

## ADDITIONS TO THE CYNIPOID FAUNA OF ISRAEL (HYMENOPTERA, CYNIPOIDEA)

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### ABSTRACT

Thirty-seven species of cynipoid-wasps are reported as new to Israel.

**KEY WORDS:** Cynipoidea, Hymenoptera, species list, Israel, distributional data, hosts.

The superfamily Cynipoidea contains small to medium sized wasps, classified in seven families and with about 2500 described species around the world. Although they are called gall-wasps, the great majority of Cynipoidea are not gall-makers but parasitic. Such as the Ibalidae in the larvae of Siricidae; Eucoilidae and Figitidae in puparia of Diptera and Neuroptera; Alloxystidae mainly hyperparasitic on braconids, ichneumonids, chalcidoids (Hymenoptera) in their primary host of aphids and other Homoptera. The 'true' gall-makers belong to the subfamily Cynipinae (Cynipidae) and most of them produce galls on oaks.

Bodenheimer (1937) enumerates 12 species of Cynipidae. Ten of these were gall-makers and two were parasitic species. Rosen (1966) mentions additional hyperparasitic genera on aphids in Israel. A special study was dedicated to gall-makers on oaks and their inquilines by Bytinski-Salz and Sternlicht (1967) and Sternlicht (1968), increasing the number of species known in Israel to about 80 nominal taxa. However, in these publications some parasitic forms were identified only as genus. With regard to this respect, our fauna is still rather poorly known in comparison with that of European countries. This especially concerns the parasitic families of Figitidae, Eucoilidae and Alloxystidae. The first two of these have not yet been recorded from Israel. The following paper aims to collate various data on the distribution and hosts of 37 species of cynipids, new to the fauna of Israel. Most specimens were collected by the author in various biotopes, mainly by sweeping\*, but also by rearings. The material identified is deposited partly in the author's collection, partly in that of the Plant Protection Department. Host preference, if available, is recorded from the most pertinent reference of the earlier authors, not necessarily the original one. The systematic arrangements of taxa and synonymies, are based on the catalogue of Burks (1979).

### FIGITIDAE

#### *Aspicera coriacea* Kieffer, 1901

Distribution: Corsica.

**MATERIAL EXAMINED:** 1♂ Nazareth forest (Lower Galilee), 21.VI.1981; 1♂ and 2♀♀ Eshta'ol (Foothills of Judea), 3-4.IV.1983; 1♂ Biriyya (Upper Galilee), 17.VI.1984; 3♂♂ Qedumim (Samaria), 17.VI.1987; 1♀ Newe Ya'aqov (Judean Hills), 19.VI.1977.

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*Aspicera scutellata* Villers, 1789

Distribution: Sweden, France, England, Germany, Italy, Hungary, Yugoslavia, Rumania, Austria, Spain, USSR, Algeria, Tunis.

MATERIAL EXAMINED: 1♂ Qiryat Motzkin (Northern Coastal Plain), 10.V.1983; 1♂ Latrun (Foothills of Judea), 24.V.1983; 1♀ Barqay (Central Coastal Plain), 7.IV.1985; 3♂♂ and 4♀♀ Qevuzat Yavne (Southern Coastal Plain), 12.V.1985; 1♀ Negba (Northern Negev), 25.V.1988; 1♂ Bet She'an (Jordan Valley), 29.V.1985.

*Aspicera suecica* Dalla Torre & Kieffer, 1910

Distribution: Sweden, USSR.

MATERIAL EXAMINED: 1♂ Petah Tiqwa (Central Coastal Plain), 9.IV.1981; 1♂ Nahariyya (Northern Coastal Plain), 17.III.1983; 2♂♂ and 1♀ Nir Eliyyahu (Central Coastal Plain), 1.IV.1985; 3♂♂ Tel Afeq-Antipatris near Rosh ha'Ayin (Central Coastal Plain), 27.III.1987; 1♂ and 3♀♀ Shoshannat ha'Amaqim (Central Coastal Plain), 29.IV.1988.

*Callaspidia dufouri* Giraud, 1860

Distribution: England, Germany, Austria, Czechoslovakia.

Host: From larva of an unidentified Chrysomelidae (Coleoptera) on *Caltha palustris* L. (Ranunculaceae) (Kieffer 1905:291).

MATERIAL EXAMINED: 1♂ 'Auja el Fauqa near Jericho (Dead Sea Area), 3.VIII.1982; 6♂♂ and 1♀ Sa'ad (Northern Negev), 5.V.1985; 1♂ Zur Natan (Samaria), 16.V.1985; 3♂♂ and 3♀♀ Yad Mordekhay (Southern Coastal Plain), 11.VIII.1987.

*Callaspidia ligurica* Giraud, 1860

Distribution: France, Italy.

Host: From larva of *Syrphus* sp. (Diptera: Syrphidae) (Kieffer 1905:286).

MATERIAL EXAMINED: 1♀ Ramat Yishay (Lower Galilee), 19.V.1986.

*Figites consobrinus* Girault, 1860

Distribution: England, Germany, Austria, Sweden, Finland, France, Corsica.

Host: From puparia of *Sarcophaga striata* Meigen and *S. haemorrhoea* Meigen (Diptera: Sarcophagidae) (Kieffer 1905:319).

MATERIAL EXAMINED: 1♀ Ofaqim (Northern Negev), 4.III.1982; 1♂ and 2♀♀ Yoqne'am 'Illit (Valley of Yizre'el), 11.III.1982; 3♀♀ Hod haSharon (Central Coastal Plain), 2.VII.1984;; 1♀ Gane Tal (Southern Coastal Plain), 1.III.1988.

*Melanips opacus* Hartig, 1840

Distribution: England, Germany, Austria, Czechoslovakia, Sweden, France, Corsica, USSR, Switzerland, Rumania.

Host: From larva of an unidentified Diptera on *Pinus* sp. (Pinaceae) (Kieffer 1905:336).

MATERIAL EXAMINED: 1♂ Mikhmoret (Central Coastal Plain), 2.VII.1980; 1♂ Sederot (Southern Coastal Plain), 9.VI.1981; 2♂♂ Biriyya (Upper Galilee), 13.V.1981; 7♂♂ and 1♀ Eshta'ol (Foothills of Judea), 30.VI.1982; 4♂♂ and 11♀♀ Wadi Soreq near Yavne (Southern Coastal Plain), 9.VIII.1982; 1♂ and 1♀ Ramat haKovesh (Central Coastal Plain), 7.VII.1983; 1♀ Gan Hayyim (Central Coastal Plain), 7.VII.1983; 4♂♂ and 4♀♀ 'Ein es Sultan (Dead Sea Area), 18.V.1984; 1♂ Sifsufa (Upper Galilee), 19.VII.1985; 1♂ and 2♀♀ Ramot Menashe (Carmel Ridge), 24.VIII.1987; 1♂ Tel Yoqne'am (Valley of Yizre'el), 21.VI.1988.

## EUCOILIDAE

### *Cothonaspis giraudi* Dalla Torre & Kieffer, 1910

Distribution: Sweden, England, Austria, Hungary, Rumania.

MATERIAL EXAMINED: 1♀ Dor (Northern Coastal Plain), 20.VII.1982; 1♀ Kefar Nahum (Capernaum) (Jordan Valley), 11.IV.1982; 1♂ and 2♀♀ Miqwe Yisra'el (Southern Coastal Plain), 22.IV.1985; 3♂♂ and 3♀♀ Kissufim (Southern Coastal Plain), 27.VII.1987; 1♀ Avne Etan (Golan Heights), 21.V.1988.

### *Disorygma divulgatum* Förster, 1869

Distribution: Germany, Rumania.

Host: Present record, puparia of *Phytomyza* and *Liriomyza* spp. (Diptera: Agromyzidae).

MATERIAL EXAMINED: 1♀ Jerusalem-Betar (Judean Hills); 2♀♀ reared from *Phytomyza atricornis* Meigen in Bet Dagan (Southern Coastal Plain), 24.VII.1896, host plant not identified; 1♂ reared from *Liriomyza trifolii* (Burgess) on leaves of *Gypsophila paniculata* L. (Caryophyllaceae) in Nezer Hazzani (Southern Coastal Plain), 20.VII.1987; 1♂ and 1♀ Tirat Zevi (Jordan Valley), 9.VII.1988.

### *Eutrias tritoma* Thomson, 1861

Distribution: Sweden, Rumania, and it was introduced in USA (Texas).

Host: From pupae of Sepsidae (Diptera) in cow manure (Burks: 1979:1053).

MATERIAL EXAMINED: 1♀ Migdal ha'Emeq (Lower Galilee), 3.IX.1984; 2♀♀ Nahalat Yehuda (Southern Coastal Plain), 9.VII.1987.

### *Ganaspis mundata* Förster, 1869

Distribution: Germany.

MATERIAL EXAMINED: 1♂ and 1♀ Zikhron Ya'aqov (Central Coastal Plain), 2.VI.1981; 1♂ Kabri (Northern Coastal Plain), 5.VI.1981; 1♀ Holon (Southern Coastal Plain), 3.VII.1983; 1♂ and 1♀ Palmahim (Southern Coastal Plain), 14.VII.1987; 1♂ and 1♀ Berekhya (Southern Coastal Plain), 11.VI.1988.

*Gronotoma allotriiformis* Giraud, 1860

Distribution: Austria.

MATERIAL EXAMINED: 1♀ Wadi Teqoa' near Bethlehem (Judean Hills), 29.V.1981; 1♀ Ma'oz Hayyim (Jordan Valley), 8.V.1983; 1♀ Eshta'ol (Foothills of Judea), 24.V.1983; 3♀♀ Kefar Shemaryahu (Central Coastal Plain), 10.V.1987, on leaves of *Macadamia* sp. (Proteaceae); 1♀ Kefar haNagid (Southern Coastal Plain), 2.V.1988.

*Hypolethria compressiventris* Giraud, 1860

Distribution: Austria, Rumania.

MATERIAL EXAMINED: 1♂ 'Arad (Judean Desert), 9.III.1982; 5♂♂ and 1♀ Iksal (Kislot Tavor) (Lower Galilee), 19.V.1982; 1♂ Qiryat Gat (Southern Coastal Plain), 15.V.1986; 1♂ and 1♀ Nir Banim (Southern Coastal Plain), 13.VI.1988.

*Kleidotoma affinis* Cameron, 1889

Distribution: England.

MATERIAL EXAMINED: 1♀ Elqosh (Upper Galilee), 21.IV.1981; 4♀♀ Nahal Bedolah (Southern Coastal Plain), 23.II.1982; 1♂ and 8♀♀ Daliyya (Carmel Ridge), 6.V.1982; 3♀♀ Karmi'el (Lower Galilee), 6.V.1982; 1♀ Kallanit (Lower Galilee), 20.II.1985; 3♀♀ Mishmar haSheloshah (Lower Galilee), 1.V.1987.

*Kleidotoma cordata* Giraud, 1860

Distribution: Austria, Rumania.

MATERIAL EXAMINED: 1♀ Wadi Hebron (Judean Hills), 9.VI.1981; 1♂ and 2♀♀ Sede Boqer (Central Negev), 2.VIII.1981; 1♀ Ge'alya (Southern Coastal Plain), 9.VII.1983; 3♀♀ Mizpe Yeriho (Dead Sea Area), 27.IV.1984; 11♂♂ and 2♀♀ Giv'at haSheloshah (Central Coastal Plain), 21.VII.1986.

*Kleidotoma emarginata* Hartig, 1841

Distribution: Germany.

MATERIAL EXAMINED: 1♂ Ramla (Southern Coastal Plain), 26.X.1981; 1♂ Gan Or (Southern Coastal Plain), 7.X.1982; 1♂ and 2♀♀ Nir Banim (Southern Coastal Plain), 30.X.1982; 1♂ and 1♀ Karmi'el (Lower Galilee), 9.VIII.1983; 1♂ Even Yehuda (Central Coastal Plain), 11.X.1984; 1♂ and 1♀ Mabbu'im (Southern Coastal Plain), 8.XI.1984; 4♂♂ and 1♀ Pardes Hanna-Karkur (Central Coastal Plain), 17.VIII.1985; 1♂ Yoqne'am 'Illit (Valley of Yizre'el), 21.VIII.1985; 2♂♂ Wered Yeriho (Dead Sea Area), 23.X.1987; 1♂ Nahal Malkishua' (Samaria), 19.XI.1987; 1♂ and 2♀♀ Nezer Hazzani (Southern Coastal Plain), 24.XI.1987.

*Kleidotoma geniculata* Hartig, 1840

Distribution: Sweden, Germany, Austria, France, Rumania.

MATERIAL EXAMINED: 1♂ 'En Gedi (Dead Sea Area), 25.VI.1981; 3♂♂ and 1♀ Ne'ot haKikkar (Dead Sea Area), 17.VII.1984; 1♂ and 1♀ Tel Yosef (Valley of Yizre'el), 19.VII.1984; 3♂♂ and 3♀♀ Nizzana (Northern Negev), 21.VI.1985; 1♂ Yotvata (Arava Valley), 12.VII.1987.

*Kleidotoma psilloides* Westwood, 1833

Distribution: England, Rumania, Austria.

MATERIAL EXAMINED: 1♂ and 1♀ Karmi'el (Lower Galilee), 9.VIII.1983; 1♀ Jericho (Dead Sea Area), 17.VII.1987; 2♀♀ Hawwat 'Eden, Agriculture Experiment Station (Jordan Valley), 12-21.V.1984, light trap, R. Or & Q. Argaman legit; 2♀♀ Yavne (Southern Coastal Plain), 9.VI.1984; 1♂ and 3♀♀ Tel 'Adashim (Valley of Yizre'el), 3.VI.1986; 2♂♂ Ne'ot Mordekhay (Upper Galilee), 9.VII.1986; 1♂ and 1♀ Be'erotayim (Central Coastal Plain), 20.VII.1986; 2♂♂ and 2♀♀ Rehovot (Southern Coastal Plain), 3.VIII.1987; 1♂ Ro'i (Samaria), 5.V.1988; 1♂ Erez (Southern Coastal Plain), 11.V.1988.

*Kleidotoma striaticollis* Cameron, 1888

Distribution: England, Rumania.

Host: From puparia of *Hydrellia griseola* Fallen (Diptera: Ephydriidae) (Ionescu 1969:146).

MATERIAL EXAMINED: 1♂ and 1♀ Ramat Gan (Central Coastal Plain), 17.III.1981; 1♂ and 1♀ Wadi Qelt (Judean Desert), 2.VI.1983; 3♀♀ Ma'ale Gilbo'a (Samaria), 21.X.1984; 3♂♂ and 8♀♀ Mikhmoret (Central Coastal Plain), 1.VIII.1985.

*Microstilba heterogena* Giraud, 1860

Distribution: Austria, Rumania.

Host: *Liriomyza trifolii* (Burgess) and *Phytomyza* sp. (s.l.) (Diptera: Agromyzidae), present record.

MATERIAL EXAMINED: 1♀ Deir el Balah (Southern Coastal Plain), 21.VII.1981; 2♀♀ Qiryat 'Anavim (Judean Hills), 30.V.1983; 1♂ and 1♀ Talme Yosef (Southern Coastal Plain), 12.IV.1984; 1♀ Lakhish (Foothills of Judea), 30.VI.1985, reared from leaves of *Chrysanthemum morifolium* Ramat (Compositae) infested with *Liriomyza trifolii* (Burgess); 1♀ Bet Dagan (Southern Coastal Plain), 2.VII.1988, reared from mining larva of *Phytomyza* sp. (s.l.), host not reared, on leaves of *Jacaranda* sp. (Bignoniaceae).

*Microstilba tibialis* Kieffer, 1901

Distribution: Sweden, Rumania.

MATERIAL EXAMINED: 1♂ and 1♀ Caesarea (Horbat Qesari) (Central Coastal Plain), 18.IV.1981; 1♂ Magen Sha'ul (Valley of Yizre'el), 3.VI.1986; 1♀ Tel Dan (Upper Galilee), 3.IV.1987; 1♂ and 6♀♀ Rishon leZiyyon (Southern Coastal Plain), 24.IV.1987; 1♀ 'En Gev (Southern Golan), 4.V.1988.

*Pilinothrix designata* Förster, 1869

Distribution: Germany.

Host: Present record, *Agromyza* sp. (Diptera: Agromyzidae).

MATERIAL EXAMINED: 1♀ Hofit (Nahal Alexander) (Central Coastal Plain), 3.X.1980; 2♀♀ Giv'at 'Oz (Samaria), 23.VI.1981; 1♀ Be'erot Yizhaq (Central Coastal Plain), 18.V.1988, ex *Agromyza* sp.; 1♀ Hafez Hayyim (Southern Coastal Plain), 18.V.1988.

*Rhoptromeris heptoma* Hartig, 1840

Distribution: England, Sweden, Germany, Rumania, Spain.

MATERIAL EXAMINED: 1♂ 'Olesh (Central Coastal Plain), 7.II.1981; 4♂♂ and 5♀♀ Even Yehuda (Central Coastal Plain), 7.II.1981; 2♂♂ Or Yehuda (Southern Coastal Plain), 1.II.1987; 2♂♂ and 1♀ Ramallah (Judean Hills), 20.III.1987.

ALLOXYSTIDAE

*Alloxysta nigrita* Thomson, 1861

Distribution: Sweden, France.

Host: From *Aphis* sp. (Homoptera: Aphididae) on *Sonchus asper* L. (Compositae) (Kieffer 1905:44).

MATERIAL EXAMINED: 1♂ and 1♀ Ramat haSharon (Central Coastal Plain), 28.V.1981; 3♂♂ and 2♀♀ 'Afula (Valley of Yizre'el), 9.V.1987.

*Alloxysta ullrichi* Giraud, 1860

Distribution: England, Austria, France, Rumania.

MATERIAL EXAMINED: 1♂ and 1♀ Desert Zin (Southern Negev), 13.V.1981; 4♂♂ and 2♀♀ Yitav (Dead Sea Area), 1.V.1982; 4♂♂ and 1♀ 'En Hazeva ('Arava Valley), 14.III.1984; 2♂♂ Tubas (Samaria), 5.V.1988.

*Alloxysta victrix* Westwood, 1833

Distribution: England, Finland, Sweden, Greenland, Germany, Austria, Hungary, Czechoslovakia, Rumania.

Host: By records of Kieffer (1905:76) *Macrosiphum rosae* L. on *Rosa canina* L. (Rosaceae), *Cryptosiphon artemisiae* Buckton on *Artemisia vulgaris* L. (Compositae), *Megoura viciae* Buckton on *Vicia faba* L. (Leguminosae), *Myzodes ligustri* Mosley on *Ligustrum vulgare* L. (Oleaceae); and by present record (aphid hosts species were identified by S. Amitai, Agricultural Research Organization, The Volcani Center, Bet Dagan), based on the rearings of Dr. A. Zehavi (Forests Department of Jewish National Fund), but the extensive distributional data not included: *Aphis* sp. on *Salix* sp. (Salicaceae), *Aphis* sp. on *Sinapis alba* L. (Cruciferae), *Aphis gossypii* Glover on *Gossypium* spp. (Malvaceae), *Aphis citricola* Van der Goot on *Citrus* spp. (Rutaceae), *Brevicoryne brassicae* L. on *Brassica* sp. (Cruciferae); all hosts species from Homoptera: Aphididae.

MATERIAL EXAMINED: 1♂ and 1♀ Tiberias (Lower Galilee), 20.III.1982; 1♂ Mikhmoret (Central Coastal Plain), 9.IX.1982; 2♀♀ Wadi Qelt (Judean Desert), 2.VI.1983; 3♀♀ Negba (Southern Coastal Plain), 10.III.1985; 2♀♀ Shelomi (Northern Coastal Plain), 15.VIII.1985; 2♂♂ and 1♀ Mishmar haNegev (Northern Negev), 9.III.1986; 1♀ Ben Zakkay (Southern Coastal Plain), 8.IX.1986; 2♂♂ and 2♀♀ Yad Mordekhay (Southern Coastal Plain), 9.IX.1987.

*Dilyta flavicornis* Hartig, 1841

Distribution: England, Germany, Austria, Rumania.

Host: From *Aphis* sp. on *Carthamnus tinctorius* L. (Compositae) (Kieffer 1905:66).

MATERIAL EXAMINED: 1♀ Yafo (Abu Kebir) (Southern Coastal Plain), 20.I.1982; 9♀♀ Ra'anana (Central Coastal Plain), 25.IV.1982; 1♂ and 2♀♀ Daliyya (Carmel Ridge), 6.V.1982; 1♀ 'En Hazeva ('Arava Valley), 21.V.1985; 1♂ and 4♀♀ Dimona (Northern Negev), 3.IV.1987; 2♂♂ Gerofit ('Arava Valley), 19.V.1987.

*Dilyta minuta* Hartig, 1840

Distribution: Sweden, Germany, Austria, Hungary, Rumania.

Host: From *Aphis* sp. on *Eryngium campestre* L. (Umbelliferae), *Aphis* sp. on *Rumex acetosella* L. (Polygonaceae) (Kieffer 1905:54); and from *Aphis* sp. on *Persica vulgaris* Millière (Rosaceae) (Ionescu 1969:253).

MATERIAL EXAMINED: 1♀ Elat (Southern Negev), 30.VI.1981; 1♂ and 2♀♀ Bet Guvrin (Foothills of Judea), 9.VII.1983, on *Ficus* sp. (Moraceae); 1♀ Ayyelet haShahar (Upper Galilee), 18.VII.1983, on *Rosa* sp. (Rosaceae); 3♀♀ Merkaz Sappir ('Arava Valley), 22.VII.1987.

*Dilyta pleuralis* Cameron, 1879

Distribution: England.

MATERIAL EXAMINED: 1♀ Jabaliya near Gaza (Southern Coastal Plain), 14.I.1982; 1♀ Sha'ar ha'Amaqim (Lower Galilee), 10.III.1982; 1♀ Ramat haShofet (Carmel Ridge), 19.II.1984; 1♀ Wadi Peza'el (Jordan Valley), 7.VI.1986.

*Dilyta xanthocera* Thomson, 1862

Distribution: Sweden, Rumania.

MATERIAL EXAMINED: 1♀ Mount Meron Reserve (Upper Galilee), 27.VI.1982; 1♂ Timna ('Arava Valley), 29.VI.1987.

*Hemicrisis ruficornis* Förster, 1869

Distribution: Germany.

MATERIAL EXAMINED: 1♀ Chor-Es-Fara near Shekhem (Samaria), 11.VII.1982; 3♀♀ Har Dardar near Zur Natan (Samaria), 5.VII.1982; 1♂ and 2♀♀ Jalazun near Ramallah (Judean Hills), 3.VII.1984; 2♂♂ Bene 'Atarot (Southern Coastal Plain), VII.1984; 3♀♀ Kefar

Sirkin (Central Coastal Plain), 29.VII.1984; 2♂♂ and 4♀♀ Kefar Ruppin (Jordan Valley), 3.VIII.1984; 1♀ Karmi'el (Central Coastal Plain), 17.VII.1985.

## CYNIPIDAE

### *Aulacidea pilosellae* (Kieffer, 1901)

Distribution: France, Rumania.

Host: Gall-maker on *Hieracium pilosella* L. (Compositae) (Ionescu 1957:218).

MATERIAL EXAMINED: 1♀ Regba junction (Northern Coastal Plain), 20.VIII.1980; 2♀♀ Ilanot (Central Coastal Plain), 27.VIII.1980; 7♀♀ 'En Harod (Ihud) (Jordan Valley), 2.VI.1983; 1♀ Newe Yam (Northern Coastal Plain), 14.VI.1983; 2♀♀ Shefayim, sea shore (Central Coastal Plain), 19.VI.1986, on *Elymus caput-medusae* L. (Gramineae).

### *Aylax papaveris* (Perris, 1839)

Distribution: Sweden, England, France, Germany, Austria, Hungary, Rumania, Portugal, USSR, Yugoslavia, Czechoslovakia.

Host: Gall-maker on *Papaver dubium* L. and *P. rhoeas* L. (Papaveracea) (Ionescu 1957:215).

MATERIAL EXAMINED: 1♂ and 1♀ Tel Aviv (Coastal Plain), 1.VIII.1981; 2♂♂ Qidron (Southern Coastal Plain), 3.IX.1986; 1♂ and 2♀♀ 'Ayanot (Southern Coastal Plain), 17.VIII.1987; 1♀ Erez (Southern Coastal Plain), 9.IX.1987.

### *Aylax salviae* Giraud, 1859

Distribution: Germany, Czechoslovakia, Yugoslavia, Rumania, Italy.

Host: Gall-maker on *Salvia officinalis* L. (Labiatae) (Ionescu 1957:217).

MATERIAL EXAMINED: 1♀ Mount Tabor Forest (Lower Galilee), 9.VI.1981; 1♂ Netivot (Southern Coastal Plain), 21.VII.1983; 1♂ and 1♀ Havazzelet haSharon (Central Coastal Plain), 7.VIII.1983; 1♀ Barqay (Central Coastal Plain), 7.VIII.1983; 1♂ and 2♀♀ Miqwe Yisra'el (Southern Coastal Plain), 2.VII.1988.

### *Ceroptres arator* Hartig, 1841

Distribution: Sweden, England, Germany, France, Austria, Italy, Hungary, Rumania.

Host: Inquilin in the galls of the genera *Andricus*, *Adleria*, *Cynips*, *Neuroterus* and other cynipids (Hymenoptera: Cynipidae) (Ionescu 1957:201).

MATERIAL EXAMINED: 1♂ Magdala near Kinneret (Lower Galilee), 17.IV.1981; 1♀ Elqosh (Upper Galilee), 21.IV.1981; 1♀ Park Canada near Latrun (Foothills of Judea), 24.V.1983; 1♀ Hinnon Valley near Jerusalem (Judean Hills), 23.VI.1984; 1♀ Mount Carmel (Carmel Ridge), 18.V.1985; 1♂ and 3♀♀ Kefar Maymon (Southern Coastal Plain), 22.V.1986; 1♀ Bet Oren (Carmel Ridge), 18.V.1985; 2♂♂ and 1♀ 'En el Asad in Mount Meron Reserve (Upper Galilee), 19.VI.1987.



*Diastrophus rubi* Bouché, 1834

Distribution: Entire Europe.

Host: Gall-maker on *Rubus* sp. (Rosacea) (Ionescu 1957:207).

MATERIAL EXAMINED: 1♂ and 1♀ Qiryat Bialik (Northern Coastal Plain), 11.IV.1981; 2♂♂ and 9♀♀ Ga'ton (Northern Coastal Plain), 11.IV.1981; 1♂ and 1♀ Mehola (Samaria), 26.V.1985; 2♀♀ Kokhav haYarden (Belvoir) (Lower Galilee), 29.VII.1987.

*Timaspis phoenixopodos* Mayr, 1882

Distribution: Austria, France, Rumania.

Host: Gall-maker on *Lactuca* sp. (Compositae) (Ionescu 1957:225).

MATERIAL EXAMINED: 1♂ Qadesh Barnea (Northern Negev), 26.III.1982; 1♂ and 3♀♀ Barqay (Central Coastal Plain), 7.VIII.1983; 1♀ Qidron (Southern Coastal Plain), 3.IX.1986; 1♀ Ge'alya (Southern Coastal Plain), 3.IX.1986; 1♂ and 1♀ Bet Yannay (Central Coastal Plain), 4.IV.1987; 1♂ Bet Hanan (Southern Coastal Plain), 19.IV.1987; 1♂ Miqwe Yisra'el (Southern Coastal Plain), 2.VII.1988.

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## ILLUSTRATIONS

Only high quality photographs and drawings will be accepted. Each figure and photograph should be identified on the back, in pencil, with the author's name and figure number. Photographs should be submitted on glossy paper, not smaller than 6x9 cm. Drawings should be prepared as to allow a maximum of 30-50% reduction.

## TAXONOMY

1. Comprehensive treatments of taxa (genera, families, etc.) will receive higher priority over partial treatments. Partial lists of species or faunistic lists, not accompanied by proper keys or references to such keys will receive lower priority.
2. Authors must comply with the requirements of the International Code of Zoological Nomenclature and with the published Opinions of the International Commission.
3. The following abbreviations should be adopted in the text: *n.gen.* — new genus; *n.sp.* — new species; *n.nom.* — new name, used once to introduce a name replacing a junior homonym; *n.comb.* — new combination of names; *n.syn.* — denotes synonymy established for the first time, *n.stat.* — will be used to indicate a new change in rank of a name; *nomen nudum*, *nomen dubium* are not abbreviated.
4. In treating the taxonomy of a described taxon, the following form is essential for the beginning of a chapter.

### *Filippia olea* (Costa, 1832) (Fig. 1)

*Coccus oleae* Costa, 1832:21; Green, 1868:42 (biology)

*Lecanium oleae*. Smith, 1892:15 (list); Brown, 1899:20 (description)

*Filippia oleae*. Fernald, 1903:13 (Catalog); Hall, 1943:50 (hosts list)

The full references to the above citations should be given in the REFERENCES section at the end of the article.

5. New taxa must be distinguished from related taxa.
6. In describing new species, the complete data of the type-series, together with the collection(s) in which it is deposited will be recorded in the original description as follows:

MATERIAL EXAMINED. Holotype ♀, Israel, Jerusalem, 14.V.1956, on *Ficus carica*, G. Levi (BMNH). Paratypes, 2♀♀, same data as holotype, (USNM); 8♀♀' Tel Aviv, 3.V.1962, *Acacia* sp., G. Brown (ZTV).

7. Records of described species will be listed at the end of each relevant chapter in the following form:

MATERIAL EXAMINED: Sinai, Dahab, 13.V.1958, ex. *Phoenix* sp., D. Cohen (1♂, 1♀; BMNH); Israel, Haifa, 20.II.1967, *Pistacia vera*, M. Levi (1♀; ZTV).

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