean. Since 1983, 24 species of *Thrips* have been intercepted from shipments arriving from Africa, Europe, and the Mediterranean, but only 18 were intercepted repeatedly. The following list of African, European, and the Mediter-

Table 1. Species of *Thrips* in Europe, Africa, and the Mediterranean region as indicated with an "x". Establishment or occurrence of any of these species in the United States and South America also is indicated by an "x." (Numbers represent accumulated interceptions over the period 1983–1993).

Species	No. of Interceptions	Eur	Med.	Afr.	U.S.	S.Am.
acaciae Trybom, 1910	2			x		
angusticeps Uzel, 1895	24	x	x	x		
atratus (Haliday, 1836)	52	x				
australis (Bagnall, 1915)	10	x	x	x	x	x
brevicornis Priesner, 1920	3	x				
flavus Schrank, 1776	28	x	x	x	x	
fulvipes Bagnall, 1923	6	x				
fuscipennis Haliday, 1836	200	x	x		x	
italicus (Karny, 1907)	54	x	x	x		
major Uzel, 1895	154	x	x	x		
mareochaetus (Priesner, 1932)	1	x	x	x		
meridionalis (Priesner, 1926b)	23	x	x	x		
minutissimus Linnaeus, 1758	1	x	x			
nigropilosus Uzel, 1895	9	x	?	x		
palmi Karny, 1925	11	?				?
physapus Linnaeus, 1758	1	x	x	x	x	
pillichi Priesner, 1924	1	x				
simplex (Morison, 1930)	26	x	x	x	x	
spadix Hood, 1932	1			x		
tabaci Lindeman, 1889	474	x	x	x	x	x
tenellus Trybom, 1912	1			x		
trehernei Priesner, 1937	1	x	x		x	
urticae Fabricius, 1781	3	x				
vulgatissimus (Haliday, 1836)	98	x			x	

ranean *Thrips* species, intercepted on at least two occasions, are covered in this paper. Their distributions and frequency of interceptions at ports-of-entry between 1983 and 1993 are indicated in Table 1. The five additional species listed in Table 1 but not herein reviewed (*T. acaciae*, *T. mareochaetus*, *T. minutissimus*, *T. spadax*, and *T. tenellus*) were encountered only once between 1983 and 1993.

Thrips Linnaeus, 1758

angusticeps Uzel, 1895
atratus (Haliday, 1836)
australis (Bagnall, 1915)
brevicornis Priesner, 1920
flavus Schrank, 1776
fulvipes Bagnall, 1923
fuscipennis Haliday, 1836
italicus (Karny, 1907)
major Uzel, 1895
meridionalis (Priesner, 1926b)
nigropilosus Uzel, 1895
palmi Karny, 1925
physapus Linnaeus, 1758
pillichi Priesner, 1924
simplex (Morison, 1930)
tabaci Lindeman, 1889
urticae Fabricius, 1781
vulgatissimus (Haliday, 1836)

Ten of the above species species have become established through commerce within the United States and/or Canada. Two of them – *T. tabaci* and *T. simplex* — are found in all states, while others have more limited U.S. distributions: *Thrips atratus* (Connecticut, Maine, Maryland, Michigan, New Jersey, New York, Oregon, Vermont, Washington), *T. australis*: (California, Hawaii), *T. flavus*: (New York, Washington), *T. fuscipennis*: (Illinois, New York, Oregon, Utah, Washington), *T. nigropilosus*: (Cal-

Table 2. Most frequently intercepted thrips from Europe and Africa at U.S. ports-of-entry, 1994–1999, based on a database of 497 identified specimens. Species were ranked from most frequently intercepted to species represented by more than unique specimens.

Species	Rank	Number of Interceptions	% of Total (n = 497)	Cumulative Percent
Thrips tabaci Lindeman, 1889	1	81	20.0	20.0
Frankliniella occidentalis (Pergande, 1895)	2	59	14.6	34.6
Thrips fuscipennis Haliday, 1836	3	41	10.1	44.7
Thrips major Uzel, 1895	4	32	7.9	52.6
Thrips vulgatissimus Haliday, 1836	5	22	5.4	58.0
Odontothrips karnyi Priesner, 1924	6	18	4.5	62.2
Frankliniella intonsa (Trybom, 1895)	7	15	3.7	65.9
Haplothrips gowdeyi (Franklin, 1908)	8	11	2.7	68.6
Frankliniella tenuicornis (Uzel, 1895)	9	10	2.4	71.0
Frankliniella schultzei (Trybom, 1910)	10	7	1.7	72.7
Melanthrips fuscus (Sulze, 1776)	11	6	1.4	74.1
Thrips meridionalis (Priesner, 1926)	12	5	1.2	75.3
Thrips flavus Schrank, 1776	13	5	1.2	76.5
Limothrips cerealium (Haliday, 1836)	14	5	1.2	77.7
Thrips atratus (Haliday, 1836)	15	4	0.9	78.6
Haplothrips nigricornis Bagnall, 1910	16	4	0.9	79.5
Aeolothrips collaris Priesner, 1919	17	3	0.7	79.3
Thrips simplex (Morison, 1930)	18	3	0.7	80.0
Thrips nigropilosus Uzel, 1895	19	2	0.5	80.5
Neohydatothrips samayunkur Kudo, 1995	20	2	0.5	81.0
Limothrips denticornis (Haliday, 1836)	21	2	0.5	81.5
Aeolothrips deserticola Priesner, 1929	22	2	0.5	82.0
Thrips australis (Bagnall, 1915)	23	2	0.5	82.5
Dendrothrips ornatus (Jablonowski, 1894)	24	2	0.5	83.0

ifornia, Georgia, Illinois, Indiana, Iowa, New Jersey, New York, South Dakota, Virginia, Washington), *T. palmi*: (Florida), *T. physapus*: (Illinois, Michigan, New Jersey, New York, Utah), and *T. vulgatissimus*: (Alaska, Arizona, California, Colorado, Georgia, Idaho, Illinois, Maine, Montana, New Jersey, New Mexico, Nevada, Oregon, South Dakota, Utah, Washington, Wyoming).

Of the 1,412 records of *Thrips* identifiable to species in the 1983–1993 database, 33.6% of the interceptions were attributed to *T. tabaci* (n = 474), with smaller percentages attributed to *T. fuscipennis* (n = 200, or 14.1%), *T. major* (n = 178 or 12.6%), and *T. vulgatissimus* (n = 98 or 6.9%). The 1994–1999 database shows trends of interceptions from this region, with these four species ranking in the top 10 species intercepted (Table 2). If the list is extended to include the 24 most frequently intercepted species, six more species of *Thrips* are are added to the list: *T. meridionalis* (rank 12), *T. flavus* (rank 13), *T. atratus* (rank 15), *T. simplex* (rank 18), *T. nigropilosus* (rank 19), and *T. australis* (rank 23).

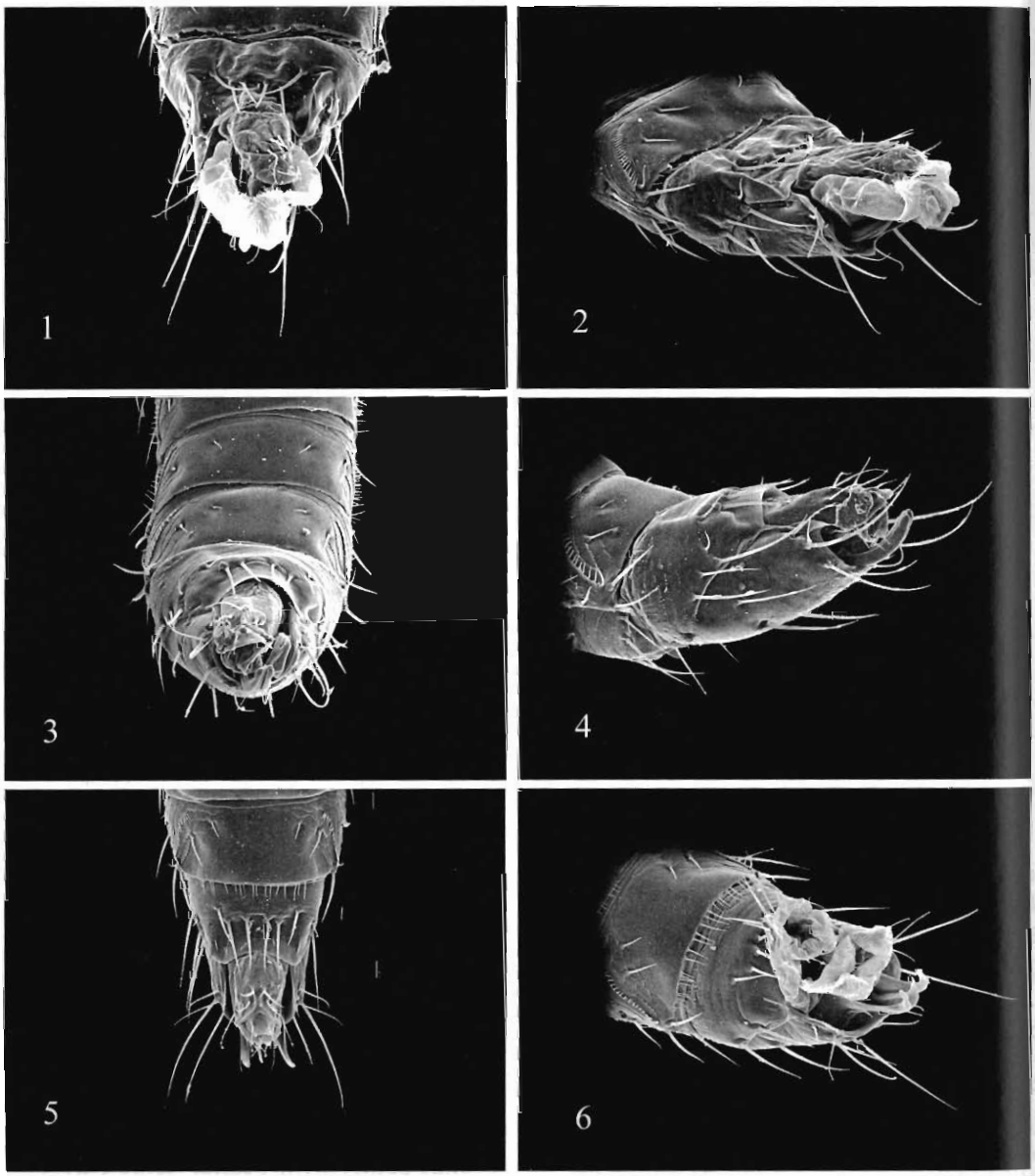
Key to Species of *Thrips* Likely to be Intercepted at US Ports-of-Entry

1 Ventral surface of sternites II–VII with accessory setae in addition to marginal setae 2
– Ventral surface of sternites II–VII glabrous, with marginal setae only 10
2 Pleurotergites III–IV with 3 accessory setae in addition to a single postero-marginal seta (Fig. 8) 3
– Pleurotergites III–IV with a single postero-marginal seta only (Fig. 7) 8
3 Distal half of forevein of forewing with 3 setae 4

- Distal half of forevein of forewing with 5 or more setae or with a complete uninterrupted row of setae 6
4 Antenna 7-segmented; maxillary style 1-segmented . . . . . *pillichi*
- Antenna 8-segmented; maxillary style 2-segmented 5
5 Antennal segment III with sides only weakly convex, 3–4 times longer than wide; sternites II–VII with 12–19 accessory setae arranged in two rows; metanotum as in Fig. 9; forewing usually shaded . . . . . *meridionalis*
- Antennal segment III with sides more strongly convex, less than 3 times longer than wide; sternites II-VII with 7–10 accessory setae arranged in a single row; metanotum as in Fig. 10; forewing pale . . . . . *vulgatissimus*
6 Antenna 7-segmented; maxillary style 2-segmented; metanotum reticulated (Fig. 11); forevein on forewing with a complete row of setae . . . . . *australis*
- Antenna 8-segmented; maxillary style 1-segmented; metanotum laterally striated; forevein on forewing with a 8 setae separated on distal half from basal row of setae 7
7 Antennal segment III and adjoining portions of II and IV yellow; tergite II with 4 lateral setae . . . . . *italicus*
Antennal segment III brown; tergite II with 3 lateral setae . . . . . *atratus*
8 Antenna 8-segmented; maxillary style 2-segmented[5] . . . . . *simplex*
- Antenna 7-segmented; maxillary style 1-segmented 9
9 Distal half of forevein of forewing with 3 4 setae; posterior margin of pronotum with 3 pairs of posteromarginal setae . . . *physapus*
- Distal half of forevein of forewing with 7 or more setae; posterior margin of pronotum with 3 pairs of posteromarginal setae . . . . . *angusticeps*
10 Pleurotergites III IV with 3 accessory setae in addition to a single postero-marginal seta (Fig. 8) 11
Pleurotergites III IV with a single posteromarginal seta only (Fig. 7) 12
11 Body color yellow with constrastingly dark brown setae; only distal antennal segments shaded; metanotum as in Fig. 12. . .*brevicornis*
Body color brown with legs and antennal segment III yellow; distal antennal segments shaded as well as antennal segments 1 and 2; metanotum as in Fig. 13. . . . *fulvipes*
12 Abdominal tergite VIII with a complete comb of microtrichia 13
- Abdominal tergite VIII with an interrupted comb of microtrichia, or with comb reduced to irregular triangulate bases, or lacking a comb altogether 17
13 Abdominal pleurotergites with rows of fine, ciliate microtrichia; female tergite IX with a single pair of sensory pores . . . . . *tabaci*
Abdominal pleurotergites without rows of fine, ciliate microtrichia; female tergite IX usually with 2 pairs of sensory pores . . . 14
14 Compound eye with 5 pigmented ommatidia; metanotum without sensilla; tergite IX with only one pair of sensory pores; usually micropterous . . . . . *nigropilosus*
- Compound eye with ommatidia undifferentiated; metanotum with 2 sensilla; tergite IX with two pairs of sensory pores; macropterous 15
15 Tergite II with 3 lateral setae; circumocellar area pigmented red . . . . . *flavus*
- Tergite II with 4 lateral setae; circumocellar area pigmented yellow 16
16 Ocellar setae III located laterad and just behind anterior ocellus; pleurotergites with postmarginal setae only . . . . . *palmi*
Ocellar setae III located equidistant between anterior and posterior ocelli and just just outside of ocellar triangle; pleurotergites with anterolateral setae . . . . . *urticae*
17 Pleurotergites with rows of ciliate microtrichia; tergite II with 3 lateral marginal setae . . . . . *major*
- Pleurotergites with rows of dentate microtrichia; tergite II with 4 lateral marginal setae . . . . . *fuscipennis*

Thrips Linnaeus 1758

Diagnosis.—Head either wider than long, as wide as, or longer than wide; antenna either 7- or 8-segmented; antennal segments III and IV each with forked sensory cones; 3 ocelli present; 2 pairs of ocellar setae, with ocellar setae I absent; postocular setae comprising 4–6 pairs in an arcuate arrangement behind compound eyes; seta I usually longest, others interspecifically differing in length with respect to seta I; maxillary palpi 3-segmented; pronotum without anteroangular or anteromedial pairs of setae and with two pairs of well-developed, posteroangular, long setae and usually 3 pairs of posteromarginal setae of various lengths with median pair longest; fore-



Figs. 1–6. Tip of abdomen of male thrips. *Thrips australis*: 1, dorsal. 2, left lateral. *Thrips fuscipennis*: 3, dorsal. 4, left lateral. *Thrips tabaci*: 5, dorsal. 6, left lateral.

wings usually macropterous with two rows of venal setae evenly distributed, the setae on forevein usually interrupted, or brachypterous; tarsi 2-segmented; abdominal sternites with or without accessory discal setae; tergite VIII with ctenidia located posteromedially to spiracle.

Thrips angusticeps Uzel, 1895

Thrips angusticeps Uzel 1895: 191. Type locality. Bohemia [Vienna?].

Synonyms. *Achaetothrips loboptera* Karny 1908; *Bagnallia asemus* Williams 1913; *Thrips ebneri* Karny 1914.

Description.—Antenna 7-segmented. Head longer than wide, genae weakly inflated, convex or subparallel; ocellar seta III closer to and laterad of anterior ocellus; postocular seta i longest, ii and iv shorter than iii, iv, or v. Metanotum without sensilla. Forewing with 6 setae on distal half of forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete, often in clusters, with short, irregularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III–VII with 7–9 accessory setae roughly arranged in a single row. Pleurotergites with accessory setae, without microtrichia on sculpture lines.

Color: Body brown. Antenna: I brown, II brown, III yellow, IV yellow to pale brown, V brown, VI brown, VII brown. Legs: tarsi yellow, foretibiae yellow to pale brown, mid- and hind tibiae brown, femora brown; forewings pale brown.

Hosts.—Numerous plants; a pest on flax.

Distribution.—(Africa) Egypt, Morocco. (Europe) Austria, Canary Islands, Czech Republic, Denmark, England, Finland, France, Georgia, Germany, Hungary, Lithuania, Netherlands, Poland, Scotland, Spain, Sweden, Switzerland, Ukraine, former Yugoslavia, Wales. (Mediterranean) Palestine (Israel), Persia (Iran, Iraq).

Likelihood of interception.—Probable; both widely distributed and found on many hosts; a pest on flax.

Thrips atratus Haliday, 1836

Thr.[ips] atrata Haliday 1836: 447. Type locality. Britain [Unknown].

Synonyms. *Physopus atrata* var. *adusta* Uzel 1895; *Taeniothrips atratus* var. *longicornis* Priesner 1926a; *Ceratothrips britteni* Bagnall 1914.

Description.—Antenna 8-segmented. Head longer than wide, genae weakly inflated, convex or subparallel; ocellar seta III long, laterad of and slightly posterior to anterior ocellus; postocular seta i longest, subequal to iii, v, and vi, ii and iv subequal and less than 0.25× length of i. Metanotum with 2 sensilla. Forewing with 8 setae on distal half of forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete with long regularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III–VII with 11–14 accessory setae roughly arranged in a single row. Pleurotergites with accessory setae, without microtrichia on sculpture lines.

Color: Body dark brown. Antenna: I brown, II brown, III brown, IV brown, V brown, VI brown, VII brown, VIII brown. Legs brown. Forewings basally clear, distal 4/5 pale brown or gray.

Hosts.—Numerous flowers, especially those of Caryophyllaceae, Compositae, and Labiatae.

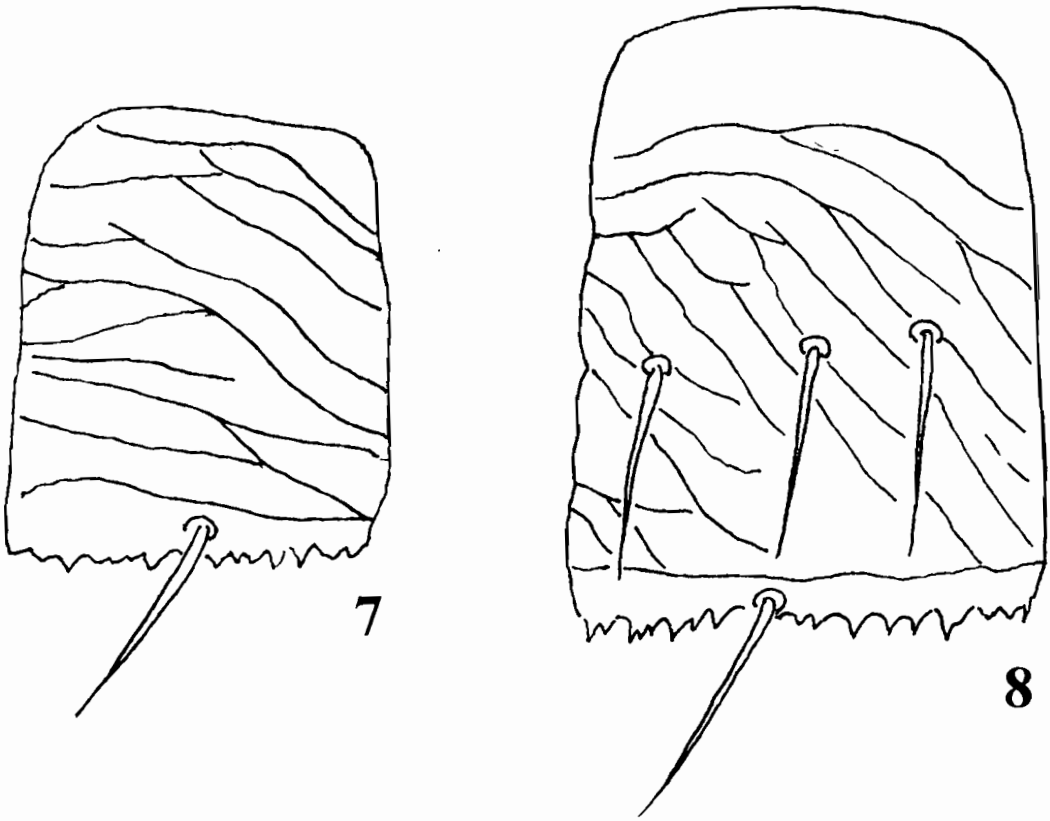
Distribution.—(Europe) Albania, Austria, Azores, Czech Republic, Denmark, England, Estonia, France, Georgia, Germany, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Romania, Russia, Scotland, Serbia, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine, former Yugoslavia. (Mediterranean) Cypress. (North America) Canada (Ontario), USA (Maine, New Jersey, New York, Washington).

Likelihood of interception.—Probable; intercepted frequently on a variety of cut flowers.

Thrips australis (Bagnall, 1915)
(Figs. 1, 2, 11)

Isoneurothrips australis Bagnall 1915: 592; Bailey 1957: 182; Jacot-Guillarmod 1974: 844. Type locality. Western Australia: Mundaring Weir, Darling Range, Perth [British Museum (Natural History)].

Thrips australis (Bagnall): Bhatti 1980: 112.



Figs. 7–8. Pleurotergite III of *Thrips* species. 7, seta on posteromarginal edge only. 8, posteromarginal seta in addition to anterolateral setae.

Thrips spinosus Hood: Johansen 1974: 34 (misidentification).

Synonyms. *Anomalothrips amygdali* Morgan 1929.

Description.—Antenna 7-segmented. Head wider than long, genae inflated, convex; ocellar seta III inside ocellar triangle and closer to anterior ocellus than posterior and slightly posterior to anterior ocellus; postocular setae i–v subequal in length. Metanotum reticulated, with 2 sensilla (Fig. 11). Forewing with complete row of setae on forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII incomplete with short, irregularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III-VII with 12–17 accessory setae roughly arranged in 1–2 rows. Pleurotergites with accessory setae, without microtrichia on sculpture lines.

Color: Body yellow to brown. Antenna: I yellow, II brown, III 1/2 yellow, 1/2 brown, IV brown, V brown, VI brown, VII yellow to brown, VIII yellow to brown. Legs yellow to pale brown. Forewings clear to pale brown.

Distribution.—(Africa) Egypt, Kenya, Malagasy Republic, Malawy, Morocco, Rhodesia, South Africa. (Australasia) Australia, New Zealand, Tasmania). (Europe) Canary Islands, Spain, Turkey. (Mediterranean) Cypress, Palestine (Israel). (North America) Barbados, USA (California, Hawaii). (South America) Brazil. (Asia) Japan.

Hosts.—Intercepted on *Acacia cyanophylla*; *A. pulchella*; *A.* sp.;.*Adenocarpus foliosus villosus*; *Adenostoma sparsifolium*;

Buddleia japonica; *Crataegus* sp.; *Dryandra floribunda*; *Eucalyptus leucoxylon*, *E.* sp.; *Goodenia* sp.; *Laurestina* sp.; *Leucadendron daphnoides*; *Leucaena glauca*; *Linum usitatissimum*; *Metrosideros* sp.; *Pinus canariensis*; *Pittosporum undulatum*; *Podocarpus macrophylla*; *Prunus amygdallus*; *Psidium guayava*; *Reseda odorata*; *Sonchus congestus*; *S. oleraceus*; *Tropaeolum majus*; arum lily; blackberry, dahlia; Indian tea; orange; rose.

Likelihood of interception.--Probable; intercepted frequently on a variety of cut flowers and commodities.

Thrips brevicornis Priesner, 1920b
(Fig. 12)

Thrips brevicornis Priesner 1920b: 59. Type locality. Austria: Oberösterreich, alpine region [Priesner Coll., Linz, Austria].

Description.—Antenna 7-segmented. Head longer than wide, genae inflated, convex; ocellar seta III located just behind and laterad of anterior ocellus; postocular seta i and ii shortest, iii slightly longer, iv longest (3× length of i), and v and vi 3/4 length of iv. Metanotum with 2 sensilla (Fig. 12). Forewing with 3 setae on forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete with long regularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III-VII without accessory setae. Pleurotergites with accessory setae, with weakly dentate microtrichia on sculpture lines.

Color: Body yellow. Antenna: I yellow, II yellow, III yellow, IV basal 1/4 yellow distal 3/4 pale brown, V pale brown, VI brown, VII brown. Legs yellow. Forewings clear.

Distribution.--Known only from Austria.

Hosts.—Variety of cut flowers.

Likelihood of interception.—Probable; has been intercepted repeatedly on cut flowers from Europe.

Thrips flavus Schrank, 1776
(Fig. 15)

Thrips flavus Schrank 1776: 31. Type locality. Austria [Unknown].

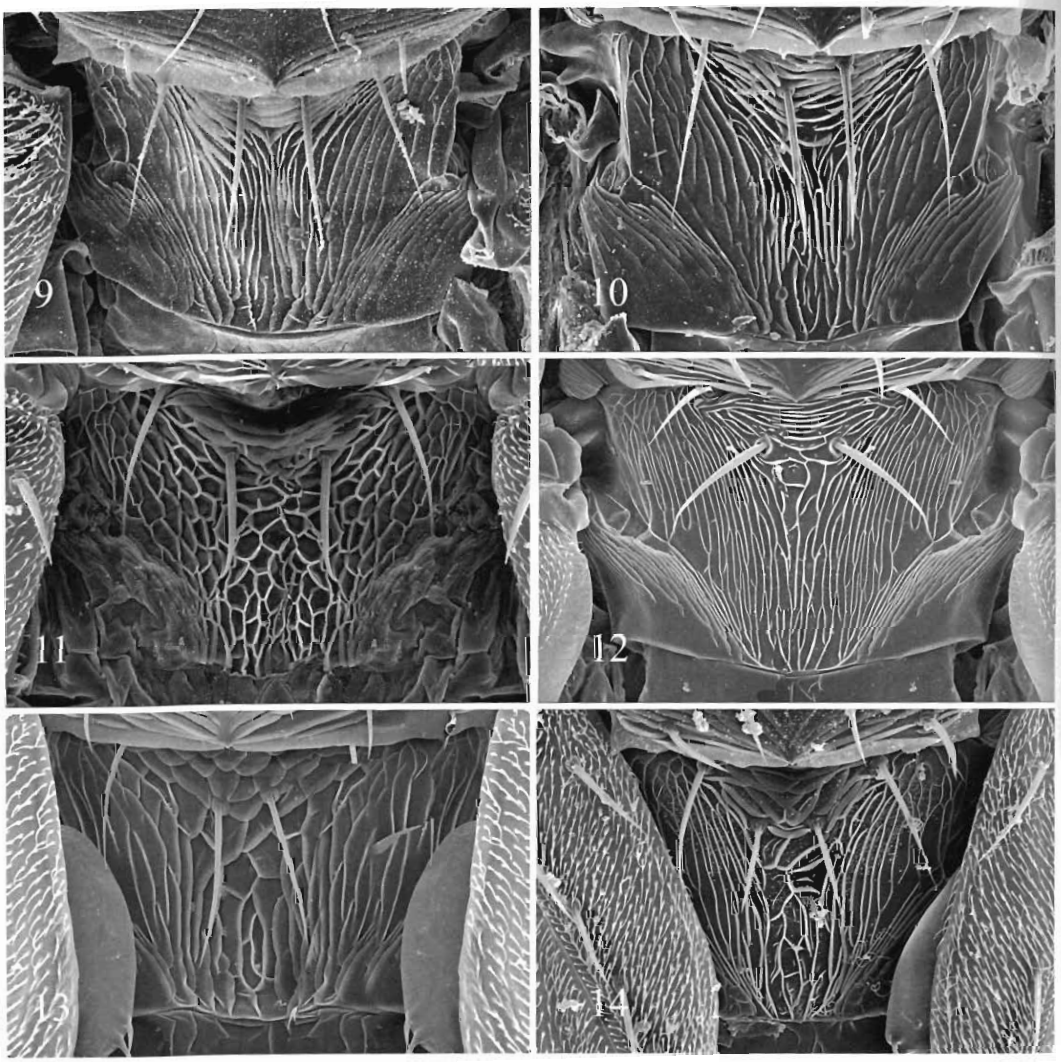
Synonyms. *Thrips melanopa* Schrank 1781; *Thrips ochraceus* Ruricola [Curtis]; *Thrips flavidus* Bagnall 1916; *Thrips flavus* var. *flavosetosus* Priesner 1919; *Physothrips flavidulus* Bagnall 1923; *Thrips flavus* var. *obscuricornis* Priesner 1927; *Thrips clarus* Moulton 1928; *Thrips flavus* var. *kyotoi* Moulton 1928; *Thrips nilgiriensis* Ramakrishna 1928; *Thrips luteus* Oettingen 1935; *Taeniothrips sulfuratus* Priesner 1935; *Thrips rhopalantennalis* Shumsher 1946.

Description.--Antenna 7-segmented. Head longer than wide, genae inflated, convex; ocellar seta III equidistant from anterior and posterior ocellus, situated on edge of ocellar triangle; postocular seta i and iii equal in length, 2× length of either ii, iv, v, or vi. Metanotum with 2 sensilla (Fig. 15). Forewing with 3 setae on forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete with long regularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III–VII without accessory setae. Pleurotergites without accessory setae, with weakly dentate microtrichia on sculpture lines.

Color: Body yellow. Antenna: I yellow, II yellow, III yellow, IV yellow, V yellow to pale brown, VI pale brown, VII brown. Legs yellow. Forewings clear.

Distribution.—(Asia) Taiwan, China, Korea, Philippines, Malawi. (Europe) Austria, Azores, Czech Republic, Denmark, England, Finland, France, Germany, Hungary, Ireland, Italy, Netherlands, Poland, Romania, Russia, Scotland, Slovakia, Sweden, Switzerland, Transcaucasia, Turkistan. (North America) USA (New York).

Hosts.--Many plants.



Figs. 9–14. Metanotal sculpturation of *Thrips* species. 9, *T. meridionalis*. 10, *T. vulgatissimus*. 11, *T australis*. 12, *T. brevicornis*. 13, *T. fulvipes*. 14, *T. tabaci*.

Likelihood of interception.—Probable; has a broad distribution and has been found on many hosts; intercepted frequently from various countries and on various hosts and commodities.

Thrips fulvipes Bagnall, 1923
(Fig. 13)

Thrips fulvipes Bagnall 1923: 59. Type locality. England: Shotover, Oxfordshire [British Museum (Natural History)].

Description.—Antenna 7-segmented. Head longer than wide, genae weakly inflated, convex; ocellar seta III located slightly laterad of and behind anterior ocellus, situated outside of ocellar triangle; postocular seta i, iii, and iv equal in length, 0.75× length of either ii or v. Metanotum without sensilla (Fig. 13). Forewing with 3 setae on forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete with long regularly-spaced microtrichia.

Tergite IX with 2 pairs of sensory pores. Sternites III–VII without accessory setae. Pleurotergites without accessory setae, without microtrichia on sculpture lines.

Color: Body pale brown to brown. Antenna: I brown, II brown, III yellow, IV yellow, V pale brown, VI brown, VII brown. Legs: tarsi yellow, foretibiae yellow, mid- and hindtibiae brown, femora brown, forewings basally clear, distal 4/5 pale brown.

Distribution.—(Europe) Austria, Czech Republic, Denmark, England, France, Germany, Hungary, Romania, Scotland, Slovakia, Sweden, Switzerland. (Asia) Trancaucasia.

Hosts.—*Brachypodium sylvaticum*, *Corylus* sp., *Mercurialis perennis*.

Likelihood of interception.—Probable; has been found on various hosts from Europe.

Thrips fuscipennis Haliday, 1836
(Figs. 3–4, 18)

Thrips fuscipennis Haliday 1836: 448; *fuscipennis* Haliday 1852; Hood 1927; Hood and Herrick 1928; Stannard 1968; Gentile and Bailey 1968; Huntsinger 1982; Jacot-Guillarmod 1975. Type locality. Britain [Unknown].

Synonyms. *Thrips fuscipennis* f. *drabae* Priesner 1927; *Thrips meledensis* Karny, 1907.

Color: Body brown. Antenna: I brown, II brown, III yellowish brown, IV yellowish brown basally, brown distally, V pale brown basally, brown distally, VI brown, VII brown. Legs: tarsi yellow; tibiae yellow with brown medially or mid- and hind tibiae brown; forefemur yellow with dorsum brownish, midfemur brown with apices yellowish, hind femur brown; forewings pale brown.

Description.—Body length 1.2–1.4 mm. Antenna 7- segmented. Head broader than long, genae not inflated; ocellar seta III laterad of anterior ocellus; postocular seta i longest, ii and iv shorter than iii. Metanotum usually with 2 sensilla (Fig. 18). Forewing with 3 setae on distal half of forevein. Tergite II with 4 lateral setae. Posteromarginal comb on tergite VIII interrupted, with 3–8 microtrichia on lateral margins. Tergite IX with 2 pairs of sensory pores. Sternites without accessory setae. Pleurotergites without accessory setae, with dentate microtrichia on sculpture lines.

Hosts.—Plants of various families.

Economic importance.—Damages flowers of roses, cucumbers, and strawberries in Europe (Morison 1957).

Distribution.—(Asia) China. (Europe) Albania, Austria, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Romania, Russia, Sardinia, Scotland, Serbia, Slovakia, Sweden, Switzerland, Trancaucasia, Turkey, Wales, former Yugoslavia. (North America) Canada (British Columbia, Quebec), USA (Illinois, New York, Oregon, Utah).

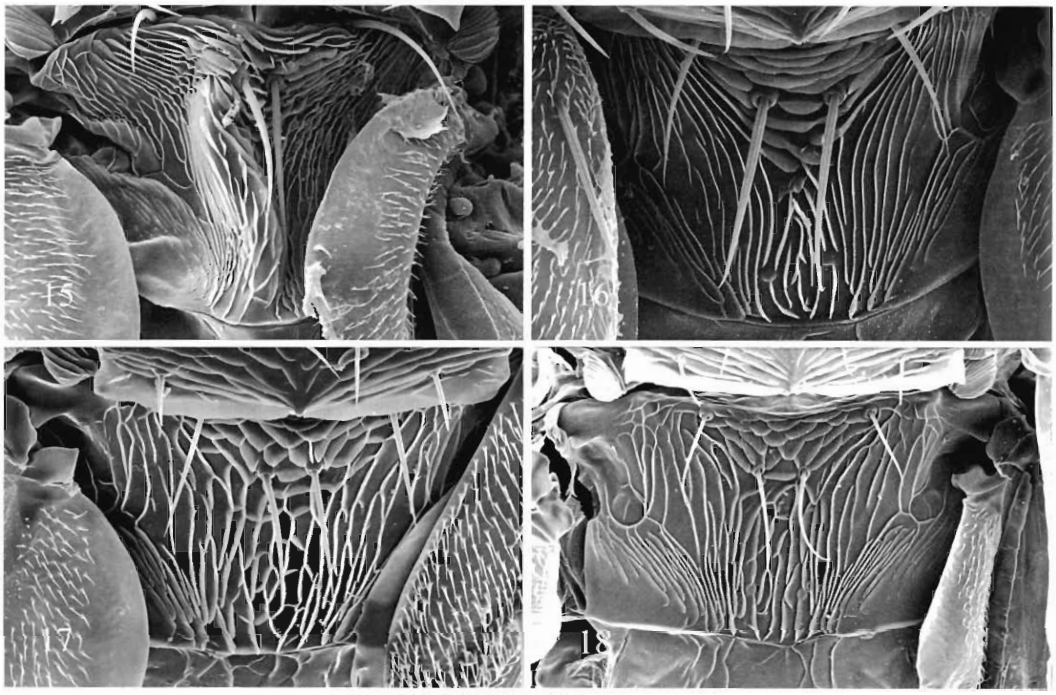
Likelihood of interception.—Very probable; a common species frequently intercepted in ports on a variety of hosts.

Thrips italicus (Bagnall, 1926)

Taeniothrips italicus Bagnall 1926: 650. Type locality. Italy: Portici (Napoli) The Natural History Museum (London)

Synonyms: *Euthrips annulata* Karny 1907

Description.—Antenna 8-segmented. Head as long as wide, genae not inflated, expanding posteriorly from behind compound eyes; ocellar seta III laterad of and slightly behind anterior ocellus, located outside of ocellar triangle; postocular setae i and iii longest, ii and iv shortest, only 0.33× length of i, iv and v 0.75× length of i. Metanotum with 2 sensilla. Forewing with 8 setae on distal half of forevein. Tergite II with 4 lateral setae. Posteromarginal comb on tergite



Figs. 15–18. Metanotal sculpturation of *Thrips* species. 15, *T. flavus*. 16, *T. palmi*. 17, *T. major*. 18, *T fuscipennis*.

VIII complete, with medium-sized regularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites with a single row of 8–12 accessory setae. Pleurotergites without accessory setae, with dentate microtrichia on sculpture lines.

Color: Body brown. Antenna: I brown, II brown, III yellow, IV brown, V brown, VI brown, VII brown, VIII brown. Legs: tarsi yellow; foretibiae yellow, mid- and hind tibiae brown; femora brown; forewings basal 1/4 clear, distal 3/4 pale brown.

Distribution.—(Europe) Albania, England, France, Italy, Turkey, Ukraine, Yugoslavia.

Hosts.—*Bellis* sp.; *Citrullus vulgaris*; *Erica verticillata*; *Euphorbia wulfenii*; *Ficus* sp.; *Genista* sp.; *Photinia elliptica*; *Quercus ilex*; *Ranunculus* sp.; *Robinia* sp.; *Scabiosa* sp.; *Solanum dulcamara*; *Spartium* sp.; *Spasticum* sp.

Likelihood of interception.—Probable; occasionally intercepted on various commodities.

Thrips major Uzel, 1895
(Fig. 17)

Thrips major Uzel 1895: 179. Type locality. Bohemia [Vienna Museum?].

Synonyms. *Thrips major* var. *adusta* Uzel 1895; *Thrips major* var. *gracilicornis* Uzel 1895; *Thrips major* var. *corticina* Priesner 1925; *Thrips major* var. *sarothamni* Priesner 1927; *Thrips major* var. *banatica* Knechtel (*i. litt.*) Priesner 1927; *Thrips major* var. *banatica* f. *dorsimaculata* Priesner 1927; *Thrips major* var. *banatica* f. *ustulata* Priesner 1927; *Physothrips rosaceae* Moulton 1936.

Description.—Antenna 7-segmented. Head as long as wide, genae inflated, convex; ocellar seta III laterad of and

slightly behind anterior ocellus, located well outside of ocellar triangle; postocular setae i and iii longest, ii shortest, only 0.4× length of i, iv and v 0.8× length of i. Metanotum with 2 sensilla (Fig. 17). Forewing with 3 setae on distal half of forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII incomplete, with short irregularly-spaced lateral microtrichia only. Tergite IX with 2 pairs of sensory pores. Sternites without accessory setae. Pleurotergites without accessory setae, with dentate microtrichia on sculpture lines.

Color: Body yellow to brown. Antenna: I brown, II brown, III yellow, IV pale brown, V brown, VI brown, VII brown. Legs: tarsi yellow; foretibiae yellow, mid- and hind tibiae yellow to pale brown; femora pale brown; forewings clear to yellow.

Distribution.—(Africa) Algeria, Canary Islands, Madeira, Mallorca, Morocco. (Asia) Mongolia. (Europe) Albania, Austria, Canary Islands, Czech Republic, Dalmatia, Denmark, England, Estonia, Finland, Germany, Hungary, Ireland, Italy, Lithuania, Poland, Romania, Russia, Scotland, Slovakia, Sweden, Transcaucasia, Wales. (Mediterranean) Cypress, Palestine (= Israel).

Hosts.—Large variety of cut flowers.

Likelihood of interception.—Very probable; a common species frequently intercepted in ports on a variety of hosts.

Thrips meridionalis (Priesner, 1926b)

Taeniothrips meridionalis Priesner 1926b: 301. Type locality. Unknown [Priesner Coll., Linz, Austria].

Thrips meridionalis, Bhatti 1978: 301.

Color: Body brown. Antenna: I brown, II brown, III yellow, 1/2 brown, IV brown, V brown, VI brown, VII brown, VIII brown. Legs: tarsi yellow to pale brown; foretibiae pale brown; mid- and hindtibiae brown; femora brown. Forewings basal 1/4 clear, distal 3/4 pale brown.

Description.—Antenna 8-segmented. Head as long as wide, genae weakly inflated, expanding posteriorly from behind compound eyes; ocellar seta III long, nearly equidistant from anterior to posterior ocellus, located on edge of ocellar triangle; postocular seta i longest, ii and iv shortest, less than 0.25× length of i; setae iii, v, and vi subequal in length, equal to 0.9× length of seta i. Metanotum with 2 sensilla (Fig. 9). Forewing with 3 setae on distal half of forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete with long, regularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III–VII with 2 rows of 6–9 accessory setae in each row. Pleurotergites with accessory setae, with ciliate microtrichia on sculpture lines.

Distribution.—(Africa) African Mediterranean coast. (Europe) Albania, France, Georgia, Greece, Italy; Romania, Russia, Turkey; former Yugoslavia. (Mediterranean) Cypress, Palestine (Israel), Lebanon. (Asia) Iran, Iraq.

Hosts: Achillea sp.; *Anthemis maritima*; *Atriplex portulacoides*; *Brassica* sp.; *Citrus* sp.; *Erica verticillata*; *Fontanesia phillyreoides*; *Frankenia laevis*; *Fraxims ornus*; *Helichrysum arenarium*; *Iris germanica*; *Matthiola sinuata*; *Prangos ferulacea*; *Raphanus* sp.; *Robinia pseudoacacia*; *Rosa* sp.; *Sambucus ebulus*; *Scilla* sp.; *Sinapis* sp.; *Styrax officinalis*; *Tamarix* sp.; *Ulex* sp.; *Viburnum* sp.; Gramineae.

Likelihood of interception.—Very probable; often intercepted.

Thrips nigropilosus Uzel, 1895

Thrips nigropilosus Uzel 1895: 198; *nigropilosus* 1957; Stannard 1968; Gentile and Bailey 1968; Beshear 1973; Huntsinger et al. 1982; Jacot-Guillarmod 1975. Type locality. Bohemia [Vienna Museum?].

latucae Beach 1896; Hood 1927; Bailey 1948.

Thrips nigropilosus f. *pilosissima* Priesner 1922; Moulton 1927; Gentile and Bailey 1968.

Synonyms. *Thrips lactucae* Beach 1896; *Thrips nigropilosus* f. *pilosissimus* Priesner 1922.

Description.—Body length 1.15–1.35 mm. Antenna 7- segmented. Head broader than long, genae inflated; compound eye with 5 pigmented ommatidia on ventral surface; ocellar seta III posterolaterad of anterior ocellus; postocular seta i longest, ii and iv shorter than iii. Metanotum lacking sensilla. Forewing with 3 setae on distal half of forevein. Brachypterous forms common. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete, with closely spaced microtrichia. Tergite IX with 1 pair of sensory pores. Sternites without accessory setae. Pleurotergites without accessory setae, with small microtrichia on sculpture lines.

Color: Body yellow with brown markings on thorax and abdomen. Antenna: I yellow, II yellow, III basally yellowish brown, distally brown, IV basally yellowish brown, distally brown, V pale brown basally, brown distally, VI basal 1/4 yellowish, distal 3/4 brown, VII brown. Legs: yellow; forewings pale gray.

Hosts.—various cut flowers, mainly composites.

Economic importance.—Occasional pest of chrysanthemums, gloxinia, lettuce, and other crops. Also a minor greenhouse pest (Morison 1957). Listed as a pest of onion, flax, and wheat by Ananthakrishnan (1984).

Distribution.—(Africa) Egypt. (Asia) Japan. (Australasian) Australia. (Europe) Albania, Austria, Czech Republic, Denmark, England, Finland, France, Germany, Hungary, Lithuania, Netherlands, Poland, Romania, Russia, Scotland, Slovakia, Sweden, Switzerland, Turkey. (North America) USA (California, Georgia, Illinois, Indiana, Iowa, New Jersey, New York, South Dakota, Virginia, Washington). (Oceana) Hawaii, Fiji.

Likelihood of interception.—Probable; widely distributed and found on numerous cut flowers transported in commerce.

Thrips palmi Karny, 1925
(Fig. 16)

Thrips palmi Karny 1925: 54; Type locality. Indonesia [Unknown].

Bhatti 1980; Sakimura et al. 1986; Guyot 1988.

Thrips clarus Moulton 1928.

Chloethrips aureus Ananthakrishnan and Jagadish 1967; Bhatti 1969.

Thrips gracilis Ananthakrishnan and Jagadish 1968; Bhatti 1969.

Thrips leucadophilus Priesner 1936.

Description.—Body length 1.0–1.2 mm. Antenna 7- segmented. Head broader than long, genae inflated; ocellar seta III laterad of anterior ocellus; postocular seta i longest, ii and iv shorter than iii. Metanotum with 2 sensilla (Fig. 16). Forewing with 3 (sometimes 2 or 4) setae on distal half of forevein. Tergite II with 4 lateral setae. Pleurotergite II with a single postero-marginal setae only. Posteromarginal comb on tergite VIII complete, with closely spaced microtrichia. Tergite IX with 1 pair of sensory pores. Sternites without accessory setae. Pleurotergites without accessory setae, with small microtrichia on sculpture lines.

Color: Body bright pale yellow. Antenna: I yellow, II yellow, III basally yellowish brown, distally brown, IV basally yellowish brown, distally brown, V pale brown basally, brown distally, VI brown, VII brown. Legs: yellow; forewings clear or pale yellow.

Hosts.—*Brassica campestris*, *B. juncea*, *Camellia thea*, *Citrus medica*, *Cymbidium bicolor*, *Cypripedium* sp., *Dendro-*

bium gratiosissimus, *Fabia vulgaris*, *Goodlaea* sp., *Gossypium herbaceum*, *Habernaria* sp., *Lathyrus* sp., *Pyrus malus*, *Sesamum indicum*, *Striga* sp.

Economic importance.—Potential major pest on numerous members of Cucurbitaceae (bitter melon, cantaloupe, cucumber, hairy gourd, muskmelon, pumpkin, squash, watermelon), Leguminosae (broadbean, cowpea, kidney bean, soybean, whiteclover), Solanaceae (eggplant, groundcherry, pepper, potato, tobacco), chrysanthemum, cotton, cyclamen, dahlia, morning glory, sesame, sweet potato (Sakimura et al. 1986). Also reported on apple, avocado, carnation, citron, coriander, onion,orange, orchids, peach, tea, and other crops (Nakahara 1996).

Distribution.—(Asia) India, Indonesia. A potential invasive species into the U.S.

Likelihood of interception.—Probable, but not from Africa, Europe, or Mediterranean region; may be intercepted on plant material imported into and distributed from the Netherlands.

Thrips physapus Linnaeus, 1758

Thrips physapus Linnaeus 1758: 457. Type locality. Not specified [Unknown].

Synonyms. *Thrips fusca* Muller 1776; *Thrips flavicornis* Reuter 1879; *Thrips physapus* var. *adusta* Uzel 1895; *Thrips* f. *annulata* Karny 1907; *Thrips physapus* var. *flavescens* Priesner 1919; *Thrips physapus* var. *quadrisetosus* Priesner 1923; *Thrips physapus* f. *brunnea* Ishida 1936; *Thrips collinus* Oettingen 1951.

Description.—Antenna 7-segmented. Head longer than wide, genae inflated, convex; ocellar seta III located well outside ocellar triangle, situated slightly posterior to anterior ocellus and closer to anterior than posterior ocellus; postocular seta i longest, iii and v subequal in length, about 0.5× length of seta i, setae ii and iv shortest, less than 0.4× length of seta i. Metanotum with 2 sensilla. Forewing with 3 setae on distal half of forevein of forevein. Tergite II with 4 lateral setae. Posteromarginal comb on tergite VIII complete with short to long regularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III–VII with 10–14 accessory setae arranged alternately in two rows of 5–7. Pleurotergites with accessory setae, with ciliate microtrichia on sculpture lines.

Color: Body brown. Antenna: I brown, II brown, III yellow, IV yellow, V basal 3/4 yellow, distal 1/4 brown, VI V basal 1/2 yellow, distal 1/2 brown, VII brown. Legs: tarsi yellow, foretibiae pale brown, mid- and hindtibiae brown, femora brown. Forewings pale brown.

Distribution.—(Africa) Sudan, Morocco. (Asia) Japan. (Europe) Albania, Austria, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Scotland, Serbia, Slovakia, Sweden, Switzerland, Turkey, Wales, former Yugoslavia. (North America) Canada (British Columbia), USA (Illinois, Michigan, New Jersey, New York, Utah).

Hosts.—Numerous cut flowers, especially composites.

Likelihood of interception.—Probable; intercepted frequently on a variety of cut flowers.

Thrips pillichi Priesner, 1924

Thrips pillichi Priesner 1924: 2. Type locality. Hungary: Simontornya [Priesner Coll., Linz, Austria].

Synonyms. *Thrips f. fallaciosa* Priesner 1924; *Thrips praetermissimus* Priesner 1920b; *Thrips f. hiemalis* Priesner 1925; *Thrips kerschneri* Priesner 1927.

Description.—Antenna 7-segmented. Head wider than long, genae weakly inflated, convex; ocellar seta III located

outside ocellar triangle, situated slightly posterior to anterior ocellus; all postocular setae subequal in length. Metanotum without sensilla. Forewing with 3 setae on distal half of forevein of forevein. Tergite II with 4 lateral setae. Posteromarginal comb on tergite VIII complete with long regularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III-VII with 15–25 accessory setae arranged randomly in 2-3 indistinct rows. Pleurotergites with accessory setae, with widely dispersed dentate microtrichia on sculpture lines.

Color: Body yellow. Antenna: I yellow, II yellow, III yellow, IV basal 3/4 Y distal 1/4 pale brown, V pale brown, VI pale brown, VII pale brown. Legs: tarsi yellow, foretibiae yellow, mid- and hindtibiae yellow, femora yellow. Forewings clear.

Distribution.—(Europe)Austria, Czech Republic, England, France, Germany, Hungary, Netherlands, Norway, Romania, Spain, Turkey, Ukraine.

Hosts.— *Achillea millefolium*, *Alopecurus pratensis*, *Anthemis arvensis*, *Arrhenatherum elatius*, *Bidens tripartitus*, *Camilla* sp., *Centaurea jacea* f. *pannonica*, *Cerastium tomentosum*, *Chrysanthemum leucanthemum*, *C. vulgare*, *C.* sp., *Cichorium intybus*, *Cuscuta europaea*, *Euphorbia cyparissias*, *E. palustris*, *Hieracium umbellatum*, *Isatis tinctoria*, *Lotus corniculatus*, *Matricaria chamomilla*, *Medicago sativa*, *Ranunculus* sp., *Senecio jacobaea*, *S. sylvaticus*, *Solidago virgaurea*, *Sonchus palustris*, *Sorbus torminalis*, *Tanacetum vulgare*, *Vicia cracca*.

Likelihood of interception.—Probable. Although seldom intercepted at U.S. ports, this widely distributed species has a wide host range that greatly increases its potential for establishment through U.S. ports.

Thrips simplex (Morison 1930)

Physothrips simplex Morison 1930: 12. Type locality. Not specified [Unknown].

Taeniothrips simplex (Morison): Steele 1935: 33.

Thrips simplex (Morison): Bhatti 1969: 380.

Synonyms. *Taeniothrips gladioli* Moulton and Steinweden 1931; *Physothrips spiranthidis plurisetae* Girault 1933.

Description.—Body length 1.5–1.9 mm. Antenna 8- segmented. Head broader than long, genae inflated; ocellar seta III posterior of anterior ocellus; postocular seta i longest, ii and iv shorter than iii. Metanotum without sensilla. Forewing with 5-8 setae on distal half of forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete, with short, irregularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III–VII with accessory setae. Pleurotergites without accessory setae, with ciliate microtrichia on sculpture lines.

Color: Body dark brown. Antenna: I brown, II distally yellowish brown, III yellow or yellowish brown, IV brown, V brown, VI brown, VII brown, VIII brown. Legs: brown, except tarsi, foretibiae, and apices of mid- and hindtibiae, and bases of femora yellowish brown; forewings grayish brown.

Hosts.—Numerous flowers, especially composites.

Economic importance.—Pest of gladiolus flowers, carnations and other flowers (Bailey 1938, Morison 1957).

Distribution.—(Africa) Sudan, Morocco. (Asia) Iraq, Iran, Japan. (Europe) Albania, Austria, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Scotland, Serbia, Slovakia, Sweden, Switzerland, Turkey, Wales, former Yugoslavia. (North America) Canada (British Columbia), USA (Illinois, Michigan, New Jersey, New York, Utah).

Likelihood of interception.—Probable; intercepted frequently on a variety of cut flowers.

Thrips tabaci Lindeman, 1889
(Figs. 5, 6, 14)

Thrips tabaci Lindeman 1889: 72. Type locality. Basarabia [Unknown].

Synonyms. *T. adamsoni* Bagnall 1923; *T. communis* Uzel 1895; *T. flava* var. *obsoleta* Uzel 1895; *T. bremnerii* Moulton 1907; *T. dorsalis* Bagnall 1927; *T. hololeucus* Bagnall 1914; *Limothrips allii* Gillette 1893; *T. bicolor* Karny 1907; *T. communis* var. *pulla* Uzel 1895; *Parathrips uzeli* Karny 1907; *T. debilis* Bagnall 1923; *T. frankeniae* Bagnall 1926; *T. seminiveus* Girault 1926; *T. shakespearei* Girault 1926; *T. indigenus* Girault 1929.

Description.—Antenna 7-segmented. Head as long as wide, genae inflated, convex; ocellar seta III laterad and slightly behind anterior ocellus, located outside of ocellar triangle; postocular seta i longest, ii nearly as long as i and iv shortest, less than 0.5× length of i; setae iii and v subequal in length, equal to 0.6× length of seta i. Metanotum without sensilla (Fig. 14). Forewing with 3–5 setae on distal half of forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete with long, regularly-spaced microtrichia. Tergite IX with 1 pair of sensory pores. Sternites III–VII without accessory setae. Pleurotergites without accessory setae, with ciliate microtrichia on sculpture lines.

Color: Body yellow to pale brown. Antenna: I yellow, II pale brown, III basal 1/2 yellow, distal 1/2 brown, IV basal 1/2 yellow, distal 1/2 brown, V basal 1/4 yellow, distal 3/4 brown, VI brown, VII brown. Legs: tarsi yellow; foretibiae yellow; mid- and hindtibiae yellow; femora yellow to pale brown. Forewings clear.

Distribution.—Cosmopolitan.

Hosts.– Large number of plants; pest of onions, tobacco, cotton, vector of tomato spotted wilt virus and related forms.

Likelihood of interception.—Extremely high; this is one of the most frequently intercepted species in U.S. ports and is found on a wide variety of hosts.

Thrips urticae Fabricius, 1781

Thrips urticae Fabricius 1781: 397. Type locality. Not specified [Lost?].

Description.—Antenna 7-segmented. Head longer than wide, genae inflated, convex; ocellar seta III located outside of ocellar triangle, equidistant from anterior and posterior ocelli; postocular seta i longest, ii shortest as i and iv shortest, less than 0.2× length of i; setae iii equal to 0.9× length of seta i; seta iv equal to about 0.4× length of seta i; seta v equal to about 0.6× length of seta i. Metanotum with 2 sensilla. Forewing with 3 setae on distal half of forevein. Tergite II with 4 lateral setae. Posteromarginal comb on tergite VIII complete with long, regularly-spaced microtrichia. Tergite IX with 1 pair of sensory pores. Sternites III–VII without accessory setae. Pleurotergites with accessory setae, without microtrichia on sculpture lines.

Color: Body yellow with head and thorax brownish. Antenna: I brown, II yellow, III yellow, IV basal 1/2 yellow, distal 1/2 brown, V basal 1/2 yellow, distal 1/2 brown, VI pale brown, VII pale brown. Legs yellow. Forewings clear.

Distribution.—(Asia) China. (Europe) Austria, Bessarabia, Czech Republic, Denmark, England, Finland, Germany, Hungary, Poland, Romania, Slovakia, Switzerland, Ukraine.

Hosts.- *Urtica dioica*, other plants in literature probably casual.

Likelihood of interception.—Unlikely; though widely distributed in Europe, this species has not as yet been encountered at U.S. ports.

Thrips vulgatissimus Haliday, 1836
(Fig. 10)

Thrips vulgatissima Haliday 1836: 447. Type locality. Bohemia [Vienna Museum?].

Synonyms. *Euthrips alpina* Karny 1908; *Taeniothrips lemansis* Trehcrne 1924; *Physopus pallipennis* Uzel 1895; *Taeniothrips vulgatissimus americanus* Moulton 1929; *Taeniothrips vulgatissimus atricornis* Priesner 1926a.

Description.—Antenna 8-segmented. Head longer than wide, genae inflated, convex; ocellar seta III located outside ocellar triangle, nearly equidistant from anterior and posterior ocelli; postocular seta i longest, iii and v 0.5× length of i; setae ii shortest, less than 0.15× length of seta i; seta iv about 2× than of seta ii. Metanotum with 2 sensilla (Fig. 10). Forewing with 3 setae on distal half of forevein. Tergite II with 3 lateral setae. Posteromarginal comb on tergite VIII complete with long, regularly-spaced microtrichia. Tergite IX with 2 pairs of sensory pores. Sternites III–VII with 10–12 accessory setae arranged in a single row. Pleurotergites with accessory setae, with weakly defined dentate microtrichia on sculpture lines.

Color: Body brown. Antenna: I brown, II brown, III pale brown, IV brown, V brown, VI brown, VII brown, VIII brown. Legs brown. Forewings basal 1/4 clear, distal 3/4 pale brown.

Distribution.—(Europe) Austria, Czech Republic, England, Finland, Denmark, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Netherlands, Poland, Romania, Russia, Scotland, Slovakia, Spain, Sweden, Switzerland, former Yugoslavia. (North America) Canada (British Columbia, Manitoba, Nova Scotia, Quebec), Greenland, U.S.A. (California, Colorado, Georgia, Illinois, Maine, New Jersey).

Hosts.—From many varieties of plants.

Likelihood of interception.—Very probable; a commonly intercepted species found on a wide array of hosts.

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