

PSOCOPTERA OF ISRAEL. II

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ABSTRACT

Eighteen species of Psocoptera from Israel are recorded, of which eight were previously unknown. *Peripsocus yuleki* n.sp. is described. A key to Israeli species is given.

KEY WORDS: Psocoptera, *Peripsocus yuleki* n.sp., Israeli species, key.

INTRODUCTION

The Psocopteran fauna of Israel is still rather poorly known, and until now only ten species have been recorded (Galil, 1981). The present paper is an account of collections kindly sent to me by J. Halperin of the Ilanot Entomological Laboratory and Dr. A. Freidberg of Tel Aviv University. Eighteen species are represented, one of which is described as new, and a further eight recorded from Israel for the first time. The latter are all known from Europe. Additional records of species previously recorded from Israel are given. A key to the known species of psocids in Israel is appended.

Holotype and paratypes will be deposited in the Entomological collection of Tel Aviv University. In the lists of material examined given below collector is J. Halperin unless specified otherwise. Asterisks indicate species new to Israel.

TROGIIDAE

Cerobasis guestfalicus (Kolbe, 1880)

Hyperetes guestfalicus Kolbe, 1880:132

Distribution: Cosmopolitan. Domestic species.

MATERIAL EXAMINED: Evron, 2.VI.1969, ex. *Celtis australis*, (1♀); Cercis (Tscherkas), 21. IV.1963, ex. *Quercus ithaburensis*, (17♀).

LIPOSCELIDAE *Liposcelis divinatorius* (Muller, 1776)

Termes divinatorius Muller, 1776:184

Distribution: Cosmopolitan.

MATERIAL EXAMINED: Hazbany, X.1982, ex.nest of *Liometopum*, A.Hefetz

Tel Aviv, 18.I.1970, Y. Nitzan; Tel Aviv, 18.XI.1980, in box with dead insects, M. Kaplan; Tel Aviv, 10.IX.1981, D. Gerling, Numerous specimens.

CAECILIIDAE

Caecilius rhenanus Tetens, 1891

Caecilius rhenanus Tetens, 1891:372, 381

Distribution: Europe.

MATERIAL EXAMINED: Kfar Bialik, 3.VII.1981, ex. *Cupressus sempervirens*, (6♂ 1♀); Givat Haim, 19.VI.1970, ex. *Pinus pinea*, (1♀); Yevul, 27.XII.1982, ex. *Artemisia monosperma*, A. Freidberg (10♂ 10♀).

STENOPSOCIDAE

Graphopsocus cruciatus (Linne, 1768)*

Hemerobius cruciatus Linne, 1768:225

Distribution: Holarctic.

MATERIAL EXAMINED: Mt. Meiron, 1100m., 30.IX.1982, A. Freidberg (1♂); Herzelia, 19.II.1982, A. Freidberg (2♂ 1♀); Herzelia, 5.V.1982, A. Freidberg (1♂ 2♀).

LACHESILLIDAE

Lachesilla quercus (Kolbe, 1880)

Pterodela quercus Kolbe, 1880:120

Distribution: Europe, Morocco, Central Asia.

MATERIAL EXAMINED: Evron, VI.1969, ex. *Celtis australis*, (4♂); Amir, I.X.1973, ex. *Populus alba*, (3♂ 2♀ 9 nymphs).

Lachesilla pedicularia (Linne, 1758)

Hemerobius pedicularius Linne, 1758:551

Distribution: Cosmopolitan.

MATERIAL EXAMINED: Evron, VI.1969, ex. *Celtis australis*, (1♂); Hadar Ramatayim, 15.XI.1982, A. Freidberg (25♂ 19♀); Herzelia, 10.III.1982, A. Freidberg (8♂ 3♀).

Lachesilla bernardi Badonnel, 1938

Lachesilla bernardi Badonnel, 1938:19

Distribution: Europe.

MATERIAL EXAMINED: Evron, 15.X.1969, ex. *Celtis australis*, (1♂); Tel Aviv, 10.VII.1975, ex. *Carthamus*, A. Freidberg (25♂ 17♀); Yevul, 27.XII.1982, ex. *Artemisia monosperma*, A. Freidberg (2♂ 3♀).

ECTOPSOCIDAE

Ectopsocus briggsi McLachlan, 1899*

Ectopsocus briggsi McLachlan, 1899:277

Distribution: Europe.

MATERIAL EXAMINED: Ilanot, 1.V.1982, ex. *Dodonaea viscosa*, (1♂ 1♀); Ilanot, 2.V.1982, ex. *Ligustrum ovalifolium*, (1♂); Ilanot, 27.V.1982, ex. *Quercus calliprinos*, (4♂ 5♀); Beit Haemek, 26.V.1982, ex. *Olea europea*, (6♂ 12♀); Ein Shemer, 14.V.1969, ex. *Ulmus* sp., (12♂ 1♀); Givat Haim, 19.VI.1970, ex. *Pinus pinea*, (5♂); Herzelia, 19.II.1982, A. Freidberg (1♂).

Ectopsocus meridionalis Ribaga, 1904

Ectopsocus briggsi var. *meridionalis* Ribaga, 1904:296

Distribution: Cosmopolitan.

MATERIAL EXAMINED: Evron, VI.1969, ex. *Celtis australis*, (1♂ 2♀).

PERIPSOCIDAE

Peripsocus parvulus Kolbe, 1880*

Peripsocus alboguttatus var. *parvulus* Kolbe, 1880:130

Distribution: Europe.

MATERIAL EXAMINED: En Dor, 10.VI.1968, ex. *Pyracantha crenatoserrata*, (1♀); Ilanot, 25.X.1973, ex. *Ficus microcarpa*, (1♂ 4♀).

Peripsocus yuleki Galil n. sp.

(Figs. 1-5)

MALE

Coloration: (in alcohol). Head brown with irregular dark brown markings on either side of median epicranial suture. Vertex mottled brown. Postclypeus with anteriorly convergent stripes, which do not meet in midline. Antennae brown. Eyes dark brown. Ocellar tubercle brown. Thorax dark brown except along posterior margin. Legs uniformly pale brown, but for darker coxae. Fore wings (Fig. 1) pale brown with hyaline spots in median cells. Pterostigma brown. Hind wings faintly tinged with brown, veins brown to pale in anterior half of the wing, in posterior half almost colorless. Abdomen pale with irregular brown markings; genital segments dark brown.

Morphology: (abbreviations as follows: IO distance across vertex between the eyes, D eye diameter from front to back as seen from above, F femur, T tibia, t1 first tarsal segment, t2 second tarsal segment.) Length of body 1.3 mm., Epicranial suture distinct. Eyes large, reaching level of vertex. IO/D = 0.8. Ocelli arranged on a circular tubercle, the anterior ocellus very small. Fore wing length 2.3 mm., fore wing width 0.9 mm. Measurements of hind leg: F 0.4 mm.; T 0.6 mm.; t1 0.15 mm.; t2 0.8 mm. Hypandrium simple, setose, slightly sclerotized. Epiproct and paraproct typical for the genus. Phallosome (Fig. 2), with hooked distal prolongations and heavily sclerotized parameres, possibly distorted in preparation.

FEMALE

Coloration: (in alcohol). Head pale brown, with irregular brown markings on either side of median epicranial suture. Frons with a dark spot in front of compound eyes. Postclypeus with brown, anteriorly converging stripes which meet in midline. Eyes dark brown. Ocellar tubercle dark brown. Thorax as in male. Fore legs darker than others. Fore wings (Fig. 3) hyaline with smoky brown patches in cells r3, r5, m1, m2, m3, cu1, cu2. Pterostigma hyaline. Hind wings faintly tinged in brown. Abdomen pale. Terminal structures brown.

Morphology: Length of body 1.9 mm. Epicranial suture distinct. Eyes small, upper margin much lower than vertex. IO/D 2.8. Ocelli ovoid, anterior ocellus slightly smaller than lateral ocelli. Fore wing length 2 mm.; fore wing width 0.8 mm. Subgenital plate (Fig. 4) with a broad posterior lobe. Gonapophyses (Fig. 5).

MATERIAL EXAMINED: Holotype 1♂, Alonim, 4.II.1975, on *Cercis siliquastrum* (TAU). Paratypes, 2♀, same data as holotype, (TAU).

TRICHOPSOCIDAE

Trichopsocus dali (McLachlan, 1867)

Caecilius dali McLachlan, 1867:272

Distribution: Europe, Algeria, Morocco, Canary Islands.

MATERIAL EXAMINED: Evron, VI.1969, ex. *Celtis australis*, (3♀); Kfar Bialik, 3.VII.1981, ex. *Cupressus sempervirens*, (6♂ 6♀); Ilanot, 25.VI.1973, ex. *Pinus pinea*, (2♀); Ilanot, 27.V.1982, ex. *Quercus calliprinos*, (1♀).

ELIPSOCIDAE

Elipsocus hyalinus (Stephens, 1836)*

Psocus hyalinus Stephens, 1836:123

Distribution: Europe.

MATERIAL EXAMINED: Neve Zohar, 11.IV.1971, ex. *Tamarix* sp., (1♂ 1♀).

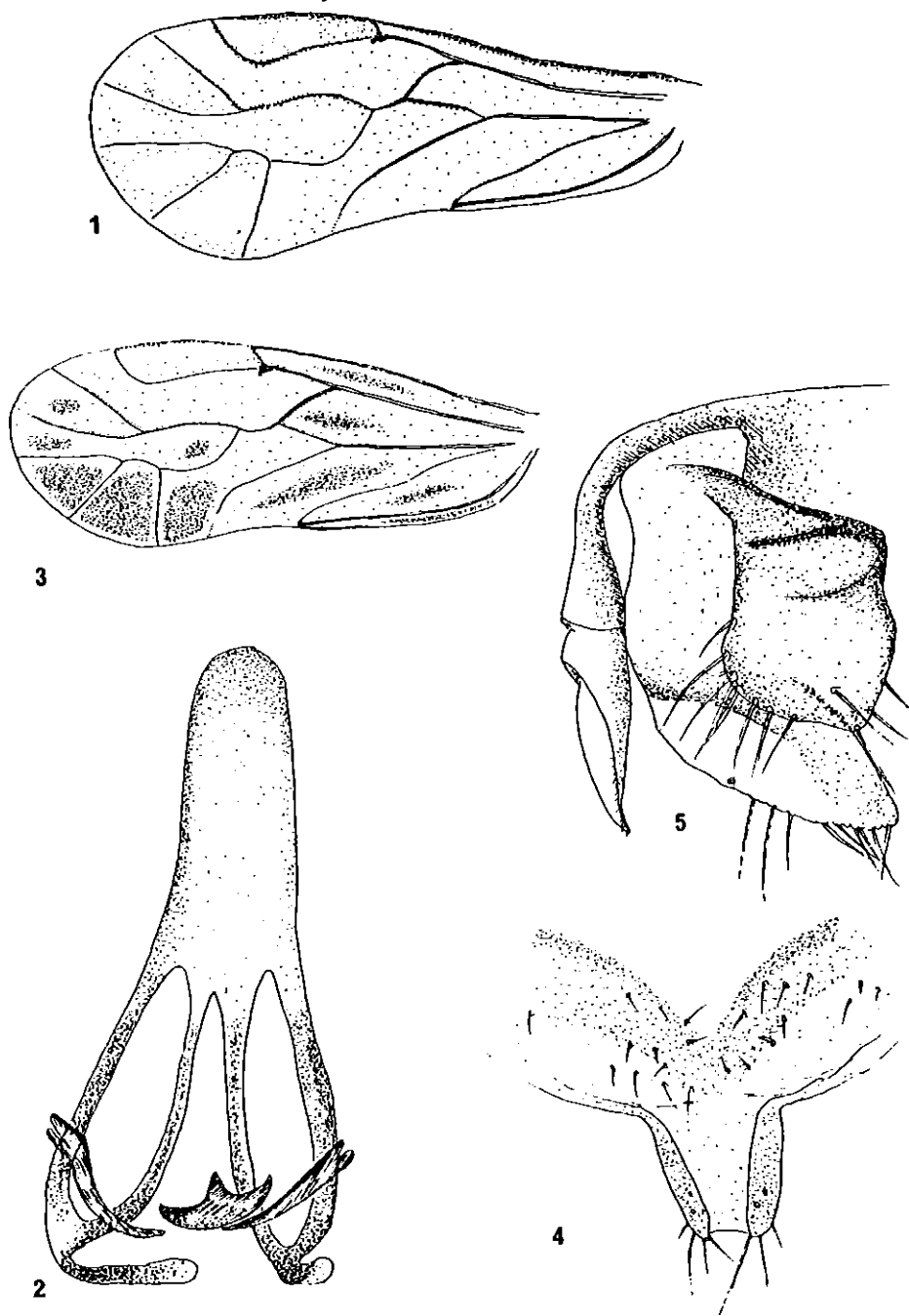
MYOPSOCIDAE

Phlotodes eatoni McLachlan, 1880*

Myopsocus eatoni McLachlan, 1880:103

Distribution: Europe, North Africa.

MATERIAL EXAMINED: Masada, 20.X.1970, ex. *Crataegus monogyna*, (2♂ 6♀); Hazorea, 24.IV.1977, ex. *Acer negundo*, (6♂); Matta, 11.II.1981, ex. *Pinus halepensis*, (8♂ 7♀); Zikhron Ya'akov, 25.III.1981, ex. *Pistachia palaestina*, (2♂ 2♀); Miqve Yisrael, 29.XII.1968, ex. *Tetraclinis articulata*, (1♀); Nahal Tut, 25.III.1981, ex. *Salix alba*, (7♂ 6♀).



Figs. 1-5. *Peripsocus yuleki* n.sp. 1. ♂ Fore wing, 2. ♂ Phallosome, 3. ♀ Fore wing,
4. ♀ Subgenital plate, 5. ♀ Gonapophyses.

PSOCIDAE

Amphigerontia contaminata (Stephens, 1836)*

Psocus contaminatus Stephens, 1836:120

Distribution: Europe.

MATERIAL EXAMINED: Tel Aviv, 10.I.1976, A. Freidberg (1♀).

Blaste conspurcata (Rambur, 1842)*

Psocus conspurcatus Rambur, 1842:323

Distribution: Europe, Central Asia.

MATERIAL EXAMINED: Gan Shemuel, 21.IV.1963, ex. *Persea americana*, (1♀); Hadera, 5.VI.1959, ex. *Delonix regia*, (3♂ 6♀); Beit Haemeq, 26.V.1982, ex. *Quercus calliprinos*, (1♀); Cercis (Tcherkas), 21.IV.1963, ex. *Quercus ithaburensis*, (1♂ 1♀); Ein Dor, 10.V.1968, ex. *Pyracantha crenatoserrata*, (1♂ 1♀); Ilanot, 29.XII.1966, ex. *Pinus pinea*, (24♂ 1♀); Ilanot, 1.IV.1968, ex. *Pinus insignis*, (4♀); Qunetra, 6.XI.1967, ex. *Populus* sp., (6♂ 13♀).

Ptycta nadleri Galil, 1981

Ptycta nadleri Galil, 1981:55

Distribution: Israel.

MATERIAL EXAMINED: Mt. Meiron, 1100 m., 30.IX.1982, A. Freidberg (1♂).

Loensia variegata (Latreille, 1799)*

Psocus variegatum Latreille, 1799:13

Distribution: Europe.

MATERIAL EXAMINED: Mt. Meiron, 1100 m., 30.IX.1982, A. Freidberg (1♂ 1♀); Tivon, 11.IV.1982, ex. *Quercus ithaburensis*, (1♂ 1♀).

KEY TO ISRAELI SPECIES OF PSOCOPTERA, ADAPTED FROM NEW (1974)

- | | |
|--|--------------------------------|
| 1. Adults apterous, tarsi three-segmented | 2 |
| – Adults macropterous, wings reaching beyond apex of abdomen | 4 |
| 2. Hind femora strongly dilated | <i>Liposcelis divinatorius</i> |
| – Hind femora not dilated | 3 |
| 3. Hind tibia with one or two preapical spines. Basal segment of hind tarsus with eight spines in irregular double row | <i>Cerobasis guestfalicus</i> |
| – Hind tibia with no preapical spines. Basal segment of hind tarsus with two spines | <i>Trogium pulsatorium</i> |

4.	Tarsi three-segmented	5
—	Tarsi two-segmented	6
5.	Areola postica fused with media at point. Fore wings heavily marked with brown spots	<i>Phlotodes eatoni</i>
—	Areola postica free. Fore wings not as above. Hind wings marginal setae limited to radial fork	<i>Elipsocus hyalinus</i>
6.	Areola postica present in fore wing	7
—	Areola postica absent in fore wing	15
7.	Areola postica in fore wing joined to media	8
—	Areola postica in fore wing not joined to media	11
8.	Areola postica fused to media completely	9
—	Areola postica joined to media by crossvein	<i>Graphopsocus cruciatus</i>
9.	Pterostigma with short spur vein	<i>Ptycta nadleri</i>
—	No spur vein	10
10.	Wings strongly patterned; fore wing with first and second sections of Cu1A without an angle between them, forming almost a straight line	<i>Loensia variegata</i>
—	Wings faintly marked; fore wing with areola postica very high. First section of Cu1A separating from Cu1B well before wing margin. Cu1B meets wing margin at an angle.	<i>Blaste conspurcata</i>
—	Wings faintly marked; areola postica different from above. First section of Cu1A shorter than the second. Cu1B meets wing margin at a right angle	<i>Amphigerontia contaminata</i>
11.	Fore wing completely glabrous	12
—	Fore wing setose	14
12.	In fore wing r and m fused at length	13
—	In fore wing r and m meet at a point or joined by short transverse vein	<i>Lachesilla bernardi</i>
13.	Large species; fore wing length over 2 mm; ♂ with hypandrial processes bifurcate, the shorter external fork forming a right angle with the main stem, abdomen concolorous	<i>Lachesilla quercus</i>
—	Smaller species; fore wing length 1.8 mm or less; ♂ hypandrial processes curved and meeting in midline, not forked. Epiproct with a strongly curved median hook. Abdomen annulated in brown	<i>Lachesilla pedicularia</i>
14.	Posterior margin of hind wing with long and short setae alternating	<i>Trichopsocus dali</i>
—	Posterior margin of hind wing with long setae only	<i>Caecilius rhenanus</i>

15. Claws with subapical tooth, pulvillus narrow. Phallosome with parameres fused anteriorly and posteriorly to form a closed frame, pointed posteriorly 16
 — Claws without subapical tooth, pulvillus broad. Phallosome not as above 17
16. Phallosome with narrow anterior stem, extending into broad ovoid area with narrow posterior apex. Subgenital plate with squat median lobe. Fore wing uniformly pale *Peripsocus parvulus*
 — Phallosome with broad anterior stem. Subgenital plate with median lobe longer than wide. ♀ fore wing patterned *Peripsocus yuleki*
17. Subgenital plate with apophyses strongly incurved. No dark marks on median lobe *Ectopsocus briggsi*
 — Subgenital plate with apophyses straight or very slightly incurved. Two diffuse dark spots at base of median lobe *Ectopsocus meridionalis*

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