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LIST OF THE SYMPHYTA (HYMENOPTERA) OF ISRAEL, WITH DESCRIPTION OF FOUR NEW SPECIES

DAVID R. SMITH

Systematic Entomology Laboratory, IIBIII, Agricultural Research Service, USD A, c/o National Museum of Natural History, Washington, D. C. 20560.

ABSTRACT

Eighty-one species of Symphyta in the families Xyelidae, Magalodontidae, Cimbi- cidae, Argidae, Tenthredinidae, Siricidae, and Cephidae are recorded from Israel. Four new species of Tenthredinidae are described from Israel, *Profemusa lutea, Periclista freidbergi, P. hermonensis,* and *Tenthredopsis kaplanorum.*

Most of the work on the Symphyta of the Near East is by Benson (1954, 1955, 1968). His 1955 paper is the most complete list of Israeli sawflies; he included 56 species, most of which were new records, the others being from the earlier lists of Bodenheimer (1930,1937). In Benson's treatment of the Symphyta of Turkey (1968), most of the Israeli fauna was also included in the species lists and keys.

Recently, I studied a collection of Symphyta from the Department of Zoology, Tel Aviv University, Israel. This collection contains two-thirds of the species recorded from Israel and forms a good basis for updating the knowledge of the country's fauna. Based on this collection and on information in the literature, 81 species in 41 genera and seven families are now known from Israel.

A number of existing keys to the Symphyta are useful for identifying the sawflies of Israel, keeping in mind taxonomic changes that have come about since those keys were published. Benson's (1951, 1952, 1958) keys are adequate to family, subfamily, and in most cases, genera. Gussakovskij (1935, 1947) treated the fauna of the USSR for the Megalodontidae, Argidae, Cimbicidae, and Cephidae, and his keys are adequate for most of the Palearctic Region. A key to the genera of Cephidae was published by Benson (1946), and Benson (1962) revised *Athalia.* Benson (1968) gave keys to *Cala- meuta* and *Trachelus* (Cephidae), *Corynis* (Cimbicidae), and some *Dolerus, Periclista, Tenthredopsis,* some *Tenthredo, Elinora, Sciapteryx,* and some *Macrophya* (Tenthredinidae).

In the following list, published locality records, information on taxonomic changes where appropriate, and material examined are presented. The section on material examined is arranged by faunal regions (number in parenthesis) as accepted

by the "Fauna Palaestina" Committee (F. Kaplan, personal communication), a map of the regions is given by Theodor (1975); the specimen data follow, and the last number is the number of specimens examined.

The faunal regions are as follows: (1) Upper Galilee; (2) Lower Galilee; (3) Carmel Ridge; (4) Northern Coastal Plain; (5) Valley of Yizre'el; (6) Samaria; (7) Jordan Valley and Southern Golan; (8) Central Coastal Plain; (9) Southern Coastal Plain; (10) Foothills of Judea; (11) Judean Hills; (12) Judean Desert; (13) Dead Sea Area; (14) 'Arava Valley; (15) Northern Negev; (16) Southern Negev; (17) Central Negev; (18) Golan Heights; (19) Mount Hermon; (20) Northern Sinai; (21) Central Sinai Foothills; (22) Sinai Mountains; (23) Southwestern Sinai.

Locality records represent areas of most intensive collecting; most are from northern and central Israel, regions 1, 2, 3, 6-11, with about half as many records from regions 5, 12, 13, 15, 16, 18, 19. There are only a few records from other areas, and only one from the Sinai (22). Sawflies are usually found in humid areas with luxurious vegetation; therefore, greater numbers of individuals and species would probably be found in the central and northern mountains. Periods after rain should be the best for collecting. Many species recorded here are representatives of groups in which adults are commonly found on flowers (Cimbicidae, Megalodontidae, Argidae, Tenthredinidae, Cephidae). Diprionidae and Siricidae, families associated with coniferous forests, are absent except for some adventive Siricidae. Groups most common to the north, such as the Nematinae and Dolerinae, and groups most common to the temperate regions and humid tropics, such as the Selandriinae, Blennocampinae, and Allantinae, are either represented by very few species or are absent.

LIST OF SYMPHYTA

XYELIDAE

Xyela graeca (Stein)

Discussion: First recorded by Benson (1955): (11) Jerusalem; Botanical Garden on Mt. Scopus. Israel also mentioned in distribution of species by Benson (1968). *Xyela* species are associated with *Pinus* spp.

Material examined: (3) Carmel, 22.II.1981, A. Freidberg, 12.

MEGALODONTIDAE

Megalodontes escalerai Konow

Discussion. First recorded from Israel by Benson (1955): (9) Rehovot. Benson (1968) also mentioned Israel in distribution.

Material examined: (8) W. Falik, 10.IV.1963, 1. (18) Abu Nida, Golan Heights, 28.V.1969, 1.

Megalodontes exornatus (Zaddach)

Discussion: This species was listed by Bodenheimer (1937), but may not occur in Israel. Benson (1968) gave the distribution as Hungary, Greece, Turkey, and Transcaucasia.

Megalodontes imperialis Konow

Discussion: First recorded by Benson (1955): (1) Hazor. (7) Migdal (on *Bupleurum subovatum*); Deganya; 'En Gev. (10) Lakhish. Israel mentioned in distribution by Benson (1968).

Megalodontes laticeps Konow

Discussion: Recorded from Israel by Benson (1968): (3) Carmel, Place of Sacrifice.

Megalodontes phoenicus Lepeletier

Discussion: First recorded from Israel by Benson (1955): (15) Urim. (16) Yeroham (on *Haplophyllum tuberculatum*). Israel mentioned in distribution by Benson (1968).

Material examined: (16) Mishor Rotem, 28.III.1965, M. Weichselfish, 1; same data, 29.IV.1965, 3; same data, 29.III.1964, 1.

Tristacus judaicus (Lepeletier)

Discussion: Listed by Bodenheimer (1937). Recorded from the following by Benson (1955): (1) Elon. (2) Alonim. (7) Tiberias. (8) Binyamina. (11) Jerusalem. Also from the following by Benson (1968): Tiberias, Binyamina, and Elon.

Material examined: (2) Tiv'on, 25.III.1955, Fishelsohn, 1; (10) Ben Shemen, 31.III.1964, Kugler, 1.

CIMBICIDAE

Corynis amoena (Klug)

Discussion: This species was recorded from (3) Carmel by Benson (1955), but the Israeli record may refer to another species because all other records are from southern and eastern Europe and southwestern Siberia (Benson, 1968).

Corynis citrina (Perez)

Discussion: This is the first record of *citrina* from Israel. Benson (1968) gave the distribution as Algeria, Tunisia, Tripolitania, and Arabia.

Material examined: (16) Sede Boqer, 31.III.1975, M. Kaplan, 1.

Corynis haematica Benson

Discussion: Described by Benson (1968) from (17) Wadi Ajram. Benson described only the male, but a female I examined is similar in color and structure to the male and will key to the male of *haematica* in Benson's 1968 key.

Material examined: (16) Mishor Rotem, 31.III.1964, M. Weichselfish, 3; same data, 24.?.1965, 1; same data, 23.II.1965, 1; same data, 19.III.1965, 1.

Corynis orientalis (Konow)

Discussion: Recorded by Benson (1955): (12) "Jerusalem-Jericho road at sea level, "ditto" – Old Wadi Kelt Police Station, Jerusalem." Benson (1968) also mentioned Jerusalem in distribution.

Material examined: (1) Nahal Amud, 18.III.1979, M. Kaplan, 2. (2) Yavne'el, 2.II.1973, D. Furth, 1. (6) Gilboa, 17.III.1978, D. Simon, 1. (12) Ma'ale Adumim, 22.II.1978, A. Freidberg, 1.

Corynis reticulata Benson

Discussion: Described by Benson (1954) from (11) Shu'fat near Jerusalem and recorded from the same locality by Benson (1955). Israel mentioned in distribution by Benson (1968).

Material examined: (19) Mt. Hermon, 22.IV.1973, 1450 m, D. Furth, 2.

Corynis similis (Mocsáry)

Discussion: Listed as *Amasis similis* by Bodenheimer (1937). Recorded by Benson (1955) from (3) Carmel (Place of Sacrifice). Israel mentioned in distribution by Benson (1968).

Material examined: (8) Tel-Aviv, 18.III.1974, A. Freidberg, 1. (12) Jerusalem-Jericho Road, Wadi Kelt, 28.II.1941, Bytinski-Salz, 1. (13) 'En-Gedi, 16.III.1958, Lewinsohn, 1. (16) Mishor Rotem, 28.II-11.III.1965, M. Weichselfish, 5.

Paleocimbex quadrimaculata (Müller)

Discussion: Listed by Bodenheimer (1937) as *Cimbex quadrimaculata humeralis* Geoffroy. Recorded by Benson (1955) from: (5) 'En Harod. (8) Bet Lid. (10) Hartuv. (11) Jerusalem; Qiryat 'Anavim; Betar. According to Benson, larval hosts are *Amygdalis, Prunus, Crataegus,* and *Pyrus*, and adults are usually obtained by rearing. Israel also reported in distribution by Benson (1968).

Material examined: (6) Tamoon, W. Faria, 2.V.1981, emerged 10.II.1982, Y. Hadar, E. Milo, 1. (10) Hartuv, ex. larva, IV., Bytinski-Salz, 1.

Arge auripennis Konow

Discussion: Listed by Bodenheimer (1937). Not recorded by Benson (1955). Benson (1968) gave southeastern Europe, Syria, and Transcaucasia as the distribution.

Material examined: (1) Nahal Amud, 16.IV.1978, D. Simon, 1. (6) 'En Hashofet, 21.IV.1974, D. Furth, 1. (18) Baniyas, 11.V.1977, A. Freidberg, 1.

Arge cyanocrocea (Forster)

Discussion: Benson (1968) recorded this species from Europe, Turkey, Cyprus, Lebanon, Syria, Iran, Transcaucasia, and Turkmen. The following are the first Israeli records. Those found in Israel are the form with black legs, described by Mocsáry as *syriaca*; Benson (1968) synonymized *syriaca* under *cyanocrocea.*

Material examined: (1) Tel-Dan, 1.II.1978, D. Furth, 1; 'En Te'o, 21.II.1973, D. Furth, 1; Hula, 11.IV.1976; D. Simon, 1; Montfort, 10.III.1981, A. Freidberg, 6. (6) Wadi Fari'a, 19.II.1974, D. Furth, 1. (8) Abu-Kabir [Tel-Aviv], 15.II.1972, Kugler, 1; same locality, 19.II.1971, Gerling, 1.

Arge frivaldzkyi (Tischbein)

Discussion: Recorded by Benson (1955) from (1) Dan and (11) Qiryat 'Anavim, but Israel not mentioned in distribution by Benson (1968).

Arge melanochroa (Gmelin)

Discussion: Recorded from (1) Elon, though identification questionable by Benson (1955) under the name *nigritarsis* (Klug). Benson (1968) synonymized *nigritarsis* under *melanochroa* but did not mention Israel in the distribution.

Arge ochropus (Gmelin)

Discussion: Recorded as *Arge rosae* (L.) by Bodenheimer (1937). Benson (1955) recorded it from: "Sahel Ifgim." (1) Dafna Oaks. (11) Jerusalem. Israel mentioned in distribution by Benson (1968). The larva feeds on *Rosa* spp.

Material examined: (1) Hatannur, 26.VI.1974, A. Freidberg, 1; Meron, 13.V.1973, M. Kaplan, 1.

Arge pyrenaica (André)

Discussion: This species was listed by Bodenheimer (1937), but there are no other records in the literature from Israel, and I did not see specimens.

Arge rustica (Linnaeus)

Discussion: Recorded from (3) Carmel by Benson (1955). Benson (1968) also mentioned Israel in its distribution. The larva feeds on *Quercus* spp.

Material examined: (1) Meron, 14.V.1974, F. Kaplan, 1; Meron, 6.VI.1973, M. Kaplan, 1.

Arge scita (Mocsáry)

Discussion: Listed by Bodenheimer (1937) as *Arge proxima* (André). Benson (1955) recorded this species from: (1) Upper Galilee. (11) Jerusalem; Bethlehem; Qiryat 'Anavim. He mentioned that *A. proxima*, described from Lebanon, may also be expected to occur in Israel, but later (1968) synonymized *proxima* under *scita*.

Material examined: (1) Meron, 18.VI.1975, M. Motro, 1; (6) Anabta, 25.IV. 1981, A. Freidberg, 1; (11) Jerusalem, 12.V.1941, Bytinski-Salz, 1; Jerusalem, 29.VI. 1958, Kugler, 1.

Aprosthema tarda (Klug)

Discussion: Recorded by Benson (1968) from "Israel." Benson (1955) recorded *Aprosthema* sp. from (1) Elon, (8) Ra'anana, and (9) Miqwe Yisra'el, and mentioned without naming them that at least two different species are represented. Whether or not these refer to *tarda* is unknown.

Kokujewia ectrapela Konow

Discussion: Described as *K. palestina* Benson (1954) from western shore of the Dead Sea (13) (Wadi Umbarrik), larva on *Emex*, and recorded from the same place by Benson (1955). Benson (1968) synonymized *palestina* under *ectrapela* and mentioned Israel in the distribution.

Pseudaprosthema sp.

Discussion: Two specimens examined by me belong to this genus; however, because of unresolved generic and specific definitions in *Aprosthema* and *Pseudaprosthema*, the specimens cannot be identified. Benson (1968) stated "Gussakovskii keys 45 palearctic species of *Aprosthema* (and *Pseudaprosthema*) but most of these are colour forms of a very few genuine species. In Europe and Turkey there are probably only two, *tarda* and *melanura* (see Conde, 1934)."

Material examined: (19) Mt. Hermon, 1600 m, 16.VIII.1976, A. Freidberg, 2.

Sterictiphora furcata (Villers)

Discussion: Recorded from (15) Urim by Benson (1955), but Israel was not mentioned in the distribution of *furcata* by Benson (1968).

TENTHREDINIDAE

Dolerinae

Dolerus kokujewi Konow

Discussion: First recorded from Israel by Benson (1955); (3) Haifa. (8) Caesarea. (9) Miqwe Yisra'el; Beror Hayil; Be'er Toviyya. (11) Jerusalem. Benson mentioned that the determinations of *D. gonager* Fabricius by André (1881) and Bodenheimer (1937) probably refer to this species. Israel was not mentioned in the distribution of *kokujewi* by Benson (1968).

Material examined: (2) Karmi'el, 22.II.1974, D. Furth, 1. (8) Horashim, 19.II. 1975, F. Kaplan, 1; Wadi Falik, 16.II.1963, Gerling, 1. (13) Jericho, 14.II.1974, D. Furth, 1. (18) Merom Golan, 14.III.1975, M. Kaplan, 1; Golan Heights, Naffakh, 31.I. 1978, D.G. Furth, 1; Qusbiye', 22.II.1978, D. Furth, 1.

Dolerus puncticollis Thomson

Discussion: Recorded from "Israel" by Benson (1968), but no specific localities were given.

Nematinae

Cladius ordubadensis Konow

Discussion: Recorded by Benson (1955) from (3) Haifa and (9) Miqwe Yisra'el, but Israel not mentioned in distribution of *ordubadensis* in Benson (1968).

Material examined: (1) Nahal Tavor, 17.IV.1974, D. Furth, 1; Montfort, 4.III. 1976, A. Freidberg, 1; Jatt, 20.IV.1978, D. Furth, 1. (2) Karmi'el, 14.II.1976, A. Freidberg, 1. (3) Haifa, 17.II.1973, D. Furth, 2; Nahal Oren, 30.IV.1976, D. Furth, 1. (6) Nablus, 18.IV.1974, D. Furth, 1.

Cladius pectinicornis (Geoffroy)

Discussion: This species was recorded by Bodenheimer (1973).

Material examined: (19) Mt. Hermon, 21.V.1979, D. Furth, 1.

Hoplocampa chrysorrhoea (Klug)

Discussion: The following is the first record from Israel. The species occurs throughout Europe. Typically, the thorax is black, but the Israeli specimens have the pronotum and much of the mesopleura pale orange; in the male the mesosternum is also orange. Structurally, however, the Israeli specimens are too similar to typical *chrysorrhoea* than to be recognized as a separate species. The female lancet is long and slender with annuli and serrulae on only the apical third (Masutti and Covassi, 1980,

fig. VIII, 2), and the male penis valve is slender and lacks apical filaments (Benson, 1958, fig. 398). In Europe the larvae feed in the fruits of *Prunus*.

Material examined: (1) Tiv'on, 7.III.1981, A. Freidberg, 5.

Hoplocampa flava (Linnaeus)

Discussion: Listed by Bodenheimer (1937). Recorded by Benson (1955) from: (6) Daliyya; Ramat Hashofet. (11) Qiryat 'Anavim; Abu Ghosh. The larvae feed in the fruits of *Prunus*. Benson (1968) also mentioned Israel in the distribution of *flava*.

Material examined: (11) Qiryat 'Anavim, 11.IV.1945, Bytinski-Salz, 1.

Nematus capreae (Linnaeus)

Discussion: Recorded by Benson (1955) from (8) Tel Aviv, Yarqon River, on *Salix babylonica*.

Nematus miliaris Panzer

Discussion: Listed by Bodenheimer (1937) as *Pteronidia miliaris*, but not recorded since.

Priophorus morio (Lepeletier)

Discussion: This is the first record of *morio* from Israel. The larva feeds on *Rubus* spp.

Material examined: (18) Baniyas, 10.VII.1967, Kugler, 1.

Pristiphora monogyniae (Hartig)

Discussion: This is the first record of *monogyniae* from Israel.

Material examined: (5) Ramat David, 14.III.1981, T. Furman, 1. (6) Wadi Ara, 19.IV.1974, D. Furth, 1.

Heterarthrinae

Caliroa cerasi (Linnaeus)

Discussion: Listed as *Caliroa limacina* Retzius by Bodenheimer (1937). Recorded by Benson (1955) from (11) Qiryat 'Anavim. The larva feeds on *Pyrus, Prunus,* and other Rosaceae.

Fenella granulata Benson

Discussion: The following is the first record from Israel. The species was described from Algeria, but the specimen agrees with the description of *granulata* and keys to

granulata in the available keys to *Fenella* species (Benson, 1953; Zombori, 1978).

Material examined: (3) Carmel, 11.XII.1976, A. Freidberg, 1.

Fenella judaica (Forsius)

Discussion: Described by Forsius (1930) from (11) Jerusalem as *Paraphyllotoma judaica*. The same locality was mentioned by Benson (1955), and it was listed under the original combination by Bodenheimer (1937).

Metallus pumilis (Klug)

Discussion: Listed as *Entodecta pumilis* by Bodenheimer (1937), but there are no other records from Israel. The larva is a leaf miner of *Rubus*.

Profenusa lutea n.sp.

Discussion: See description at end of article.

Material examined: (1) Horshat Tal, 11.IV.1976, D. Simon, 1.

Profenusa pygmaea (Klug)

Discussion: Listed by Bodenheimer (1934) as *Fenusella pygmaea*, but there are no other records from Israel. Recorded from Turkey by Benson (1968). The larva is a leaf miner of *Quercus*.

Blennocampinae

Eutomostethus gagathinus (Klug)

Discussion: The following are the first records from Israel.

Material examined: (5) El Roi, 14.III.1975, F. Kaplan, 1. (6) Wadi Ara, 2.III. 1978, A. Freidberg, 1. (7) Jordan R. Delta, 22.II.1973, D. Furth, 1. (8) Netanya, 9.III.1978, D. Furth, 1. (9) Palmahim, 8.III.1975, M. Kaplan, 4. (11) Bet Shemesh, 17.IV.1974, D. Furth, 1. (18) ~~Qousbiye~~', 19.IV.1976, M. Kaplan, 1; Golan, Qousbiye', 24.III.1973, M. Kaplan, 1.

Halidamia affinis (Fallén)

Discussion: The following is the first record of *affinis* from Israel. This species is known from Europe, Turkey, Transcaucasia, and eastern North America (Benson, 1968).

Material examined: (8) Hertzliyya, 22.II.1982, A. Freidberg, Malaise trap, 2; same data, 26.II.1982, 1.

Periclista freidbergi n.sp.

Discussion: See description at end of article.
Material examined: (1) Mt. Meron, 1100 m, 9.IV.1977, A. Freidberg, 3.

Periclista hermonensis n. sp.

Discussion: See description at end of article.
Material examined: (19) Mt. Hermon, 1100 m, 7.IV.1978, D. Furth, 1.

Allantinae

Allantus cinctus (Linnaeus)

Discussion: This species was listed by Bodenheimer (1937) but apparently has not been found in Israel since then. Benson (1968) did not mention Israel in the distribution of *cinctus*. The larva feeds on *Rosa* spp.

Allantus didymus (Klug)

Discussion: Listed by Bodenheimer (1937) and recorded by Benson (1955) from (2) Alonim; (3) Haifa; (7) 'En Gev; (8) Binyamina; and (11) Jerusalem. Most specimens I have seen from Israel are the form with black legs.

Material examined: (1) Mi'ilya – Montfort Rd., 5.IV.1972, Gerling, 1. (8) Tel-Aviv, 20.III.1974, M. Kaplan, 1; Tel-Aviv, 4.III.1964, Kugler, 1. (11) Bet-Shemesh, 8.IV.1979, M. Kaplan, 1; Ma'ale Ha'Hamisha, 31.III.1974, F. Kaplan, 1.

Athalia ahngeri Kokujev

Discussion: Recorded from "Israel" by Benson (1968), but he did not give specific localities.

Athalia cordata Lepeletier

Discussion: Recorded by Benson (1955) from (8) Ramat Gan, Hadera; (9) Beror Hayil, Qvutsat Shiller. Hosts were stated to include *Ajuga, Antirrhinum,* and *Plantago*.

Material examined: (8) Abu-Kabir [Tel-Aviv], 28.XII.1953, Fishelsohn, 1.

Athalia cuspidata Benson

Discussion: Described from (11) Jerusalem by Benson (1954) and recorded by Benson (1955) from the same locality. Israel also mentioned in distribution by Benson (1968).

Athalia glabricollis meridiana Benson

Discussion: This was listed as *A. glabricollis* Thoms. by Bodenheimer (1937). The subspecies was described by Benson (1954) from (13) Jordan (Place of Baptism, Jericho), and recorded from there and the following by Benson (1955): (8) Jaffa; (10) Gat; (11) Jerusalem; (12) Wadi Ghar; and (?) Naqb Sehali. Benson (1968) gave the distribution of this subspecies as Israel and S.W. Iran.

Material examined: (6) Wadi Fari'a, 1.III.1973, M. Kaplan, 4; Wadi Fari'a, 3.III. 1973, D. Furth, 6. (12) Hebron Desert, 26.III.1974, D. Furth, 1. (13) Jericho, 26.II. 1972, Kugler, 1; Nahal Ze'elim, 24.IV.1975, Kugler, 1; Nahal Ze'elim, 24.IV.1975, M. Kaplan, 1; Ein Gedi, 25.II.1979, Kugler, 1. (15) Mash'abbe Sade, 19.III.1978, A. Freidberg, 1. (16) Yeroham, 22.III.1971, Kugler, 1.

Athalia rosae rosae (Linnaeus)

Discussion: Listed as *A. colibri* Christ by Bodenheimer (1937). Recorded by Benson (1955) from (7) Tiberias and Deganya, on flowering cauliflower. Israel also mentioned in distribution by Benson (1968).

Athalia rufoscutellata Mocsáry

Discussion: Listed by Bodenheimer (1937) but not since mentioned or found in Israel.

Athalia circularis circularis Klug

Discussion: Listed as *A. lineolata* Lepeletier by Bodenheimer (1937) but not since reported from or found in Israel.

Empria archangelskii Dovnar-Zapolskii

Discussion: The following is the first record from Israel. Benson (1968) recorded this species from Cyprus, Turkey, and Transcaucasia.

Material examined: (1) Montfort, 10.III.1981, F. Kaplan, 1.

Monostegia abdominalis (Fabricius)

Discussion: Listed as *Empria abdominalis* by Bodenheimer (1937). Recorded by Benson (1955) from (7) Deganya, and Israel mentioned in distribution by Benson (1968). Larvae feed on *Lysimachia* spp. and *Anagallis* spp.

Material examined: (8) Ga'ash, 14.IV.1973, D. Furth, 4; Bet Yehoshua', 9.I.1962, Kugler, 1; Herzliyya, 10.III.1975, A. Freidberg, 1. (9) Qidron, 31.III.1978, D. Furth, 1.

Elinora maculata (Kriechbaumer)

Discussion: *Allantus syriacus* André was listed by Bodenheimer (1937), but *syriacus*, according to Benson (1968), is a synonym of *maculata*. Benson (1955) recorded *maculata* from (7) Deganya and Kinneret; (12) Wadi Ghar; (13) Jordan (Place of Baptism, Jericho); (15) Be'er Sheva; and (?) Wadi Fejjas. Israel also mentioned in distribution by Benson (1968).

Material examined: (1) Gesher, 20.II.1974, D. Furth, 1. (6) Wadi Fari'a, 18.IV. 1974, D. Furth, 1; Nablus, 18.IV.1974, D. Furth, 2; Wadi Fari'a, 15.II.1979, D. Furth, 1; Wadi Fari'a, 1.III.1973, M. Kaplan, 3. (7) Deganya, 8.III.1941, Bytinski-Salz, 1; Hammat Gader, 31.III.1973, D. Furth, 1. (8) Ramat-Aviv [Tel-Aviv], 11.III.1976, M. Kaplan, 1. (9) Sharsheret, 1.IV.1978, D. Furth, 1; Be'eri, 2.III.1973, D. Furth, 1. (11) Hureisha, 21.IV.1952, 1. (12) Ma'ale Adumim, 22.II.1978, Kugler, 1; same data, 25.III.1979, 1; Hebron Desert, 26.III.1974, D. Furth, 1; Judean Desert, Umm Daraj, 16.III.1977, D. Furth, 1. (13) Kallia, 22.II.1978, A. Freidberg, 1; same data, 13.II.1975, 1; same data, 8.III.1976, 1; Jericho, 14.II.1974, D. Furth, 2; same data, 16.II.1974, 2; Jericho, 13.II.1975, F. Kaplan, 1; Qumran, 6.III.1974, D. Furth, 1; 'Auja, 18.IV.1974, D. Furth, 1; (15) Seiyal, 1.III.1956, Fishelsohn, 1; Mash'abbe Sade, 19.III.1978, D. Furth, 1; Mash'abbe Sade, 16.II.1976, A. Freidberg, 1; Ze'elim, 12.III.1974, D. Furth, 1; same data, 22.III.1977, 1; Qiryat Gat, 17.IV.1974, D. Furth, 1. (16) Nahal Boqer, 23.II.1979, D. Furth, 1; Yeroham, 24.III.1959, Kugler, 1; Mishor Rotem, 9.III.1964, M. Weichselfish, 1; same data, 29.III.1964, 1; Shivta, 17.III.1977, A. Freidberg, 1; same data, 13.III.1977, 1; Mishor Rotem, 18.II.1965, M. Weichselfish, 1; same data, 14.II.1965, 2. (22) S. Katharina, Sinai, 26.III.1969, Kugler, 1.

Elinora nigritarsis (Konow)

Discussion: Recorded by Benson (1955) from (3) Haifa and (8) Meged. Species not mentioned or given in key to species in Benson (1968).

Elinora stolida Benson

Discussion: Described by Benson (1968) from (11) Jerusalem.

Elinora vittata (Kriechbaumer)

Discussion: Recorded as *Tenthredo vittata* by Bodenheimer (1937) and also as a *Tenthredo* by Benson (1955) from (9) Jaffa District and Ramla. Recorded from "Israel" by Benson (1968).

Material examined: (1) Zefat, 20.IV.1974, A. Freidberg, 1. (2) Tiv'on, 4.III.1975, F. Kaplan, 1. (6) Wadi Ara, 2.III.1978, A. Freidberg, 1. (18) Merom Golan, 28.IV. 17.IV.1974, D. Furth, 1. (18) Qusbiye', 19.IV.1976, M. Kaplan, 1; Golan, Qusbiye', 24.III.1973, M. Kaplan, 1.

Macrophya consobrina Mocsáry

Discussion: Listed by Bodenheimer (1937). Recorded by Benson (1955) from (2) Alonim; (3) Mt. Carmel; (5) Nahalal; (8) Binyamina; and (9) Miqwe Yisra'el. Israel not mentioned in distribution by Benson (1968).

Material examined: (1) Ha'Tannur, 15.III.1975, F. Kaplan, 4; same data, A. Freidberg, 1; Nahal Amud, 20.III.1974, D. Furth, 1. (6) W. Fari'a, 19.II.1974, Junction road to Tubas, 1. (7) Bteiha, 14.III.1975, A. Freidberg, 1; Jordan River Delta, 22.II. 1973, D. Furth, 1; Kare Deshe, 22.II.1974, D. Furth, 1. (8) Binyamina, 23/25.III.1942, Bytinski-Salz, 1. (18) Golan, Qusbiye, 17.III.1981, A. Freidberg, 1.

Macrophya erythrocnema Costa

Discussion: Not previously recorded from Israel.

Material examined: (1) Ha'Tannur, 15.III.1975, A. Freidberg, 2; Montfort, 4.III.1976, M. Kaplan, 1; Kfar Nahum, 17.III.1981, M. Kaplan, 1. (6) 'Azzun, 1.III 1973, M. Kaplan, 1; Wadi Ara, 2.III.1978, A. Freidberg, 1. (9) Negba, 21.III.1977, D. Simon, 1. (11) Beth Shemesh, 17.IV.1974, D. Furth, 1.

Macrophya ottomana Mocsáry

Discussion: The listing of *M. postica* Brullé by Bodenheimer (1937) and the records for *M. postica* by Benson (1955) may refer to this species. Benson's records are: (1) Mazzuva, Dafna; (3) Zikhron Ya'aqov, Mt. Carmel; (7) Deganya, Migdal; (8) Binyamina, Bet Lid; (9) Holon; (13) Jericho. Benson (1968) recorded *ottomana* from "Israel", but Israel was not given in the distribution for *postica*. All specimens I have seen are *ottomana*.

Material examined: (1) Wadi Habiz, Upper Galilee, 3.IV.1972, Gerling, 1; Ramot Naftali, 15.V.1965, Kugler, 2; Har-Meron, 18.V.1966, Kugler, 1; Mt. Meron, 30.V.1972, Kugler, 1; Nahal Keziv, 5.V.—, D. Furth, 1; Ha'Tannur, 15.III.1975, F. Kaplan, 2. (3) Zikhron-Ya'aqov, 17.III.1958, Fishelsohn, 1. (6) Wadi Fari'a, 1.III.1973, M. Kaplan, 2. (8) Abu-Kabir [Tel-Aviv], 26.III.1972, Kugler, 1. (11) Zova, 31.III.1974, M. Kaplan, 1; Kiryat-Anavim, 3.IV.1941, Bytinski-Salz, 1. (13) Nu'eima, 5.III.1981, T. Furman, 1. (18) Golan, Qusbiye, 15.IV.1982, F. Kaplan, 2.

Macrophya parvula Konow

Discussion: Recorded by Benson (1955) from (3) Mt. Carmel.

Macrophya spp.

Discussion: Bodenheimer (1937) listed *M. superba* (Tischbein), *M. rustica* L., *M. montana* (Scopoli) (as *M. rustica* L.), and *M. mocsaryi* Kirby; none of these are known to occur in Israel and some may represent misidentifications. They were not recorded by Benson.

Sciapteryx cleopatra Benson

Discussion: Described by Benson (1954) from (11) Jerusalem and recorded from the same locality by Benson (1955).

Material examined: (7) Reshafim, 17.II.1973, D. Furth, 3.

Sciapteryx costalis (Fabricius)

Discussion: Recorded by Bodenheimer (1937), but not subsequently. As *costalis* is a more northern species, I regard this record as doubtful.

Sciapteryx lactipennis Konow

Discussion: Recorded by Benson (1955) from (11) Kefar 'Ezyon, and Israel mentioned in distribution by Benson (1968).

Tenthredo diversipes Mocsáry

Discussion: Recorded from "Israel" by Benson (1968).

Tenthredo kiefferi (Konow)

Discussion: Recorded from "Israel" by Benson (1968). The records of *costata* by Benson (1955) may refer to *kiefferi*: (3) Carmel; (7) Kinneret, Tiberias; (11) Jerusalem, Qiryat 'Anavim; (15) Dorot.

Material examined: (3) Nahal Oren, 3.IV.1978, D. Furth, 1; Haifa, 24.III.1973, A. Freidberg, 1; Zikhron-Ya'aqov, 22.III.1950, 1. (6) Gilboa, 7.III.1978, Kugler, 1; W. Fari'a, 1.III.1973, M. Kaplan, 3. (7) El-Hamma, 2.III.1978, M. Kaplan, 1; Gesher, 16.III.1973, D. Furth, 1. (9) Negba, 22.III.1977, D. Simon, 1; same data, 21.III.1977, 1. (10) Latrun, 30.III.1972, D. Furth, 2; Hartuv, 31.III.1973, M. Kaplan, 2; Hartuv, 21.III.1963, Kugler, 1. (15) Pelugot, 1.IV.1972, Kugler, 1; same data, 3.III.1971, 2.

Tenthredo zonula Klug

Discussion: Listed as *Allantus similis* var. *nazareensis* André by Bodenheimer (1937). Recorded as *T. similis* Mocsáry by Benson (1955) from: (3) Ya'arot HaCarmel; (8) Bet Lid; (9) Rehovot, Nir'Am; (11) Jerusalem. Benson (1968) synonymized *nazareensis* André and *similis* Mocsáry under *zonula* and included "Israel" in its distribution.

Material examined: (1) Ga'ton, 17.III.1973, M. Kaplan, 1; Ha'Tannur, 15.III.1975, F. Kaplan, 1; Ha'Tannur, 15.III.1975, A. Freidberg, 2; Dafna, 18.III.1973, M. Kaplan, 1; Avivim, 18.IV.1981, A. Freidberg, 1. (2) Tiv'on, 6.III.1975, A. Freidberg, 1; Tiv'on, 2.IV.1975, F. Kaplan, 1. (3) Haifa, 2.IV.1977, A. Freidberg, 2; Haifa, 26.II.1977, A. Freidberg, 1. (4) Yagur, 21.II.1976, A. Freidberg, 3. (5) Ramat David, 14.III.1981, T. Furman, 1. (6) Gilboa', 17.III.1978, D. Simon, 1; Ma'ale Gilboa', 17.III.1978, Kugler, 1; Nahal Yoqne'am, 22.III.1974, D. Furth, 1; 'En Hashofet, 22.III.1974, D. Furth, 1. (7) Hawwat Shemu'el, 16.III.1973, D. Furth, 1. (9) Negba, 22.III.1977, D. Simon, 1;

Qidron, 31.III.1978, D. Furth, 1; Negba, 23.III.1977, D. Simon, 1. (10) Bet Guvrin, 8.III.1976, A. Freidberg, 1. (11) Zova, 31.III.1974, M. Kaplan, 3. (18) Merom Golan, 17.IV.1973, D. Furth, 3.

Tenthredopsis albonotata (Brullé)

Discussion: Listed as *Perineura albonotata* by Bodenheimer (1937). Recorded by Benson (1955) from: (6) Mt. Gilboa; (7) Deganya, Kinneret, Tiberias; (8) Hadera, Ra'anana; (11) Jerusalem, Bab el Wad.

Material examined: (1) Ha'Tannur, 15.III.1975, M. Kaplan, 1. (2) Tiv'on, 4.III. 1975, F. Kaplan, 1. (3) Nahal Oren, 4.III.1975, M. Kaplan, 1. (6) Wadi Ara, 23.III.1973, D. Furth, 2. (8) Abu-Kabir, 12.III.1970, Rotari, 1; Herzliyya, 5.III.1982, Malaise trap, A. Freidberg, 1. (9) Bet 'Oved, 25.II.1969, Grinberg, 1; Helez, 27.II.1976, D. Furth, 1; (10) Migdal Zedek, 16.III.1978, M. Kaplan, 1. (11) Jerusalem, 25.II.1941, Bytinski-Salz, 1. (18) Qusbyie, 14.III.1975, F. Kaplan, 1; Merom Golan, 17.IV.1973, D. Furth, 1; Golan, Qusbiye, 17.III.1981, T. Furman, 1; same data, A. Freidberg, 2.

Tenthredopsis albopunctata (Tischbein)

Discussion: Listed as *T. benthini* Rudow by Bodenheimer (1937). Benson (1968) synonymized *benthini* under *albopunctata*, and recorded it from "E. Mediterranean."

Material examined: (1) Meron, 10.IV.1976, D. Simon, 1; Montfort, 10.III.1981, A. Freidberg, 3; same data, T. Furman, 1; Montfort, 9.III.1982, M. Kaplan, 4. (2) Tiv'on, 4.III.1975, F. Kaplan, 1; Tiv'on, 6.III.1975, A. Freidberg, 2. (3) Haifa, 17.II.1973, D. Furth, 2; Haifa, 7.III.1981, A. Freidberg, 1; Nahal Oren, 4.III.1975, F. Kaplan, 1.

Tenthredopsis annuligera (Tischbein)

Discussion: Bodenheimer (1937) listed *T. andrei* Konow, but this was synonymized under *annuligera* by Benson (1968) who gave the distribution as central, southern and southeastern Europe and eastern Mediterranean. I do not know of Israeli records.

Tenthredopsis convergens Benson

Discussion: Described from (1) Elon by Benson (1954) and also recorded from there by Benson (1955). Benson (1968) stated "Israel."

Tenthredopsis kaplanorum n. sp.

Discussion: See description at end of article.

Material examined: (1) Mt. Meron, 9.IV.1977, A. Freidberg, 1; Ga'ton, 17.IV. 1973, M. Kaplan, 1. (2) Tiv'on, 2.IV.1975, F. Kaplan, 1. (18) Baniyas, 24.IV.1982, F. Kaplan, 1.

Tenthredininae

Discussion: The listing of *Tenthredo bifasciata* Mueller, *Allantus abeillei* André, *Allantus calcaratus* André, and *Rhogogaster picta* (Klug) by Bodenheimer (1937) may refer to several of the above species or they may not occur in Israel. The identity of *abeillei* and *calcaratus* is uncertain.

SIRICIDAE

Sirex cyaneus dux (Semenov-Tian-Shanskij)

Discussion: Recorded by Benson (1955) from one female caught alive in (8) Tel-Aviv and "Probably introduced with coniferous timber from Transcaucasia via the Black Sea."

Urocerus gigas gigas (Linnaeus)

Discussion: Recorded by Benson (1955) from (5) Nahalal; and (13) 'En Gedi; probably introduced with timber. Benson's record is based on Bodenheimer (1930). Listed as *Sirex gigas* by Bodenheimer (1930, 1937).

Xeris spectrum spectrum (Linnaeus)

Discussion: Recorded by Benson (1955) from (8) "Tel-Aviv from pine timber imported from Yugoslavia."

CEPHIDAE

Calameuta filiformis (Eversmann)

Discussion: Not before recorded from Israel. Larvae of *Calameuta* bore and feed in stems of grasses.

Material examined: (1) Kefar Shammay, 21.IV.1973, M. Kaplan, 1; Mt. Meron, 30.IV.1981, F. Kaplan, 1. (8) Netanya, 3.IV.1978, D. Furth, 1. (10) Lakhish, 6.III. 1978, D. Furth, 1; Latrun, 30.III.1974, D. Furth, 1. (18) Golan, Qusbiye, 15.IV.1982, F. Kaplan, 1. (19) Mt. Hermon, 1300 m, 22.V.1973, A. Freidberg, 2; Mt. Hermon, 1300 m, 5.V.1977, D. Simon, 1; Hermon, 1400 m, 5.V.1977, A. Freidberg, 1.

Calameuta haemorrhoidalis (Fabricius)

Discussion: Recorded from "Israel" by Benson (1968).

Material examined: (7) Gesher, 20.III.1974, D. Furth, 1. (10) Hartuv, 31.III.1973, M. Kaplan, 1.

Calameuta idiolon (Rossi)

Discussion: Listed under *Monoplopus* by Bodenheimer (1937). Benson (1955) recorded it from (3) Shefeya; (5) Nahalal, and (7) Tiberias under the name *idiolon*, and from (11) Jerusalem under the name *C. apicicornis* (Pic). Benson (1968) synonymized *apicicornis* under *idiolon* and again mentioned "Israel" in the distribution.

Material examined: (1) Meron, 23.IV.1973, M. Kaplan, 1; Avivim, 18.IV.1981, A. Freidberg, 1; Huquq, 17.III.1981, T. Furman, 1. (7) Ein-El Hamma, 3.V.1968, Gerling, 1. (10) Lakhish, 16.III.1978, D. Furth, 1; Hartuv, 3.III.1973, M. Kaplan, 1. (18) Merom Golan, 27.IV.1978, D. Furth, 1; same data, 28.IV.1978, 1; Khochniye, 18.III.1973, M. Kaplan, 1; Golan, Khochniye, 18.III.1973, M. Kaplan, 1. (19) Mt. Hermon, 1400 m, 26.IV.1978, D. Furth, 1; same data, 1650 m, 5.V.1979, 2; same data, 1400-1600 m, 18.V.1976, M. Kaplan, 1; Mt. Hermon, 1600 m, 14.V.1981, A. Freidberg, 1; Qala'at Nemrod, 24.IV.1982, F. Kaplan, 1.

Calameuta pygmaea (Poda)

Discussion: Recorded by Benson (1955) from (1) Elon; (7) Deganya, and (13) Jericho. Benson (1968) recorded *pygmaea* from (2) Oranim; (11) Wadi Ruaz, Beth Hakerem.

Material examined: (1) Hula, 17.III.1981, A. Freidberg, 1. (3) Haifa, 26.III.1979, A. Freidberg, 1; same data, 22.IV.1973, 1. (4) Nahal Oren Spill, 18.III.1973, D. Furth, 1. (6) Nurit, 19.III.1974, D. Furth, 1. (7) Deganya, 20.III.1965, Gizler, 1; Deganya, 18.III.1941, Bytinski-Salz, 1. (8) Netanya, 2.III.1963, 1; Abu-Kabir [Tel-Aviv], 26.III 1972, Kugler, 1; Tel-Aviv Swamp, 9.IV.1981, A. Freidberg, 1. (11) Jerusalem, 9.IV. 1943, Bytinski-Salz, 1; Jerusalem, 1.IV.1941, Bytinski-Salz, 1. (18) Baniyas, 24.IV. 1982, F. Kaplan, 1.

Cephus pygmaeus (Linnaeus)

Discussion: Listed by Bodenheimer (1937). Recorded by Benson (1955) from: (1) Rosh Pinna; (5) 'Afula, 'En Harod; (6) Wadi 'Ara; (7) Tiberias, Deganya; (8) Ra'anana; (9) Holon, Miqwe Yisra'el; (11) Jerusalem; (13) Jericho. Also mentioned by Benson (1968). The larvae bore and feed in stems of wheat, rye, oats, and other grasses and may be a pest.

Material examined: (1) Zefat, 20.IV.1971, A. Freidberg, 1; Nahal Amud, 21.III. 1974, D. Furth, 1; Nahal Dishon, 25.IV.1974, D. Furth, 1; Hatzbani, 24.IV.1982, F. Kaplan, 1; Avivim, 18.IV.1981, A. Freidberg, 1. (2) Mt. Tabor, 24.IV.1974, D. Furth, 1. (3) Zikhron Ya'aqov, 17.III.1958, Fishelsohn, 1. (5) 'Afula, 19.IV.1976, M. Kaplan, 3; Hayogev, 23.III.1973, D. Furth, 1. (6) Gal'ed, 25.III.1973, D. Furth, 1; Nahal Tut, 3.III.1979, D. Furth, 1. (7) 'En Pelugot, 16.IV.1974, D. Furth, 1. (8) Netanya, 13.III.1944, Bytinski-Salz, 1; Herzliyya, 20.IV.1982, A. Freidberg, Malaise trap, 1. (10) Latrun, 18.III.1978, D. Furth, 4. (11) Nahal 'Ezyona, 26.III.1974, D. Furth, 1. (12) Hebron Desert, 26.III.1974, D. Furth, 3. (13) Kallia, 8.III.1976, M. Kaplan, 1; Jericho, 8.III.1976, A. Freidberg, 2. (15) 20 km N Be'er Sheva, 31.III.1981, F. Kaplan, 4; Mash'abbe Sade, 19.III.1978, D. Furth, 1; Gevulot, 12.III.1974, D. Furth, 3; En

Bsor, 23.III.1975, A. Freidberg, 2. (18) Mas'ada, 17.IV.1973, D. Furth, 1; Merom Golan, 17.IV.1973, D. Furth, 1.

Characopygus decoratus Benson

Discussion: Described by Benson (1968) from (3) Holon; (11) near Jerusalem, 'En Kerem.

Material examined: (2) Ramat Hadassa, 8.IV.1957, Fishelson, 1. (6) Nurit, 19.III.1974, D. Furth, 1. (7) Bteiha, 14.III.1975, A. Freidberg, 2; Gennosar, 28.II.1977, A. Freidberg, 1. (8) Tel-Aviv, 11.IV.1977, D. Simon, 1.

Pachycephus cruentatus konowi Kohl

Discussion: Recorded by Benson (1955) from (15) Urim as *konowi*. In 1968, Benson regarded it as subspecies *konowi*.

Pachycephus smyrnensis Stein

Discussion: Recorded by Bodenheimer (1937). Benson (1955) reported it from: (1) Upper Galilee; (7) Tiberias, Kinneret; (8) Tel-Aviv; (9) Jaffa; (15) Dorot, Be'er Sheva, under the name *Pachycephus sanctus* (Pic). Benson (1968) synonymized *sanctus* under *smyrnensis* and again stated Israel in its distribution.

Material examined: (8) Kefar Shemaryahu, 20.III.1962, Grutzner, 1.

Syrista parreyssii (Spinola)

Discussion: Recorded from (1) Elon, Amir and (8) Binyamina by Benson (1955) and from "Israel" by Benson (1968). The larva bores and feeds in the stems of *Rosa* spp.

Material examined: (1) 'En Teo, 20.IV.1974, A. Freidberg, 1. (3) Zikhron Ya'aqov, 20.V.1975, Kugler, 1. (4) Kabri, 19.IV.1969, 1.

Trachelus flavicornis (Lucas)

Discussion: The following are the first records for Israel. This species is known from Spain and north Africa (Benson, 1968).

Material examined: (1) Sasa, 18.IV.1981, A. Freidberg, 1; Avivim, 18.IV.1981, A. Freidberg, 1.

Trachelus judaicus (Konow)

Discussion: Recorded from (11) Jerusalem by Benson (1955) and from "Israel" by Benson (1968).

Trachelus libanensis (André)

Discussion: Listed by Bodenheimer (1937) as *Cephus libanensis* and *C. nigritarsis* André, the latter being a synonym. Benson (1955) recorded it under the name *liba-*

nensis from (2) Mt. Tabor; (8) Binyamina; (9) Miqwe Yisra'el; and (13) Jericho, and under the name *Trachelus armenius* Konow from (7) Tiberias and Deganya. Benson (1968) synonymized *armenius* under *libanensis*.

Material examined: (8) Binyamina, 12.IV.1947, Bytinski-Salz, 1.

Trachelus tabidus (Fabricius)

Discussion: Listed by Bodenheimer (1937). Recorded by Benson (1955) from: (1) Elon, Hanita; (2) Alonim; (3) Carmel; (5) Nahalal; (7) 'En Gev; (11) Jerusalem; and (15) Be'er Sheva under the name *T. tabidus* subsp. *macilentus* Fabricius. This subspecies was not mentioned by Benson (1968), but I regard these records as *T. tabidus*, not recognizing subspecies. The larvae bore and feed in the stems of wheat, barley, rye and other grasses, and the species is a well-known pest.

Material examined: (1) Elon, 5.IV., Bytinski-Salz, 1. (2) N. Oranim, 21.IV.1959, Kugler, 1; same data, Fishelsohn, 1. (3) Nahal Me'arot, 14.IV.1973, D. Furth, 2; Haifa, 26.III.1977, A. Freidberg, 1; Haifa, 4.IV.1968, Kugler, 1. (6) Sebastiya, 29.III.1973, D. Furth, 1; Wadi Ara, 23.III.1973, D. Furth, 1; Daliyya, 23.III.1973, D. Furth, 1. (7) Gesher, 20.III.1974, D. Furth, 1. (8) Abu Kabir [Tel-Aviv], 28.IV.1981, A. Freidberg, 1; Qalqilya, 4.IV.1981, F. Kaplan, 2; Binyamina, 23/25.III.1942, Bytinski-Salz, 6; Elyashiv, 23.III.1973, D. Furth, 1. (9) Kokhav, 1.IV.1972, Kugler, 1; Sederot, 27.II. 1974, D. Furth, 1; Ashqelon, 31.III.1978, D. Furth, 5; Sharsheret, 1.IV.1978, D. Furth, 1. (10) Bet Guvrin, 31.III.1975, A. Freidberg. 1; Lakhish, 29.III.1973, D. Furth, 2; same data, 16.III.1978, 1; Latrun, 18.III.1978, D. Furth, 1. (15) Qiryat Gat, 17.IV. 1974, D. Furth, 1; Qiryat Gat, 19.IV.1977, F. Kaplan, 1; 20 km N Be'er Sheva, 31.III. 1981, F. Kaplan, 11. (18) Ma'ale Gamla, 28.IV.1978, D. Furth, 1; Merom Golan, 6.V.1973, D. Furth, 1; Golan, Qusbiye, 15.IV.1982, F. Kaplan, 1; Baniyas, 24.IV.1982, F. Kaplan, 2. (19) Neve Ativ, 26.IV.1974, D. Furth, 1.

DESCRIPTION OF NEW SPECIES

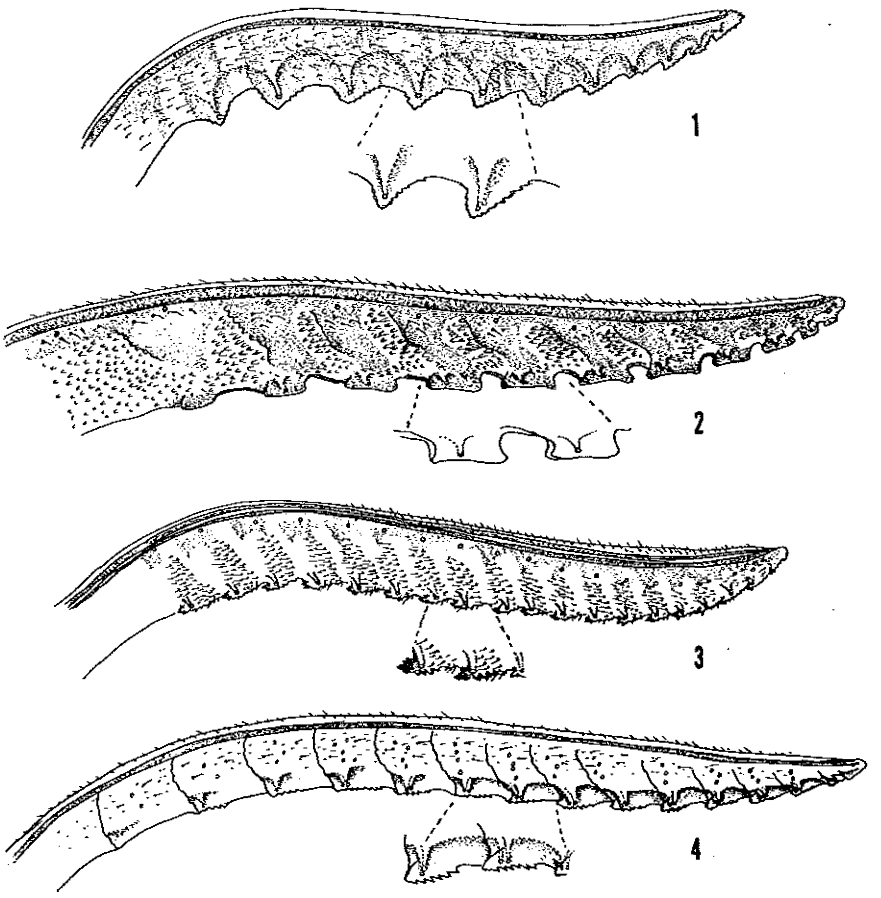
All types are deposited in the collection of the Department of Zoology, Tel Aviv University, Tel Aviv.

Profenusa lutea Smith, n.sp.
(Fig. 1)

Female. Length, 4.0 mm. Antennal segments 1-3 yellow (remaining segments missing). Head yellow white, except interocellar area, postocellar area, occiput, and narrow band behing eye black; mouthparts yellow white, apex of mandible redish. Thorax black, except posterior lateral angles of pronotum, tegula, and perapteron yellow white. Abdomen black. Legs yellow white, except coxae, trochanters, and basal 1/4 of femora black. Wings lightly uniformly blackish infuscated; veins and stigma black. Head and body shining, without sculpture.

First and 2nd antennal segments each longer than broad; 3rd segment as long as first 2 segments combined. Clypeus shallowly, broadly, v-shaped emarginated; malar space and genal carina absent; distance between antennae 1 1/3 x longer than distance

from antenna to eye; inner margins of eyes parallel, lower interocular distance 1 1/2 x greater than length of eye; ratio of distance between posterior ocellus and eye to distance between posterior ocelli to distance from posterior ocellus to hindmargin of head, 1.0:1.2:1.3. Prepectus absent. Hind basitarsus equal to combined length of 3 following tarsal segments; tarsal claw with single outer tooth and large acute basal lobe. Forewing with radial cell closed; vein 2A + 3A straight. Hindwing with radial cell open; anal cell open. Sheath slender in dorsal view, straight above and rounded below in lateral view (similar to Fig. 6). Lancet with 11 serrulae; central serrulae each with 3-4 anterior and 5-8 posterior subbasal teeth; each serrula narrowly rounded to pointed at apex and posterior margin longer than anterior margin (Fig. 1).



Figs. 1-4. Female lancets; entire lancet and detail of two central serrulae. 1, *Profenusa lutea.* 2, *Periclista hermonensis.* 3, *P. freidbergi.* 4, *Tenthredopsis kaplanorum.*

Male. Unknown.

MATERIAL EXAMINED. Holotype ♀, labelled "Israel, Horshat Tal, 11.IV.1976, D. Simon".

REMARKS. No other species of *Profenusa* has such extensive areas of yellow white on the head, thorax, and legs. The two European species, *pygmaea* (Klug) and *thomsoni* (Konow) are entirely black, with at most the apex of the femora and all the tibiae and tarsi white. Also, *pygmaea* has the anal cell of the hindwing closed (open in *lutea*), and *thomsoni* has a cluster of long setae at the center of each segment of the lancet (absent in *lutea*).

The species name is derived from the pale coloration.

Periclista freidbergi Smith, n.sp.
(Figs. 3, 6, 7)

Female. Length, 4.0 mm. Antenna and head black; apex of mandible reddish; palpi whitish. Thorax black, except posterior margin of pronotum and tegula white; spot on lower posterior margin of mesepisternum reddish orange. Abdomen orange; sterna blackish with white apical margins; basal plates, basal margin of 2nd tergum, and sheath black. Legs yellow orange, except coxae, trochanters, and tarsi black. Wings hyaline; veins and stigma black.

Clypeus subtruncate; malar space less than 1/2 diameter of front ocellus; eyes with inner margins slightly converging below, lower interocular distance 1 1/4 x eye length; ratio of distance from posterior ocellus to eye to distance between posterior ocelli to distance from posterior ocellus to hindmargin of head, 1.0:1.2:0.7. Antenna 1 1/4 x head width; 1st and 2nd segments each longer than broad; 3rd segment longer than 4th segment; segments 4 to apex slightly decreasing in length. Head and body shining and impunctate; only few punctures on clypeus and area around antennae, mesopleuron and mesosternum, and posterior margin of mesoscutellum; head and body with whitish pubescence, shorter than diameter of an ocellus. Forewing with vein 2A + 3A curved up. Hindwing with cell M present; petiole of anal cell 1 1/2 x width of cell. Sheath in lateral view straight above, rounded below (Fig. 6). Lancet slightly sclerotized, with about 19 serrulae; each serrula low, pointed on anterior margin, with no anterior and 4-5 coarse posterior subbasal teeth; intersegmental area with hairs (Fig. 3); dorsal margin of lance crenulate on apical 2/3.

Male. Length, 4.0 mm. Coloration similar to female except abdomen with apical 2 or 3 terga blackish and mesopleuron without distinct reddish spot. Structure similar to female. Hindwing with peripheral vein. Genitalia in Fig. 7; valve with broad transverse spine, about as long as width of valve.

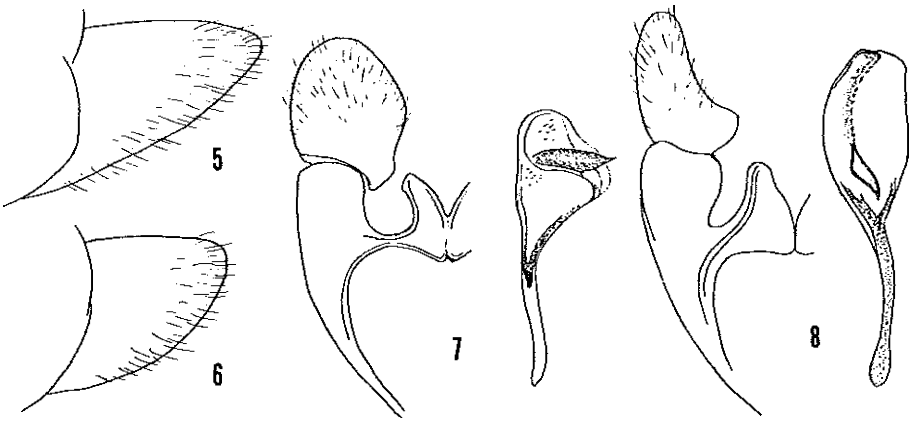
MATERIAL EXAMINED. Holotype ♀, labelled "Israel, Mt. Meron, 1100 m, 9.IV.1977, A. Freidberg."

Paratypes. 2 ♂ with same data as holotype.

REMARKS. This species keys to *lenta* Konow in Benson (1968); however, in *lenta*, the clypeus is emarginate medially, the malar space is two-thirds or more the diameter of an ocellus, the bases of the femora are black, and the female abdomen is mainly black with pale apical margins to the segments. In *rufiventris* Zombori (1980), a species also close to *lenta*, the malar space equals the diameter of an ocellus, the pronotum, tegulae, mesopleuron, and mesonotal lobes are streaked with yellow, and the female lacks cell M in the hindwing.

P. freidbergi belongs in the *lineolata* group of *Periclista*, distinguished by the crenulate dorsal margin of the lance, the broad transverse spine on the penis valve, and the long petiole to the anal cell of the hindwing. *Periclista lineolata* (Klug) also belongs here, but *lineolata* is almost entirely black, has a malar space equal to the diameter of an ocellus, and has an emarginated cylpeus.

This species is named for the collector, Amnon Freidberg, Tel Aviv University.



Figs. 5-8. 5, Female sheath, lateral, of *Periclista hermonensis*. 6, Female sheath, lateral, of *P. freidbergi*. 7, Male genitalia of *P. freidbergi*. 8, Male genitalia of *Tenthredopsis kaplanorum*. Figures of male genitalia show genital capsule, ventral view of left half, and lateral view of valve.

Periclista hermonensis Smith, n.sp.
(Figs. 2, 5)

Female. Length, 5.0 mm. Antenna and head black; apex of mandible reddish. Thorax black, except following reddish orange: cervical sclerite, pronotum, tegula, mesopleuron, spot on anterolateral corners of mesoprescutum, lateral downturned portions of each lateral lobe of mesonotum, and metapleuron. Abdomen dark reddish orange, except sterna, basal plates, anterior margin of 2nd tergum, and sheath black. Legs yellow orange, except following black: inner surface of forecoxa, midcoxa, hindcoxa (except spot at base), trochanters, and tarsi, especially apical 4 segments of each tarsus. Wings hyaline, veins and stigma black.

Clypeus subtruncate; malar space about 1/2 diameter of front ocellus; inner margins of eyes subparallel, lower interocular distance 1 1/4 x eye length; ratio of distance from posterior ocellus to eye to distance between posterior ocelli to distance from posterior ocellus to hindmargin of head, 1.0:0.9:0.9. Antenna 1 1/2 x head width; 1st and 2nd segments each longer than broad; 3rd segment longer than 4th segment; segments 4 to 9 very gradually decreasing in length. Head and body smooth and shining, impunctate, only clypeus and area around and between antennae and eyes

with few punctures; head and thorax with short white pubescence, shorter than diameter of an ocellus. Forewing with vein 2A + 3A curved up at apex. Hindwing without cell M; petiole of anal cell 1 1/2 x width of cell. Sheath in lateral view tapering above and below to narrowly rounded apex (Fig. 5). Lancet heavily sclerotized, with 11 serrulae; each serrulae broad, truncated at apex, without subbasal teeth; intersegmental ctenidia present (Fig. 2).

Male. Unknown.

MATERIAL EXAMINED. Holotype ♀, labelled "Israel, Mt. Hermon, 1100 m, 7.IV.1978, D. Furth."

REMARKS. This species runs to *albipennis* (Zaddach) in Benson's (1968) key; it differs from *albipennis* by the reddish orange on the thorax, abdomen, and legs (*albipennis* is black with some white on the posterior margin of the pronotum, apical margins of the abdominal segments, and part of the tibiae), and by the slightly broader malar space (less than half the diameter of an ocellus in *albipennis*). Both *hermonensis* and *albipennis* have a strongly sclerotized ovipositor, and both belong in the subgenus *Neocharactus* as recognized in North America, though Europeans have never utilized this subgenus. They differ from the typical subgenus by the sclerotized ovipositor, which is nearly as long as or about as long as the hindtibia, the fewer serrulae, and presence of ctenidia along the segments of the lancet. The lancet of *albipennis* has this general appearance, but differs from *hermonensis* in having pointed serrulae and with several coarse posterior subbasal teeth.

From some other species of *periclista, hermonensis* may be distinguished as follows: *rufiventris* has a broad malar space, equal to the diameter of an ocellus and the basal plates are black spotted only (also the male of *rufiventris* has a marginal vein in the hindwing, a character which would not place it with *albipennis*); *lenta* has a broad malar space, equal to or more than the diameter of an ocellus, has cell M in the hindwing, and the abdomen of the female is mainly black with only the apical edges white; *lineolata* is mostly black and has cell M in the hindwing; and *pubescens* (Zaddach) has long white pubescence longer than the diameter of an ocellus, and has cell M in the hindwing. All these other species, except *rufiventris* for which genitalia were not illustrated, have a lightly sclerotized, fragile lancet with about 20 serrulae, similar to Fig. 3.

The name is derived from the type-locality.

Tenthredopsis kaplanorum Smith, n.sp.
(Figs. 4, 8)

Female. Length, 9.5-10.0 mm. Antenna yellow orange, 1st segment black except at extreme base and apex. Head black, except following yellow: clypeus, labrum, mandible (except extreme base and apex reddish), palpi, small supraclypeal spot, antennal crests, inner orbits to near malar space, and large spot on dorsolateral area of head behind eye. Thorax black, except following yellow: pronotum (except lower and anterior lateral margins), tegula, mesoscutellum, posttergite, and metascutellum. Abdomen yellowish, except following black: basal plates, apical 3 segments, basal central spot on terga 2-6, the spot decreasing in size to 6th tergum, and lateral, downturned portions of terga; sterna yellow orange, apical 1 or 2 black. Legs yellow orange, except following black: base of forecoxa, midcoxa except for extreme base and apex; hindcoxa

except for extreme apical margin, and hindfemur except extreme base and apex. Wings lightly, uniformly yellowish infuscated; veins brownish with costa and basal 1/2 to 2/3 of stigma yellowish.

Antennal segments 1 and 2 each as long as broad; 3rd segment longer than 4th segment; segments 4-9 slightly decreasing in length; antenna 2 1/2 x head width, shorter than forewing (would extend from base to about base of stigma). Clypeus shallowly circularly emarginated at center, for about 1/5 its medial length; occipital carina distinct around entire margin of head; width of malar space slightly less than diameter of front ocellus; ratio of distance from posterior ocellus to eye to distance between posterior ocelli to distance from posterior ocellus to hindmargin of head, 1.0:0.5:0.7; inner margins of eyes subparallel, lower interocular distance 1 1/5 x eye length. Head shining with scattered punctures, punctures denser and area subshining to dull on genae; mesonotum shining with small punctures separated by their own diameter or more; pleurae with punctures denser than those on mesonotum and with surface subshining to dull; abdomen with transverse microsculpture. Sheath slender in dorsal view, slightly broader at base tapering to a pointed apex; in lateral view straight above and rounded below (similar to Fig. 6). Lancet long and slender, typical for genus, serrulae low, without anterior and with 6-7 coarse posterior subbasal teeth (Fig. 4).

Male. Length, 9.0 mm. Color and structure similar to female. Slightly more yellow as follows: inner orbits with yellow extending through malar area and part way up outer orbit; abdomen with terga 2-7 mostly yellow, with smaller basal central black spots. Genitalia as in Fig. 8; valve with longitudinal lateral ridge with rounded lateral flap at base of ridge.

MATERIAL EXAMINED. Holotype ♀, labelled "Israel, Tiv'on, 2.IV.1975, F. Kaplan."

Paratypes. Israel: Mt. Meron, 9.IV.1977, A. Freidberg (1♀); Ga'ton, 17.IV.1973, M. Kaplan (1♂); Baniyas, 24.IV.1982, F. Kaplan (1♀).

REMARKS. The emarginated clypeus and lack of a long spine on the penis valve places *kaplanorum* in the *stigma* group (Benson, 1968). In this group, the only species have a smooth and shining mesopleuron. *Tenthredopsis floricola* has a black abdomen with the middle four segments red, has subhyaline wings with black venation and the costa and subcosta of the forewing white, and is known from southern and southeastern Europe. A distinctive feature for *kaplanorum* is the almost entirely orange-yellow antennae; the antennae are black or partly black in other species. *Tenthredopsis tesselata* (Klug) is a widespread and variable species, also in the *stigma* group, with the lateral flap of the penis valve small, less than 1/3 the width of the valve, and the apex of the lateral ridge no more protuberant than the rest of the ridge, whereas in *kaplanorum*, the flap is nearly as broad as the valve and the apical part of the ridge is protuberant. Also, *tesselata* has a smooth and shining mesopleuron.

Named for the collectors, F. and M. Kaplan, Tel Aviv University.

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