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TOM. 22. N:o 7.

SUOMALAISEN ELÄIN- JA KASVITIEEELLISEN SEURAN VANAMON ELÄINTIEEELLISIÄ JULKAISUJA  
OSA 22. N:o 7.

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## HEMIPTERA OF ISRAEL

### II

R. LINNAVUORI

HELSINKI 1961

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22 Figures

Selostus:

Israelin nivelkärsäiset. II

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## 1. INTRODUCTION

This paper is a continuation of the author's previous survey (LINNAVUORI 1960) on the Hemiptera of Israel, based partly on the collections made by the author between June 12 and August 7, 1958, partly on revision of material from the considerable collection at the University of Helsinki and several Israeli collections. As in the first part of this paper, all the material found by myself is marked ! and that revised by me (!) in the present list. In other respects the reader is referred to the first part of this survey.

## 2. TAXONOMY AND DISTRIBUTION OF THE SPECIES TREATED

### *Miridae* (Continuation)

#### *Stenodema* Lap.

*S. calcaratum* (Fn.) – Palestine (BODENHEIMER 1937); Kiriath Anavim, 1 spec., Bodenheimer(!); Nabi Rubin, 1 spec., 1. V. 1958, Michaeli (!); Wadi Rubin, 1 spec., 4. VII. 1958, !. Among herbs in fresher biotopes. – Eurosiberian.

#### *S. laevigatum* (L)

Palestine (BODENHEIMER op.cit.). – Eurosiberian.

#### *Notostira* Fb.

*N. elongata* (G.) – Recorded as *N. erratica* (L.) from Palestine by BODENHEIMER (op.cit.).

The species *N. erratica* and *elongata*, previously regarded as synonyms, have recently been separated from each other by WAGNER (1957, p. 1 – 5). The species can be distinguished only on the basis of the male genitalia. Unfortunately, no material was available to me from Israel. According to STICHEL (1958, p. 843), *N. erratica* is a more northern species, while *N. elongata* extends further southwards e.g. to Greece, Turkey and Syria. It is thus highly probable that the Palestinian specimens also belong to *N. elongata*. – Eurosiberian.

#### *Trigonotylus* Fb.

*T. ruficornis* (G.) – Palestine (BODENHEIMER op.cit.) – Holarctic.

*T. pulchellus* (H.) – Palestine (BODENHEIMER op.cit.); Beersheba, 1 spec., 19. VI. 1958, !; Bet Dagan, 1 spec., 11. VI. 1950, Yatom (!); Beit Jubrin, 6 spec., 17. VI. 1958, !; Dan, 1 spec., 7. VII. 1958, !; 'Ein Gedi, 2 spec., 19. VI. 1958, !; Gvuloth, 2 spec., 17. VII. 1958, !; Hadera,

2 spec., 26. VI. 1958,; Hulda, 4 spec., 15. VII. 1958,; Jerusalem, 6 spec., 17. VI. 1958,; Miqve Israel, 10 spec., 13. V. 1958, Michaeli (!); Nabi Rubin, 1 spec., 27. VI. 1958, Swirski (!); Nahariya, 4 spec., 6. VIII. 1958,; Ramla, 2 spec., 30. IV. 1958, Amitai (!); Rehovot, 29 spec., 28. VII. 1957, Swirski (!), 2 spec., 28. VII. 1958,; Sha'alvim, 1 spec., 28. VII. 1958,; Shoval, 1 spec., 20. III. 1958, Rubin (!); Shuva, 1 spec., 14. VII. 1958,; Tel-Aviv, 7 spec., 4. VII. 1958,; Wadi Beersheba, 3 spec., 1. VIII. 1958,; Yarkon, 11 spec., 5. VII. 1958,; Yotvata, 1 spec., 22. VI. 1958,.

A very common species on grasses (e.g. on *Cynodon dactylon*) in dry places, especially on dunes and in gardens. — Holomediterranean, extending far into Central Europe.

The species bears a close resemblance to *T. ruficornis*, but may be distinguished by the more strongly produced, conical clypeus and the fact that the under surface of the body usually has longitudinal crimson lines on either side.

*T. pallidicornis* Rt. — 'Ein Gedi, 1 spec., 18. VI. 1958,; Palestine, 3 spec., Bodenheimer (!); Rehovot, 1 spec., 8. X. 1957, Swirski (!). — Eremian, previously known from Africa and Syria.

*T. brevipex* Jak. Palestine (BODENHEIMER op.cit.). — Pontomediterranean.

### *Macrolophus* Fb.

*M. costalis* Fb. — Palestine (BODENHEIMER op.cit.); Jerusalem, 4 spec., 16. VI. 1958,; Mont. Jud. occ., 1 spec., 29. II. 1904, J. Sahlberg (!). — Among herbs in fresh biotopes. — Holomediterranean.

*M. caliginosus* E. Wgn. — Aqua Bella, 13 spec., 14. VI. 1958,; Bat Shlomo, 3 spec., 28. VI. 1958,; Bet Dagan, 2 spec., 11. VI. 1958, Yatom (!); Dan, 4 spec., 7. VII. 1958,; 'Ein Hamifraz, 1 spec., 21. V. 1958, Michaeli (!); Gesher Haziv, 3 spec., 6. VIII. 1958,; Hadera, 9 spec., 1. VII. 1958,; Hagoshrim, 3 spec., 11. VII. 1958,; Haifa, 1 spec., 5. IV. 1904, J. Sahlberg (!), 1 spec., 29. VI. 1958,; Hula, 4 spec., 8. VII. 1958,; Nabi Rubin, 1 spec., 27. VI. 1958,; Tanninim, 2 spec., 26. VII. 1958,; Wadi Rubin, 1 spec., 16. VII. 1958,; Wadi Sukreir, 4 spec., 27. VI. 1958,; — Common among herbs in moist biotopes. — Holomediterranean.

### *Cyrtopeltis* Fb.

*C. tenuis* Rt. — Palestine (BODENHEIMER op.cit.); Abu-Kabir, 1 spec., 8. VII. 1958, Krystal(!); Beit Jubrin, 6 spec., 31. VII. 1958,; Deganya, 2 spec., 23. VII. 1958,; 'Ein Gedi, 3 spec., XII. 1957, Harpaz (!), 1 spec., 18. VI. 1958,; Hadera, 1 spec., 26. VI. 1958,; Hameishar, 2 spec., 20. VI. 1958,; Herzliya, 1 spec., 26. VII. 1958,; Jerusalem, 1 spec., 15. VI. 1958,; Ramath Gan, 3 spec., 15. VIII. 1958, Fishelson (!); Rehovot, 24 spec., 23. XII. 1957, Derech, Michaeli, Swirski (!), 4 spec., 28. VII. 1958,; Revivim, 1. VIII. 1958,; Tel-Aviv, 3 spec., 26. VI. 1958,.

On herbs (especially *Solanaceae*). Common at lamps. — Intertropical, extending from Africa through India and Java to Japan.

*C. impictus* n.sp.

Length 1.9–2.5 mm. Uniformly whitish ochraceous. Eyes dark brown. Base of 3rd and 4th antennal joints slightly infumed. Apex of cuneus reddish.

A very small, delicate species. Body parallel-sided, much as in *C. tenuis* but considerably smaller. Head strongly convex, 1.7 × as broad as long; vertex 2.8 × (♂) or 3 × (♀) as broad as eye. Proportions between antennal joints 10 + 30 + 25 + 19 (1 unit = 0.015 mm.), 1st joint 0.7 × as long as breadth of vertex, 2nd joint 1.2 × as long as breadth of head. Pronotum twice as broad as long, trapezoidal, strongly tapering anteriorly; collar broad and distinct; calli faintly convex; lateral margins nearly straight, basal margin concave. Scutellum large, base also visible. Elytra longer than abdomen. Hair covering of upper surface rather long, yellowish,

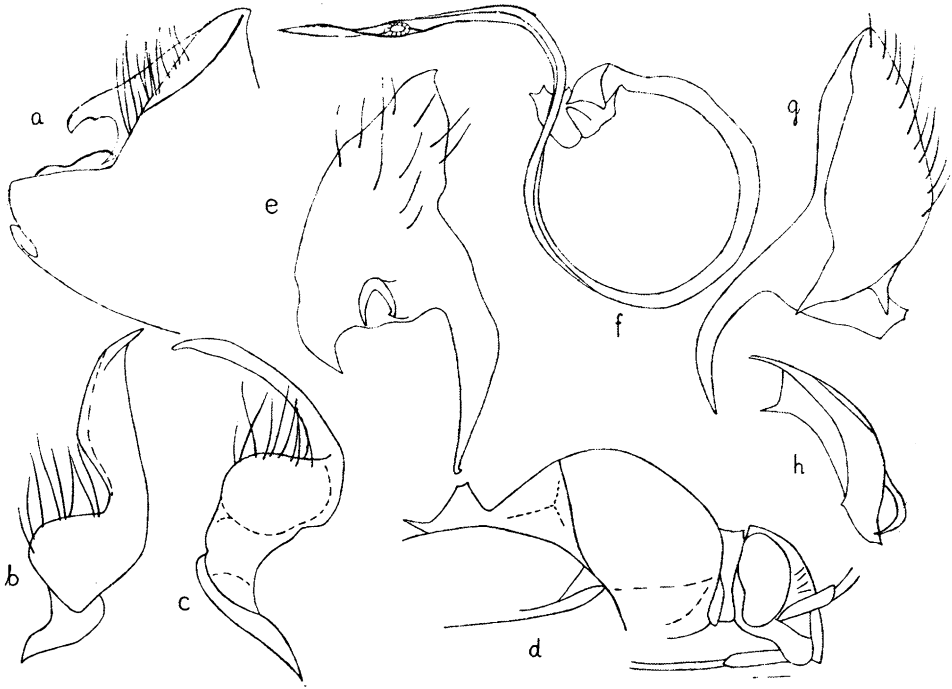


Fig. 1. *Cyrtopeltis impictus* n.sp.: a pygofer ( $\delta$ ), lateral aspect; b - c left stylus. - *Hypomimus secundus* n.sp.: d head and thorax, lateral view; e left stylus from below g same, lateral aspect: f vesica; h theca. - Orig.

obliquely erect. Legs gracile, with yellow hairs. Male genitalia: Genital segment as in fig. 1 a. Right stylus very small and gracile. Left stylus (fig. 1 b - c) with a long, curved hypophysis, sensory lobe roundedly prominent and provided with several long hairs.

Type, a male and the allotype, a female, taken on an unidentified broad-leaved tree in 'Ein Gedi, 19. VI. 1958, l. The types in my collection.

*C. tenuis* Rt. and *C. canariensis* (Lbd.) are conspicuously larger than the new species, length 3.5 mm. or more. *C. pygmaea* E. Wgn. from Egypt resembles my species in size, but the vertex is only  $1.66 \times$  ( $\delta$ ) or  $1.8 \times$  ( $\varphi$ ) as broad as the eye, the 2nd antennal joint only  $2.6 - 2.7 \times$  as long as the 1st and the hypophysis of the left stylus of the male shorter and stouter.

### *Dicyphus* Fb.

(*D. tamaninii* E. Wgn.) - Jericho, Transjordan, 1 spec., 12. III. 1904, J. Sahlberg (!). - Holomediterranean, also recorded from the South of France, Italy, Yugoslavia and Tunisia.

*D. lindbergi* E. Wgn. - Dan, 4 spec., 7. VII. 1958, l. - Swept from the ground vegetation (ferns, e.g. *Adiantum capillus-Veneris*, *Cyperaceae* and *Labiatae*) in a dense, shady and moist grove at the source of the Jordan. - Syrio-Anatolian, previously known from Cyprus and Syria. The specimens from Israel have the vertex a little narrower than the specimens from Cyprus, but the male genitalia are similar.

*D. tamaricis* Pt. - Palestine (BODENHEIMER op.cit.). - Eremian; otherwise recorded only from Algeria and Tunisia. The record from Israel apparently erroneous.

*D. annulatus* (W.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean, also extending far into Central Europe.

*D. ononidis* E. Wgn. – Dan, 5 spec. 7. VII. 1958,!; Hadera, 6 spec., 1. VII. 1958,!; Hula, 3 spec., 10. VII. 1958,!; Nabi Rubin, 18 spec., 4. VII. 1958,!; Yarkon, 1 spec., 28. VI. 1958,! – Common on *Ononis* species. Pontomediterranean previously recorded from Italy, Greece and Morocco.

*D. sedilloti* Pt. – Nahariya, 1 spec., 6. VIII. 1958,!; Wadi Sukreir, 1 spec., 27. VI. 1958!; Yarkon, 42 spec., 5. VII. 1958,! – Common on *Silene succulenta* on coastal dunes. – Probably Eremian. Previously known only from Tunisia.

The Palestinian specimens agree externally with specimens from Tunisia. Unfortunately I have seen only females from Tunisia so that I have not been able to compare the male genital characters.

### *Campyloneura* Fb.

*C. virgula* (H. S.) – Palestine (BODENHEIMER op.cit.). – European.

### *Plagiorrhama* Fb.

*P. concolor* Rt. – Bat Yam, 1 spec., 3. VII. 1958,!; Beit Jubrin, 1 spec., 21. VII. 1958,!; Hulda, 1 spec., 15. VII. 1958,! – Among xerophilous vegetation on dry, sunny slopes. – Caspian, previously known from Caucasia and Turkestan.

### *Hallodapus* Fb.

*H. costai* (Rt.), n.comb.

*Laemocoris costai* REUTER 1890, p. 257.

*Allodapus longicornis* REUTER 1904, p. 12, n.syn.

REUTER described the male of the species as *Laemocoris* and the female as *Allodapus*. In Revivim however, I found, both sexes together and could thus establish the above synonymy. Although the male somewhat resembles certain species within the genus *Laemocoris* (the antennae are longer than in typical *Hallodapus* species; the proportions between the joints are 8 + 26 + 26 + 20 (also in the female), the 3rd and 4th joints together being thus considerably longer than the 2nd joint, while the 3rd and 4th joints together are only a little longer than the 2nd in typical *Hallodapus* species), the female has a typical *Hallodapus*-like habitus (the pronotum tapering anteriorly, the upper surface of the pronotum even and dull and the elytra extending near to the apex of the abdomen), being thus decidedly different from the peculiar, myrmicomimous females of *Laemocoris*, so that I do not hesitate to regard the species as belonging to the genus *Hallodapus*. The species has recently been illustrated by LINDBERG (1958, p. 106).

Dan, 1 spec., 7. VII. 1958,!; Deganya, 3 spec., 23. VII. 1958,!; Gvuloth, 1 spec., 17. VII. 1958,!; Hula, 1 spec., 10. VII. 1958,!; Hulda, 1 spec., 15. VII. 1958,!; Ness Zionah, 2 spec., Carmin (!); Rehovot, 2 spec., 28. VII. 1958,!; Revivim, 6 spec., 2. VIII. 1958,!; Wadi Musrara, 1 spec., Carmin (!).

Under herbs in dry sandy places. Possibly myrmecophilous, since found together with *Monomorium* sp. in Revivim. Males often collected at lamps. – Eremian. Previously recorded from the Cape Verde Islands, Egypt and Palestine (BODENHEIMER op.cit.).

### *Laemocoris* Rt.

*L. reuteri* (Jak.) – Herzliya, 1 spec., 26. VII. 1958,! – Myrmecophilous, found together with *Monomorium* sp. under *Thymus* on a dry slope. – Eremian, previously recorded from



Morocco, Algeria, South Russia and Turkestan. My specimen differs from typical specimens of *L. reuteri* in that the apex of the elytra is more truncate and only narrowly darkened and the basal triangular light spot of the elytra is somewhat smaller. The body form and also the proportions between the antennal joints and between the vertex and the eye are, however, similar.

### *Hypomimus* Ldb.

#### *H. secundus* n.sp.

♂. Length 3.75 mm. Head, pronotum and scutellum dark coffee-brown. Pronotum, excluding fore margin and scutellum, strongly shining. Eyes red-brown. 1st antennal joint yellow-brown, the other joints dark brown. Elytra (fig. 2 a): clavus and corium to tip of clavus reddish brown, weakly shining, with a white figure bordered by dark brown; apical part of corium and cuneus darker brown and very shining; membrane smoky brown, veins lighter brownish. Legs and under surface dark brown, tibiae apically and tarsi greyish.

Head small, considerably narrower than basal width of pronotum, nearly as broad as long, strongly triangularly tapering apicad; eyes rather small and flattish; vertex  $1.7 \times$  as broad as eye, basal margin sharp. Antennae (fig. 3 a) short and thick, all joints of equal breadth; proportions between the joints  $8 + 22 + 13.5 + 13$  (1 unit = 0.033 mm.); 1st joint with some longer, obliquely erect brownish hairs, the hair covering of the other joints short and smooth. Pronotum  $1.8 \times$  as broad as long, strongly broadening caudad; lateral margins nearly straight; posterior part of pronotum strongly globose. Scutellum with a strong conical hump (fig. 1 d). Hair covering of elytra relatively sparse, long and brownish, that of legs short and smooth. 1st joint of hind tarsi shortest, 3rd joint longest. Male genitalia: Right stylus small and elongate. Left stylus (fig. 1 e and g) large, elongately conical, hypophysis long and curved, sensory lobe with a short clawlike appendage. Theca (fig. 1 h) with a thin claw-like subapical process. Vesica (fig. 1 f) long and slender. ♀ unknown.

Type, a male, Tel-Aviv, 26. VI. 1958, l.; in my collection.

I have placed the new species in the genus *Hypomimus* on the basis of the thick, short antennae, which exclude it at once from the related genera. *H. albosellatus* Ldb. from Morocco and Algeria is bigger, length 4.4 mm., the vertex is narrower than the eye and the 3rd antennal joint is  $1.5 \times$  as long as the 4th.

### *Orthotylus* Fb.

*O. ?nassatus* (F) – Shimron, 1 spec., 4. VIII. 1958, l. – On *Quercus ithaburensis*. – European, not previously recorded from the Orient.

As my specimen is a teneral female, the identification is somewhat tentative. The 1st antennal joint has, however, a dark spot, a specific character of *O. nassatus*.

*O. priesneri* Schm. – Shimron, 3 spec., 4. VIII. 1958, l. On *Acacia albida*. – Eremian.

A rare species, previously known only from Egypt. It is related to *O. acacicola* Ldb. from the Cape Verde Islands but differs especially in the male genitalia (fig. 3 b – e). The right stylus is long and elongate with the apex dentate. The left stylus is somewhat hammer-shaped. The

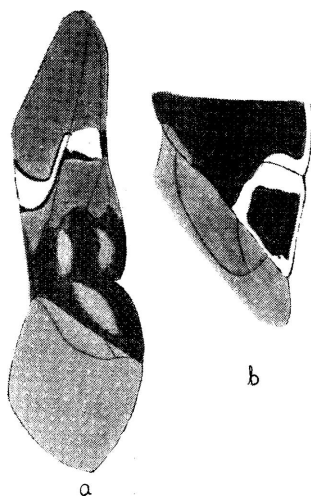


Fig. 2. *Hypomimus secundus* n.sp.: a elytron. – *Tuponia apicalis* Rt.: b cuneus. – Orig.



Fig. 3. *Hypomimus secundus* n.sp.: a antenna. — *Orthotylus priesneri* Schm.: b right stylus, lateral aspect; c apex of same, median aspect; d left stylus, lateral aspect; e penis. — *O. hodiernus* n.sp.: f right stylus, median aspect; g left stylus, lateral aspect; h sensory lobe of same, median aspect. — *O. divisus* n.sp.: i right stylus, lateral aspect. — Orig.

penis is short and thick, with the apicalmost chitinized appendage hooked upwardly and serrate in the apical part.

*O. hodiernus* n.sp.

♂. Length 2.25 mm. Uniformly dirty greyish green. Eyes dark brown. Membrane infusate.

Body small and gracile,  $2.7 \times$  as broad as long. Head relatively small,  $0.7 \times$  as broad as basal width of pronotum; vertex  $1.6 \times$  as broad as eye. Antennae relatively thick; proportions between the joints  $5 + 25 + 10 + 6$  (1 unit =  $0.038$  mm.), 2nd joint  $1.31 \times$  as long as basal width of pronotum. Pronotum short and broad,  $2.4 \times$  as broad as long; calli obscure. Elytra much longer than abdomen. Hair covering of upper surface long and yellowish brown (darker than the ground colouring). Rostrum extending to hind coxae. Spines of tibiae light. Male genitalia: Right stylus (fig. 3 f) elongate, having a pair of small apical teeth and some larger subapical teeth. Left stylus (fig. 3 g, h) hammer-shaped; hypophysis ending as a small claw-like process; sensory lobe large and blunt with some small teeth in the inner apical margin. Penis (fig. 4 a) stout. ♀ unknown.

Type, a male (in my collection), Ramath Gan, 19. VII. 1958, !.

The new species is closely related to *O. priesneri*, which, however, is bigger and furnished with larger eyes and dissimilar genitalia. From the other small species of the genus, *O. hodiernus* is readily distinguished externally by the small head.

*O. fieberi* F.-G. — Jordan, 2 spec., J. Sahlberg (!). — Pontomediterranean. Not previously recorded from Israel.

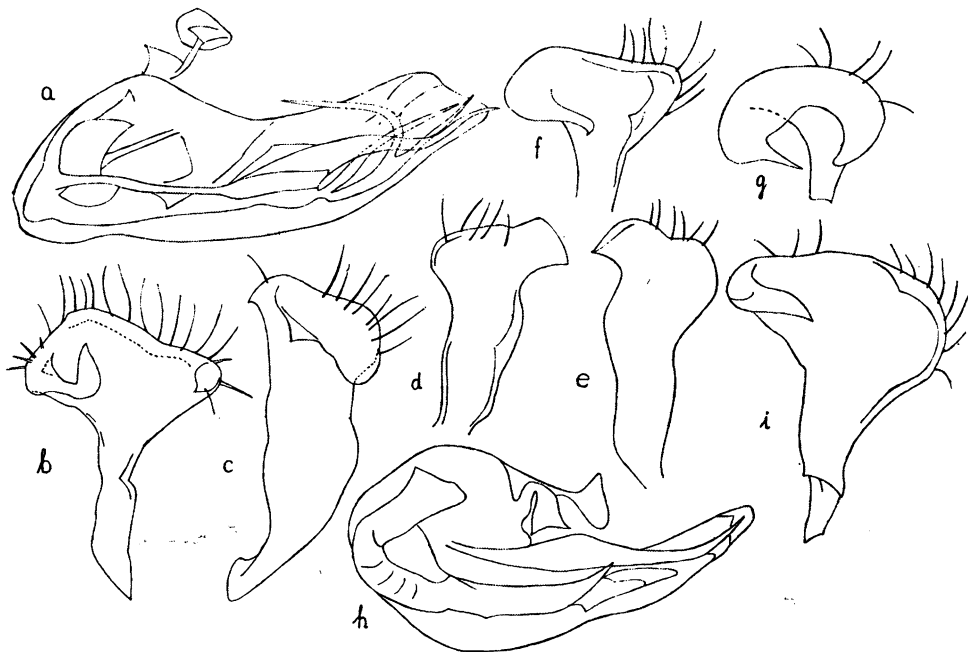


Fig. 4. *Orthotylus hodiernus* n.sp.: a penis. — *O. divisus* n.sp.: b left stylus, median aspect; c right stylus, median aspect; h penis. — *O. minutus* Jak. (type): d right stylus, lateral aspect; e same, median aspect; f left stylus, median aspect; g same from above. — *O. pusillus* Rt.: i left stylus, median aspect. — Orig.

*O. virescens* (Dgl. Sc.) — Rehovot, 1 spec., 1. IV. 1958, Swirski (!). — Holomediterranean, also extending into Central Europe. Not previously recorded from Israel but known from Cyprus and Turkey.

*O. spartiicola* Rt. — Palestine (BODENHEIMER op.cit.); Haifa, some spec., J. Sahlberg (!). — Endemic.

*O. divisus* n.sp.

Length 3.5 mm. A pale species. General colouring pale whitish yellow. Vertex sometimes with a small orangish spot near either eye basally. Pronotum shining, sometimes with slight orangish shadows. Elytra faintly tinged with dirty greenish, densely marked with small, round darker spots, each spot bearing a longer erect, brownish hair. Membrane faintly smoky, veins bright green. Antennae whitish yellow. Legs yellowish white, femora with a few dark apical spots; tibiae with small brown spots, each bearing a spine. Under surface whitish yellow.

Body elongately oval, ♂ 2.5 ×, ♀ 2.2 × as long as broad. Head broader than anterior width of pronotum; vertex rather flat, 1.8 × (♂) or 2.3 × (♀) as broad as eye, basal margin slightly ridged. Antennae with rather short whitish bristles; proportions between the joints 9 + 27 + 20 + 12 (1 unit = 0.033 mm.), 2nd joint about 1.35 × as long as width of head. Pronotum short and broad, 2.1 × (♂) or 2.7 × (♀) as broad as long, lateral margins straight. Head, pronotum and scutellum densely covered with long, whitish or yellowish hairs. Elytra with double hair covering: 1) with groups of dense, short and rather smooth silvery hairs and 2) with dense, long and erect light brownish hairs. Rostrum extending beyond hind coxae. Hind tibia 4.0 × as long as tarsus. Male genitalia: Right stylus (fig. 3 i, 4 c) stout, with two conspicuous apical teeth. Left stylus (fig. 4 b) nearly rectangular, hypophysis nearly horizontal and slender in

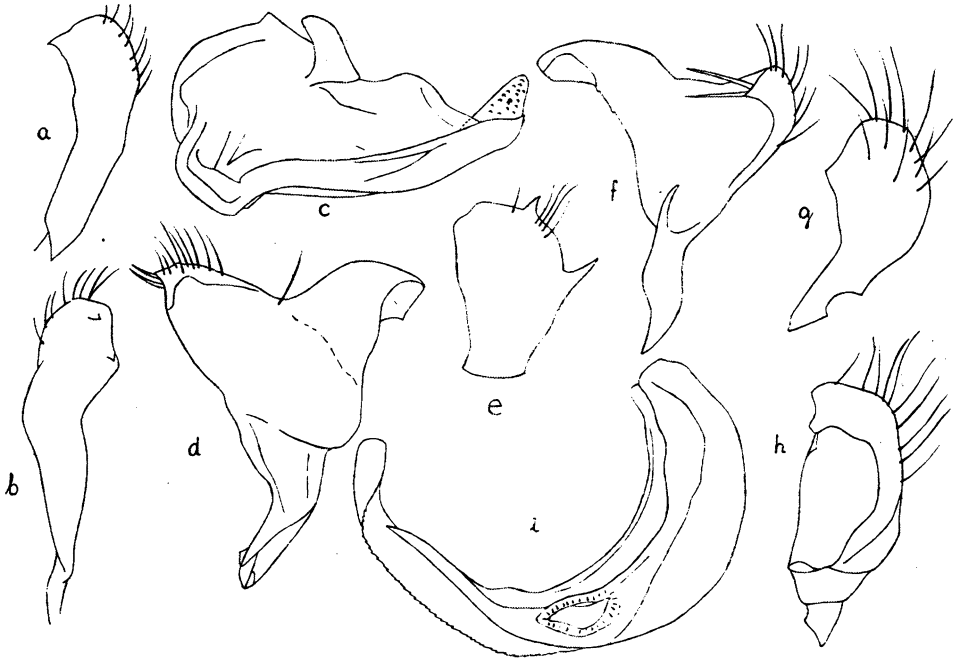


Fig. 5. *Orthotylus pusillus* Rt.: a right stylus, lateral aspect; b same, median aspect; c penis. — *Brachynotocoris cyprus* E. Wgn.: e right stylus, lateral aspect; d left stylus, lateral aspect; f same, median aspect. — *Nasocoris albipennis* Ldb.: g stylus, lateral aspect; h same, median aspect. — *Psallopsis bisulcis* n.sp.: i vesica. — Orig.

basal portion, thickened and strongly upturned in apical part; sensory lobe with a small tooth. Penis (fig. 4 h) with simple chitinized bands of vesica.

Type, a male; allotype, a female and 16 paratypes, Revivim, 2. VIII. 1958, l. 6 paratypes, Greece, Piraeus, 10. VIII. 1958, l. Types in my collection.

On *Atriplex halimus*.

The new species belong to the group *Halocapsus* Pt. Owing to the hair covering of the upper surface, it resembles *O. hirtulus* E. Wgn. from Egypt, but differs in the whitish yellow colouring and in the shape of the styli. The right stylus of *O. hirtulus* has only one apical tooth and the hypophysis of the left stylus is much slenderer. In the shape of the right stylus the new species resembles *O. pusillus* Rt., but differs from it in the colouring and in the male genitalia. In *O. minutus* Jak., *O. haloxytoni* E. Wgn., and *O. schoberiae* Rt. the rostrum extends only to the middle coxae and the male genitalia are dissimilar. Those of the type of *O. minutus* have been illustrated in fig. 4 d – g. *O. parvulus* Rt., in which the rostrum extends at least to the distal margin of the hind coxae, has a broader vertex, green colouring and yellow veins of the membrane.

*O. haloxytoni* E. Wgn. — Eilat-Tebkha, 6 spec., 15. I. 1957, Ginsburg (WAGNER 1959, p. 38).

— On *Haloxylon* (WAGNER 1956, p. 7). — Eremian. Also known from Egypt.

*O. pusillus* Rt. — Eilat, 40 spec., 20. VI. 1958, l.; Revivim, 1 spec., 23. VI. 1958, l. — On *Suaeda monoica* in a salt-marsh. — Eremian. Previously known from North Africa and Greece.

The male genitalia of the species have been illustrated in fig. 4 i, 5 a – c.

*Pachylops* Fb.

*P. punctipes* (Rt.) – Jordan, several spec., 10. III. 1904, J. Sahlberg (!). – Eremian, elsewhere known from the Canary Islands, Morocco, Algeria and Tunisia.

*Heterocordylus* Fb.

*H. tibialis* (H.) – Palestine (BODENHEIMER op.cit.). – European.

*Zanchius* Dist.

*Z. alatanus* Hob. – Deganya, 1 spec., 23. VII. 1958,!; Herzliya, 1 spec., 23. VII. 1958,!; Hula, 1 spec., 10. VII. 1958,!; Neve Ya'ar, 1 spec., 29. VII. 1958,!; Ramath Gan, 1 spec., 19. VII. 1958,!; Rehovot, 3 spec., 17. IX – 4. X. 1957, Swirski (!), 1 spec., 28. VII. 1958,!; Tel-Aviv, 1 spec., 24. VII. 1958,!

On *Nymphaea* sp. in Lake Hula. Among grasses in wet biotopes. At lamps. – Syrio-Anatolian. Previously known from Turkey.

*Brachynotocoris* Rt.

*B. viticinus* Sdst. – Bat Shlomo, 7 spec., 29. VII. 1958,!; Gesher Haziv, 3 spec., 6. VIII. 1958,!; Nahariya, 3 spec., 6. VIII. 1958,!. – On *Vitex agnus-castus*. – Syrio-Anatolian. Previously known from Turkey and Syria.

*B. cyprius* E. Wgn.

Length 3.5 – 4.2 mm. Head, pronotum and scutellum yellowish white. Antennae uniformly yellowish. Eyes pale brownish grey. Elytra pale greenish; membrane pale smoky, veins pale greenish. Under surface and legs yellowish. Tip of ovipositor black.

Body gracile and flattened, 3.0 × (♂) or 2.8 × (♀) as long as broad. Head narrower than basal width of pronotum. Vertex flattish, 1.6 × (♂) or 2.2 × (♀) as broad as eye. Eyes relatively small. Proportions between the antennal joints 9 + 29 + 34 + 13 (♂) or 11 + 29 + 32 + 16 (♀) (1 unit = 0.033 mm.). Antennae with brown hairs that are longest in the 1st joint. Pronotum shorter than head, about 2.8 × as broad as long, lateral margins straight; calli conspicuous, broadly separated from each other in the middle; disk flat; basal margin broadly insinuated. Elytra longer than abdomen. Hair covering of upper surface light and long. Rostrum not swollen apically. Hairs of tibiae light. Male genitalia: Right stylus (fig. 5 e) short, with two sharp apical teeth. Left stylus (fig. 5 d, f) triangular in outline, hypophysis stout with some minute teeth in the ventral margin; sensory lobe with a sharp spine.

Jerusalem, 2 spec., 13. VI. 1958,!; Palestine, 1 spec., Bodenheimer(!); Rehovot, 1 spec., 31. VII. 1957, Swirski(!); Wadi Keren near Goren, 4 spec., 6. VIII. 1958,!. – On *Olea europaea*. Syrio-Anatolian. Previously recorded from Cyprus (WAGNER 1960, p. 115–116).

*Platycranus* Fb.

*P. putoni* Rt. – Beer Mashash, 1 spec., 23. VI. 1958,!; Beersheba, 1 spec., 1. VIII. 1958,!; Hadera, 2 spec., 1. VII. 1958,!; Haifa, 3 spec., 5. IV. 1904, J. Sahlberg (!), 1 spec., 12. VI. 1958,!; Herzliya, 1 spec., 4. VII. 1958,!; Ness Zionah, Petah-Tikvah, 1 spec., 1933, Carmin (!); Rehovot, 1 spec., 12. VI. 1957, Swirski (!); Revivim, 1 spec., 1. VIII. 1958,!; Wadi Rubin, 1 spec., 11. VII. 1958,!

On *Retama raetam* on coastal dunes and in desert conditions. – Eremian, known from Morocco, Algeria, Tunisia, Egypt and Israel.

*Plagiotylus* Sc.

*P. dispar* Rt. – Palestine (Bodenheimer op.cit.); Jericho, Transjordanian, some spec., J. Sahlberg (!). – Endemic.

*Dimorphocoris* Rt.

*D. punctiger* (Hv.) – Palestine (BODENHEIMER op.cit.). – Endemic.

*D. lateralis* Rt. – Haifa, 1 spec., J. Sahlberg (!). Pontomediterranean. Known from Crete and Israel.

The species resembles *D. punctiger*, but the antennae are shorter, the proportions between the joints being 14 + 29 + 20 + 10 (♂) (in *punctiger* ♂ 19 + 40 + 29 + 15, 1 unit = 0.088 mm.). The tibial spines arise from small dark spots in *D. lateralis* also. I have not seen the type specimen from Crete. The specimen from Haifa has been illustrated by LINDBERG (1956, p. 59).

*D. mariae* Lv. – Galilea, Vall. Kison, 3 spec., 31. III. 1904, J. Sahlberg (!); Palestine, 2 spec., Bodenheimer (!). – Endemic.

The male much resembles the corresponding sex of *D. debilis* (Rt.) but is bigger, length 4.5 – 4.6 mm. (*debilis* ♂ 3.9 – 4.2 mm.) and the 2nd and 3rd antennal joints are longer, the proportions between the joints being 13 + 35 + 25 + 9 (in *debilis* ♂ 12 + 30 + 20 + 8, 1 unit = 0.088 mm.).

*D. debilis* (Rt.) – Palestine (BODENHEIMER op.cit.); Haifa, 1 spec., J. Sahlberg (!); Ness Zionah, 2 spec., 15. II – 3. III. 1933, Carmin (!); Palestine, 7 spec., Bodenheimer (!). – Holomediterranean.

*Orthocephalus* Fb.

*O. proserpinae* Ms. R. – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

*O. tenuicornis* (Ms. R.) – Palestine (BODENHEIMER op.cit.); Beersheba, 1 spec., Bytinski-Salz (!); Galilea, some spec., J. Sahlberg (!); Jerusalem, 2 spec., 23. IV. 1946, Houška (HOBERLANDT 1951, p. 32); Kiriath Anavim, 2 spec., 3. VI. 1931, Bodenheimer (!); Miqve Israel, 2 spec., Bodenheimer (!); Ramath Gan, 15 spec., 22. III. 1942, Houška (HOBERLANDT op.cit.). – Holomediterranean.

*Pachytomella* Rt.

*P. phoenicea* (Hv.) – Palestine (BODENHEIMER op.cit.); El Hamme, 1 spec., 21. III. 1945, Bytinski-Salz (!); Galilea, some spec., Saalas (!). – Syrio-Anatolian.

*P. passerinii* (C.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

*Strongylocoris* Blanch.

*S. niger* (H. S.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean, extending far into Central Europe.

*S. amabilis* (Dgl. Sc.) – Palestine (BODENHEIMER op.cit.); Benjamina, 1 spec., 23. III. 1942, Houška (HOBERLANDT 1951, p. 31). – Syrio-Anatolian.

*S. cicadifrons* C. – Palestine (BODENHEIMER op.cit.); Palestine, 3 spec., Bodenheimer (!). – Holomediterranean.

*Halticus* Hhn.

*H. rugosus* Rt. – Palestine (BODENHEIMER op.cit.). – Endemic.

*Nasocoris* Rt.

*N. albipennis* Ldb. – LINDBERG (1939, p. 19) described the species from Egypt on the basis of some (possibly somewhat teneral) specimens. Some additions are therefore made to the original description: 1st antennal joint pale orangish to pale red; pronotum greyish with lateral margins and especially basal part usually  $\pm$  tinged with pale reddish; scutellum greyish brown to reddish; elytra uniformly greyish white or  $\pm$  tinged with red along claval suture, apical margin usually reddish. The male stylus is figured in fig. 5 g and h. The penis is similar to that in LINDBERG's original figure.

Haifa, 2 spec., 12. VI. 1958, !; Rehovot, 1 spec., 14. X. 1956, Swirski (!), 13 spec., 28. VII. 1958, !; Sha'alabim, 1 spec., 31. VII. 1958, Rubin (!).

On *Ephedra*, like the other species of the genus. The record of *Haloxylon schweinfurthii* as the food plant (PRIESNER & ALFIERI 1953, p. 97) presumably arises from an occasional find. – Eremian. Previously known only from Egypt.

*Atomophora* Rt.

*A. ? fuscomaculata* Rt. – Eilat, 3 spec., 20. VI. 1958, !. – Irano-Turanian. Previously known from Turkestan and Iran.

Since my specimens are teneral, the identification is somewhat tentative. My species, however, has light tibial spines that do not arise from dark spots, a feature that does not exist in the other known species of the genus. The male genitalia are also very similar to those in a Turkestanian specimen in my collection.

*Oncotylus* Fb.

*O. nigricornis* Sd. – Palestine, 1 spec., Bodenheimer (!); Rehovot, 16 spec., 8. IV – 20. V. 1958, Swirski (!). – Holomediterranean. Not previously recorded from the Middle East.

*Pastocoris* Rt.

*P. putoni* (Rt.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

*Conostethus* Fb.

*C. roseus* (Fn.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean, extending far into Central Europe.

*C. venustus* (Fb.) – Palestine (BODENHEIMER op.cit.); Beer-Mashash, 2 spec., 13. III. 1957, Swirski (!); Hatserim, 1 spec., 20. III. 1958, Rubin (!); Judea, Chan el Hatrura, some spec., Saalas (!); Tel el Kuneza, 2 spec., 13. III. 1957, Swirski (!). – Holomediterranean.

*Psallopsis* Rt.

*P. longicornis* (Jak.)

*Psallopsis longicornis* JAKOVLEFF 1902, p. 338.

*P. similis* E. WAGNER 1958, p. 6 – 7, n.syn.

The species shows considerable variability in the density of the dark spotting on the elytra. In the type specimen ( $\sigma$ ) from Eupatoria the elytra are densely spotted with dark. 2  $\sigma$  from Bukhara are somewhat smaller and lighter than the type, with the elytra more minutely and sparsely spotted. Owing to the variability I have made some measurements on the specimens: Head (seen from before)  $1.35 \times$  as broad as high; vertex  $1.67 - 1.76 \times$  as broad as eye. Propor-



Fig. 6. *Psallopis bisulcis* n.sp.: a left stylus; c right stylus; d theca; b claw. — *P. longicornis* (Jak.) (type): f left stylus; g right stylus; i vesica. — *P. longicornis* (specimen from Bukhara): e left stylus; h right stylus. — *Amblytylus inscriptus* n.sp.: j right stylus; k claw. — Orig.

tions between antennal joints  $6 + 27 + 20 + 10$  (1 unit = 0.038 mm.); 2nd joint  $0.96 \times$  (the type) —  $1.0 \times$  as long as basal width of pronotum (not longer, as stated in the previous descriptions!) and  $1.23 \times$  (the type) —  $1.4 \times$  as long as width of head; 3rd joint  $0.74 \times$  as long as 2nd, twice as long as 4th. Pronotum  $1.3 \times$  as broad as head. Male genitalia: Right stylus (fig. 6 g, h) small and thick, apex  $\pm$  angled. Left stylus (fig. 6 f, e) with hypophysis relatively long and curved; sensory lobe with a produced angle. Vesica (fig. 6 i) long and very thin, ending in a thin, somewhat claw-like process. In all other known species of the genus the vesica is much stouter.

WAGNER (op.cit.), in describing *P. similis*, compares his species with *P. longicornis* as follows: »The new species differs from *P. longicornis* in the shorter antennae. In *P. longicornis* the 2nd antennal joint is somewhat longer than the basal width of the pronotum and the head is relatively broader.» The results of my measurements do not, however, show any notable differences from WAGNER's description. In view of this and the similarity in the male genitalia I must regard *P. similis* as a synonym of *P. longicornis*.

Material studied: Eupatoria, 1 ♂, the type, Jakovleff; Bukhara mer., Termez, 2 ♂♂, 19. V. 1912, Kiritshenko.

WAGNER (op.cit., p. 7) reports *P. similis* from the following localities in Israel: 'Ein Gedi, 3 spec., 16. VIII. 1957, Wahrman; Sedom, 3 spec., 15. VII. 1957, Wahrman; Timna, 2 spec., 21. IX. 1957, Wahrman.

Irano-Turanian. Recorded from South Russia, Turkestan, Iran and Israel.

*P. bisulcis* n.sp.

♂. Length 3 mm. Dull, uniformly whitish or yellowish grey (probably tinged with greenish in life). Antennae uniformly pale yellowish. Elytra: clavus, corium and cuneus minutely spotted



with fuscous; membrane densely irrorated with fuscous, a roundish fuscous spot present in inner basal angle. Under surface and legs pale yellowish; tibiae with small fuscous spots each bearing a light spine.

Body relatively robust,  $2.5 \times$  as long as broad, parallel-sided. Head short and broad, (seen from before)  $1.5 \times$  as broad as high; vertex  $2.0 \times$  as broad as eye. Proportions between antennal joints  $4 + 25.5 + 21 + 5$  (1 unit = 0.033 mm.); 2nd joint  $1.3 \times$  as long as width of head,  $0.82 \times$  as long as basal width of pronotum. Pronotum short and broad,  $2.5 \times$  as broad as long,  $1.55 \times$  as broad as head. Rostrum extending to middle coxae. Proportions between hind tarsal joints (from side)  $8 + 19 + 18$ . Claw as in fig. 6 b. Male genitalia: Right stylus (fig. 6 c) short and broad. Left stylus (fig. 6 a) with hypophysis relatively short and thick; sensory lobe triangularly produced. Theca (fig. 6 d) sharp-tipped. Vesica (fig. 5 i) biramose, split to the base; 1st branch (which has the gonopore) strongly broadening basally, apex falcate; 2nd branch narrowing both basad and apicad, broadest at the gonopore, ventral margin serrate from the gonopore almost to the rather blunt apex. ♀ unknown.

Type, a male and a paratype, Palestine, Bodenheimer. The type in my collection, the paratype in coll. Lindberg, Helsinki.

The new species closely resembles *P. basalis* Rt. from Iran in the shape of the vesica, but differs even externally in the unicoloured antennae and in the somewhat broader vertex, which in *P. basalis* (♂) is  $1.7 \times$  as broad as the eye. Moreover, the vesica of *P. basalis* is sharp-tipped apically. The male genitalia of *P. basalis* have been illustrated by WAGNER (1958, p. 7). *P. longicornis* (Jak.) differs in the longer antennae and in the thin vesica. *P. rufifemur* E. Wgn. has the hind femora marked with red and the vesica is entirely dissimilar. *P. kirgiscicus* (F. G) has much shorter elytra and the rostrum extends near to the apex of the abdomen.

### *Malthacosoma* Rt.

*M. halimocnemis* (Bck.)

*Malthacosoma halimocnemis* BECKER 1864, p. 485.

*M. punctipenne* REUTER 1879, p. 254.

*M. adpersum* REUTER 1904, p. 11, n.syn.

*Solenoxyphus barbatus* E. WAGNER 1951, p. 147.

Rehovot, 1 spec., 7. VII. 1957, Derech (!). – Irano-Turanian. Previously recorded from South Russia, Turkestan, Iran and Egypt. The type of *M. adpersum* is, in my opinion, a brachypterous female of *M. halimocnemis*. I have also seen some specimens of *Malthacosoma* from Aschabad, Turkestan, the type locality of *M. adpersum* Rt., which I regard as a synonym of the very variable *M. halimocnemis*.

### *Pronototropis* Rt.

*P. longicornis* Rt. – Palestine (BODENHEIMER op.cit.); Rehovot, 6 spec., 20. IV. 1958, Swirski (!). – Holomediterranean. Recorded from Morocco, Cyprus, Turkey and Israel.

### *Pachyxyphus* Fb.

*P. lineellus* (Ms. R.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

### *Megalocoleus* Rt.

*M. aurantiacus* (Fb.) – Galilea, Vall. Kison, 4 spec., 31. III. 1904, Saalas (!). – Holomediterranean.

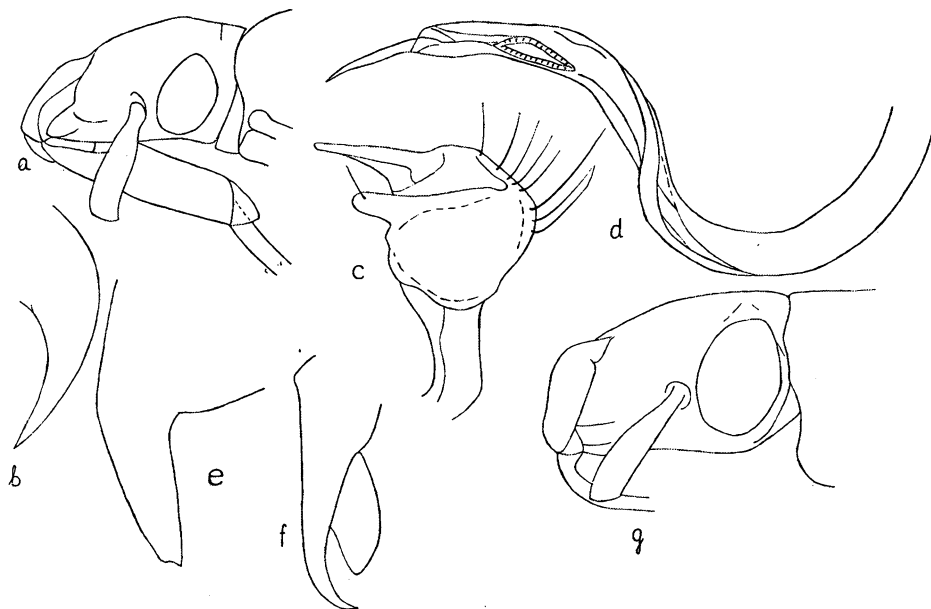


Fig. 7. *Amblytylus inscriptus* n.sp.: a head, lateral view; b theca; c left stylus; d vesica. - *A. gregarius* n.sp.: e theca; f claw; g head, lateral view. - Orig.

*M. molliculus* (Fn.) - Palestine (BODENHEIMER op.cit.); Rehovot, 3 spec., 20. IV. 1958, Swirski (!). - European.

(*M. longirostris* (Fb.)) - Jericho, Transjordanian, 1 spec., J. Sahlberg (!). - Holomediterranean. Not previously recorded from the Middle East.

*M. krueperi* (Rt.) - Sa'ad, 1 spec., 20. III. 1958, Rubin (!); Jericho, Transjordanian, 1 spec., J. Sahlberg (!). - Holomediterranean. Not previously known from Israel.

### *Amblytylus* Fb.

#### *A. inscriptus* n.sp.

♂. Length 3.8 mm. Head yellow-greenish; stylus, median part and margins of frons and base of vertex yellowish. Eyes light grey. Antennae yellowish, 3rd and 4th joints (sometimes also 2nd joint) slightly infuscate. Pronotum yellowish; a median stripe and a transverse stripe behind calli green, forming a cross-shaped green figure on the disk; lateral margins with a green mark, basal lateral angles whitish yellow. Sometimes the calli are slightly infuscate and the greenish area larger, sending 4 broad greenish-yellow branches caudad. Scutellum yellowish with 2 small greenish basal spots; an orange median stripe sometimes present. Clavus, corium and cuneus greenish yellow, lateral margin of corium lighter; an obscure lighter longitudinal stripe present on corium; membrane milky, apical part with a broad bow-shaped smoky area extending to the apices of the membranal cells, which are also distinctly darkened, a dark smoky spot also present in the mediobasal angle of the membrane. Under surface greenish and yellowish. Legs yellowish, femora minutely spotted with dark apically; 1st and 2nd tarsal joints brownish, 3rd joint dark.

A small, slender species. Body elongate, 3.8 × as long as broad. Head 1.3 × as broad as long, in lateral aspect less steeply sloping ventrad apically than in the following species (fig. 7 a);



Fig. 8. *Amblytylus gregarius* n.sp.: a vesica; b left stylus; c right stylus. — *Ectagela guttata* Schm.: h vesica. — *Compsidolon elegantulum* Rt.: d claw. — *C. acacicola* n.sp.: e claw; f left stylus from side; g same from above; i right stylus. — Orig.

vertex  $2.5 \times$  as broad as eye. Proportions between antennal joints  $9 + 27 + 20 + 14$  (1 unit =  $0.038$  mm.); 1st joint  $0.86 \times$  as long as width of vertex, 2nd joint as long as basal width of pronotum. Pronotum  $2.1 \times$  as broad as long, basal width  $1.42 \times$  as long as breadth of head, distinctly tapering anteriorly, lateral margins rather acute. Hair covering of upper surface long, light yellowish, in parts somewhat darker. Rostrum extending to middle of abdomen. Tibial spines light. Claw as in fig. 6 k. Male genitalia: Right stylus (fig. 6 j) short and broad, ending in a short, sharp apical process. Left stylus (fig. 7 c) with hypophysis rather thin and straight; sensory lobe produced, bearing a hair apically. Theca (fig. 7 b) claw-like. Vesica (fig. 7 d) slender, ending as a thin and relatively long apical process. ♀ unknown.

Type, a male and 2 paratypes, Rehovot, 8 - 20. IV. 1958, Swirski. Types in my collection.

In *A. longicornis* E. Wgn., *A. nasutus* (Kbm.), *A. amoenus* E. Wgn., *A. macedonicus* E. Wgn. and *A. concolor* Jak. the vesica is provided with 2 apical processes. The following 3 species have an unpaired vesical process, but *A. binotatus* E. Wgn. has a broader body, the hair covering of the upper surface is black and the colouring is dissimilar, *A. jani* Fb. has a similarly shaped penis to *A. inscriptus*, but the sensory lobe of the left stylus is shorter and broader, having no apical hair, and the hair covering of the upper surface is black, and *A. albidus* (H.) is much bigger and dissimilarly coloured and the vesica is much shorter and thicker. The male genitalia of the following species are unknown to me: *A. vittiger* Rt. is bigger, length 4.5 mm., the 2nd antennal joint is  $1.2 \times$  as long as the basal width of the pronotum, the 3rd joint is  $0.5 \times$  as long as the 2nd and the vertex ( $\delta$ ) is scarcely  $1.5 \times$  as broad as the eye. *A. tarsalis* Rt. has all tarsal joints black, the tibial spines are black and the rostrum is longer, extending to the apex of the abdomen. *A. testaceus* Rt. and *A. brevicollis* Fb. have a unicoloured membrane with the apical part not darkened. *A. testaceus* is also bigger, length 4.5 mm., and the vertex ( $\delta$ ) is

$2.33 \times$  as broad as the eye. *A. brevicollis* is robuster and provided with black tibial spines. *A. delicatus* (Pr.) is bigger, length 4.6 – 4.7 mm., the vertex ( $\delta$ ) is a little more than twice as broad as the eye, and the species has a western distribution (Germany, England and France). *A. scutellaris* Hv. has the scutellum rose-red with a yellow median stripe and the vertex ( $\delta$ ) is scarcely more than twice as broad as the eye.

*A. gregarius* n.sp.

$\delta$ . Length 4.4 mm. Whitish grey. Head slightly infusate and fulvous laterally. Eyes light grey. Antennae fuscous. Pronotum with a faint, broad, fuscous longitudinal band on either side (nearly absent in the other, probably immature specimen). Scutellum whitish grey or pale yellowish. Elytra whitish grey; corium with two faint, longitudinal fuscous bands; membrane uniformly light smoky. Under surface and legs light greyish ochraceous. 1st and 2nd tarsal joints brownish, 3rd joint dark.

Elongate, body  $4.5 \times$  as long as broad. Head  $1.3 \times$  as broad as long, in lateral view steeply sloping ventrad apically (fig. 7 g); vertex  $2.04 - 2.2 \times$  as broad as eye. Proportions between the antennal joints  $9 + 28 + ? + ?$  (1 unit = 0.033 mm.); 1st joint  $0.94 \times$  as long as width of vertex, 2nd joint  $1.1 \times$  as long as breadth of pronotum. Pronotum twice as broad as long,  $1.4 \times$  as broad basally as breadth of head, lateral margins slightly insinuated and sharp. Hair covering of upper surface light. Rostrum extending a little beyond hind coxae. Tibial spines black. Claw as in fig. 7 f. Male genitalia: Right stylus (fig. 8 c) ending in a produced process. Left stylus (fig. 8 b) with hypophysis relatively thick and straight; sensory lobe strongly produced, bearing an apical hair. Theca (fig. 7 e) rather stout. Vesica relatively short and robust, bearing a pair of falcate apical processes of equal length.  $\text{♀}$  unknown.

Type, a male, Rehovot, 20. IV. 1958, Swirski; a paratype from the same locality, 20. X. 1958, Swirski. Types in my collection.

The new species closely resembles *A. albidus*, but is much smaller. *A. albidus* is 5.2 – 5.9 mm. long, the 2nd antennal joint is  $0.90 - 0.93 \times$  as long as the basal width of the pronotum and the vertex ( $\delta$ ) is  $2.4 \times$  as broad as the eye. The vesica has only one apical process, as is also the case in *A. binotatus*, *A. jani* and *A. inscriptus*. *A. longicornis* is bigger, length 5.2 – 5.5 mm., the vertex ( $\delta$ ) is  $2.6 \times$  as broad as the eye, the 2nd antennal joint is  $1.23 \times$  as long as the basal width of the pronotum, the sensory lobe of the left stylus lacks the apical hair and the apical processes of the vesica are shorter. *A. nasutus* is much robuster, the hair covering of the upper surface is black and the apical appendages of the vesica very short. *A. concolor* is also much robuster and lighter, the vertex ( $\delta$ ) is  $3.1 - 3.3 \times$  as broad as the eye, the sensory lobe of the left stylus lacks the apical hair and the vesical appendages are conspicuously broad and short. *A. macedonicus* is robuster, the body is  $3.3 - 3.6 \times$  as long as broad, the vertex ( $\delta$ ) is  $2.3 - 2.4 \times$  as broad as the eye, the rostrum extends to the apex of the abdomen and the one vesical appendage is shorter than the second. *A. amoenus* is dissimilarly coloured: the pronotum has no dark stripes, the cuneus and two spots on the corium are marked with small red dots, the membrane with blackish markings, the sensory lobe of the left stylus has several hairs and the vesica is thinner. Of the species whose genitalia are unknown to me, *A. tarsalis* has all tarsal joints black and the rostrum extends to the apex of the abdomen. *A. scutellaris* is smaller, length 3.5 – 3.75 mm., the scutellum is rose-red with a yellow median stripe and the tibial spines are lighter. *A. delicatus* also has light tibial spines and in addition the membrane is not unicoloured. *A. brevicollis* is robuster, the vertex ( $\delta$ ) is  $2.33 \times$  as broad as the eye, the 1st and 2nd antennal joints are light yellow and the pronotum lacks the dark longitudinal stripes. *A. testaceus* has light tibial spines. *A. vittiger* has the vertex ( $\delta$ )  $1.5 \times$  as broad as the eye and the colouring is dissimilar.

#### *Macrotylus* Fb.

*M. atricapillus* (Sc.) – Aqua Bella, 5 spec., 14. VI. 1958,; Ashqelon, 2 spec., 2. VII. 1958,; Dan, 2 spec., 7. VII. 1958,; Geshar Haziv, 2 spec., 6. VIII. 1958,; Hagoshrim, 3 spec., 8. VII.

1958,; Haifa, several spec., 5. IV. 1904, J. Sahlberg (!), 2 spec., 29. VI. 1958,; Hula, 1 spec., 10. VII. 1958,; Nabi Rubin, 1 spec., 4. VII. 1958,; Nazareth, 4 spec., 5. VIII. 1958,; Ramath Gan, 2 spec., 19. VII. 1958,; Rehovot, 7 spec., 28. VII. 1957, Swirski (!); Yarkon, 38 spec., 5. VII. 1958,.

Common on an unidentified thorny composite in dry sunny places. — Holomediterranean.

### *Camptotylus* Fb.

*C. bipunctatus* (Rt.) — Palestine (BODENHEIMER op.cit.). — Probably Irano — Turanian. Originally described from Turkestan. The record from Israel seems to me somewhat uncertain.

*C. lineae* (Pt.) — Palestine (BODENHEIMER op.cit.). — Possibly Caspian. Recorded from South Russia, Caucasia, Turkey, Syria and Israel.

### *Harpocera* Curt.

*H. hellenica* Rt. — Palestine (BODENHEIMER op.cit.). A damaged specimen from Tivon, Sternlicht leg. (!), probably belongs to the species. It was found on *Quercus ithaburensis*. — Pontomediterranean.

### *Orthonotus* Steph.

*O. syriacus* (Pt.) — Palestine (Bodenheimer op.cit.); Galilea, several spec., Saalas (!). — Endemic.

### *Ectagela* Schm.

(*E. guttata* Schm.) — Jericho, Transjordanian, 6 spec., 15. IV. 1931, Bodenheimer (!). — Eremian. Previously recorded from Egypt, Syria and Iran.

The male genitalia: Right stylus (fig. 9 c) very small. Left stylus (fig. 9 b) with hypophysis thin, nearly semicircularly curved, apex slightly hooked; sensory lobe with a tooth-like process. Theca (fig. 9 d) robust. Vesica (fig. 8 h) rather short and straight, an unpaired appendage present subapically on the dorsal surface.

### *Tythus* Fb.

*T. parviceps* (Rt.) — Beersheba, 1 spec., 1. VIII. 1958,; Dan, 1 spec., 7. VII. 1958,; Deganya, 3 spec., 23. VII. 1958,; Ramath Gan, 3 spec., 15. IX. 1958, Fishelson (!); Revivim, 1 spec., 2. VIII. 1958,; Hadera, 1 spec., 1. VII. 1958,; Wadi Sukreir, 1 spec., 27. VI. 1958,.

On *Cyperus* species in wet biotopes. Also at lamps. — Intertropical. Recorded from northern and tropical Africa and from the Neotropical region.

### *Compsidolon* Rt.

Various opinions have been presented about the position of the genus. The present author (LINNAVUORI 1953, p. 109) regarded it as a synonym of *Psallus*, owing to the complete external similarity to the species of the subgenus *Coniortodes* of the genus. STICHEL (1958 a, p. 778 and 783 — 784), apparently on the basis of some publication unknown to me, regards it as a valid genus, also placing *Plagiognathus spilotus* (Fb.), save the generotype *C. elegantulum*, in the genus.

As pointed out above, externally the genus perfectly resembles certain *Conior-*

*todes* species. Since, however, the male genitalia of the new species *C. acacicola* are very dissimilar from those of any *Psallus* species known to me (see the description below), it seems to me best to regard *Compsidolon* as a valid genus. The connecting of *Plagiognathus spilotus* with the genus is, on the contrary, entirely incorrect. Even externally, there are great differences between *P. spilotus* and *Compsidolon* species: 1) The colouring is dissimilar. In colouring the *Compsidolon* species much resemble *Psallus (Coniortodes) parviceps* E. Wgn., *P. freyi* E. Wgn. and *P. pumilus* (Jak.), also having the typically marked membrane of the subgenus. In *P. spilotus* the elytra are not spotted with brown and the membrane lacks the whitish spots of *Coniortodes*. 2) The hair covering of *C. elegantulum* is entirely similar to that in *Coniortodes*: the elytra are provided not only with long yellow-brown hairs but also with short, dense silvery hair-tufts (Schuppenhaare), while *P. spilotus* has only long, dense, black or brownish hairs on the upper surface. 3) The claws are also dissimilar. In *Compsidolon* the claws are similar to those in *Psallus* (fig. 8 d, e), while *P. spilotus* has strongly curved and basally thickened claws. 4) The male genitalia of *P. spilotus* are dissimilar, resembling the common type of *Plagiognathinae*. If the species is not a *Plagiognathus*, a new genus should be established for *spilotus*.

(*C. elegantulum* Rt.) – Jericho, Transjordanian, 3 spec., J. Sahlberg (!). – Endemic.

*C. acacicola* n.sp.

♂. Length 2.3 mm. Light grey. Head light grey, with numerous orangish and blood-red lateral arcs; basal margin of vertex with a transverse row of minute orangish spots. Antennae light greyish; 1st joint with a dark red subapical ring, 2nd and 3rd joints with a reddish sub-basal and subapical ring, 4th joint orangish. Pronotum light grey; anterior part with 4 longitudinal orangish stripes; region of calli faintly tinged with fuscous; entire disk minutely and sparsely spotted with red and orange. Base of scutellum brownish, apex light grey; scutellum sparsely spotted with reddish, a pair of triangular, red basal spots present. Elytra light grey; corium rather densely spotted with reddish brown and orange, the spots partly confluent, the basal half with a large, roundish, dark reddish brown spot apically; spotting of clavus fuscous or orangish but much sparser than on corium, especially apically; cuneus with a conspicuous, triangular, dark reddish brown spot in each basal angle, other parts of cuneus densely spotted with reddish brown, apical angle blood-red; membrane dark smoky, apical part irrorate with hyaline, a pair of large, roundish, hyaline spots present in lateral margin; veins whitish, spotted with fuscous basally. Under surface light ochraceous, ± spotted with dark red. Legs light ochraceous; fore and middle femora with roundish purplish spots in apical part, hind femora densely spotted with purplish except in basal third; tibiae with round, reddish brown spots.

Small but relatively robust and parallel-sided. Body  $2.5 \times$  as long as broad. Head small, (seen from before)  $1.45 \times$  as broad as high,  $0.7 \times$  as broad as basal width of pronotum. Eyes unusually large, vertex only  $0.9 \times$  as broad as eye. Proportions between antennal joints  $3 + 22 + 9 + 7$  (1 unit = 0.033 mm.); 2nd joint  $0.9 \times$  as long as basal width of pronotum and  $2.4 \times$  as long as 3rd joint, 4th joint  $0.8 \times$  as long as 3rd. Pronotum short and broad,  $2.2 \times$  as long as broad basally; calli relatively prominent, limited by a short depression behind vertex anteriorly. Hair covering of elytra long, dense, erect, light brown. Tibial spines dark brown. 3rd joint of hind tarsi a little shorter than 2nd. Claws as in fig. 8 e. Male genitalia: Right stylus (fig. 8 i) very small, provided with a short apical process. Left stylus (fig. 8 f, g) like a peaked cap (lateral aspect), hypophysis thin, hooked apically; sensory lobe strongly produced, bifid

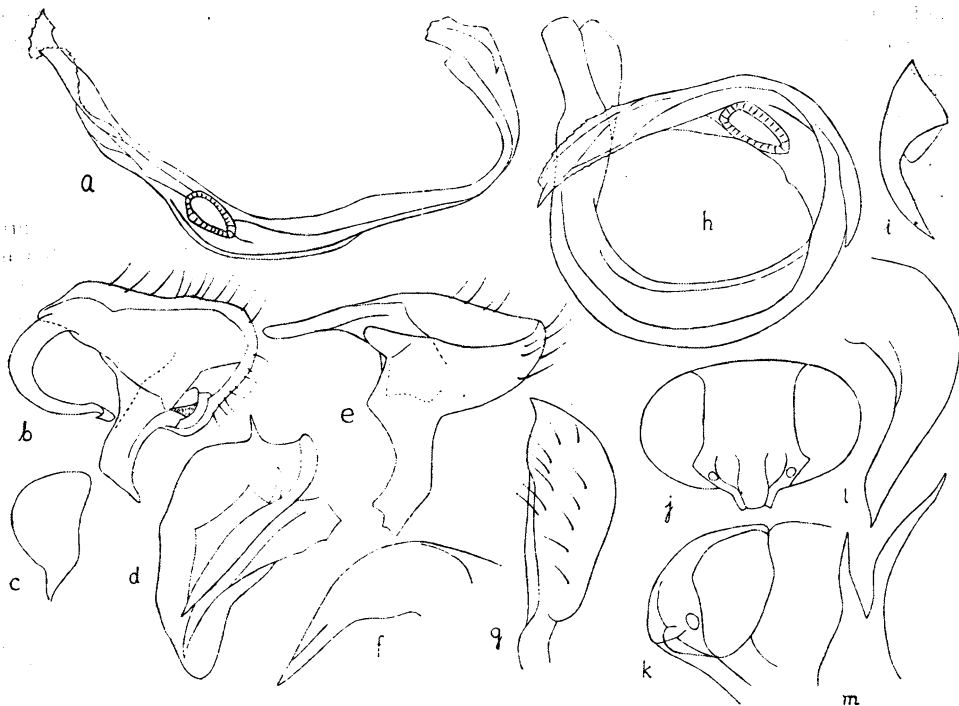


Fig. 9. *Compsidolon acacicola* n.sp.: a vesica. — *Ectagela guttata* Schm.: b left stylus; c right stylus; d theca. — *Psallus salviae* n.sp.: e left stylus; g right stylus; f theca; h vesica. — *Campyloomma acaciae* n.sp.: j head, frontal view; k same, lateral view; i claw; l theca; m apex of vesica from above. — Orig.

apically. Theca (fig. 19 a) peculiar, bearing a pair of long basal processes. Vesica (fig. 9 a) long and slender, apex with an undulate, serrate membrane. ♀ unknown.

Type, a male, Yotvata, 22. VI. 1958, l, in my collection.

On *Acacia* in a desert.

The species much resembles *C. elegantulum* which is however, much darker, e.g. the 1st antennal joint is dark brown except apically and the entire pronotum and most of the scutellum are dark brown, the apical part of the corium is dark brown, the cuneus is basally brownish hyaline and unspotted and the hind femora are dark brown. The head structure is dissimilar. The claws are somewhat shorter and provided with slightly larger aroliae and the elytra have groups of silvery hairs (absent in *acacicola*). Hence I regard *C. acacicola* as a different species.

### *Psallus* Fb.

*P. ancorifer* (Fb.) ssp. *sengüni* E. Wgn. — Rehovot, 1 spec., 22. IV. 1958, Michaeli (!). — The nominate form Holomediterranean, the subspecies *sengüni* endemic. Recorded from Syria.

*P. ancorifer* (Fb.) ssp. *syriacus* E. Wgn. — Palestine, 4 spec., Bodenheimer (!); Jericho, Transjordan, 1 spec., 22. III. 1931, Bodenheimer (!). — Syrio-Anatolian. Recorded from Syria and Turkey.

BODENHEIMER (op.cit.) has recorded *P. ancorifer* from Palestine and HOBERLANDT (1951, p. 32) from Wadi el Kelt, near Jericho, 8 spec., Houška leg. The recorded specimens probably

do not belong to the nominate form but to one or other of the subspecies mentioned above. Moreover it is possible that the third subspecies of *P. ancorifer*, ssp. *vesicatus* E. Wgn., which is known from Syria and Turkey, could be found in Israel too.

*P. perrisi* Ms. R.

*Psallus perrisi* MULSANT & REY 1852, p. 120.

*P. anticus* REUTLER 1876, p. 22, n.syn.

Mt. Carmel, 2 spec., Saalas (!); Tivon, 3 spec., Sternlicht (!).

On *Quercus ithaburensis*. — European, the distribution still imperfectly known. Not previously recorded from Israel. REUTER (op.cit.) described *P. anticus* on the basis of female specimens from Greece. I cannot find any difference between these and the Palestinian specimens and so regard *P. anticus* as a synonym of *perrisi*. The male genitalia of the Palestinian specimens agree perfectly with my European material.

*P. albicans* Rt. — Tivon, 2 spec., 11. VIII. 1957, Sternlicht (!). — On *Quercus ithaburensis*. — Possibly Irano-Turanian. Previously known only from Turkestan. The Palestinian specimens agree well with the type, which is unfortunately a female, so that I have not been able to compare the male genitalia.

*P. punctulatus* Fb. Pt. — Shimron, 1 spec., 11. IV. 1957, Sternlicht (!); Tivon, 1 spec., 2. I. 1957, Sternlicht (!). — On *Quercus ithaburensis*. — Holomediterranean. Not previously recorded from Israel.

*P. salviae* n.sp.

Length 2.6–3 mm. A dull, pale species. Upper surface pale whitish or yellowish grey. Head unicoloured or with very faint brownish shadows. Eyes light grey. Antennae pale yellowish, 1st joint with a faint, darker subapical spot. Pronotum and scutellum unicoloured and sparsely and minutely spotted with fuscous. Entire elytra provided with sparse, faint, round, fuscous spots; spots of costal margin somewhat denser and more distinct. Membrane milky, densely irrorated with fuscous; a larger fuscous spot present in the inner basal angle and in the smaller cell as well as a semicircular, fuscous spot in the lateral margin; outer basal angle and middle of semicircular spot milky, unspotted. Under surface yellowish. Legs: femora yellowish, middle and hind femora densely and minutely spotted with fuscous apically; tibiae whitish with several distinct black, spine-bearing spots.

Body 2.2 × as long as broad. Head (seen from before) 1.1 × (♂) or 1.0 (♀) as broad as high, sharply angled apicad, vertex 2.0 × (♂) or 3.0 × (♀) as broad as eye. Proportions between antennal joints 5 + 24 + 11 + 6 (♂) or 4 + 22 + 13 + 8 (♀) (1 unit = 0.033 mm.); 2nd joint 1.0 × (♂) or 0.88 × (♀) as long as basal width of pronotum. Pronotum 2.2 × (♂) or 2.5 × (♀) as broad as long. Hair covering of upper surface light. Rostrum very long, extending far beyond the hind coxae nearly to the genital segment. Tibial spines long and whitish. 3rd joint of hind tarsi about as long as 2nd. Male genitalia: Right stylus (fig. 9 g) resembling the blade of a clasp-knife. Left stylus (fig. 9 e) with hypophysis long and nearly straight; sensory lobe strongly produced. Theca (fig. 9 f) sharp-tipped. Vesica (fig. 9 h) relatively thick, strongly curved, apex minutely serrate.

Type, a male; allotype, a female and 4 paratypes, Mt. Carmel, Haifa, 29. VI. 1958. On *Salvia* sp. on a dry, sunny slope. — The types in my collection.

The new species belong to the subgenus *Coniortodes* E. Wgn. *P. salicellus* (H. S.) and *P. crotchii* Sc. have an immaculate cuneus in the elytra. *P. atomosus* Rt. is light reddish grey with the entire upper surface densely spotted with reddish brown; the 1st antennal joint is at least basally brown and the anterior femora are apically dark brown. *P. scutellaris* Rt. and *P. pumilus* (Jak.) have the 1st antennal joint black. *P. pterocephali* Ldb. has the elytra with blood-red apical markings. In *P. saundersi* Rt. the tibial spines are short, while in *P. reraiensis* Ldb. they are black. *P. absinthii* (Sc.) is bigger, the head is broader and shorter, the eyes consider-



ably larger and the fuscous spots on the elytra are often confluent, forming larger fuscous maculae. As a whole, the new species is easily recognized by the light colouring, the very small brown spots on the upper surface, the sharply angled head and the small eyes.

### *Plagiognathus* Fb.

(*P. bipunctatus* Rt.) – Jericho, Transjordan, 3 spec., 22. III. 1931, Bodenheimer (!), 4 spec., 22. VII. 1943, Bytinski-Salz (!). – Pontomediterranean, not previously recorded from Palestine.

*P. chrysanthemii* (W.) – Palestine (BODENHEIMER op.cit.). – Euro-Siberian.

*P. fulvipennis* (Kbm.) – Rehovot, 3 spec., 20. IV. 1958, Swirski (!). – Holomediterranean, also extending into Central Europe. Not previously recorded from Israel.

### *Utopnia* Rt.

*U. torquata* (Pt.) – Palestine (BODENHEIMER op.cit.); Galilea, some spec., J. Sahlberg (!). – Syrio-Anatolian.

### *Atomoscelis* Rt.

*A. onustus* (Fb.) – Ramath Gan, 1 spec., 14. VIII. 1958, Fishelson (!); Revivim, 94 spec., 2. VIII. 1958,; Wadi Beersheba, 44 spec., 1. VIII. 1958,; Yotvata, 2 spec., 22. VI. 1958,!. – Very common on ruderal plants, especially on different *Chenopodiaceae*. – Holomediterranean, also extending into Central Europe. Not previously recorded from Israel.

*A. signaticornis* Rt. – 'Ein Gedi, 1 spec., 18. VI. 1958,; Rehovot, 5 spec., 7. VII. 1957, Swirski (!); Yotvata, 4 spec., 22. VI. 1958,!. – Habitats as in the preceding species. – Eremian, previously recorded from the Cape Verde Islands, Egypt and Iran.

*A. noualhieri* Rt. – 'Ein Gedi, 1 spec., 18. VI. 1958,; Deganya, 73 spec., 23. VII. 1958,!. – On *Atriplex halimus*. – Eremian. Previously recorded only from Algeria.

### *Campylomma* Rt.

*C. viticis* Ldb. – Geshar Haziv, 12 spec., 6. VIII. 1958,; Hadera, 7 spec., 1. VII. 1958,; Nahariya, 2 spec., 6. VIII. 1958,; Tel-Aviv, 1 spec., 26. VI. 1958,!. – On *Vitex agnus-castus*. – Syrio-Anatolian. Previously recorded only from Cyprus.

### *C. impicta* E. Wgn.

The species usually has unicoloured, yellowish antennae. Sometimes, especially in males, there may be faint dark markings in the 1st joint and at the base of the 2nd joint. Such specimens then resemble *C. nicolasi* Pt. Rt., but differ in the shape and position of the apical branches of the vesica and in the theca, which is slightly bifid apically in *C. nicolasi*, sharp-tipped (fig. 10 d – f) in *C. impicta*.

Beer-Mashash, 1 spec., 23. VI. 1958,; Beit Shean, 1 spec., 7. VIII. 1958,; Deganya, 8 spec., 23. VII. 1958,; Eilat, 1 spec., 20. VI. 1958,; 'Ein Gedi, 21 spec., 18. VI. 1958,; Hulda, 1 spec., 15. VII. 1958,; Maanit, some spec., 22. VIII. 1958, Harpaz (!); Miqve Israel, 1 spec., 25. VII. 1958,; Nahariya, 2 spec., 6. VIII. 1958,; Nazareth, 5 spec., 5. VIII. 1958,; Ramath Gan, 2 spec., 19. VII. 1958,; 4 spec., 15. VIII. 1958, Fishelson (!); Rehovot, 13 spec., 22. IX – 8. X. 1957, Swirski (!), 8 spec., 28. VII. 1958,; Revadim, 3 spec., 18. VII. 1958,; Revivim, 10 spec., 1. VIII. 1958,; Sha'alvim, 3 spec., 28. VII. 1958,; Shimron, 2 spec., 4. VIII. 1958,; Tanninim, 1 spec., 26. VII. 1958,; Tel-Aviv, 14 spec., 29. VI, 24. VII. 1958,; Tirat-Shalom, 1 spec., 18. VII. 1958,; Tivon 5 spec., Sternlicht (!); Wadi Beersheba, 1 spec., 1. VIII. 1958,!

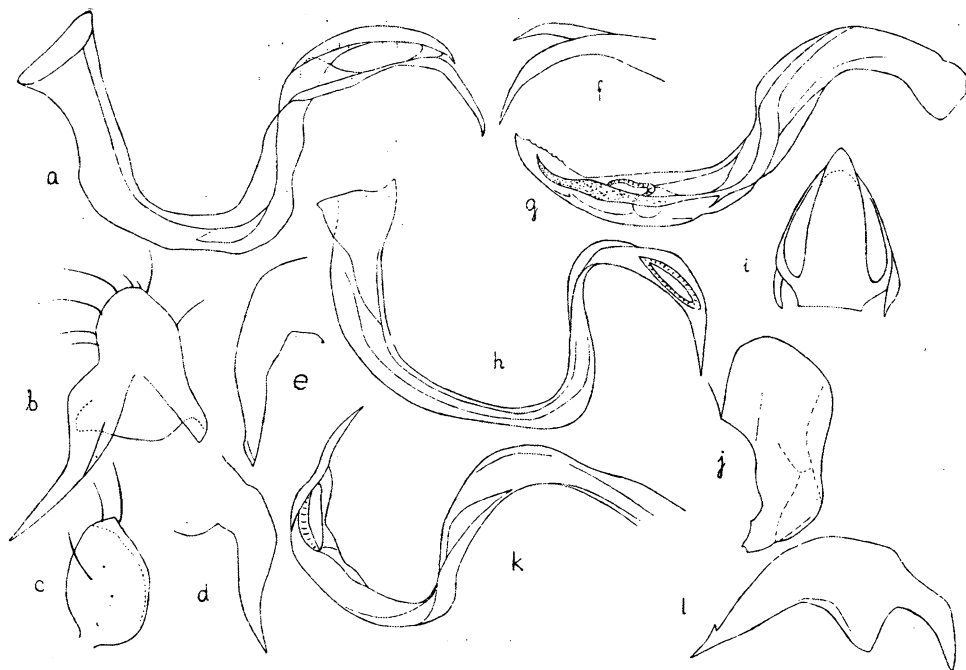


Fig. 10. *Campylomma acaciae* n.sp.: a vesica; b left stylus from above; c right stylus. — *C. impicta* E. Wgn.: d and e theca of two Palestinian specimens; f apex of vesica. — *Tuponia tamaricicola* Ldb.: h vesica; i theca from above; j same, lateral aspect. — *T. tincta* Jak.: g vesica. — *T. lethierryi vulnerata* n.ssp.: k apex of vesica; l theca. — Orig.

A very common species in cultivated fields, e.g. on alfalfa, *Andropogon sorghum* and *Zea*. Also on various bushes and trees, e.g. *Acacia*, *Quercus ithaburensis*, *Zizyphus spina-Christi*, etc. — Probably Eremian. Recorded from Egypt and Iran.

*C. acaciae* n.sp.

Length 1.7–1.8 mm. Uniformly whitish ochraceous. Eyes light grey. Antennae pale ochraceous, unmarked. Elytra rarely somewhat darkened medially. Femora with several small, round, fuscous spots on the under surface (the larger, black subapical spot of the hind femora absent). Tibiae whitish with black spines arising from distinct black spots.

A very small species. Body short-oval, twice as long as broad. Head (fig. 9 j, k)  $0.70 - 0.75 \times$  as broad as pronotum; vertex  $1.75 \times$  ( $\delta$ ) or  $1.85 \times$  ( $\varphi$ ) as broad as eye. Proportions between antennal joints:  $3 + 10 + 7 + ?$  ( $\delta$ ) or  $2 + 9 + 6 + 5$  ( $\varphi$ ) (1 unit =  $0.033$  mm.), 2nd joint  $0.7 \times$  as long as width of the head. Pronotum  $2.5 - 3 \times$  as broad as long. Upper surface with both longer, brownish hairs and shorter, silvery hairs. 3rd joint of hind tarsi nearly as long as 2nd. Rostrum extending to hind coxae. Claw as in fig. 9 i. Male genitalia: Right stylus (fig. 10 c) small, oval in outline, apex rather rounded. Left stylus (fig. 10 b) with a long, sharp-tipped hypophysis. Theca (fig. 9 l) sharp-tipped. Vesica (fig. 9 m, 10 a) with two falcate apical branches.

Type, a male; allotype, a female and 12 paratypes, Yotvata, 22. VI. 1958, l. The types in my collection. — On *Acacia* in a desert.

The new species is readily distinguished from the other species of the genus owing to its unusually small size. In the genitalia it resembles *C. nicolasi*, which, however is much bigger

and has a large black apical spot on the hind femur. *C. indigena* Ldb. from the Cape Verde Islands also lacks the apical spot on the hind femur, but is much bigger and the 1st antennal joint is black.

### *Paramixia* Rt.

*P. suturalis* Rt. – Palestine (BODENHEIMER op.cit.); Hadera, 2 spec., 1. VII. 1958,; Miqve Israel, 12 spec., 25. VII. 1958,; Nabi Rubin, 3 spec., 4. VII. 1958,; Rehovot, 2 spec., 28. VII. 1958,; Tanninim, 5 spec., 26. VII. 1958,; Tel-Aviv, 2 spec., 24. VI. 1958,; Wadi Rubin, 1 spec., 16. VII. 1958,; Wadi Sukreir, 1 spec., 27. VI. 1958,!. – On *Cyperaceae* in wet places. – Eremian. Recorded from the Cape Verde Islands, Egypt and Israel.

### *Auchenocrepis* Fb.

*A. alboscuteolata* Pt. – Beer-Mashash, 1 spec., 23. VI. 1958,; Deganya, 3 spec., 23. VII. 1958,; 'Ein Gedi, 2 spec., 19. VI. 1958,; Herzliya, 1 spec., 26. VII. 1958,; Hula, 7 spec., 10. VII. 1958,; Nabi Rubin, 1 spec., 1. V. 1958, Michaeli (!); Palestine, 2 spec., Bodenheimer (!); Tel-Aviv, 1 spec., 26. VIII. 1958,; Tiberias, 3 spec., 21. VII. 1958,; Wadi Beersheba, 1 spec., 1. VIII. 1958,; Yotvata, 5 spec., 22. VI. 1958,!. – On *Tamarix*. – Eremian. Not previously recorded from Israel.

### *Tragiscocoris* Fb.

*T. fieberi* (Fb.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

### *Maurodactylus* Rt.

*M. albidus* (Klt.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

### *Tuponia* Rt.

*Tuponia* specimens were collected in great numbers on *Tamarix* during my trip. Since the species of the genus are often rather difficult to determine and show considerable variability and splitting into geographical subspecies, I have studied a number of types of lesser known species in coll. REUTER and give a description of their main genital characters below.

#### (*T. tincta* Jak.)

The species closely resembles *T. tamaricicola* Ldb., but is somewhat smaller, the cuneus is unicoloured whitish and the vesica (fig. 10 g) shorter and straighter (strongly S-shaped curved in *T. tamaricicola*), the apex being blunter and minutely serrate, bearing a claw-like subapical process on the left side. From *T. elegans* (Jak.) and *T. lethierryi* Rt. it differs in the light tibial spines.

Material studied: Transcaspia, 1 spec., Ahnger; Iran, Bampur-Kaskinjuv, 1 spec., 31. VII. 1898, Zarudnyi and Iran, Bendun, Neizar, Sjeistan, 1 spec., 28. IX. 1898, Zarudnyi. Previously known from Turkestan. The specimens were determined as *T. elegans* in coll. Reuter.

#### *T. tamaricicola* Ldb.

The species has been described and illustrated by LINDBERG (1938, p. 20). Some remarks on the male genitalia: Theca (fig. 10 i, j) unusually short and broadly triangular in dorsal aspect.

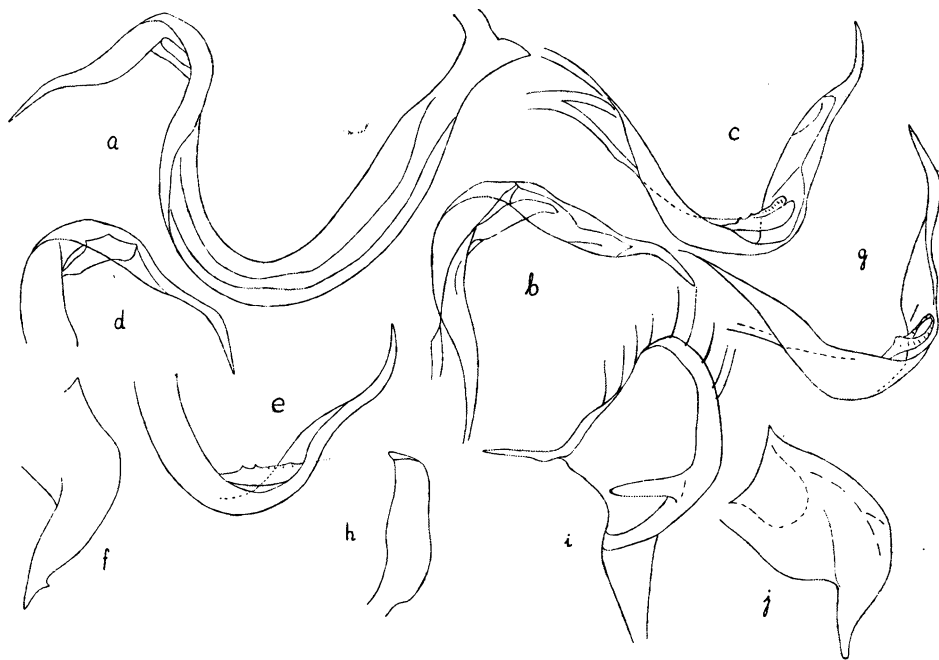


Fig. 11. *Tuponia lethierryi vulnerata* n.sp.: a - c vesica in different aspects. - *T. lethierryi* Pt. (specimen from Egypt): d - e apex of vesica; f theca. - *T. lethierryi carayoni* E. Wgn. (specimen from the South of France): g apex of vesica. - *T. nupta* n.sp.: h right stylus, median aspect; i left stylus; j theca. - Orig.

Vesica (fig. 10 h) relatively long and slender, strongly S-shaped curved, apex sharp-tipped and simple. This species likewise has light tibial spines.

Beer-Mashash, 1 spec., 23. VI. 1958,!; Revivim, 7 spec., 22. VI. 1958,!; Yotvata, 2 spec., 22. VI. 1958,!. - On *Tamarix* in desert conditions. - Eremian. Previously recorded only from Egypt (Sinai).

#### *T. ?pallida* Rt.

This species also has light tibial spines but differs from *T. tincta* and *T. tamaricicola* in the uniformly whitish ochraceous colouring without any red pigment. The Palestinian specimen differs from typical specimens in having a faint, dilute fuscous, transverse band across the apical part of the elytra. It is unfortunately a female, so that the male genital characters are unknown to me. Since, however, *T. pallida* has also been found in Libya, it seems to me rather probable that the Palestinian specimen also belongs to this species.

Revivim, 1 spec., 2. VIII. 1958,!. - On *Tamarix* in desert conditions. - Eremian. Previously recorded from Turkestan and Libya. I have seen specimens from Aschabad, Turkestan, Ahngerleg.

#### *T. lethierryi* Rt. complex.

The species shows considerable geographical variation. It is easily recognized, however, by the shape of the theca, which bears a small subapical tooth (fig. 10 l). There are scarcely any differences in the male genitalia between the different subspecies.

#### *T. lethierryi* Rt., nominate form.

Length 2.6 - 3.2 mm. The subspecies shows the most intensive reddish colouring. Apart from

the red markings of ssp. *vulnerata*, the elytra are more intensively marked with red, the greater part of the clavus and corium being red; the cuneus and the veins of the membrane are also red. The male genitalia illustrated in fig. 11 d - f.

Material studied: The Canary Islands, Lanzarote, Haria, some spec., 19. III. 1949, Lindberg; Algeria, Biskra, 2 spec., Noualhier; Egypt, Fayum, 2 spec., J. Sahlberg.

The subspecies occurs throughout North Africa. The record from Yugoslavia (STICHEL 1958, p. 823) seems to me very questionable. As pointed out above, the subspecies is easily recognized by the red membranal veins and the red markings on the cuneus.

*T. lethierryi* ssp. *vulnerata* n.ssp.

Length 2.6 - 3.2 mm. Whitish ochraceous. Base of pronotum sometimes tinged with reddish. Base of scutellum usually reddish. Elytra with a broad reddish transverse band in the apical part; sometimes the red colouring may also spread to the clavus and the corium or even the entire corium and clavus may be red; the cuneus is always without red pigment; the membranal veins are whitish. The male may be dirty greyish, the transverse band on the elytra then being fuscous as in ssp. *carayoni*. Under surface and legs yellowish ochraceous. Male genitalia as in the nominate form. Theca (fig. 10 l) with a small subapical tooth. Vesica (fig. 10 k, 11 a - c) relatively long and slender, roughly S-shaped curved, apex long and falcate.

Type, a male and 18 paratypes, Hula, 10. VII. 1958, !; allotype, a female, Tanninim, 26. VII. 1958, !; a paratype, Deganya, 23. VII. 1958, !; a paratype, 'Ein Gedi, 19. VI. 1958, !; a paratype, Haifa, Saalas; a paratype, Nabi Rubin, 1. V. 1958, Michaeli; 2 paratypes, Revivim, 22. VI. 1958, ! a paratype, Tel-Aviv, 26. VI. 1958, !; a paratype, Greece, Piraeus, 10. VIII. 1958, !. Types in my collection.

Common on *Tamarix*, especially in the northern parts of Israel. - Pontomediterranean.

The subspecies differs from the nominate form in the pale cuneus and membranal veins. The red colouring is also elsewhere much less intense, being sometimes nearly absent in the males. The subspecies *carayoni* is considerably bigger and is only rarely marked with red. The subspecies (when marked with red) also bears a considerable resemblance to *T. elegans*, but the red markings are somewhat more dilute. The male genitalia of *T. elegans* are also dissimilar (the vesica is longer and narrower and the theca lacks the subapical tooth). The male genitalia of *T. elegans* have been illustrated by WAGNER (1955 a, p. 261).

*T. lethierryi* ssp. *carayoni* E. Wgn., n.comb.

Length ♂ 2.95 - 3.55 mm., ♀ 3.2 - 3.6 mm. Colouring dirty greenish with a broad, fuscous, transverse band across apical part of elytra. Cuneus white, only rarely a small fuscous spot present in lateral margin. Membranal veins whitish. Under surface green. Legs whitish yellow or whitish green. Rarely the female may be marked with red, the red colouring then occurring not only in the apical part of the corium but also basad along the claval suture, in the clavus and even in the base of the scutellum. Male genitalia as in the nominate form. Vesica (fig. 11 g).

Material studied: France, Arles-Bouchaud, Camargue, 2 spec., Weber.

West-Mediterranean. The record from Turkey (STICHEL 1958, p. 823) should possibly be referred to ssp. *vulnerata*. The subspecies is easily distinguished by its bigger size and greenish colouring with fuscous markings. It was originally described as a valid species (WAGNER 1955 b, 446 - 447). The differences between it and the nominate form are, however, too slight to warrant this status. *T. carayoni* is certainly a geographical subspecies of *lethierryi*.

*T. lethierryi* ssp. *colorata* Popp., n.comb.

Length 2.4 - 2.6 mm. (♂), 3.1 mm. (♀). Colouring as in the nominate form, but red markings somewhat more dilute and veins of membrane pale yellowish. Body somewhat smaller than in the nominate form. Eyes a little smaller, vertex (♂) 1.6 × as broad as eye (in nominate form about 1.33 ×). Head (♂) 0.66 × as broad as basal width of pronotum (in nominate form about 0.66 ×). Male genitalia similar.

Material studied: The Cape Verde Islands, Maio, Pedro Vaz, 2 ♂♂, 3. II. 1954, Lindberg.

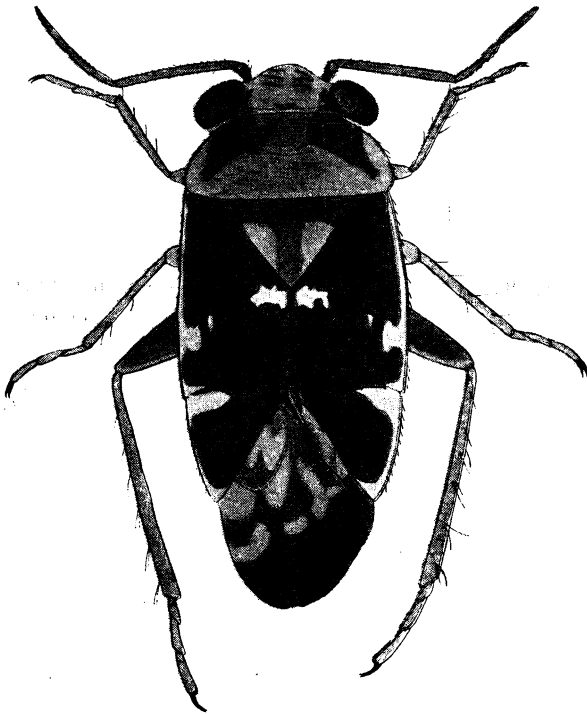


Fig. 12. *Tuponia nupta* n.sp. — Orig.

The subspecies has been found only in the Cape Verde Islands. WAGNER's record (1955 a, p. 263) of the Azores as the type locality is erroneous.

The subspecies (originally described as a valid species) (POPPIUS 1914, p. 107) differs from ssp. *vulnerata* in the red markings on the cuneus, the smaller size, the proportion between the vertex and the eye and the geographical distribution.

*T. nupta* n.sp.

Fig. 12. Length 2 mm. A small, brightly coloured species. Head whitish ochraceous; anterior part with orange, transverse lateral stripes; vertex with an orange spot near basal angle of either eye. Eyes reddish brown. 1st antennal joint orange basally, apex and other joints whitish yellow. Pronotum orange, lateral margins whitish yellow. Base and a median stripe of scutellum orange, sides of apical part yellowish. Clavus and corium bright orange; a transverse spot in clavus and lateral margin of corium whitish; apex of clavus with a minute, fuscous spot; cuneus orange, margins whitish;

membrane dark smoky with light hyaline spots; veins whitish. Dorsum of abdomen ochraceous. Under surface whitish ochraceous, sides  $\pm$  marked with orange. Legs whitish, upper surface of hind femora tinged with orange. Tibial spines dark, arising from small dark dots.

Body  $2.1 \times$  as long as broad. Head very broad and short, nearly as broad as basal width of pronotum; vertex strongly declivous anteriorly,  $1.58 \times$  ( $\sigma$ ) or  $2.2 \times$  ( $\varphi$ ) as broad as eye. Antennae with slight, smooth hairs; proportions between joints  $3.5 + 19 + 12 + 6$  ( $\sigma$ ) or  $4 + 18 + 12 + 7$  ( $\varphi$ ) (1 unit = 0.038 mm.); 2nd joint  $0.82 - 0.88$  as long as basal width of pronotum. Elytra longer than abdomen. Hair covering of upper surface long and light; dark, smoother hair also present, especially in apical part of elytra. Rostrum short, extending to middle coxae. Male genitalia: Right stylus (fig. 11 h) small and narrow. Left stylus (fig. 11 i) with a thin, spiniform hypophysis and a stouter, also spiniform sensory lobe. Theca (fig. 11 j) broad basally, then suddenly narrowing into a thin apex. Vesica (fig. 13 a - b) arcuate, apical third biramose.

Type, a male; allotype, a female and 13 paratypes, Revivim, 22. VI. 1958, l.; 72 paratypes, Yotvata, 22. VI. 1958, l. Types in my collection. — On *Tamarix* in desert conditions.

Easily distinguished from *T. tamaricicola* and *T. tincta* by the dark tibial spines. *T. elegans* is much bigger, dissimilarly shaped and coloured. *T. roseipennis* Rt. is bigger (length 3 mm.), the corium and clavus have no white transverse spots, the rostrum extends a little beyond the hind coxae and the dorsum of the abdomen is black. *T. persica* E. Wgn. has light tibial spines, the theca is much slenderer and the vesica longer and sharp-tipped.

*T. albomarginata* n.sp.

Fig. 14. Length  $\sigma$  2.4 mm.,  $\varphi$  1.95 - 2.4 mm. Head pale greenish yellow. Antennae yellowish, slightly infuscate. Pronotum pale greenish yellow, basal part of disk usually  $\pm$  green, caudo-

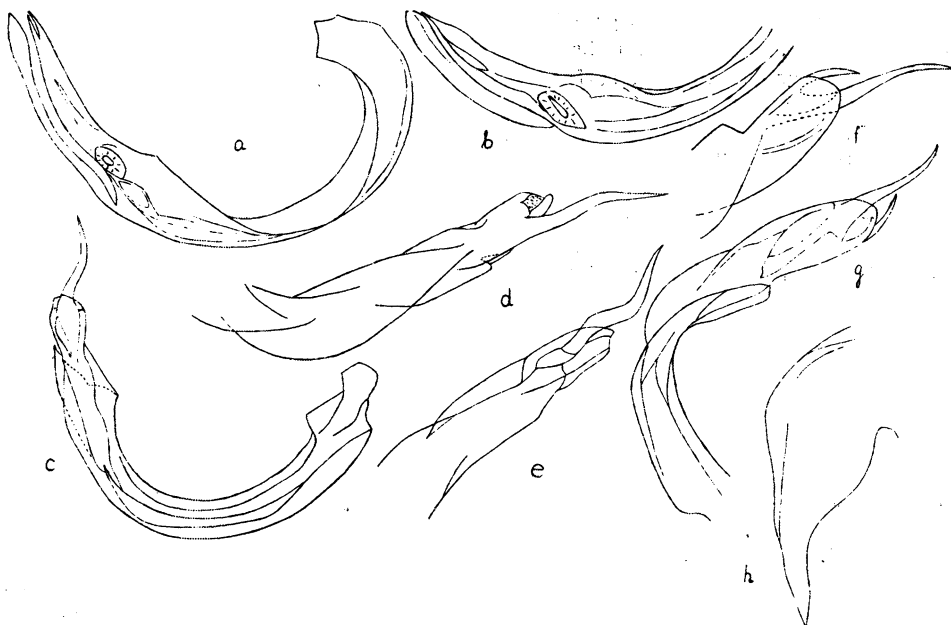


Fig. 13. *Tuponia nupta* n.sp.: a - b vesica. - *T. albomarginata* n.sp.: c - e vesica in different aspects; h theca. - *T. michalki* E. Wgn. (specimen from Cyprus): f - g vesica. - Orig.

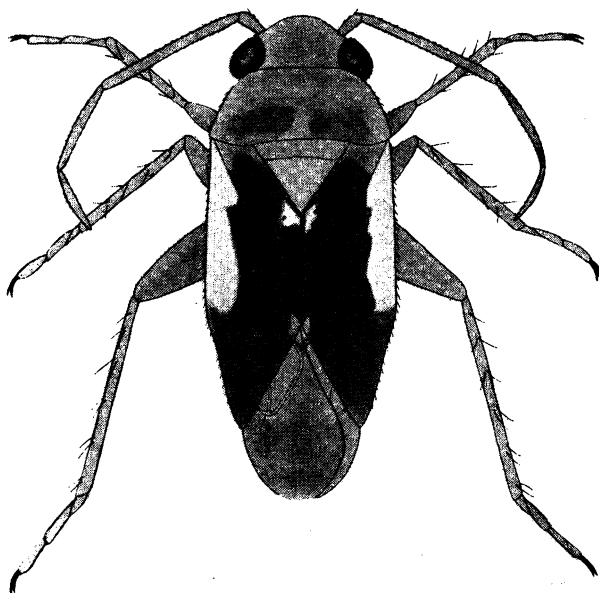


Fig. 14. *Tuponia albomarginata* n.sp. ♀ - Orig.

lateral angles whitish. Scutellum greenish yellow. Elytra bright green; a spot in middle of clavus and lateral margin of corium broadly whitish; cuneus pale greenish; membrane smoky, veins whitish or greenish. Under surface greenish yellow. Legs yellow, tibiae without dark spots, spines black. Colouring variable, e.g. ♀ may be lighter, yellowish green. The whitish markings of the elytra are, however, always visible.

♂ elongate and parallel-sided, 2.6–2.7 × as long as broad; ♀ shorter, oval, 2.2 × as long as broad. Head 0.9 × (♂) or 0.8 × (♀) as broad as basal width of pronotum; vertex 1.2–1.3 × (♂) or 2.53–2.9 × (♀) as broad as eye. Proportions between antennal joints 5 + 23 + 15 + 8 (♂) or 4 + 18 + 13 + 6.5 (♀) (1 unit = 0.033 mm.); 2nd joint 1.0 (♂) or 0.8–0.9 × (♀) as long as basal width of pronotum. Elytra much (♂) or a little (♀) longer than abdomen. Rostrum extending beyond hind coxae. Male genitalia: Right stylus (fig. 15 a) broad, oval. Left stylus (fig. 15 d) with hypophysis straight and rather stout; sensory lobe sharp, spine-like. Theca (fig. 13 h) rather slender. Vesica (fig. 13 c–e) arcuate, apex with only one falcate process.

Type, a male and 8 paratypes, Tanninim, 26. VII. 1958, !; allotype, a female and 27 paratypes, Deganya, 23. VII. 1958, !; 11 paratypes, Hula, 10. VII. 1958, !; 5 paratypes, Nahariya, 6. VIII. 1958, !; 15 paratypes, Tiberias, 21. VII. 1958, !. The types in my collection.

Common on *Tamarix* in northern parts of Israel.

The new species belongs to the *T. hippophaes* group. It closely resembles *T. hippophaes* (Fb.) itself in the shape of the vesica. *T. hippophaes* is much bigger, however, (length ♂ 2.6–3.2 mm., ♀ 2.5–3.0 mm.); the vertex of the male is broader, 1.67 × as broad as the eye; the 2nd antennal joint in the male is 1.16 × as long as the basal width of the pronotum; the elytra in the male are unicoloured green without a whitish lateral margin (in the female the lateral margin of the corium is, however, pale); the rostrum is shorter, extending to the middle coxae, and the right stylus (fig. 15 c) is much narrower. Moreover, *T. hippophaes* seems to have a more western distribution. It has been recorded from Egypt, Cyprus and Turkey (STICHEL 1958, p. 823) and from Palestine (BODENHEIMER op.cit.). PRIESNER and ALFIERI (1953) do not, however, report it from Egypt, BODENHEIMER's record is no doubt to be transferred to *T. albomarginata* and LINDBERG's (1948, p. 58) Cyprian specimens belong to *T. michalki*. *T. hartigi* E. Wgn., of which I have no material, has the vertex (♂) 2.4 × or (♀) 2.3–2.4 × as broad as the eye; the elytra are not margined with white; the rostrum extends to the middle coxae; the theca is much thinner apically and the vesica is somewhat thicker. *T. michalki* E. Wgn. resembles my species in the long rostrum and in the narrow vertex of the male, but differs in having 2 distinct falcate apical processes in the vesica (fig. 13 f–g). The specimen that I (LINNAVUORI 1952, p. 190) recorded from Israel as *T. michalki* belongs to *T. albomarginata*. *T. seidenstückeri* E. Wgn. also has 2 apical appendages in the vesica, the rostrum extends to the middle coxae and the tibial spines arise from small dark spots. *T. unicolor* (Sc.) has a much broader vertex (2.0 × (♂) or 3.2 × (♀) as broad as the eye) and the vesica is dissimilarly shaped.

#### *T. longipennis* Hv. complex

The species belongs to the group of species in which the tibiae are unicoloured, the spines not arising from any dark spots. It differs from the species of the *hippophaes* group in the shape of the vesica, which is provided with a serrate, broad apex bearing two falcate processes.

#### *T. longipennis* Hv., nominate form

The largest subspecies, length ♂ 3.0–3.3 mm., ♀ 2.7–3.0 mm. Colouring as in the other subspecies, but lateral margin of corium often (but not always) ± green. Vertex 1.2–1.23 × (♂) or 2.22 × (♀) as broad as eye. 2nd antennal joint 1.0 × (♂) or 0.9 × (♀) as long as basal width of pronotum. Apical part of vesica as in fig. 15 e. The species has been redescribed by WAGNER (1954, p. 19).

Material studied: The Canary Islands, Fuerteventura, Chilagua, 2 spec., 4–14. III. 1949, Lindberg; Fuerteventura, Gran Tarajal, 2 spec., 11–12. III. 1949, Lindbergi and Fuerteventura, Matural, 1 spec., 18. III. 1949, Lindberg. – The subspecies is endemic to the Canary Islands.



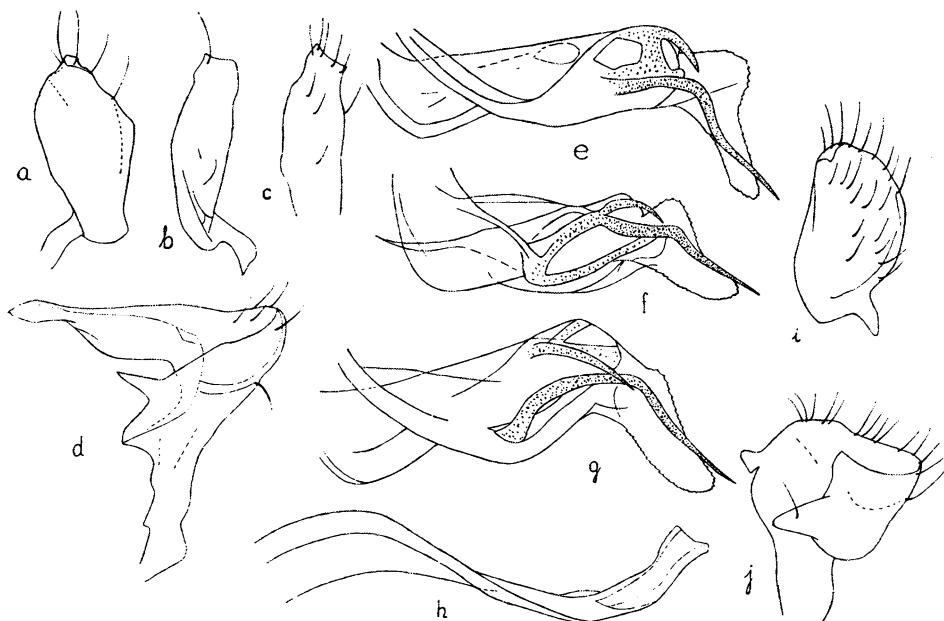


Fig. 15. *Tuponia albomarginata* n.sp.: a right stylus, broad aspect; b same, narrow aspect; d left stylus. - *T. hippophaes* (Fb.) (specimen from the South of France): c right stylus, broad aspect. - *T. longipennis* Hv. (specimen from the Canary Islands): e apex of vesica. - *T. longipennis guttata* E. Wgn. (specimen from Israel): f same. - *T. longipennis viridisparsa* Ldb. (specimen from the Cape Verde Islands): g same. - *T. punctipes* Rt. (specimen from Turkestan): i right stylus; j left stylus. - *T. apicalis* Rt.: h vesica. - Orig.

*T. longipennis* ssp. *guttata* E. Wgn., n.comb.

Length ♂ 2.0 - 3.1 mm., ♀ 2.6 - 2.8 mm. Lateral margin of corium whitish or yellowish (about as in *T. albomarginata*). Vertex  $1.30 - 1.33 \times$  (♂) or  $2.35 \times$  (♀) as broad as eye. 2nd antennal joint  $0.9 \times$  (♂) or  $0.8 \times$  (♀) as long as basal width of pronotum. Vesica as in fig. 15 f.

Material studied: Beerscheba, 1 spec., 19. VI. 1958,!; Jaffa, 1 spec., 18. II. 1904, J. Sahlberg (!); Nabi Rubin, 1 spec., 1. V. 1958, Michaeli (!), Palestine, 1 spec., Bodenheimer (!); Rehovot, 1 spec., 7. VII. 1957, Swirski (!); Revivim, 12 spec., 1 - 2. VIII. 1958,!; Tel-Aviv, 68 spec., 26. VI - 24. VII. 1958,!; Tiberias, 1 spec., 21. VII. 1958,!; Wadi Rubin, 1 spec., 27. VI. 1958,!; Yarkon, 1 spec., 5. VII. 1958,! In addition I have seen 3 spec. from Fayum, Egypt, Saalas leg.

Common on *Tamarix* in central and southern parts of Israel. - Eremian. Recorded from Egypt and Israel but certainly more widely distributed in North Africa.

WAGNER (1950, p. 147) originally described *T. guttata* as a valid species. Owing to the similarity of the male genitalia and also of the general habitus, however, I must regard it as a geographical subspecies of *T. longipennis*. In the key to the *Tuponia* species (1955 a, p. 265 - 266) WAGNER states that the hair covering of the upper surface is black in *T. longipennis*, light in *T. guttata*. In a sufficiently large collection of specimens one can find both dark and lighter hairs in both forms. The colouring of the hairs also depends somewhat on the angle at which the insect is observed under the microscope.

*T. longipennis* ssp. *viridisparsa* Ldb., n.comb.

The smallest subspecies, length 2.5 mm. Colouring as in ssp. *guttata*. Eyes of the male remar-

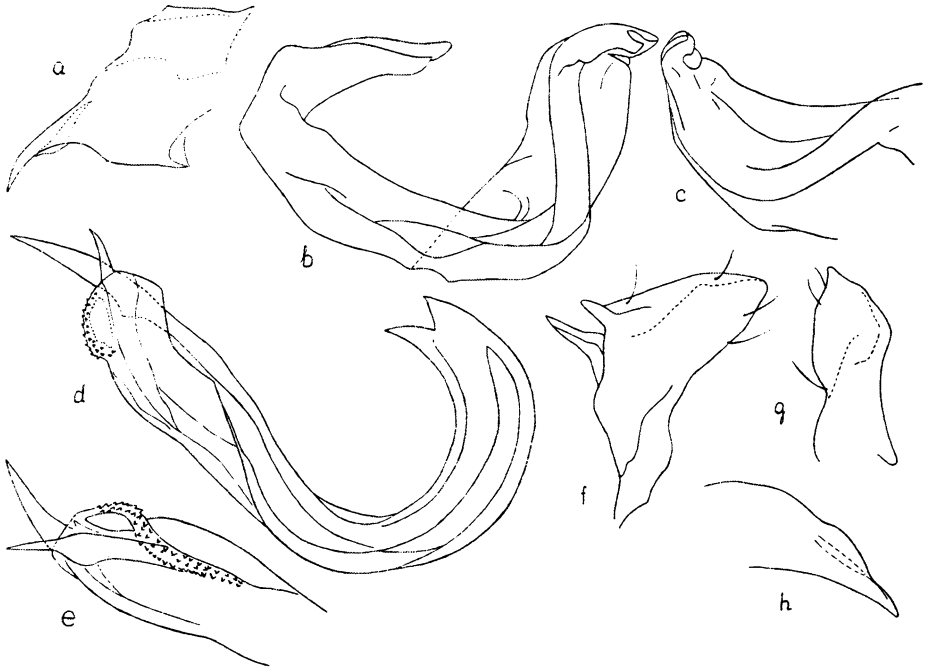


Fig. 16. *Tuponia punctipes* Rt.: a theca, d - e vesica. - *T. statices* Jak. (type): b - c vesica. - *T. concinnoides* n.sp.: g right stylus; f left stylus; h theca. - Orig.

kable large; vertex  $1.13 - 1.17 \times$  ( $\delta$ ) or  $2.4 \times$  ( $\varphi$ ) as broad as eye. Proportion between 2nd antennal joint and basal width of pronotum as in ssp. *longipennis*. Vesica as in fig. 15 g.

Material studied: The Cape Verde Islands, Boavista, Sal Rei, 1 spec., 23. I. - 1. II. 1954, Lindberg; S. Antão, Rib. Currel das Vacas, 3 spec., 5. I. 1954, Panelius; S. Antão, Rib. Grande, 1 spec., 27 - 28. XII. 1953, Lindberg; S. Vicente, Rib. Julião, 2 spec., 9 - 11. III. 1954, Lindberg. - The subspecies is endemic to the Cape Verde Islands.

This subspecies was likewise originally described as a valid species (LINDBERG 1958, p. 123).

(*T. apicalis* Rt.)

A very small species, length 1.8 - 2.0 mm. Head yellowish ochraceous. Pronotum ochraceous, tinged with green. Scutellum green, base yellowish. Elytra green; lateral margin and inner apical angle next to apex of clavus on corium whitish; cuneus green, sides broadly whitish (fig. 2 b). Vertex  $2.5 - 2.66 \times$  ( $\delta$ ) or  $3.0 \times$  ( $\varphi$ ) as broad as eye. 2nd antennal joint  $0.71 - 0.75 \times$  as long as basal width of pronotum. Rostrum extending to hind coxae. Tibial spines arise from black spots. Vesica relatively thin, band-like, apex (fig. 15 h) truncate and simple.

Material studied: Roumania, Bucharest, 3 spec., Montandon; Carpathians, Sinaia Valachie, 1 spec., Montandon. The species has only been found in Roumania.

The species is easily recognized by the small size, the colouring of the cuneus and the shape of the vesica.

(*T. punctipes* Rt.)

Length 2.75 mm. Head greenish yellow. Pronotum, scutellum and elytra green, only basal margin of cuneus very narrowly whitish laterally (thus resembling *T. prasina* (Fb.)). Body about as in *T. concinna*. Vertex  $1.68$  ( $\delta$ ) or  $2.73 \times$  ( $\varphi$ ) as broad as eye. 2nd antennal joint

0.84 – 0.9 × as long as basal width of pronotum. Rostrum extending to hind coxae. Tibial spines arise from distinct black spots. Male genitalia: Right stylus (fig. 15 i) oval. Left stylus (fig. 15 t) with a short hypophysis; sensory lobe rather stout. Theca (fig. 16 a) broad basally, then suddenly narrowing into a thin, claw-like apex. Vesica (fig. 16 d – e) stout, apex serrate ventrally; 2 apical processes present.

Material studied: Transcaspia: Pereval, 1 spec., J. Sahlberg; Transcaspia, 1 spec., Ahnger. Turkestan: Aschabad, 1 spec., Ahnger; Ćardara, 1 spec., (♀ type); Krasnovodsk, 1 spec., Ahnger; Voruh, 1 spec., (♂ type). – Irano-Turanian. Recorded from Transcaspia, Turkestan and Iran.

The species is recognizable by the uniformly greenish colouring, the relatively robust body, the distinct black spots on the tibiae and the characteristic shape of the vesica.

*T. concinnoides* n.sp.

Length ♂ 2.1 – 2.4 mm., ♀ 2.1 – 2.3 mm. Head pale ochraceous or yellowish. Antennae ochraceous, usually ± infused apically. Pronotum yellowish anteriorly, greenish basally, caudolateral angles whitish. Scutellum yellowish basally, green apically or sometimes entirely green. Elytra usually bright green in clavus and apical part of corium; lateral margin of corium broadly whitish basally; cuneus paler or brighter green; membrane smoky, more strongly so in apical part, veins whitish. Under surface greenish. Legs yellowish or greenish yellow; tibiae with conspicuous, black, spine-bearing spots; posterior femora spotted with brown. Colour variable: 1) the entire upper surface may be pale greenish yellow, 2) the elytra may be whitish and spotted with green in the clavus and corium, save in the lateral margin of the latter (as in *T. concinna*) and 3) the elytra may sometimes have a pair of faint, transverse, fulvous bands, the first at about the apex of the scutellum, the second in the apical margin.

Body relatively robust, 2.3 – 2.7 × as long as broad. Head 0.7 × (♂) or 0.76 – 0.8 × (♀) as broad as basal width of pronotum. Vertex 1.78 – 2.0 × (♂) or 2.66 × (♀) as broad as eye. Antennae rather thick; proportions between joints 4 + 19 + 13 + 8 (♂) or 4 + 17 + 14 + 4 (♀) (1 unit = 0.033 mm.), 2nd joint 0.78 × (♂) or 0.7 × (♀) as long as basal width of pronotum. Hair covering of upper surface long and dense, light, in parts also darker. Rostrum extending to middle coxae. Male genitalia: Right stylus (fig. 16 g) rather narrow. Left stylus (fig. 16 f) with a short sharp-tipped hypophysis; sensory lobe also sharply produced. Theca (fig. 16 h) rather slender. Vesica (fig. 17 a – b) rather robust, S-shaped curved, apex with a pair of processes.

Type, a male and 52 paratypes, Beer-Mashash, 23. VI. 1958, !; allotype, a female and 11 paratypes, Wadi Beersheba, 1. VIII. 1958, !; 9 paratypes, Herzliya, 26. VII. 1958, !; 26 paratypes, Revivim, 22. VI, 2. VIII. 1958, !; 7 paratypes, Tel-Aviv, 27. VII. 1958, !; 2 paratypes, Tiberias, 21. VII. 1958, !; 7 paratypes, Yotvata, 22. VI. 1958, !. In addition, 2 paratypes from Fayum, Egypt, J. Sahlberg leg. (det. as *T. concinna* by REUTER). The types in my collection.

Very common on *Tamarix* in central and southern parts of Israel. Also, like the other species of the genus, often collected at lamps. – Eremian.

Owing to its great variability, the species is relatively difficult to recognize without a study of the male genital characters. It has usually been confused with *T. concinna*, which apparently has a more western distribution. The male genitalia of *T. concinna*, however, are quite dissimilar. In the genital structure the new species shows a close relationship to *T. punctipes*. The size, however, is smaller, the right stylus much narrower, the hypophysis of the left stylus longer, the theca less broadened basally and the vesica slenderer than in *T. punctipes*.

(*T. statices* Jak.)

Length 2.7 – 3 mm. Head yellow-green or yellowish. Antennae dirty yellowish, often somewhat infusate apically. Pronotum and scutellum yellow-green. Elytra dirty greyish green, sometimes most of clavus and adjacent part of corium smoky infusate (not black, as stated e.g. in STICHEL 1956, p. 385); cuneus dirty greyish green; membrane smoky, veins whitish grey. Tibiae without dark spots. Body relatively robust, resembling *T. punctipes*. Vertex 2.2 × (♂) or 3.06 × (♀) as broad as eye. 2nd antennal joint 0.62 – 0.65 × as long as basal width of pronotum. Male genitalia: Vesica (fig. 16 b – c) very robust.

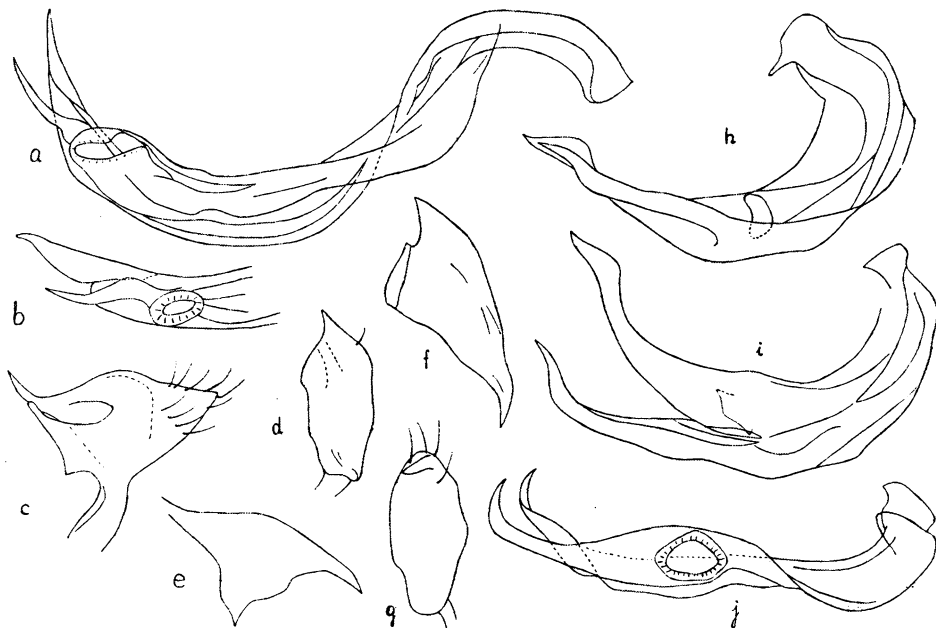


Fig. 17. *Tuponia concinnoides* n.sp.: a - b vesica. - *T. obscuriceps* Rt. (specimen from Israel): d right stylus; c left stylus; f theca; h - i vesica. - *T. concinna* Rt. (specimen from Algeria): g right stylus; e theca; j vesica. - Orig.

Material studied: Eupatoria, South Russia, 3 spec. (types), 27 - 30. V. 1905, Jakovlev. - Caspian.

*T. obscuriceps* Rt.

*Tuponia obscuriceps* REUTER 1901, p. 195.

*T. vitticollis* REUTER 1902, p. 67, n.syn.

*T. richteri* E. WAGNER 1957, p. 100 - 101, n. syn.

Length ♂ 2.75 - 3.25 mm., ♀ 2.5 - 2.8 mm. A variable species. Head dirty greyish, somewhat tinged with greenish, with faint fulvous shadows. Pronotum dirty greyish, calli and 3 faint longitudinal stripes on disk usually orangish. Scutellum dirty greyish or greenish, base often ± tinged with orangish. Elytra whitish or dirty orangish (especially in the male), ± densely spotted with green. The green spotting sometimes sparse (as in some specimens of *T. concinna*). Membrane greyish, veins whitish. Under surface whitish ochraceous with orangish shadows. Hind femora with a row of 4 reddish spots on under surface of posterior margin. Sometimes the pronotum and scutellum are uniformly dirty greyish ochraceous and the elytra greenish and membranal veins green (type of *T. obscuriceps*). In the Palestinian specimens, which are somewhat smaller (partly owing to immaturity evidently), the pronotum is greyish or greenish with only very faint longitudinal stripes, the elytra are light green and the membranal veins white. Tibiae with small black spots.

Head unusually broad and short, 0.8 - 0.9 × as broad as basal width of pronotum. Vertex 1.5 - 1.8 × (♂) or 2.0 × (♀) as broad as eye. Proportions between antennal joints 5 + 21 + 15 + 10 (♂) or 5 + 21.5 + 14 + 10 (♀) (1 unit = 0.033 mm.), 2nd joint 0.8 × as long as basal width of pronotum. Rostrum extending to middle coxae. Male genitalia: Right stylus (fig. 17 d) elongate, ending in a sharp apex. Left stylus (fig. 17 c) with hypophysis claw-like, upturned;

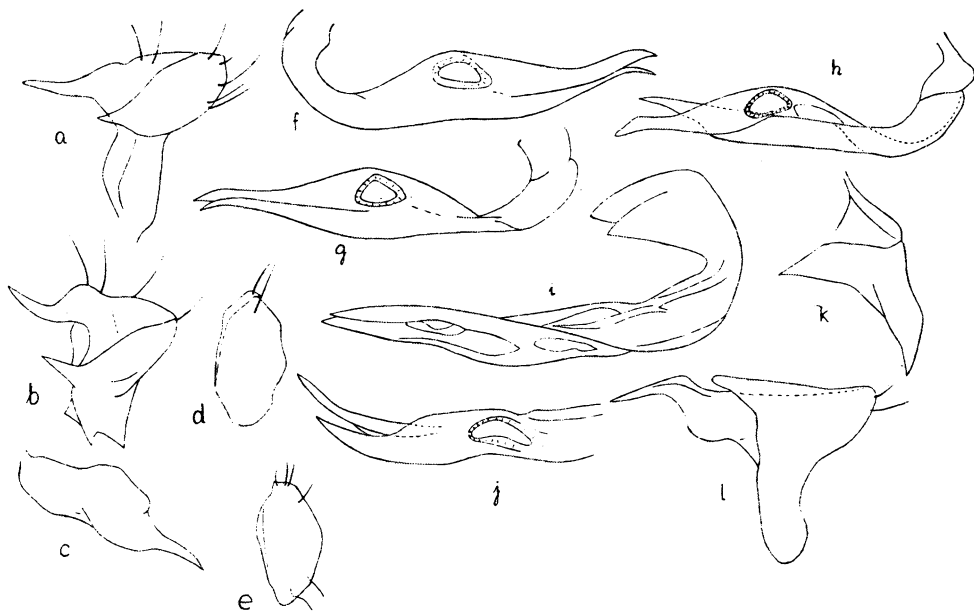


Fig. 18. *Tuponia concinna* Rt.: a left stylus. — *T. conspersa* Rt. (specimen from Israel): d right stylus; b left stylus; c theca; f — g vesica; h vesica of the type specimen from Turkestan. — *T. minutissima* n.sp.: e right stylus; l left stylus; k theca; i — j vesica. — Orig.

sensory lobe ending in a slender apex. Theca (fig. 17 f) broad basally, apex claw-like. Vesica (fig. 17 h — i) characteristic, nearly semicircularly curved, apical half split nearly to base.

Material studied: Algeria, Biskra, 1 ♀, the type of *T. obscuriceps*; 4 spec., the same locality, Noualhier; Algeria, Oued-Rhir, 4 spec., Noualhier (both Biskra and Oued-Rhir are the type localities of *T. vitticollis*). Israel: Beersheba, 2 spec., 19. VI. 1958, !; Beer-Mashash, 12 spec. 23. VI. 1958, !; 'Ein Gedi, 2 spec., 19. VI. 1958, !; Herzliya, 7 spec., 26. VII. 1958, !; Revivim, 5 spec., 22. VI. 1958, !. Saudi Arabia: Er Riyadh, 2 spec., X. 1958, Diehl(!). Iran, Baluchistan: Iranshar, 2 spec. (paratypes of *T. richteri*), 11 — 21. V. 1954, Richter and Schäuuffe(!).

On *Tamarix* in central and southern parts of Israel. Occurring with *T. concinnoides*. — Eremian. Previously known only from Algeria.

The species is recognizable by the unusually broad and short head. It must be noted, however, that the head is not as broad as the pronotum (as stated, for instance, in WAGNER's key (1955)), but a little narrower. The longitudinal orangish stripes on the pronotum (if present) form another good character for the species. Moreover, the male genitalia are also unique. The type of *T. obscuriceps* (unfortunately a female) differs from typical specimens as mentioned above. Since, however, I could not find any statistical difference between it and specimens of *T. vitticollis* and since the type locality is likewise the same in both species, I have synonymized them.

(*T. concinna* Rt.)

Length 2.1 — 2.2 mm. Head yellowish, greyish or greenish. Eyes greyish. 1st antennal joint greenish, with a dark subapical ring; other joints ochraceous. Pronotum greenish (♂), greenish or whitish grey with disk ± densely spotted with green, especially basally (♀). Scutellum greenish or yellowish grey, spotted with green. Elytra white, ± densely spotted with green, save along lateral margin of corium and in a small whitish spot in middle of clavus; cuneus

whitish, densely spotted with green apically; membrane white with an irregular transverse fuscous spot, base broadly white; veins white. Under surface ochraceous or yellowish. Legs yellowish grey; femora usually  $\pm$  densely spotted with green, tibiae with conspicuous black, spine-bearing spots.

Body  $2.2 \times$  as long as broad, rather robust. Head  $0.8 \times$  as broad as basal width of pronotum. Vertex  $1.6 \times$  ( $\sigma$ ) or  $2.9 \times$  ( $\varphi$ ) as broad as eye. 2nd antennal joint  $0.8 - 0.9 \times$  as long as basal width of pronotum. Rostrum extending near to hind coxae. Male genitalia: Right stylus (fig. 17 g) elongately oval. Left stylus (fig. 18 a) rather slender, hypophysis long and sharp; sensory lobe produced as a sharp process. Theca (fig. 17 e) broad basally, then suddenly narrowing into a thin apex. Vesica (fig. 17 j) slender and rather straight, broadest at the middle, apical third split, forming two falcate appendages of equal length.

Material studied: Algeria, Biskra, 5 spec. (including 3 types), 1898, Noualhier. – Apparently Eremian with a western distribution.

The species has previously been confused with *T. concinnoides*. The types were females, but as in the undetermined material at Helsinki University I also found a topotypic male, I could separate the two species. *T. concinna* has also been recorded from Egypt, Turkey, South Russia and Turkestan. These records should, however, be revised.

#### *T. conspersa* Rt.

Length 1.5–2 mm. Whitish, whitish yellow or pale greenish yellow. Eyes dark brown. Elytra sparsely spotted with green, with two greenish or greenish fulvous transverse bands, the first at about the middle of the corium, the second in the apical margin of the same; membrane apically smoky. Sometimes nearly whole elytra tinged with greenish. Tibiae with conspicuous black spots.

Body form as in *T. concinna*. Vertex  $1.09 - 1.18 \times$  ( $\sigma$ ) or  $2.57 \times$  ( $\varphi$ ) as broad as eye. 2nd antennal joint  $0.73 - 0.84 \times$  as long as basal width of pronotum. Male genitalia: Right stylus (fig. 18 d) elongate. Left stylus (fig. 18 b) with hypophysis falcate and somewhat upturned, a rounded lobe present in upper margin of stylus behind hypophysis; sensory lobe sharp-tipped. Theca (fig. 18 c) sharp-tipped. Vesica (fig. 18 f–h) slender and straight, as in *T. concinna* but apical appendages scarcely upturned apically.

Material studied: Turkestan, Michailovo, 1  $\sigma$ , the type, J. Sahlberg. Israel: Eilat, 4 spec., 20. VI. 1958, l.; Nahal Hiyon, 3 spec., 22. VI. 1958, l.; Revivim, 1 spec., 22. VI. 1958, l.

On *Tamarix* in deserts. – Irano-Turanian. Previously recorded only from Turkestan and Iran.

The species closely resembles *T. concinna*, but is much smaller, the eyes are much larger, the left stylus is dissimilarly shaped, the theca is less broadened basally and the vesica is straighter.

#### *T. minutissima* n.sp.

Length 1.5–1.9 mm. Whitish, greyish or greenish grey. Antennae greyish yellow. Elytra dirty pale greenish grey or yellowish grey; faint fulvous transverse band across corium and clavus at about apex of scutellum, sometimes also apical part of corium slightly fulvous. Under surface greenish grey. Legs greyish yellow; tibiae with conspicuous black spots.

A very small species. Body relatively robust,  $2.4 \times$  as long as broad. Head  $0.7 \times$  as broad as basal width of pronotum. Vertex  $2.0 \times$  ( $\sigma$ ) or  $3.0 - 3.45 \times$  ( $\varphi$ ) as broad as eye. Proportions between antennal joints  $9 + 30 + 19 + ?$  ( $\sigma$ ) or  $8 + 26.5 + 19 + 13$  ( $\varphi$ ) (1 unit = 0.015 mm.). Pronotum  $1.3 - 1.4 \times$  as broad behind as length of 2nd antennal joint. Rostrum extending to hind coxae. Male genitalia: Right stylus (fig. 18 e) very small, oval. Left stylus (fig. 18 l) with hypophysis somewhat directed ventrad; sensory lobe strongly produced. Theca (fig. 18 k) relatively thick up to the apex. Vesica (fig. 18 i–j) rather stout, straight, apical third split; the branches relatively thick.

Type, a male; allotype, a female and 7 paratypes, 'Ein Gedi, 19. VI. 1958, l.; Yotvata, 11 paratypes, 22. VI. 1958, l. The types in my collection. On *Tamarix* in southern parts of Israel.

The male genitalia show a relationship to the *concinna* group. The new species is easily recognized, however, by the very small size, the small eyes, the dissimilar colouring, the long rostrum, the thicker theca and vesica and the shape of the left stylus. *T. minima* E. Wgn. is also a very small species, but the male genitalia are quite dissimilar.

### *Eurycranella* Rt.

*E. geocoriceps* Rt. – Beer-Mashash, 6 spec., 22. VI. 1958,!; Herzliya, 1 spec., 26. VII. 1958,!; Revivim, 11 spec., 2. VIII. 1958,! – On *Tamarix*. – Eremian. Previously recorded from Libya, Egypt and Iran.

### *Isometopus* Fb.

*I. taeniaceps* Pt. – Palestine (BODENHEIMER op.cit.); Jerusalem, 1 spec., 14. VI. 1958,!; From an unidentified, imported deciduous tree. – Endemic.

### Cimicidae

#### *Cimex* L.

*C. lectularius* L. – Palestine (BODENHEIMER op.cit.). – Cosmopolitan.

### *Cacodmus* Stål

*C. aridus* Ferr. & Us. – Dan, 1 spec., 1958, (!). Recorded as *C. villosus* Stål from Palestine (BODENHEIMER op.cit.) – Endemic.

### Anthocoridae

#### *Elatophilus* Rt.

*E. pachynemis* Hv. – Jerusalem, 5 spec., 13 – 15. VI. 1958,! – On *Pinus halepensis*. – Sryio-Anatolian. Previously recorded from Cyprus, Turkey and South Russia.

#### *Anthocoris* Fn.

*A. nemoralis* (F.) – Palestine (BODENHEIMER op.cit.); Aqua Bella, 1 spec., 14. VI. 1958,! Dan, 1 spec., 7. VII. 1958,!; Hadera, 1 spec., 2. VII. 1958,!; Jerusalem, 5 spec., 13 – 15. VI. 1958,! – From bushes and deciduous trees (e.g. *Quercus calliprinos*). – European.

### *Montadoniola* Popp.

*M. moraguesi* (Pt.) – Bat Yam, 1 spec., 3. VII. 1958,!; Miqve Israel, 30 spec., 27. VII. 1958,!; Rehovot, 8 spec., 25. VI. 1958,! – On *Ficus nitida*. – Holomediterranean, with a southern distribution. Previously recorded from Spain, the Canary Islands, Morocco and Egypt.

### *Orius* W.

*O. niger* W. – Palestine (BODENHEIMER op.cit.); 'Ein Gedi, 3 spec., 19. VI. 1958,!; Jerusalem, 12 spec., 13 – 15. VI. 1958,!; Tel-Aviv, 6 spec., 26. VI. 1958,!; Tiberias, 3 spec., 21. VII. 1958,! – Swept from different herbs in cultivated fields. – Euro-Siberian.

*O. niger* ssp. *aegyptiacus* E. Wgn. – Rehovot, 19 spec., 28. VII. 1958,! – In gardens and cultivated fields. – Eremian. Previously recorded from Turkey, Syria and North Africa.

*O. laevigatus* (Fb.) ssp. *cypriacus* E. Wgn. – Dan, 12 spec., 7. VII. 1958,!; Deganya, 3 spec., 27. VII. 1958,!; Gesher Haziv, 4 spec., 6. VIII. 1958,!; Hadera, 23 spec., 1. VII. 1958,!; Haifa, 1 spec., 29. VI. 1958,!; Hagoshrim, 3 spec., 11. VII. 1958,!; Hula, 8 spec., 10. VII. 1958,!; Neot Mordekhai, 1 spec., 21. VII. 1958,!; Rehovot, 1 spec., 28. VII. 1958,!; Revadim, 2 spec., 15. VII. 1958,!; Revivim, 4 spec., 24. VI. 1958,!; Tanninim, 1 psce., 26. VII. 1958,!; Wadi Sukreir, 4 spec., 27. VI. 1958,!; Yarkon, 3 spec., 28. VI. 1958,! – Common among different herbs in meadows and cultivated fields. – The nominate form Holomediterranean, the subspecies Syrio-Anatolian. The subspecies varies considerably in colouring, being sometimes very light brown and then resembling *O. luridus*. It is easily distinguished from *O. luridus*, however, by the long pronotal setae.

*O. pallidicornis* (Rt.)

Jerusalem, 4 spec., 17. VI. 1941, Houška (HöBERLANDT 1951, p. 30), 2 spec., 20. IV. 1942, Bytinski-Salz (!), 131 spec., 14. VI. 1958,! – On *Ecbalium elaterium*. – Holomediterranean.

*O. luridus* E. Wgn. – Wadi Musrara, 3 spec., Carmin (!). – Endemic.

*O. minutus* (Rt.) – Palestine (BODENHEIMER op.cit.). – Euro-Siberian.

*O. ribauti* E. Wgn. – Hula, 1 spec., 10. VII. 1958,! – Possibly Holomediterranean, although also recorded from Siberia. Not previously known from the Middle East.

*O. albidipennis* (Rt.) – Palestine (BODENHEIMER op.cit.); 'Ein Gedi, 22 spec., 18. VI. 1958,!; Jerusalem, 1 spec., 14. VI. 1958,!; Rehovot, 1 spec., 28. VII. 1958,!; Revivim, 4 spec., 22. VI. 1958,!; Yotvata, 8 spec., 22. VI. 1958,! – In cultivated fields (e.g. on alfalfa). Commonest in the southern parts of Israel. – Eremian.

*Dokkiocoris* Mill.

*D. bicolor* Mill. – Beit-Shean, 1 spec., 7. VIII. 1958,! – Swept from *Phragmites communis*. – Eremian. Previously recorded only from Egypt.

*Lyctocoris* Hhn.

*L. campestris* (F.) – Palestine (BODENHEIMER op.cit.); Beit-Dagan, 2 spec., 15. VII. 1958,!; Tel-Aviv, 26 spec., 26. VI. 1958,!; Tirat-Shalom, 5 spec., 18. VII. 1958,! – Common among fallen leaves and other detritus in gardens. – Holarctic.

*L. dorni* E. Wgn. – Galilea, Vall. Kison, 1 spec., J. Sahlberg (!). – Possibly Pontomediterranean, also extending to South Finland.

*Xylocoris* Df.

*X. maculipennis* (Bär.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

*X. galactinus* (Fb.) – Palestine (BODENHEIMER op.cit.); Beit-Dagan, 20 spec., 15. VII. 1958,! – Among fallen leaves and other detritus in a garden. – Cosmopolitan.

*X. obliquus* (C.) – Palestine (BODENHEIMER op.cit.); Beit-Dagan, 12 spec., 15. VII. 1958,!; Dan, 2 spec., 7. VII. 1958,!; Hagoshrim, 6 spec., 7. VII. 1958,! – Among fallen leaves and other detritus in a garden. Among *Polygonum* sp. on a path at fish ponds. – Holomediterranean.

*Brachysteles* Ms.

*B. rufescens* (C.) – Palestine (BODENHEIMER op.cit.); Nahariya, 1 spec., 6. VIII. 1958,! – Swept from *Phragmites* and *Juncus*. – Holomediterranean.

*B. parvicornis* (C.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean, also extending into Central Europe.



*Cardiastethus* Fb.

*C. nazarenus* Rt. – Palestine (BODENHEIMER op.cit.); Dan, 1 spec., 7. VII. 1958,!; Hago-shrim, 11 spec., 11. VII. 1958,!; Jerusalem, 2 spec., 14. VI. 1958,!; Miqve Israel, 1 spec., 25. VII. 1958,!; Nazareth, 1 spec., 5. VIII. 1958,!; Neve Ya'ar, 1 spec., 29. VII. 1958,!; Rehovot, 9 spec., 28. VII. 1958,!; Tel-Aviv, 2 spec., 24. VII. 1958,!; Wadi Rubin, 3 spec., 17. VI. 1958,! – On various deciduous trees (e.g. *Acacia* and *Morus alba*). – Holomediterranean.

*Dufouriellus* Kk.

*D. ater* (Df.) – Palestine (BODENHEIMER op.cit.). – Holarctic.

*Microphysidae**Loricula* Ct.

*L. basalis* (Rt.) – Palestine (BODENHEIMER op.cit.); Tivon, 3 spec., 2. IV. 1955, Sternlicht (!). – On *Quercus ithaburensis*. – Eremian, recorded from Syria and Egypt.

*L. nigrifula* (Pt.) – Palestine (BODENHEIMER op.cit.). – Eremian, recorded from Algeria and Syria.

*Myrmedobia* Bär.

*M. angusticollis* Rt. – Palestine (BODENHEIMER op.cit.). – Pontomediterranean.

*Nabidae**Prostemma* Lap.

*P. guttula* (F.) – Palestine (BODENHEIMER op.cit.); Zichron Y., 1 spec., 20. I. 1945, Bytinski-Salz (!). – Holomediterranean, also extending into Central Europe.

*P. aeneicolle* St. – Palestine (BODENHEIMER op.cit.). – Holomediterranean, also extending into Central Europe.

*P. krueperi* St. – Palestine (BODENHEIMER op.cit.). – Pontomediterranean.

*Himacerus* W.

*H. mirmecoides* (O. C.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean with a wide distribution in Central Europe.

*Nabis* Latr.

*N. capsiformis* Gm. – Palestine (BODENHEIMER op.cit.); Bat Yam, 1 spec., 3. VII. 1958,!; 'Ein Gedi, 1 spec., 19. VI. 1958,!; Gvuloth, 1 spec., 17. VII. 1958,!; Hadera, 2 spec., 26. VI. 1958,!; Jerusalem, 2 spec., 14. VI. 1958,!; Kefar Malal, 1 spec., 27. VII. 1958,!; Miqve Israel, 1 spec., 16. IV. 1958, Michaeli (!); Nabi Rubin, 1 spec., 4. VII. 1958,!; Revadim, 3 spec., 15. VII. 1958,!; Tel-Aviv, 3 spec., 26. VII. 1958,!; Tirat-Shalom, 1 spec., 18. VII. 1958,!; Wadi Sukreir, 1 spec., 27. VI. 1958,!; Yarkon, 1 spec., 5. VII. 1958,! – Common among different herbs in cultivated fields, on roadsides, etc. – Cosmopolitan.

*N. palifer* Sdst. – Beit-Shean, 1 spec., 7. VIII. 1958,!; Revivim, 4 spec., 22. VI. 1958,! – Among herbs in dry localities. – Probably Irano-Turanian, previously recorded from Cyprus, Syria and Turkestan.

*N. viridis* Br. – Palestine (BODENHEIMER op.cit.); Beer-Mashash, 17 spec., 23. VI. 1950,!; Deganya, 5 spec., 26. VII. 1958,!; Eilat, 1 spec., 22. VI. 1958,!; 'Ein Gedi, 2 spec., 19. VI. 1958,!; Gvuloth, 1 spec., 17. VII. 1958,!; Herzliya, 2 spec., 26. VII. 1958,!; Tanninim, 1 spec., 26. VII. 1958,!; Yotvata, 2 spec., 22. VI. 1958,! – On Tamarix. – Holomediterranean.

BODENHEIMER (op.cit.) has also recorded *N. ferus* (L.) from Palestine. This is a collective species, however, consisting of several species distinguished only on the basis of the male genital characters. At any rate *N. ferus* seems to be a more northern species that can hardly be supposed to occur in Israel.

### *Reduviidae*

#### *Empicoris* W.

*E. culiciformis* (Deg.) – Palestine (BODENHEIMER op.cit.). – Holarctic.

*E. mediterraneus* Hob. – Palestine, 2 spec., Bodenheimer (!); Rehovot, 1 spec., 28. VII. 1958,! – Among fallen leaves in a garden. – Syrio-Anatolian. Previously recorded only from Turkey.

#### *Stenolemus* Sign.

*S. bogdanovi* Osh. – Palestine (BODENHEIMER op.cit.). – Irano-Turanian.

*S. novaki* Hv. – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

#### *Ploearia* Scop.

*P. domestica* Scop. – Palestine (BODENHEIMER op.cit.); Kabai, 1 spec., 3. IV. 1956, coll. unknown (!). – Holomediterranean.

*P. wahrmani* Wyg. – Israel (WYGODZINSKY 1952, p. 102); Jerusalem, 1 spec., 12. II. 1943, 1 spec., 17. XII. 1944, Bytinski-Salz (!). – Endemic.

*P. mosconai* Wyg. – Israel (WYGODZINSKY 1952, p. 103); Amir, 2 spec., 15. I. 1948, Bytinski-Salz (!); Yarkon, 4 spec., 5. VII. 1958,! – Among dried stems of *Juncus acutus* in coastal dunes. – Endemic.

#### *Gardena* Dhrn

*G. insignis* Hv. – Palestine (BODENHEIMER op.cit.). – Pontomediterranean, originally described from Italy.

#### *Metapterus* C.

*M. linearis* C. – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

#### *Sastrapada* Am. & Serv.

*S. baerensprungi* (Stål) – Palestine (BODENHEIMER op.cit.); Mishmar Haemek, 1 spec., 6. X. 1948, Bytinski-Salz (!). – Intertropical.

#### *Deganya* Dps. in litt.

*D. linnavuorii* Dps. in litt. – Deganya, 1 spec., 23. VII. 1958,!; Jordan, 1 spec., 17. VIII. 1939,! – Collected at lamp. – Endemic.

*Oncocephalus* Kl.

- O. acutangulus* Rt. – Palestine (BODENHEIMER op.cit.). – Eremian.  
*O. pugnax* H. – Palestine (BODENHEIMER op.cit.). – Endemic.  
*O. obsoletus* Kl. – Palestine (BODENHEIMER op.cit.); Israel, 1 spec., 1. VI. 1954,(!). – Eremian.  
*O. obsoletus* f. *imperfectus* Dps. in litt. – Israel, 1 spec., 8. IV. 1937,(!). – Endemic.  
*O. pilicornis* (H.S.). – Ramath Gan, 1 spec., 25. VIII. 1958,(!). – Holomediterranean, recorded also from Japan and the Nearctic region. New for Israel.  
*O. brachymerus* Rt. – Palestine (BODENHEIMER op.cit.). – Caspian.  
*O. squalidus* (R.). – Palestine (BODENHEIMER op.cit.). – Holomediterranean.  
*O. aspericollis* Rt. – Palestine (BODENHEIMER op.cit.); Jerusalem, 2 spec., VI. 1958,;!; Elon, 1 spec., Bytinski-Salz(!). – Endemic. Collected at lamps.  
*O. aspericollis* f. *ornatellus* Dps. in litt. – 'Ein Gedi, 1 spec., 11. III. 1958,(!); El Tureiba, 1 spec., Bytinski-Salz(!); Rehovot, 1 spec., 8. VI. 1958, Harpaz(!). – Endemic.  
*O. aspericollis* f. *decolor* Dps. in litt. – Mishmar Haemek, 1 spec., 27. VIII. 1952,(!). – Endemic.  
*O. arcticeps* Nh. – Benamina, 1 spec., 23. III. 1942, Houška (HOBERLANDT 1951, p. 22).  
*O. pennatulus* Dps. in litt. – Lake of Tiberias, 1 spec., J. Sahlberg (!). – Endemic.  
*O. fasciatellus* Dps. in litt. – Yotvata, 1 spec., 14. IV. 1955,(!). – Endemic.

*Holotrichius* Burm.

- H. tenebrosus* Bm. – Palestine (BODENHEIMER op.cit.). – Pontomediterranean, also known from Greece and the South of France.  
*H. denudatus* C. – Palestine (BODENHEIMER op.cit.). – Holomediterranean.  
*H. apterus* Jak. – Palestine (BODENHEIMER op.cit.); Dan, 2 spec., Hurvitz (!). – Irano-Turanian.  
*H. putoni* Rt. – Jerusalem, 1 spec., 1. V. 1946, Houška (HOBERLANDT 1951, p. 23). – Syrio-Anatolian.  
*H. innesi* Hv. – 'Ein Murrain, 1 spec., 18. IV. 1952,(!). – Eremian. Previously known from North Africa.  
*H. luctuosus* (Ms. & My.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean.  
*H. rotundatus* Stål – Palestine (BODENHEIMER op.cit.) Jerusalem, 1 spec., Bodenheimer (!). – Caspian, recorded from Syria, Caucasia and Turkestan.  
*H. squalidus* (Dgl. Sc.) – Palestine (BODENHEIMER op.cit.). – Endemic.  
*H. bodenheimeri* Dps. in litt. – Tel-Aviv, 1 spec., 1938, Bodenheimer. – Endemic.

*Pasira* Stål

- P. basiptera* Stål – Palestine (BODENHEIMER op.cit.); Hdon, 1 spec., 5. III. 1958, Lewinsohn (!); Jerusalem, some spec., J. Sahlberg (!). – Holomediterranean.

*Reduvius* F.

- R. personatus* (L.) – Palestine (BODENHEIMER op.cit.). – Holarctic. Also recorded from the Australian region.  
*R. nigricans* (K.) – Palestine, 1 spec., Bodenheimer (!). – Eremian. Previously recorded only from Arabia and North Africa.

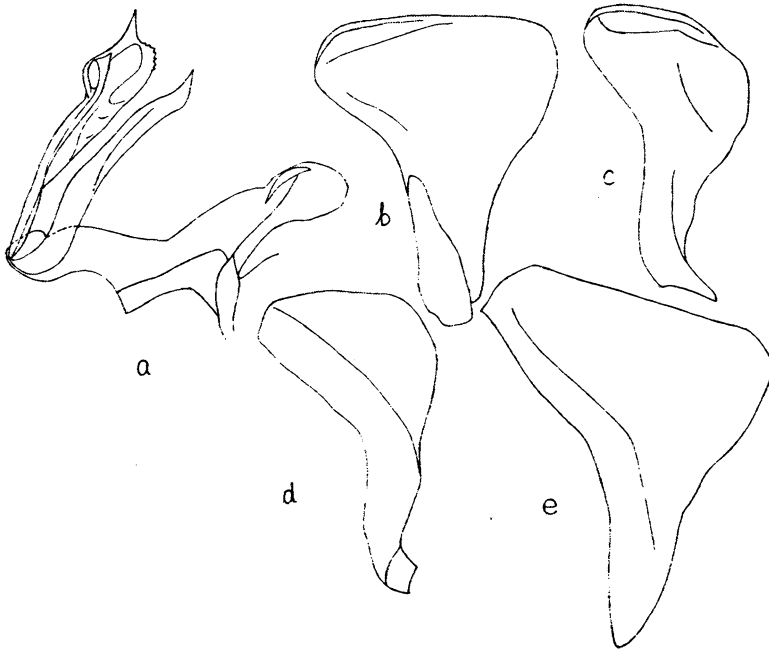


Fig. 19. *Compsidolon acacicola* n.sp.: a theca. - *Ectomocoris quadrimaculatus* (S.): b stylus, median aspect; e same; lateral aspect. - c and d same of *E. quadrimaculatus* ssp. *jordanensis* n.ssp. - Orig.

*R. austrani* Rt.

*Reduvius austrani* REUTER 1892, p. 24.

*R. maestus* MILLER 1955, p. 73-74, n. syn.

Palestine (BODENHEIMER op.cit.), Bet Hashita, 1 spec., 24. XI. 1940, Bytinski-Salz (!); Dan, 1 spec., Hurvitz (!); Dalia, 1 spec., 14. VIII. 1954, Bytinski-Salz (!); Jerusalem, 1 spec., Bodenheimer (!) Upper Galilee, 1 spec., 27. V. 1926, Hucklesby (MILLER op.cit.). - Endemic.

*R. pallipes* (K.) - Palestine (BODENHEIMER op.cit.); Revivim, 3 spec., 2. VIII. 1958,; Tel-Aviv, 1 spec., Bytinski-Salz (!). - Collected at lamps. - Eremian.

*R. tabidus* (K.) - Palestine (BODENHEIMER op.cit.); Revivim, 4 spec., 2. VIII. 1958,; 1 spec., Bytinski-Salz (!); Tel Yeruham, 1 spec., Bytinski-Salz (!). - Collected at lamps. - Eremian.

*R. jakovleffi* Rt. - Palestine (BODENHEIMER op.cit.); Abde, 1 spec., 16. IV. 1953, Bytinski-Salz (!); Bir-Rekhme, 1 spec., Fishelson (!); 'Ein Gedi, 3 spec., 19. VI. 1958,; Revivim, 2 spec., 2. VIII. 1958, l. - Collected at lamps. - Eremian.

*R. ustulatus* Mill. - El Arish, N. E. Sinai, 1 spec., 15. IX. 1924, Williams (MILLER op.cit., p. 70). - Eremian.

*R. testaceus* (H. S.) - Palestine (BODENHEIMER op.cit.). - Eremian.

*R. israelensis* Dps. in litt. - Israel, 1 spec. - Endemic.

*Ectomocoris* Mayr

*E. ululans* (R.) - Palestine BODENHEIMER op.cit.); Dan, 2 spec., Hurvitz (!); Tel-Arish, 1 spec., 12. III. 1956, Fishelson (!); Yarkon, 1 spec., VI. 1943, Bytinski-Salz (!) - Holomediterranean.

*E. melanogaster* (Fb.) - Jerusalem, 2 spec., 27. IX. 1943, 21. IX. 1944, Houška (HOBERLANDT 1951, p. 23); Palestine, 1 spec., Saliternik (!). - Pontomediterranean, recorded only from Sicily and Palestine.

*E. quadrimaculatus* ssp. *jordanensis* n.ssp.

♂. Length 16 mm. As the nominate form, but somewhat smaller. Eyes somewhat larger; vertex  $0.97 \times$  as broad as eye. Proportions between antennal joints  $31 + 67 + 67 + ?$  (1 unit =  $0.038$  mm.), 2nd joint  $1.29 \times$  as long as breadth of head over eyes. Anterior portion of pronotum somewhat shorter and broader, with more strongly rounded lateral margins. Greatest width of pronotum  $4.35$  mm., length  $4.05$  mm. Length of elytra  $9.6$  mm. Male genitalia: length of pygophoral process  $0.84$  mm. Stylus (fig. 19 c, d) narrow, greatest width  $0.80$  mm., length  $1.22$  mm. – ♀ unknown. – Possibly a valid species.

Type, a male, Lower Jordan, coll. unknown, in my collection.

The nominate form is robust, length 18 mm. Vertex  $1.08 \times$  as broad as eye. Antennae longer, proportions between joints  $35 + 74 + 80 + ?$ , 2nd joint  $1.37 \times$  as long as breadth of head over eyes. Length of pygophoral process  $1.22$  mm. Stylus (fig. 19 b, e) much broader, greatest width  $1.18$  mm., length  $1.60$  mm.

Material studied: 1 ♂ from Caucasia, Lenkoran, Reitter.

The nominate form is Eremian, recorded from Caucasia, Iran, Arabia and the Ethiopian region.

*Pirates* Serv.

*P. hybridus* (Scop.) – Palestine (BODENHEIMER op.cit.); Palestine, 6 spec., Bodenheimer (!). – Holomediterranean, also extending into Central Europe.

*P. strepitans* Rb. – Palestine (BODENHEIMER op.cit.); Dan, 1 spec., Hurvitz (!); Karkur, 1 spec., 11. VII. 1946, Bytinski-Salz (!); Tel-Aviv, 1 spec., 7. VII. 1948, Bytinski-Salz (!). – Holomediterranean, also extending into the Ethiopian region.

*Rhaphidosoma* Am. & Serv.

*R. lutescens* Pop. – Palestine (Bodenheimer op.cit.), Between Wadi Seyal and 'Ein Gedi, 1 spec., coll. unknown. (!). – Endemic.

*R. bergevini* Pop. – Palestine (BODENHEIMER op.cit.); 'Ein Gedi, 1 spec., 18. VI. 1958,; Revivim, 12 spec., 24. VI and 1. VIII. 1958,; Sdom Road, 1 spec., 3. IV. 1953, Amitai (!); 12 km. south of Beersheba, 20. VI. 1958,!. – In deserts. This stick-like insect is difficult to find when sitting immobile on the ground among dry, greyish sticks of different desert plants. – Eremian, known from Palestine and North Africa.

*R. argillaceum* Hv. – Palestine (BODENHEIMER op.cit.); – Eremian, recorded from Palestine and Iran.

*Vachiria* Stål

*V. natolica* Stål – 'Ein Gedi, 1 spec., 19. VI. 1958,; Revivim, 1 spec., 1. VIII. 1958,; Wadi Beersheba, 1 spec., 1. VIII. 1958,!. – Swept from herbs in desert conditions. – Holomediterranean. Not previously recorded from Israel.

*V. immaculata* n.sp.

♂. Length  $9.5 - 10.0$  mm., breadth  $1.8 - 1.9$  mm. Uniformly pale greyish yellow. Head behind ocelli sometimes slightly darkened. 3rd and 4th antennal joints a little darker. Corium and clavus hyaline; veins thick and yellowish; membrane hyaline. Connexivum uniformly yellowish. Entire body covered with dense, whitish, tomentous hairs.

Fig. 20 a. Body elongate,  $5.1 +$  as long as broad. Head  $1.1 \times$  as long as pronotum; anterior portion of head  $1.2 \times$  as long as posterior, parallel-sided; lateral margins of posterior portion distinctly converging caudad; vertex  $1.78 \times$  as broad as eye. Antennae gracile, hair covering very sparse and short, proportions between joints  $83 + 48 + 23 + 48$  (1 unit =  $0.038$  mm.);

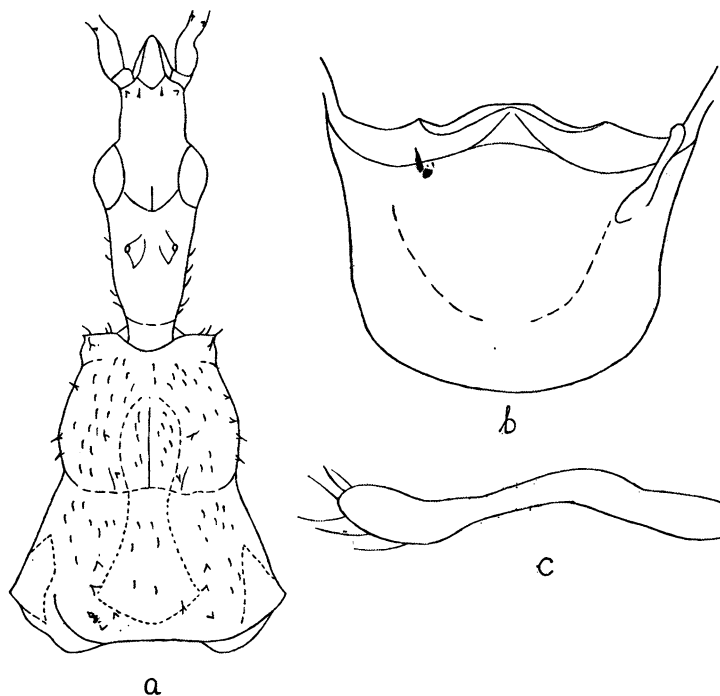


Fig. 20. *Vachiria impicta* n.sp.: a head and pronotum; b pygofer (right stylus removed), caudal aspect; c stylus. - Orig.

1st joint  $1.5 \times$  as long as head; 2nd joint  $0.6 \times$  as long as 1st and as long as 4th; 3rd joint  $0.47 \times$  as long as 2nd. Pronotum  $1.04 \times$  as long as broad; anterior portion as long as posterior, antero-lateral angles blunt and knob-like, lateral margins slightly rounded and slightly diverging caudad, disk shining, with a medial groove and some minute hair-bearing knobs; posterior portion with lateral margins straight and conspicuously diverging caudad, caudo-lateral angles blunt (less prominent than in *V. natolica*), disk with a shallow median impression and with a deeper lateral impression on either side, densely covered with minute, colourless punctures; about 4 - 5 small light knobs present on either side of the median impression (smaller than in *V. natolica*); entire surface of pronotum conspicuously smooth as compared with *V. natolica*. Scutellum elongate and sharp-tipped, with an elevated median portion. Elytra as long and as broad as abdomen, veins of corium thick and densely covered with whitish tomentous hairs. Erect and stiffer hair-covering of connexivum and of whole body much sparser and weaker than in *V. natolica*. Legs gracile. Anterior femora with two rows of hair-bearing knobs in anterior margin, hair covering of other parts of legs smooth and sparse. Male genitalia: Pygofer as in fig. 20 b, dorsocaudal margin thickened. Stylus (fig. 20 c) gracile, length  $0.45 \times$  mm. ♀ unknown.

Type, a male and 2 paratypes, Yotvata, 22. VI. 1958, I, in my collection. - On *Haloxylon persicum* on dunes in a desert.

The new species is easily recognized by the pale colouring and the elongate body. It seems to be most closely related to *V. insignis* Jak. from Turkestan, but in the latter species the 1st antennal joint is  $0.5 \times$  as long as the 2nd and as long as the 3rd and 4th joints together, the 3rd joint being only a little longer than the 4th. *V. przewalskii* (Jak.), *V. annulipes* Pop. and

*V. oshanini* Pop. have no knobs on the pronotum. In *V. natolica* and in *V. semenovi* Jak. the head is not strongly narrowed caudad. *V. deserta* (Bck.) and *V. similis* Pop. have black pronotal knobs and *V. proliza* Kir. has a blackish scutellum and the lateral margin of the elytra broadly blackish.

### *Amphibolus* K.

*A. venator* K. – Palestine (BODENHEIMER op.cit.). – Eremian.

*A. leucopterus* (Hv.) – Palestine (BODENHEIMER op.cit.). – Endemic.

*A. linnavoorii* Dps. in litt. – Haifa, 1 spec., 29. VI. 1958, 1 spec., Reitter. – Swept from shrubs (*Poterium spinosum*). – Endemic.

### *Rhinocoris* Hhn.

*R. bipustulatus* (Fb.)

Head black, a stripe next to either eye and a spot between ocelli red. Antennae black, 3rd and 4th joints brownish. Pronotum black, basal part bordered with reddish or orange both laterally and proximally; distal part with a pair of small round red spots in the middle proximally. Scutellum black, apex orange. Corium and clavus black, base of corium and base of costal margin orange; membrane dark brown. Dorsum of abdomen bright red; connexivum with black spots between each segment. Under surface red or orange; a lateral spot on prothorax, lateral parts of meso- and metathorax and a round lateral spot in each abdominal segment black. Anterior femora orange, middle femora dark brown, hind femora black, proximally brownish; tibiae and tarsi black.

Palestine (BODENHEIMER op.cit.); 'Ein Gedi, 2 spec., Bytinski-Salz (!); Wadi el Kelt near Jericho, Transjordanian, 3 spec., 29. III. 1942, 28. III. 1943, Houška (HOBERLANDT 1951, p. 23). – Pontomediterranean.

*R. bipustulatus* f. *nigripennis* Ldb., n.status.

*Rhinocoris nigripennis* LINDBERG 1930, p. 70.

Lighter. Head yellowish, pale orange or red; ♂ with a blackish triangle between eyes, both sexes with a black lateral stripe from either eye to proximal margin of head. Distal portion of pronotum orangish with a black semilunar area on either side. Femora usually orange, apically black. Thorax sometimes without black lateral spots. Other colouring as in the nominate form.

Jerusalem, 1 ♂ and 1 ♀ (the type), Bodenheimer (!), 2 spec., Bytinski-Salz (!).

Originally described as a valid species, like the following form. Since, however, I cannot find any morphological differences (e.g. the male genitalia are similar) between them and the nominate form, I must regard them as colour forms of *R. bipustulatus*. The differences in the colouring are not sufficient to regard them as valid species. Both colour forms are endemic.

*R. bipustulatus* f. *israelensis* Hob., n.status

*Rhinocoris israelensis* HOBERLANDT 1951, p. 28 – 29.

The lightest form. Dark markings on pronotum brownish, anterior portion sometimes yellowish without any dark markings. Scutellum also yellowish medially. Corium and clavus dark brownish or reddish brown; membrane lighter brownish, apex rather weakly coloured. Under surface yellow with only minute dark lateral spots in each segment. Femora yellowish with tips blackish, tibiae brownish yellow.

Jericho, Transjordanian, 3 spec., (including a paratype), 19 – 26. VI. 1945, Bytinski-Salz (!), Palestine, 1 spec., Saliternik (!); Wadi el Kelt, near Jericho, Transjordanian, 1 spec., 26. VIII. 1945, Houška (HOBERLANDT op.cit.).

*R. abeillei* (Pt.) – Palestine (BODENHEIMER op.cit.); Palestine, 5 spec., Bodenheimer (!); Jerusalem, 9 spec., 1942 – 1944, Houška (HOBERLANDT 1951, p. 23). – Endemic.

*R. transitus* Hob. – Jerusalem, 1 spec., 15. IV. 1942, Houška (HOBERLANDT 1951, p. 26). – Endemic.

*R. iracundus* (Pd.) – Palestine (BODENHEIMER op.cit.). – Euro-Siberian.

*R. punctiventris* (H. S.) – Palestine (BODENHEIMER op.cit.); Hulda, 4 spec., 25. VII. 1958,; Jerusalem, 2 spec., 27. IV. 1942 and 5. VII. 1943, Houška (HOBERLANDT 1951, p. 29), 5 spec., 14–15. VI. 1958,; Kiriath Anavim, 1 spec., 27. VI. 1943, Houška (HOBERLANDT op.cit.); Nazareth, 2 spec., 5. VIII. 1958,; Tel-Aviv, 1 spec., 28. VI. 1958,!. – Among herbs in xerophilous localities. – Pontomediterranean.

*R. christophi* (Jak.) – Above Wadi Seyal, 1 spec., coll. unknown (!). – Caspian. Previously recorded from South Russia, Turkey, Iran and Syria. New to Israel.

### *Sphedanolesthes* Stål

*S. pulchellus* (K.) – Palestine (BODENHEIMER op.cit.) – Pontomediterranean.

*S. annulatus* n.sp.

Length 7–8 mm. Head shining, yellowish; tylus, a V-shaped figure behind antennae and entire basal portion (excluding a small yellow spot behind ocelli) black. Antennae dark brown, 1st joint sometimes lighter. Rostrum orange. Pronotum (fig. 22 a) shining, whitish grey; anterior lobe and 4 roundish basal spots black. Scutellum black, apex yellow. Elytra hyaline, corium with a reddish brown tinge; veins reddish brown; membrane smoky. Dorsal surface of abdomen darkened medially, sides broadly orange, paratergites with black spots. Ventral surface of abdomen orange, sometimes  $\pm$  infumed medially. Thorax heavily marked with black. Legs (fig. 21 b); femora orange; apex, 2 narrow median rings and a small spot at base blackish; tibiae dark reddish brown, base blackish; tarsi dark brown.

A slender species. Body as in *S. pulchellus* (K.) but smaller and slenderer. Eyes relatively small, vertex  $2.3 \times$  as broad as eye. Antennae long and gracile; proportions between joints  $56 + 23 + 40 + 41$  ( $\sigma$ ) or  $55 + 22 + 36 + 41$  ( $\varphi$ ) (1 unit = 0.088 mm); 3rd joint about  $0.72 \times$  as long as basal width of pronotum. Pronotum with anterolateral angles distinctly produced; anterior lobe globose with a relatively deep and wide median sulcus; basal lobe moderately globose, basal margins conspicuously depressed laterally, a slight depression also on the middle of disk; laterobasal angles rounded and globose; pronotum with sparse long, stiff and erect hairs. Scutellum bluntly rounded apically, strongly declivous laterally; a round median pit present. Elytra a little longer than ( $\sigma$ ) or as long as ( $\varphi$ ) abdomen; Veins of corium with short tomentous hairs. Legs long and gracile, provided with erect hairs.

Type, a male; allotype, a female and 6 paratypes Dan 7. VII. 1958,; a paratype, Beit Jubrin, 17. VI. 1958,; a paratype, Beit-Shean, 7. VIII. 1958,; a paratype, Hagoshrim, 8. VII. 1958,; 3 paratypes, Haifa, 29. VI. 1958,; 2 paratypes, Jerusalem, 17. VI. 1958,!. – Among herbs in xerophilous localities.

Closely related to *S. pulchellus* (K.) but smaller, graciler and dissimilarly coloured. In *S. pulchellus* the basal black pronotal spots are confluent laterally being so only in the middle of the disk separated by the grey ground colour and the femora have only one dark median ring. Moreover the eyes are larger, the vertex ( $\varphi$ ) is only  $1.93 \times$  as broad as eye and the antennae are shorter, the proportions between the joints  $57 + 24 + 34 + ?$ , the 3rd joint being  $0.62 \times$  as long as basal width of the pronotum.

### *Coranus* Ct.

*C. aegyptius* (F.) – Palestine (BODENHEIMER op.cit.); Dan, 1 spec., 7. VII. 1958,; 'Ein Gedi, 1 spec., 19. VI. 1958,; Hadera, 1 spec., 15. VII. 1958,; Jerusalem, 2 spec., 17. VI. 1941 and 6. VIII. 1942, Houška (HOBERLANDT op.cit.), 1 spec., 14. VI. 1958,; Miqve Israel, 1 spec., 1. VI. 1958, Amitai (!). – Among herbs in xerophilous localities. – Holomediterranean.



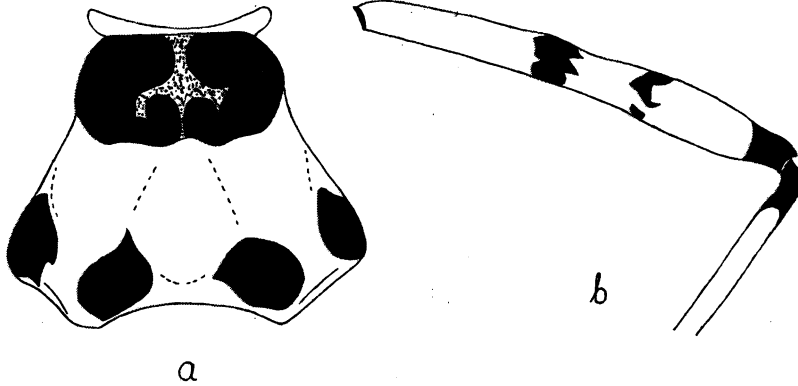


Fig. 21. *Sphecanolesthes annulatus* n.sp.: a pronotum; b hind femur. — Orig.

*C. angulatus* Stål — Palestine (BODENHEIMER op.cit.); Ashqelon, 7 spec., 2. VII. 1958,; Bat Yam, 1 spec., 27. VII. 1944, Bytinski-Salz (!); Herzliya, 2 spec., 3. IX. 1942, Houška (HOBERLANDT 1951, p. 30); Yarkon, 4 spec., 5. VII. 1948,!. — Under *Neurada procumbens* and other herbs on coastal dunes. — Eremian.

*C. tuberculifer* Rt. — Palestine (BODENHEIMER op.cit.). — Holomediterranean.

*C. niger* (Rb.) — Kefar-Malal, 2 spec., 27. VII. 1958,; Nahariya, 1 spec., 6. VIII. 1958,; Rehovot, 1 spec., 5. VI. 1958, Michaeli (!); Tel-Aviv, 1 spec., 26. VI. 1958,!. — Among herbs in gardens. — Holomediterranean, not previously recorded from Israel.

### *Nagusta* Stål

*N. goedeli* (Klt.) — Palestine (BODENHEIMER op.cit.); Dan, 1 spec., Hurvitz (!); Hagoshrim, 2 spec., 8. VII. 1958,; Miqve Israel, 1 spec., 25. VII. 1958,!. — On *Quercus ithaburensis*. — Pontomediterranean.

*N. simonis* Pt. — 'Ein Gedi, 2 spec., 18. VI. 1958,!. — On *Acacia*. — Eremian, previously known only from North Africa and Iran.

### *Polididus* Stål

*P. armatissimus* Stål — Ramath Gan, 1 spec., 15. IX. 1958, Fishelson (!); Tel-Aviv, 1 spec., 30. VII. 1944, Bytinski-Salz (!). — Indian. Previously known only from the Oriental region, China and Japan.

### *Pachynomus* K.

*P. lethierryi* Pt. — Palestine (BODENHEIMER op.cit.). — Eremian.

Bodenheimer's material consists also of 2 adults and several larvae of *Rhodnius prolixus*-Stål labelled «Palestine, Bodenheimer». The species is, however, entirely American in distribution and certainly does not occur in Israel. Probably the specimens were used in some laboratory experiments in Israel.

*Joppeicidae**Joppeicus* Pt.

*J. paradoxus* Pt. – Palestine (BODENHEIMER op.cit.); Eres, some spec., 13. XI. 1952, Bytinski-Salz (!). – Under bark of *Ficus sycomorus*. – Endemic.

*Aradidae**Aradus* F.

*A. betulae* (L.) – Elon, 4 larvae, 25. V. 1948, Bytinski-Salz (!). – Euro-Siberian. Not previously recorded from Israel.

*Tingidae**Cantacader* Am. & Serv.

*C. quadricornis* (P. & S.) ssp. *nubilus* Hv. – Hagoshrim, 1 spec., 11. VII. 1958,!. – Under *Polygonum* sp. on a path at fish ponds. – Nominate form West-Mediterranean, ssp. *nubilus* Pontomediterranean. Not previously recorded from Israel.

*Campylosteira* Fb.

*C. pilicornis* Hv. – Palestine (BODENHEIMER op.cit.). – Endemic.

*Biskria* Pt.

*B. gracilicornis* Pt. – Deganya, 1 spec., 23. VII. 1958,!. – Swept from *Phragmites communis* at a fish pond. – A rare Eremian species, previously known only from Algeria.

*Dictyonota* Ct.

*D. reuteri* Hv. – Palestine (BODENHEIMER op.cit.). – Endemic.

*Galeatus* Ct.

*G. scrophicus* Sd. – Palestine (BODENHEIMER op.cit.); Wadi Beersheba, 1 spec., 1. VIII. 1958,!. – Swept from herbs in desert conditions. – Holomediterranean, also extending into the Ethiopian and Oriental regions.

*Urentius* Dist.

(*U. aegyptiacus* Bgv.) – Jericho, Transjordan, 1 spec., Bodenheimer (!). – Eremian. Previously recorded only from Egypt.

*U. abutilonis* Prn. & Alf. – Gezer, 31 spec., 15. XI. 1958, Harpaz (!). – Eremian. Previously recorded from Egypt.

*Stephanitis* Stål

*S. pyri* (F.) – Palestine (BODENHEIMER op.cit.); Rehovot, 60 spec., 28. VII. 1958,!.; Tiberias, 16 spec., 23. VII. 1958,!. – Om *Crataegus* sp. – Holomediterranean.

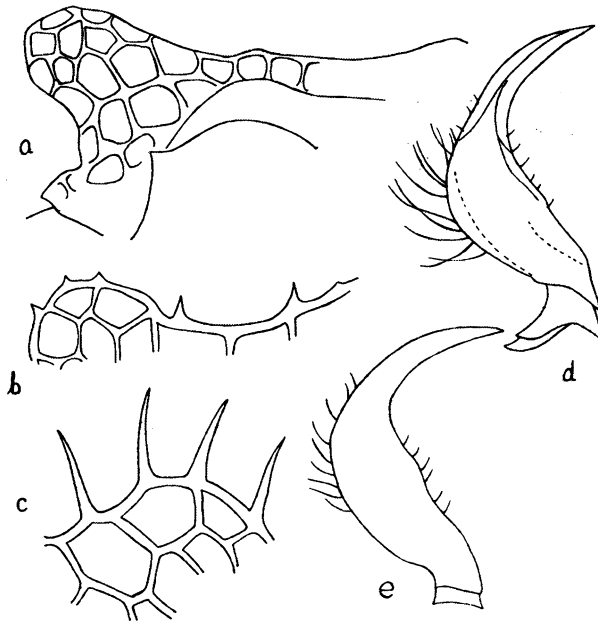


Fig. 22. *Lasiacantha beithovedensis* n.sp.: a vesicula, lateral view; b spinulation of lateral margin of pronotum; e stylus. — *L. hedemborgi* Stål: c spinulation of lateral margin of pronotum; d stylus. — Orig.

### *Elasmotropis* Stål

*E. testacea* (H. S.) *vicina* ssp. Hv. — Aqua Bella, 2 spec., 15. VI. 1958, l.; Jerusalem, 108 spec., 22 — 24. VI. 1941, Houška (HöBERLANDT 1951, p. 22). — On *Quercus calliprinos*. — Pontomediterranean.

### *Lasiacantha* Stål

*L. hedemborgi* Stål — Palestine (BÖDENHEIMER op.cit.); Hagoshrim, 2 spec., 8. VII. 1958, l. — On *Quercus ithaburensis*. — Syrio-Anatolian.

*L. beithovedensis* n.sp.

Length 2.8 — 3 mm. Dirty greyish brown. 4th antennal joint, eyes and tarsi blackish.

Body much as in *L. hedemborgi*, but considerably smaller and somewhat robust, 2.4 × as long as broad at pronotum. Head with 5 light spines (shorter than in *L. hedemborgi*, longer than in *L. capucina* and *L. gracilis*); vertex 2.8 × (♂) or 3.3 × (♀) as broad as eye. Antennae long and slender (about as in *L. hedemborgi*), 2nd joint with long, erect, whitish hairs; proportions between joints 4 + 2 + 19 + 6 (♂) or 4 + 2 + 18 + 5.5 (♀) (1 unit = 0.033 mm.), 3rd joint about 3.2 × as long as 4th. Pronotal membrane (fig. 22 b) strongly expanded subbasally with 3 rows of cells, then strongly narrowing apicad at about the middle, having there only 2 rows of cells; lateral margin with only short spines; vesicula and median ridges (fig. 22 a) as in *L. hedemborgi*, but without spines. Elytra longer than abdomen, lateral margins and veins with only minute spines; costal membrane with 2 rows of cells, which are considerably smaller than in *L. hedemborgi*, transverse veins of the outer row darkened. Entire upper surface with dense, whitish pilosity. Femora with spine-like teeth, tibiae with whitish hairs. Male genitalia: Stylus

(fig. 22 e) rather slender, strongly claw-like curved, with relatively short hairs, length of stylus 0.20 mm.

Type, a male; allotype, a female and 16 paratypes, Beith Oved, 16. VII. 1958, !; 7 paratypes, Herzliya, 26. VII. 1958, !; 1 paratype, Revivim, 1. VIII. 1958, !. Types in my collection. – On *Thymus thymea*.

The new species much resembles *L. hedenborgi*, but is smaller and the spines of the upper surface are much shorter. The lateral margin of the pronotum of *L. hedenborgi* is depicted in fig. 22 c. The male stylus of *L. hedenborgi* (fig. 22 d) is robuster and less curved and the hairs are longer; the length of the stylus is 0.24 mm. In *L. capucina* (Gm.) and *L. gracilis* (H. S.) the antennae are shorter and thicker, the lateral margins of the pronotum are not strongly insinuated in the middle and the vesicula arises from the anterior margin of the pronotum. *L. histricula* (Pt.) is very small, length only 2 mm.

### *Tingis* F.

*T. hellenica* (Pt.) – Palestine (BODENHEIMER op.cit.). – Pontomediterranean.

*T. ciliaris* (Pt.) – Palestine (BODENHEIMER op.cit.). – Pontomediterranean.

*T. bodenheimeri* Ldb. – Palestine (BODENHEIMER op.cit.); Tivon, 1 spec., 13. V. 1954, Sternlicht (!). – On *Quercus ithaburensis*. – Endemic.

*T. angustata* (H. S.) – Hadera, 2 spec., 26. VI. 1958, !; Hagoshrim, 1 spec., 11. VII. 1958, !. – Swept from herbs in fresher biotopes. – Holomediterranean, new record for Israel.

*T. grisea* Gm. – Palestine (BODENHEIMER op.cit.). – Holomediterranean, also extending into Central Europe.

*T. auriculata* (C.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean, also extending into Central Europe.

### *Catoplatus* Spin.

*C. anticus* Rt. ssp. *syriacus* Hv. – Palestine (BODENHEIMER op.cit.). – Pontomediterranean.

*C. hilaris* Hv. – Palestine (BODENHEIMER op.cit.). – Syrio-Anatolian.

### *Copium* Thnb.

*C. clavicorne* (L.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean.

*C. horvathi* E. Wgn. – Hulda, 1 spec., 25. VII. 1958, !. – Swept from herbs in a xerophilous locality. – Pontomediterranean, not previously recorded from Israel.

*C. brevicorne* (Jak.) – Palestine (BODENHEIMER op.cit.). – Pontomediterranean.

### *Physatocheila* Fb.

*P. dumetorum* (H. S.) – Palestine (BODENHEIMER op.cit.). – Holomediterranean, also extending far into Central Europe.

### *Cysteocheila* Stål

*C. n. sp.* Drake in litt. – Yotvata, 2 spec., 22. VI. 1958, !. – On *Acacia* in desertic conditions. – Eremian.

### *Dictyla* Stål

*D. aridula* n.sp.

♀. Length 2.25 mm. General colouring brownish grey. Head black with a yellow lateral spot behind either eye; spines whitish. 1st and 2nd antennal joints dark brown, 3rd joint yellow,

4th joint black. Pronotum brownish grey, median area brownish, keels greyish. Scutellum brownish grey, apical reticulation partly blackish. Elytra brownish grey; transverse veins of exocorium and some veins on mesocorium and on membrane blackish. Abdomen black. Under-surface of thorax yellowish brown. Legs coffee-brown, tibiae lighter, tarsi dark brown.

Body ovate,  $2.14 \times$  as long as broad. Head with 3 small knob-like spines on vertex; vertex twice as broad as eye. Antennae remarkably short, 3rd joint  $2.22 \times$  as long as 4th,  $0.83 \times$  as long as breadth of head and  $0.46 \times$  as long as basal width of pronotum. Pronotum with a sharp median keel, lateral keels somewhat converging apically; vesicula flat, consisting of 2 rows of cells; pronotal membrane not extending to median keel, remarkably flat, cells relatively small; central area of pronotum irregularly and densely punctate, rather dull. Scutellum with 3 keels, densely reticulate. Elytra only a little longer than abdomen, length 1.52 mm., greatest width 0.49 mm., lateral margins remarkably strongly curvate; costal membrane narrow, upturned, consisted of a row of small elongate cells; exocorium consisted of 3 rows of cells basally, of 2 rows apically; mesocorium consisted of 4 rows of cells in the broadest point; membrane consisted of 5 rows of cells in the broadest point; cells of elytra remarkably small, veins conspicuously elevated. Flying wings a little shorter than abdomen. Legs relatively short, length of fore tibiae 0.42 mm., of middle tibiae 0.56 mm and of hind tibiae 0.61 mm. ♂ unknown.

Type, a female and a paratype, 12. VI. 1958, l. – Swept from dune vegetation.

Closely related to *D. putoni* (Mtd.), resembling especially the variety *pulla* (Hv.). *D. putoni* is, however, conspicuously bigger, length 2.5 – 3 mm., more elongately oval, the spines of the vertex are longer, the antennae much longer (3rd joint  $2.67 \times$  as long as 4th,  $1.33 \times$  as long as the width of the head,  $0.56 \times$  as long as the basal width of the pronotum). The vesicula is more convex, consisting medially of 3 rows of cells, the pronotal membranes are more convex and the median area of the pronotum is more finely punctate and shining. The elytra are distinctly longer than the abdomen, the costal membrane is somewhat broader, the lateral margins less curved, the mesocorium consists of 5 rows of cells in the broadest point, the membrane consists of 6 – 7 rows of cells in the broadest point, the cells of the elytra are larger and the veins somewhat less elevated. The legs are also longer and graciler. Since the Tingids are often pterygopolymorphic the new species has been compared with specimens of *D. putoni* in which the flying wings are of equal length. In the body form the new species somewhat resembles *D. seorsa* (Dr. & P.), but differs in having a narrower pronotum with dissimilarly shaped pronotal membranes, and a dissimilar elytral venation.

*D. nassata* (Pt.) – Palestine (BODENHEIMER op.cit.); 'Ein Gedi, 9 spec., 19. VI. 1958, l. – On halophytes on the shore of the Dead Sea. – Holomediterranean.

*D. echii* (Schr.) – Palestine (BODENHEIMER op.cit.). – Euro-Siberian.

### *Monosteira* C.

*M. lobulifera* Rt. – Palestine (BODENHEIMER op.cit.); Ramath Rachel near Jerusalem, 3 spec., 6. IX. 1932, Jolles (!). – On pear leaves. – Pontomediterranean.

*M. unicastata* (Ms. & Rey) – Dan, 4 spec., 7. VII. 1958, l. – On *Salix* bushes along the river Jordan. – Holomediterranean, not previously recorded from Israel.

*M. cleopatra* Hv. – Eilat, 18 spec., 20. VI. 1958, l. – On a halophyte in a salt-marsh on the shore of the Red Sea. – Eremian, previously recorded from Egypt.

### *Agramma* (Westw.) Steph.

*A. atricapilla* (Spin.) ssp. *pallens* (Hv.), n.status.

As the nominate form, but considerably smaller and more gracile. Length 2.6 – 3.0 mm., average 2.77 mm. (nominate form 3.0 – 3.4 mm.); breadth 0.72 – 0.95 mm., average 0.82 mm. (nominate form 0.91 – 0.95 mm.). Pronotal spots usually reddish brown, sometimes black, but

then considerably smaller than in the nominate form. In the latter the pronotal spots are black and large, extending laterally to or quite near to the lateral margins.

Bat Yam, 1 spec., 9. VII. 1958,!; Beit Jubrin, 21 spec., 17. VI. 1958,!; Beit Shean, 2 spec., 7. VIII. 1958,!; Hadera, 4 spec., 7. VII. 1958,!; Hula, 12 spec., 10. VII. 1958,!; Nabi Rubin, 4 spec., 4. VII. 1958,!; Tanninim, 4 spec., 26. VII. 1958,!; Yarkon, 59 spec., 28. VI. 1958,! - In wet biotopes, on *Juncus acutus*, etc.

The subspecies was originally described as a colour form. Since, however, it differs from my *atricapilla* specimens as mentioned above, I regard it as a geographical subspecies. The nominate form Holomediterranean, the subspecies possibly Eremian, being previously known from Egypt.

*A. globiceps* (Hv.) - Palestine (BODENHEIMER op.cit.); Yarkon, 4 spec., 28. VI. 1958,! - Swept from *Juncus acutus* on coastal dunes. - Endemic.

### *Piesmidae*

#### *Piesma* LeP. & Serv.

*P. rotundata* Hv. f. *pygmaea* Hv. - Palestine (BODENHEIMER op.cit.); Ashqelon, 1 spec., 2. VII. 1958,!; Deganya, 4 spec., 23. VII. 1958,!; Revivim, 5 spec., 2. VIII. 1958,!; Tanninim, 10 spec., 26. VII. 1958,! - On *Atriplex halimus*. - Pontomediterranean.

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## SELOSTUS

### ISRAELIN NIVELKÄRSÄISET. II

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