

# **Studies on the genus *Platymetopius* Burmeister, 1838 in the Near East, with description of seven new species (Homoptera : Auchenorrhyncha, Cicadellidae)**

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Studies on the genus *Platymetopius* BURMEISTER, 1838 in the  
Near East, with the description of seven new species  
(Homoptera: Auchenorrhyncha, Cicadellidae).

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While studying the genus *Platymetopius* in Lebanon, the author seized this opportunity to update and clarify our present knowledge on this genus in the Near East. Seven new species are described: *P. linnavuorii* sp. n., *P. libanoticus* sp. n., *P. adonis* sp. n., *P. hannelorae* sp. n., *P. manfredi* sp. n., *P. infectoriae* sp. n., and *P. pseudoguttatus* sp. n. The male of *P. quercicola* LINNAVUORI, 1962 is described for the first time. Two other species are acknowledged from this area (*P. cruentatus* HAUPT, 1927 and *P. retamae* LINNAVUORI, 1962), while four others are considered doubtful records or taxonomically ill-defined (*P. ferrarii* HAUPT, 1927; *P. undatus parvulus* LINNAVUORI, 1962; *P. obsoletus* (SIGNORET, 1880) and *P. major* (KIRSCHBAUM, 1868). The author thinks that the taxonomic treatment of many known species is not sufficient to allow the erection of new generic or sub-generic taxa within this genus, and alternatively gathers the Near Eastern species into provisional groups. Ecological particularities of most of the species are discussed. Holotypes and paratypes are deposited in the British Museum of Natural History.

INTRODUCTION

The large genus *Platymetopius* BURMEISTER, 1838 (63 species in my latest count) is on its way to become a serious taxonomical problem. Not only is it obviously heterogeneous, as already pointed out by DLABOLA (1974); but a number of species are also inadequately described, some of them being known only from the female, thus hampering any progress in taxonomic and zoogeographical studies. A first attempt to clarify this situation was made by DLABOLA (1974) when he created the sub-genus *Quernus* to characterize a group of species around *P. signoreti* METCALF, 1967 (primary homonym, now named *P. complicatus* NAST, 1972). However, I think that it is premature to forge new generic or sub-generic taxa subdividing this large genus before the undertaking of a serious descriptive revision of many of the known species, and a careful cladistic study, as it was done for example for the genus *Jassargus* ZACHVATKIN, 1934 (K. SCHULZ, 1976). What we can do until then is to put down landmarks, redescribe badly known species, and try to define "groups" that may be useful to other students in this field.

Up to now, seven species of *Platymetopius* were said to exist in the Near East (that is the geographic area bordering the oriental coast of the Mediterranean sea and comprising Syria, Lebanon, Israel and Jordan): *P. quercicola* LINNAVUORI, 1962, *P. major* (KIRSCHBAUM, 1868), *P. undatus parvulus* LINNAVUORI, 1962, *P. cruentatus* HAUPT, 1927, *P. retamae* LINNAVUORI, 1962, *P. obsoletus* (SIGNORET, 1880) and *P. ferrarii* HAUPT, 1927. My own investigations in Lebanon led me to the discovery of seven new species, plus another one already known from Israel and described only after the female.

DESCRIPTION OF GROUPS

Six groups can be identified (named after the oldest known species in each one):

**I—The group of *P. undatus* (DE GEER, 1773)**

It is well defined by the coloration of the adult (a more or less dark brown zig-zag band on the fore wings), the lamelliform lateral expansions on the pygofer appendages, the ground-base structural plan of the aedeagus (two basal lateral appendages and more or less developed pre-apical appendages near the phallotreme), the long triangular shape of the sub-genital plates, the inwardly bent apophyses of the parameres and the characteristic posterior border of the 7th female sternite (as in fig. 4 for example). Three new species are described and two others are discussed:

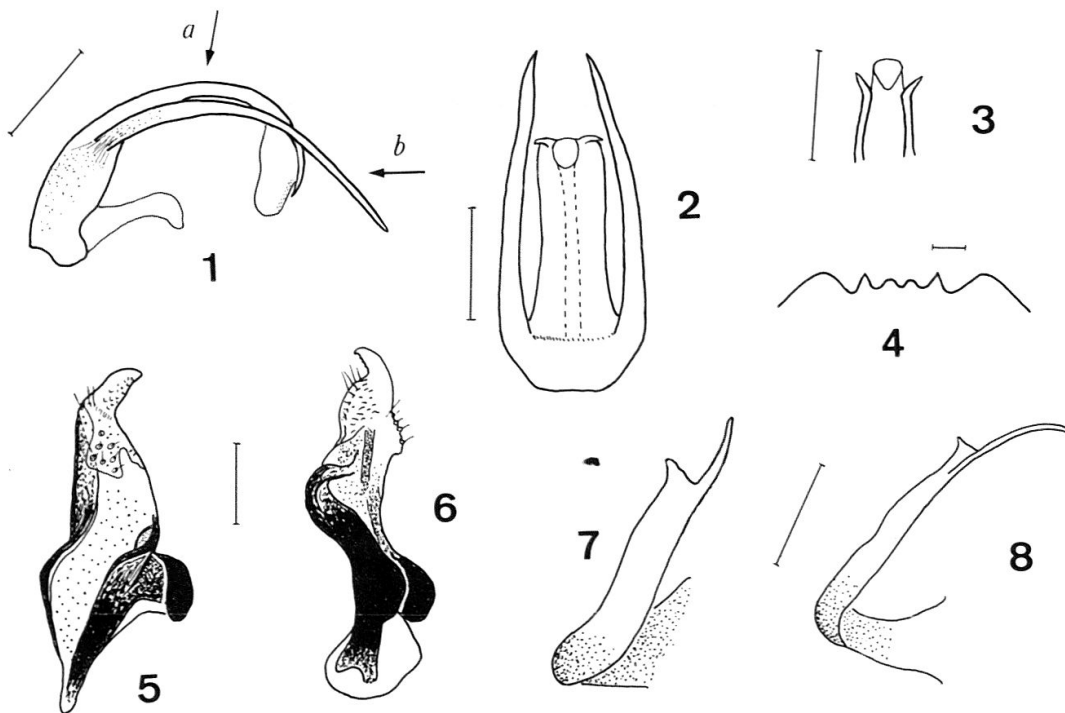
*Platymetopius linnavuorii* sp. n. (figs. 1–8).

Habitus and coloration much as *P. undatus*, the zig-zag band covering the head, pronotum and wings being brown.

*Male*: Aedeagus (figs. 1, 2 and 3) with two very small pre-apical diverging appendages. Pygofer appendage (fig. 7 and 8) with a broad lamelliform lateral expansion reaching down the base of the erected distal part. Parameres as in figs. 5 and 6.

*Female*: 7th sternite with two small teeth bordering the central protuberance and rising nearly as high as the lateral protuberances (fig. 4).

Measurements (in mm 1 ♂, 1 ♀): total length: ♂4.65; ♀5.30. Length of vertex: ♂0.55; ♀0.65. Length of pronotum: ♂0.60; ♀0.65. Width of head: ♂1.2; ♀1.35.



Figs. 1–8. *Platymetopius linnavuorii* sp. n., 1, aedeagus, left lateral view. 2, same, as seen from “a” (arrow). 3, same, as seen from “b”. 4, 7th female sternite. 5, right paramere, dorsal view. 6, same, right lateral view. 7, right appendage of pygofer, posterior view. 8, same, right lateral view. Scale: 0.1 mm.

Holotype ♂: Dahr-es-Souane, 22-6-83/plantes basses. Liban.  
 Paratype ♀: Qartaba, 29-6-84/plantes basses. Liban.  
 Distribution: Lebanon.

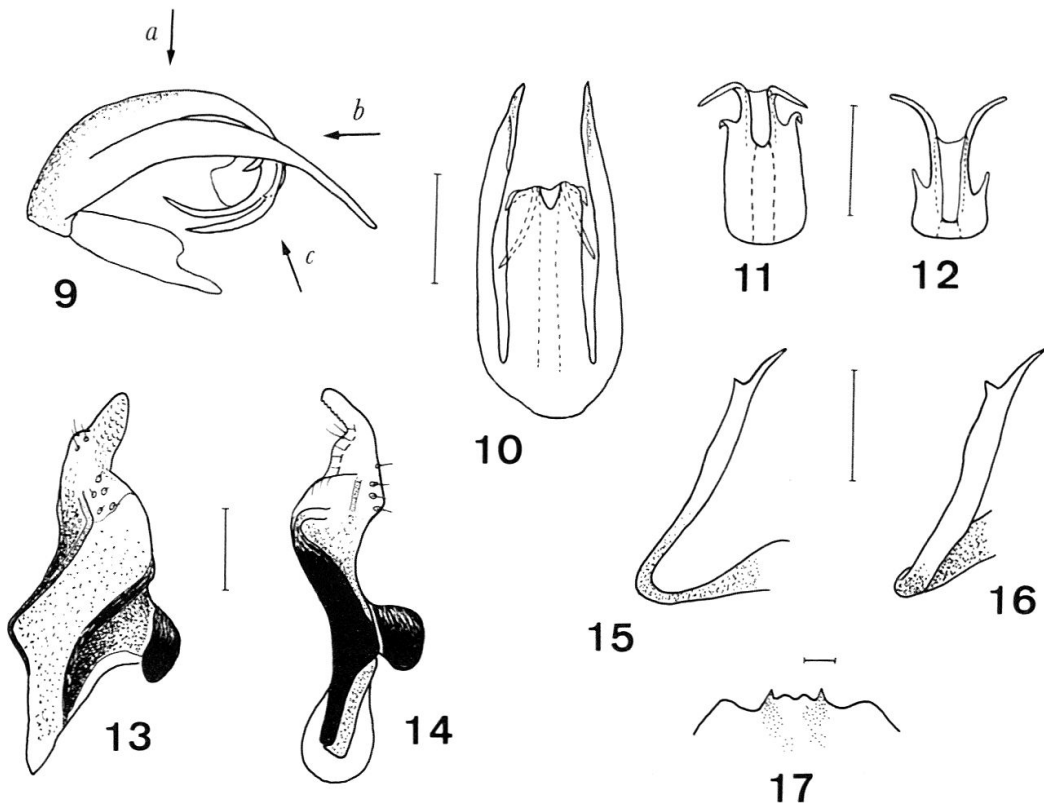
*Platymetopius libanoticus* sp. n. (figs. 9–17).

Same aspect as former species except that the zig-zag band is very dark, sometimes almost black on the head and pronotum; it is brown on the wings, but looks very dark at first sight because of the strong pigmentation dorsad of the abdomen.

**Male:** Aedeagus (figs. 9, 10, 11 and 12) with two pairs of pre-apical appendages; the posterior ones are small and slightly diverging, while the anterior appendages are much longer and diverge strongly. Pygofer appendage (figs. 15 and 16) much as for *P. linnavuorii* sp. n. but the lateral expansion is narrower. Parameres as in figs. 13 and 14.

**Female:** 7th sternite (fig. 17) with a smoke-black tint under the two very small teeth bordering the central protuberance.

Aside from the genital characteristics, this species can be distinguished from all the others in this group by its much darker coloration, and the pigmentation under the very small teeth of the female 7th sternite.



Figs. 9–17. *Platymetopius libanoticus* sp. n., 9, aedeagus, left lateral view. 10, same, as seen from “a”. 11, same, as seen from “b”. 12, same, as seen from “c”. 13, right paramere, dorsal view. 14, same, right lateral view. 15, right appendage of pygofer, right lateral view. 16, same, posterior view. 17, 7th female sternite. Scale: 0.1 mm.

Measurements (in mm 2 ♂, 2 ♀): total length: ♂4.45; ♀5.25–5.45. Length of vertex: ♂0.50–0.55; ♀0.65. Length of pronotum: ♂0.55–0.60; ♀0.65. Width of head: ♂1.20; ♀1.35–1.40.

Holotype ♂: Qartaba, 29-6-84/plantes basses. Liban.

Paratype ♀: Qartaba, 2-6-85/plantes basses. Liban.

Distribution: Lebanon.

*Platymetopius adonis* sp. n. (figs. 18–25).

Habitus much as *P. linnavuorii* sp. n. but the zig-zag band is lighter.

**Male:** Aedeagus (figs. 18, 19 and 20) with two diverging long pre-apical appendages. Pygofer appendages (figs. 23 and 24) with a broad lamelliform lateral expansion bearing two characteristic small apical teeth which are clearly visible in posterior view. Parameres as in figs. 21 and 22.

**Female:** 7th sternite (fig. 25) quite similar to that of *P. libanoticus* sp. n. but light-colored with no pigmentation under the two small teeth.

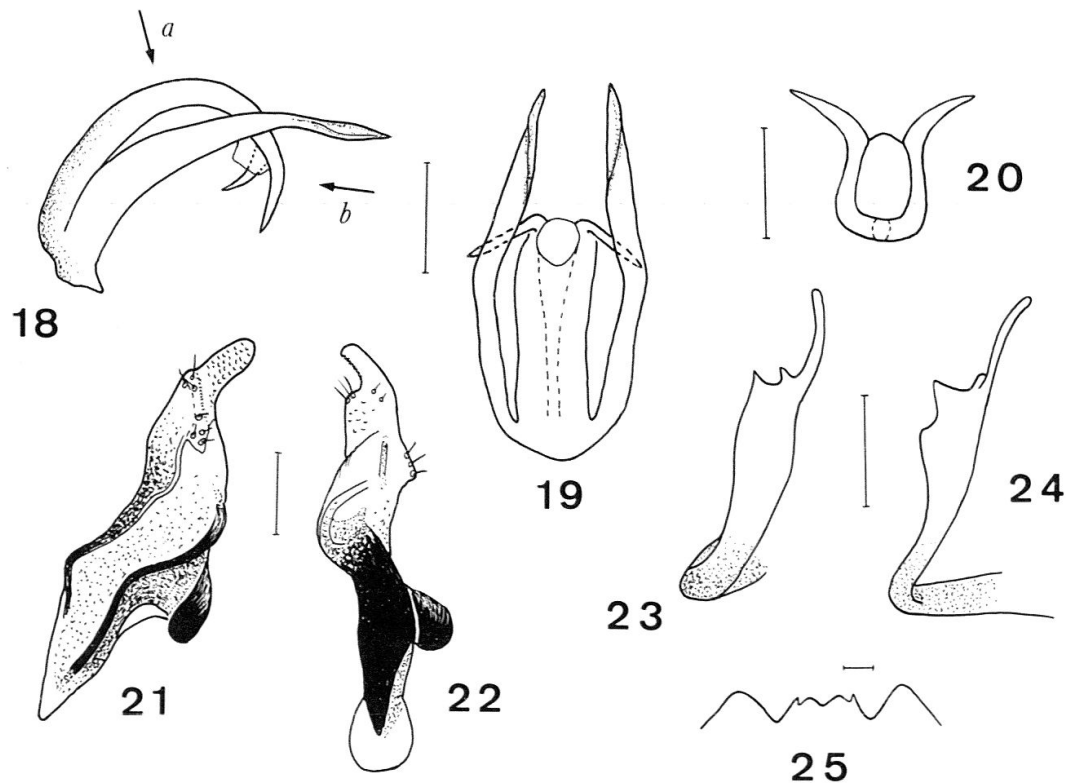
Measurements (in mm 2 ♂, 4 ♀): Total length: ♂4.25–4.65; ♀5.00–5.50. Length of vertex: ♂0.55; ♀0.65–0.75. Length of pronotum: ♂0.50; ♀0.65–0.70. Width of head: ♂1.15–1.20; ♀1.35–1.40.

Holotype ♂: Aintoura, 11-11-84/graminées. Liban.

Paratypes: 1 ♀. Janné, 30-10-85/*Pistacia* sp. Liban.

1 ♀. Janné, 30-10-84/plantes basses. Liban.

Distribution: Lebanon.



Figs. 18–25. *Platymetopius adonis* sp. n., 18, aedeagus, left lateral view. 19, same, as seen from “a”. 20, same, as seen from “b”. 21, right paramere, dorsal view. 22, same, right lateral view. 23, right appendage of pygofer, posterior view. 24, same, right lateral view. 25, 7th female sternite. Scale: 0.1 mm.

*Platymetopius undatus parvulus* LINNAVUORI, 1962

Known only from Israel and described by two female specimens. According to LINNAVUORI (1962): “♀: Length 4.5–5 mm. As the nominate form but considerably smaller (nominate form, length 5–5.2 mm). 7th sternite . . . only shallowly insinuated on either side of median lobe, the latter provided with remarkably short lateral teeth . . . Possibly a valid species.” The 7th sternite of holotype and paratype are represented (page 53, fig. 32h: paratype from Dan; fig. 32i: holotype from Jerusalem).

The following comments can be made:

- These females are smaller than those of the new species described from Lebanon. Bearing in mind the fact that greater series in each species are necessary to establish more accurately the range of length variation, we cannot decide, as for now, that they belong to any of the Lebanese species.
- The two drawings of the 7th sternite are very dissimilar: the paratype from Dan has squat teeth and looks very much like *P. linnavuorii* sp. n., while for the holotype of Jerusalem these teeth are twice smaller. I have not observed such a great variability in the Lebanese specimens (4♀ of *P. adonis* and 2♀ of *P. libanoticus*) and it may be very probable that those two females represent two distinct species.
- The problem of *P. undatus parvulus* will be solved only by the collecting of males and females in the locus typicus, that is Jerusalem and Dan in Israel.

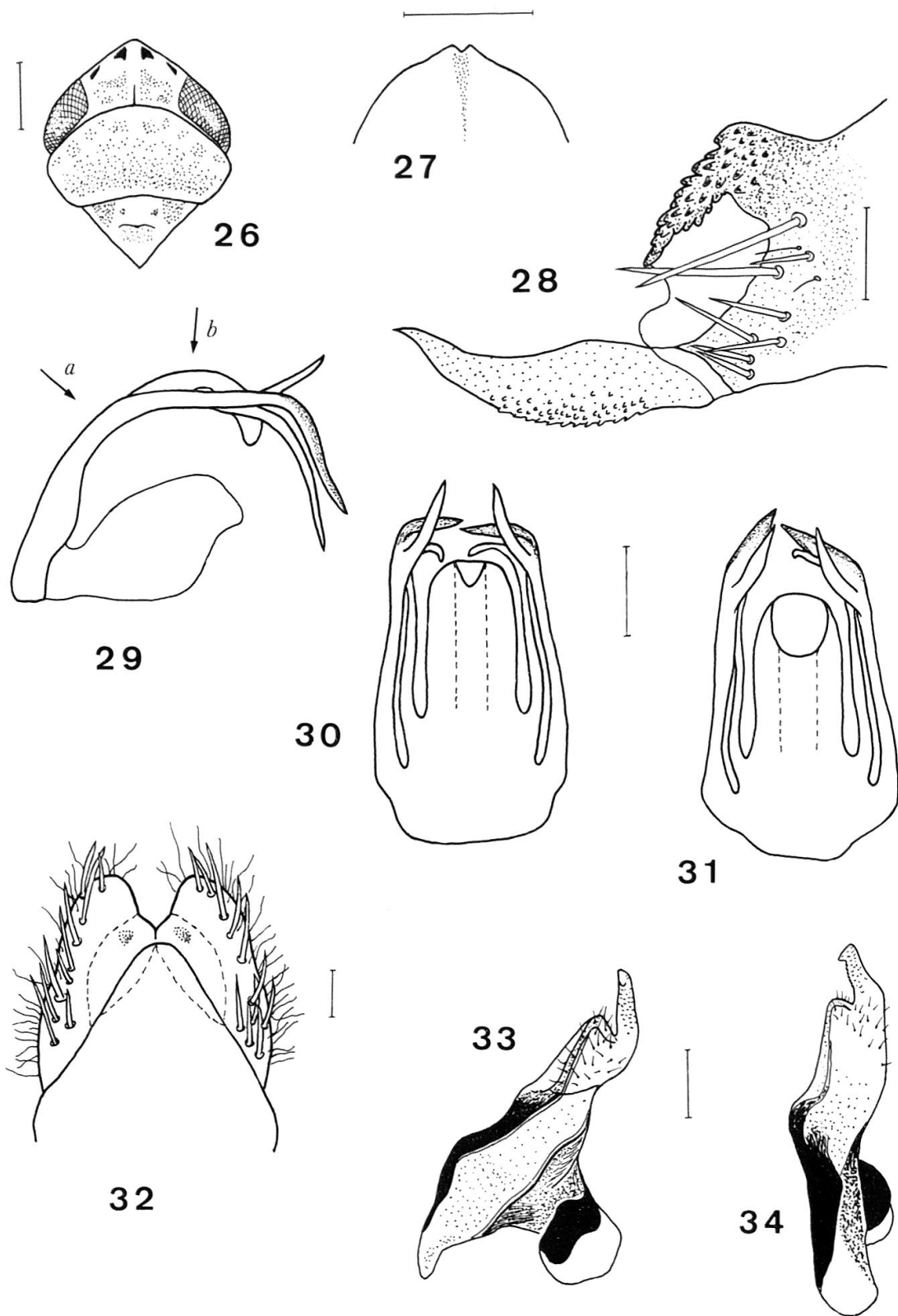
*Platymetopius major* (KIRSCHBAUM, 1868)

It is surprising that this West Palaearctic species should be recorded from Jordan, as mentioned by NAST (1972) and OSSIANNILSSON (1983). It is probably an old record that was established at a time when nobody could imagine the high rate of speciation that could occur in this area, especially within the *undatus*-group. Therefore, any museum or private collection specimen labelled “Near East” needs rechecking.

## II – The group of *P. quercicola* LINNAVUORI, 1962

This group can be defined by the following characteristics: vertex with four dark spots; back-ground stain of wings pale with various colorations of the veins; a well-marked dark dot, more or less rounded, in the middle of the third apical cell of fore wing; numerous cross-veins in the clavus and corium; aedeagus with two pairs of basal lateral appendages; pygofer with a well-defined dorsal sclerotized lobe (as in fig. 28); genital plates short, with their inner edges not joined in their natural position.

According to the descriptions of DLABOLA (1974) it may be that some of the species included in sub-genus *Quernus* DLABOLA belong to this group (particularly *P. curvatus* DLABOLA, 1974), but there is a need for more detailed pygofer descriptions in the *Quernus*-group species. The dorsal sclerotized lobe described hereafter is a very typical characteristic that should be included in any genus or sub-genus definition.



Figs. 26–34. *Platymetopius quercicola* LINN., 26, head from above. 27, 7th female sternite. 28, right lobe of pygofer with appendage. 29, aedeagus, left lateral view. 30, same, as seen from “a”. 31, same, as seen from “b”. 32, sub-genital plates, ventral view. 33, right paramere, dorsal view. 34, same, right lateral view. Scale: 0.5 mm for figs. 26 and 27. 0.1 mm for the rest.



Three species are known in the Near East:

*Platymetopius quercicola* LINNAVUORI, (figs. 26–34)

The original description of this species was based on two females caught on *Quercus ithaburensis* in Israel (LINNAVUORI, 1962), and the male was unknown up to now. In Lebanon many specimens were caught on glue traps hanged on *Quercus infectoria* trees and the females fit exactly the description given by LINNAVUORI.

**Habitus:** Head, pronotum and scutellum cream-white with diffuse reddish spots; dorsally, two triangular-like black spots at the apex of the vertex, and two other lanceolate black streaks just above the ocelli (fig. 26); wings whitish with reddish nervation; a conspicuous black dot in the middle of the third apical cell, with often one smaller faint dot in each of the adjacent apical cells.

**Male:** Pygofer black with a scimitar-like ventral appendage (fig. 28) showing numerous small teeth ventrad. A strongly sclerotized dorsal lobe with numerous small tubercles is linked to the base of the ventral appendage by a very thin membrane devoid of any hairs or setae. A group of about 8–10 strong setae is present on the posterior sclerotized edge. Aedeagus with two pairs of sub-equal lateral appendages (figs. 29, 30 and 31), the outer one bifurcating near its apex. Sub-genital plates (fig. 32) short, with a rounded apex and numerous setae in disorder; their inner edges are diverging from each other; on the dorsal side of the sub-genital plates there are two small sclerotized squat teeth-like protuberances. Parameres as in figs. 33 and 34, with a small pre-apical tooth visible in right lateral view.

**Female:** Posterior border of 7th sternite triangularly produced, with a shallow v-shaped central notch (fig. 27).

Measurements (in mm 3 ♂, 3 ♀): Total length: ♂5.00–5.15; ♀5.60–6.00. Length of vertex: ♂0.40–0.45; ♀0.50–0.55. Length of pronotum: ♂0.65–0.70; ♀0.65–0.75. Width of head: ♂1.40–1.45; ♀1.60–1.65.

Distribution: Israel, Lebanon.

*Platymetopius hannelorae* sp. n. (figs. 35–41)

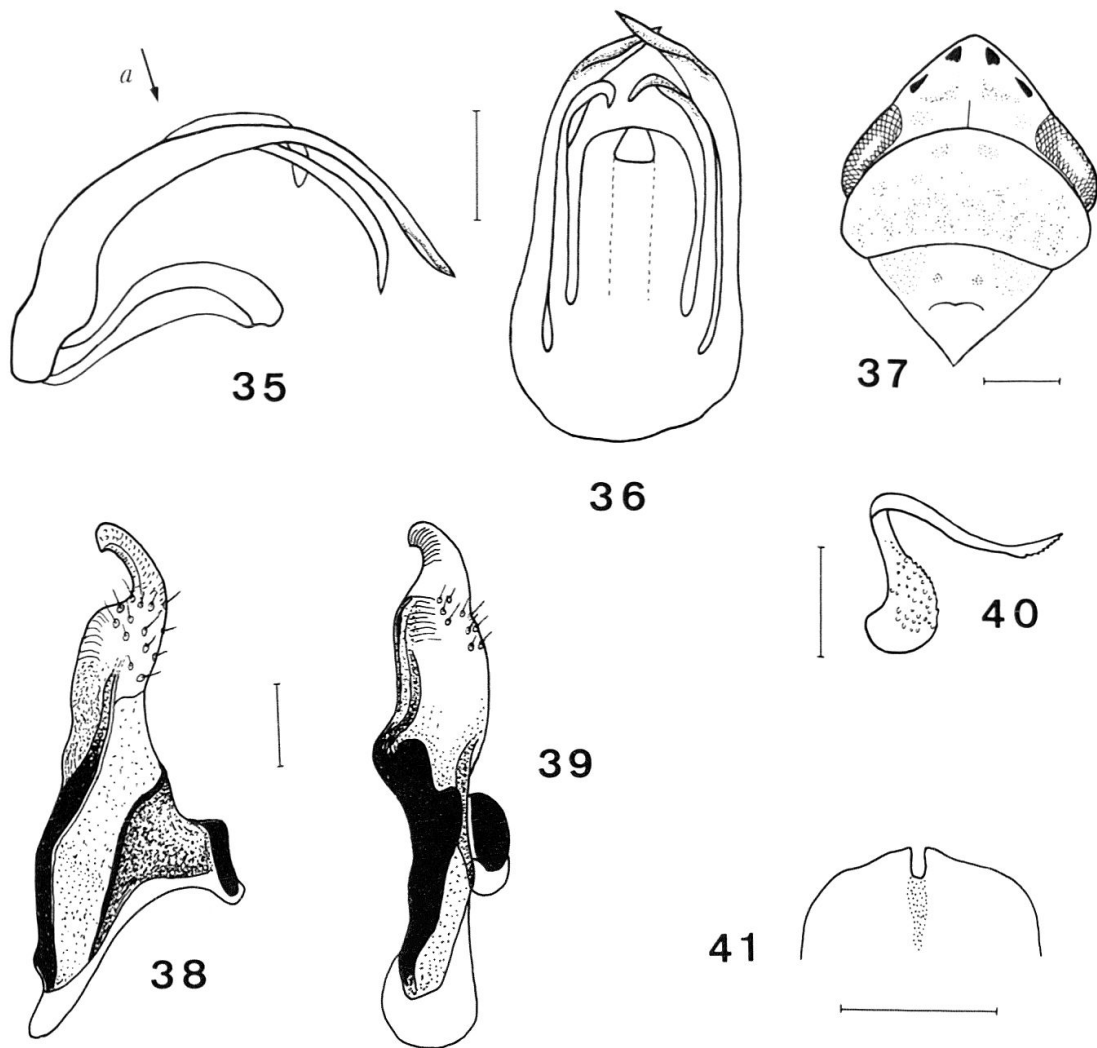
**Habitus** as *P. quercicola* except for the coloration: ochreous spots on the vertex and greenish coloration of the pronotum; scutellum whitish with sometimes ochreous to yellow faint spots. Black spots of the vertex (fig. 37) and fore wing nervation as for *P. quercicola*, with brownish veins and the same dark dots on the apical cells. Abdomen dorsally green, thus giving a general green aspect to the insect.

**Male:** Pygofer as for *P. quercicola*, with the same sclerotized dorsal lobe. Its appendages (fig. 40) are quite different, however, with a broad denticulated base and a sharp serrated apex. Aedeagus with two pairs of basal sub-equal lateral appendages (figs. 35 and 36). Sub-genital plates very similar to that of the preceding species. Parameres as in figs. 38 and 39, with a small sub-apical tooth.

**Female:** Posterior border of 7th sternite with a shallow u-shaped central notch (fig. 41).

Measurements (in mm 2 ♂, 3 ♀): Total length: ♂5.25–5.40; ♀5.75–6.05. Length of vertex: ♂0.45; ♀0.60. Length of pronotum: ♂0.65; ♀0.75. Width of head: ♂1.40; ♀1.60.





Figs. 35–41. *Platymetopius hannelorae* sp. n., 35, aedeagus, left lateral view. 36, same, as seen from “a”. 37, head from above. 38, right paramere, dorsal view. 39, same, right lateral view. 40, right appendage of pygofer, right lateral view. 41, 7th female sternite. Scale: 0.5 mm for figs. 37 and 41. 0.1 mm for the rest.

Holotype ♂: Mazraat Kfar Zebiane (el Qanater), Juin 85/pièges gluants sur *Quercus infectoria*. Liban.

Paratypes: 1 ♀: Mazraat Kfar Zebiane (el Qanater), 29-9-85/*Quercus cerris pseudocerris*. Liban.

1 ♀: Mazraat Kfar Zebiane (el Qanater), 8-7-85/pièges gluants sur *Quercus cerris pseudocerris*. Liban.

Distribution: Lebanon.

*Platymetopius manfredi* sp. n. (figs. 42–48)

Externally very similar to *P. hannelorae* sp. n., but larger and with the black posterior spots of the vertex somewhat less elongated and sometimes ovoïd (fig. 44).

*Male*: Pygofer as for *P. quercicola*, with the ventral appendages very similar to that

of *P. hannelorae*, but with an acute non-serrated apex (fig. 47). Aedeagus (figs. 42 and 43) with two pairs of basal lateral appendages, the inner ones about half the length of the others. Parameres as in figs. 45 and 46. Sub-genital plates as for *P. hannelorae*.

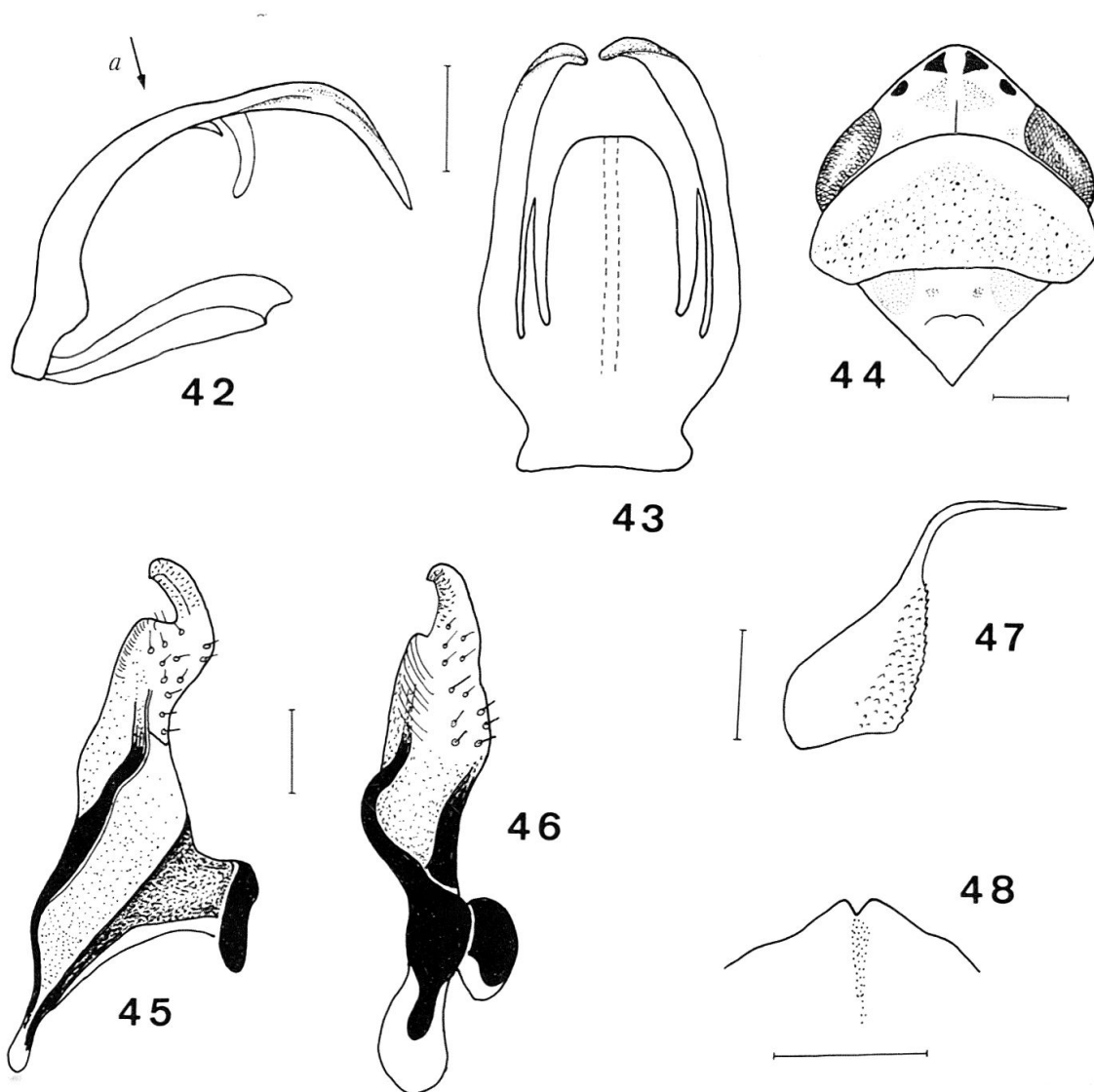
*Female*: Posterior border of 7th sternite triangular-shaped and sinuated, with a shallow v-shaped notch (fig. 48).

Measurements (in mm 2 ♂, 3 ♀): Total length: ♂5.60–5.75; ♀6.40–6.65. Length of vertex: ♂0.45–0.55; ♀0.60. Length of pronotum: ♂0.75; ♀0.80. Width of head: ♂1.60; ♀1.75–1.80.

Holotype ♂: Lassa, 8-10-83/Echinops viscosus. Liban.

Paratypes: 2 ♀: same labels.

Distribution: Lebanon.



Figs. 42–48. *Platymetopius manfredi* sp. n., 42, aedeagus, left lateral view. 43, same, as seen from “a”. 44, head from above. 45, right paramere, dorsal view. 46, same, right lateral view. 47, right appendage of pygofer, right lateral view. 48, 7th female sternite. Scale: 0.5 mm for figs. 44 and 48. 0.1 mm for the rest.

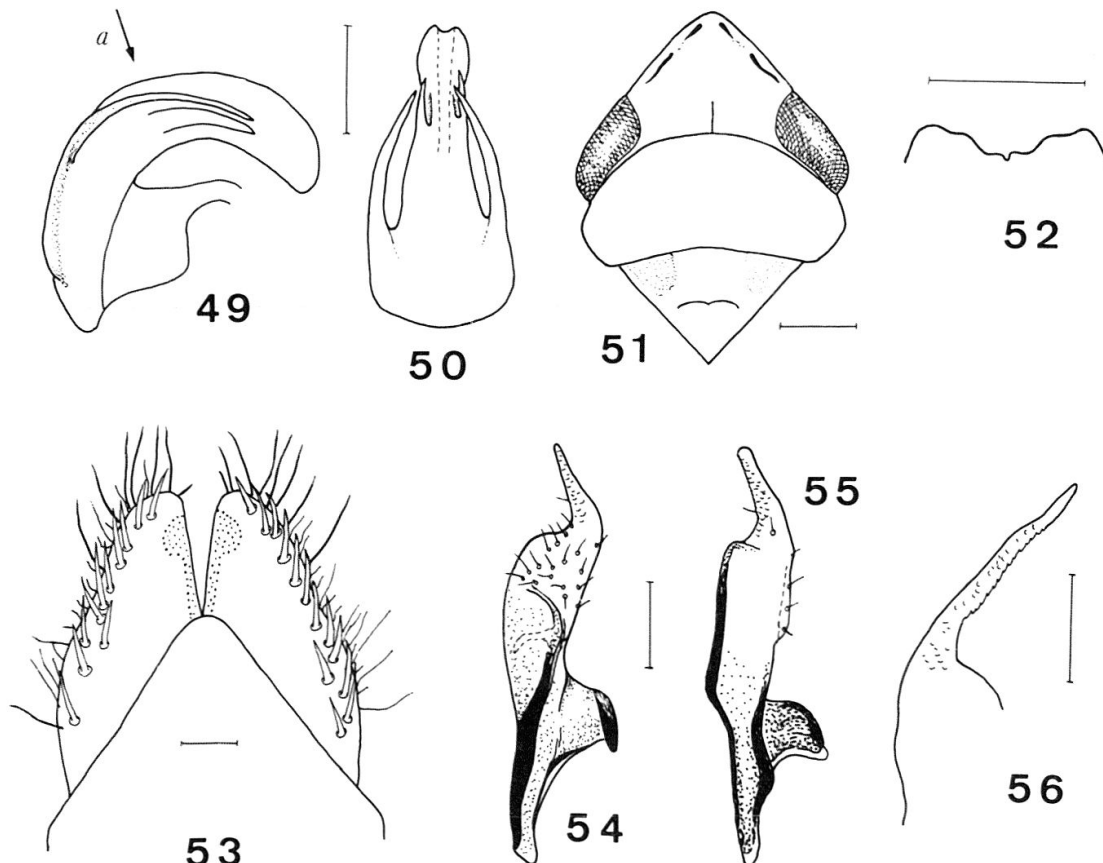
### III—The group of *P. infectoriae* sp. n.

In the defined area, this group has only one species that certainly has close affinities with *P. obsoletus* (SIGNORET, 1880) and related species (cf. below), but is quite distinctive by the concave shape of the female 7th sternite (with no central protuberance) and the relative length of the vertex which is sub-equal to the pronotum. DLABOLA (1961) represented the 7th female sternite of an undescribed *Platymetopius* sp. specimen from Tashkent (USSR, Uzbekistan), which is very similar to that of *P. infectoriae* and most probably is another member of this group.

*Platymetopius infectoriae* sp. n. (figs. 49–56)

Habitus: Vertex with a very light yellow or ochreous coloration in the middle; two black or brownish streaks are present on the apex, with two other posterior ones much elongated and almost reaching the eyes (fig. 51). Pronotum whitish with yellow-greenish longitudinal faint streaks. Fore wings hyaline with yellow nervation; numerous cross-veins in the clavus and five or six brown transverse veins in the costal cell. A small brown rounded dot is present in the middle of the third apical cell.

*Male*: Pygofer apically rounded with no dorsal process; ventral half yellow and dorsal part black. Pygofer appendage (fig. 56) slender and serrated. Aedeagus



Figs. 49–56. *Platymetopius infectoriae* sp. n., 49, aedeagus, left lateral view. 50, same, as seen from "a". 51, head from above. 52, 7th female sternite. 53, sub-genital plates, ventral view. 54, right paramere, dorsal view. 55, same, right lateral view. 56, right appendage of pygofer, right lateral view. Scale: 0.5 mm for figs. 51 and 52. 0.1 mm for the rest.

(figs. 49 and 50) with two pairs of lateral appendages: the outer ones start ventrally at mid-length of the stem and are about half its length; the inner appendages are very short and are placed laterally in the middle of the distal half of the stem. Sub-genital plates as in fig. 53, with slightly sclerotized inner edges. Parameres (figs. 54 and 55) with relatively long and slender apophyses.

*Female*: Posterior border of 7th sternite as in fig. 52, concave and sinuated, with a small central groove.

Measurements (in mm 2 ♂, 3 ♀): Total length: ♂5.65–6.35; ♀6.15–6.55. Length of vertex: ♂0.60–0.65; ♀0.65–0.75. Length of pronotum: ♂0.65–0.75; ♀0.75–0.80. Width of head: ♂1.55–1.65; ♀1.65–1.75.

Holotype ♂: Mazraat Kfar Zebiane (el Qanater), Juillet 85/pièges gluants sur *Quercus infectoria*. Liban.

Paratypes: 2 ♀: same labels as above.

1 ♂: Mazraat Kfar Zebiane (el Qanater), Juin 85/pièges gluants sur *Quercus infectoria*. Liban.

Distribution: Lebanon.

#### IV–The group of *P. guttatus* FIEBER, 1869

Vertex without any dark spots and shorter than the pronotum; fore wings with numerous cross-veins in the clavus and corium; the pygofer is ventrally prolonged by a more or less narrowing lobe with a well differentiated spine at the apex; aedeagus very characteristic with two long pairs of lateral appendages recurved dorsad with a crossing-over; sub-genital plates short with a sub-apical dorsal tooth. One species in the Near East.

*Platymetopius pseudoguttatus* sp. n. (figs. 57–60).

This species is externally very similar to *P. guttatus* FIEBER, according to the descriptions of RIBAUT (1952) and OSSIANNILSSON (1983), and its aedeagus is also identical to that of the former species. However, the male pygofer and the 7th female sternite show significant differences.

*Male*: Pygofer (fig. 59) prolonged backward by a lobe ending with a spine partly covered by a small delicate membrane. This lobe is not curved upward as in *P. guttatus* and the apical spine is directed ventrad. Parameres (figs. 57 and 58) are very similar to that of *P. guttatus*.

*Female*: Posterior border of 7th sternite (fig. 60) sinuated with a small central notch not exceeding one-fifth of the sternite length; in *P. guttatus* this notch is half as long as the sternite.

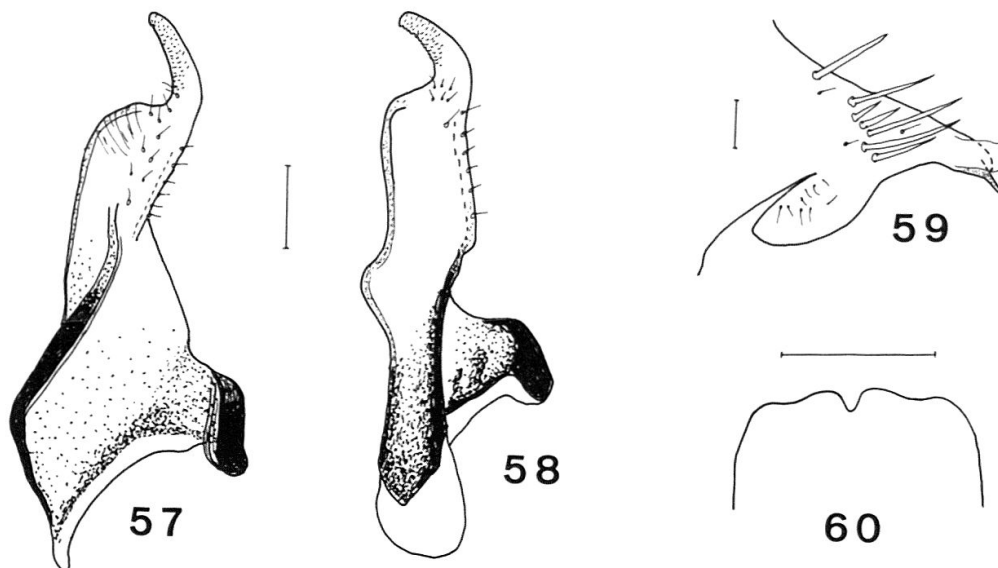
Measurements (in mm 3 ♂, 3 ♀): Total length: ♂5.15–5.55; ♀5.75–5.80. Length of vertex: ♂0.45; ♀0.55. Length of pronotum: ♂0.60–0.65; ♀0.70. Width of head: ♂1.40–1.55; ♀1.55–1.65.

Holotype ♂: Mazraat Kfar Zebiane (el Qanater), Juin 85/pièges gluants sur *Quercus infectoria*. Liban.

Paratypes: 2 ♀: labels same as above.

1 ♀: Zebdine, Juin 85/pièges gluants sur *Quercus cerris pseudocerris*. Liban.

1 ♂: Mazraat Kfar Zebiane (el Qanater), Juillet 85/pièges gluants sur *Quercus infectoria*. Liban.



Figs. 57–60. *Platymetopius pseudoguttatus* sp. n., 57, right paramere, dorsal view. 58, same, right lateral view. 59, left lobe of pygofer. 60, 7th female sternite. Scale: 0.5 mm for figs. 59 and 60. 0.1 mm for the rest.

Remarks: According to literature, the geographical range of *P. guttatus* FIEBER covers most of the western Palaearctic zone including Anatolia, Cyprus and Iran (NAST, 1972; DLABOLA, 1981). However, I have seen a specimen of *P. pseudoguttatus* sp. n. from Anatolia in M. ASCHE's collection (Marburg, West Germany), and that means that all records of the former species from the Middle East should be revised, with a careful examination of the genital parts (especially the pygofer) of the "*P. guttatus*" specimens found in this area.

Distribution: Anatolia, Lebanon.

#### V – The group of *P. obsoletus* (SIGNORET, 1880)

According to the descriptions found in the relevant literature (RIBAUT, 1952; HAUPT, 1927; DLABOLA, 1952, 1957, 1963), this group can be characterized on a provisional basis by the shape of the aedeagus (one pair of lateral appendages), the long slender pygofer appendages and the shape of the female 7th sternite which is concave but with a central protuberance. Most of the known species of this group are in need of a redescription.

##### *Platymetopius obsoletus* (SIGNORET, 1880)

This western Palaearctic species is recorded also from Egypt and Palestine (HAUPT, 1927; NAST, 1972). These records need careful checking, for this species may have been confused with the next one hereafter.

##### *Platymetopius cruentatus* HAUPT, 1927

Described from Palestine, it has been partly reviewed by DLABOLA (1952, 1957 and 1963) but still needs a complete redescription in order to differentiate it

from *P. ferrarii* HAUPT. In the Near East it has been recorded from Israel and Jordan, with a geographical range extending as far as Iran and Anatolia.

*Platymetopius ferrarii* HAUPT, 1927

Also roughly described from Palestine by HAUPT; there is an urgent need for a redescription of the type, and a checking of the records from southern Europe (Italy, Romania and Yugoslavia, after NAST, 1972).

## VI – The group of *P. retamae* LINNAVUORI, 1962

Only one species which has been described from Israel. Its very peculiar characteristics seem to be unique within the genus and it certainly would be very interesting to study it more closely (LINNAVUORI, 1962).

*Platymetopius retamae* LINNAVUORI, 1962

Distribution: Israel.

### DISCUSSION AND ECOLOGICAL NOTES

From this brief review of the Near East species of *Platymetopius*, and with the description of the new species found in Lebanon, the following conclusions can be drawn:

- Ten species are well identified in the defined area: *P. linnavuorii* sp. n. (Lebanon), *P. libanoticus* sp. n. (Lebanon), *P. adonis* sp. n. (Lebanon), *P. quercicola* LINNAVUORI (Israel, Lebanon), *P. hannelorae* sp. n. (Lebanon), *P. manfredi* sp. n. (Lebanon), *P. infectoriae* sp. n. (Lebanon), *P. pseudoguttatus* sp. n. (Lebanon), *P. cruentatus* HAUPT (Israel, Jordan) and *P. retamae* LINNAVUORI (Israel).
- Four other species are to be checked or revised: *P. ferrarii* HAUPT (Israel), *P. obsoletus* (SIGNORET) (?) (Israel), *P. undatus parvulus* LINNAVUORI (?) (Israel) and *P. major* (KIRSCHBAUM, 1868) (?) (Jordan).

Some remarks can be made about the ecological requirements and geographical range of some of these species:

- The three new species belonging to the *undatus*-group were caught in biotopes which are characterized by the presence of *Quercus calliprinos* and its partnership plants associations. These associations are found from the coast up to 1500 m in central Lebanon. The *undatus* group-species seem to be polyphagous: I have seen a larva feeding on the leaves of very low branches of *Q. calliprinos*, and I have caught adults of *P. adonis* on this tree as well as on *Pistacia* sp., and even on grasses under these trees. In spite of three years of intensive trapping and collecting at different altitudes up to 3000 m, I have never found any of these three species out of the range of *Q. calliprinos*. Due to similar ecological conditions, it is probable that they will be encountered in the future in Israel and the coastal Alawiyeh mountains in northern Syria.
- The *P. quercicola* group-species are decidedly related to the deciduous species of *Quercus* (*infectoria* and *cerris* ssp. *pseudocerris* in Lebanon; *ithaburensis* in Israel). Comparative trapping in almost pure settlements of *Q. calliprinos* and deciduous *Quercus* spp. in Lebanon (unpublished data) were conclusive to this respect. It should be emphasized, however, that many adults were found feeding on low plants, like for example *P. manfredi* on *Echinops viscosus*, and that



obligatory linkage to a plant association (as in this particular case) does not mean absolute monophagy. Again, the range of this group-species could extend at least towards northern Syria.

- *P. infectoriae*: One larva was collected from gramineae near the coast in a mixed *Q. calliprinos*-*Q. infectoria* wood. It was reared on a mixture of grasses until the adult stage and died a few days later. Trapping in pure stands of *Q. calliprinos* never yielded any adults of this species, while many of them were easily trapped in *Q. infectoria* or mixed *Q. infectoria*-*Q. cerris pseudocerris* woods. Here again, this species seems to be linked to deciduous *Quercus* biotopes with maybe (according to my own observations) a preference for *Q. infectoria*. Adults were also caught on *Echinops viscosus*.
- *P. retamae* represents probably a case of high trophic specialization. According to LINNAVUORI (1962) it was found on *Retama raetam* (Leguminosae) in the Negev desert and near Jerusalem. According to MOUTERDE (1970) this ligneous plant grows only on the southern Lebanese and Palestinian coast, and in Egypt. Another species, *Retama duriaei* which is very similar to the former, is more continental and is found in Transjordan and the Tiberiade area. It is therefore most probable that this last species that grows in the Negev desert and around Jerusalem, and that *P. retamae* was captured on it. It is possible that this *Platymetopius* is not strictly monophagous and may then be found on both *Retama* species; in which case there is a remote chance to find it along the Lebanese coast, at least for the next few years (if not too late), because, as MOUTERDE has put it (1970, page 227): “. . . mais ses rameaux, passés à la teinture, sont vendus chez les fleuristes de Beyrouth, ce qui pourrait bien amener sa disparition.”

## RÉSUMÉ

Les espèces du genre *Platymetopius* au Proche-Orient (Liban, Syrie, Israël et Jordanie) sont passées en revue et sept nouvelles espèces sont décrites du Liban: *P. linnavuorii* sp. n., *P. libanoticus* sp. n., *P. adonis* sp. n., *P. hannelorae* sp. n., *P. manfredi* sp. n., *P. infectoriae* sp. n. et *P. pseudoguttatus* sp. n. Le mâle de *P. quercicola* LINNAVUORI, 1962 est décrit pour la première fois. Deux autres espèces sont bien identifiées pour la région considérée (*P. cruentatus* HAUPT, 1927 et *P. retamae* LINNAVUORI, 1962); quatre espèces sont sujettes à caution, soit que leur description est insuffisante ou leur statut taxonomique indéterminé (*P. ferrarii* HAUPT, 1927 et *P. undatus parvulus* LINNAVUORI, 1962), soit que leur signalement dans la région du Proche-Orient est considérée comme douteuse et méritant une vérification approfondie (*P. obsoletus* [SIGNORET, 1880] et *P. major* [KIRSCHBAUM, 1868]). Les particularités écologiques de la plupart des espèces étudiées sont brièvement exposées.

## REFERENCES

- DLABOLA, J. 1952. Einige neue palaearktische Zikaden und andere faunistische Bemerkungen. *Acta ent. Mus. nat. Pragae*, 28: 27–37.
- DLABOLA, J. 1957. Results of the zoological expedition of the National Museum in Prague to Turkey. 20. (*Hom. Auch.*). *Acta ent. Mus. nat. Pragae*, 31: 19–68.
- DLABOLA, J. 1961a. Eine neue *Platymetopius*-Art aus Mitteleuropa und weitere tschechoslowakische Faunistik. *Acta faun. ent. Mus. nat. Pragae*, 7: 5–9.
- DLABOLA, J. 1961b. Die Zikaden von Zentralasien, Dagestan und Transkaukasien (*Hom. Auch.*). *Acta ent. Mus. nat. Pragae*, 34: 241–358.
- DLABOLA, J. 1963. Weitere neue Arten der Familie Cicadellidae aus Zentralasien und Zoogeographische Bemerkungen zu einzelnen Paläarktischen Zikadenarten (*Homoptera*). *Acta ent. Mus. nat. Pragae*, 35: 381–390.
- DLABOLA, J. 1974. Ergebnisse der Tschechoslowakisch-iranischen entomologischen Expedition nach dem Iran 1970. *Acta ent. Mus. nat. Pragae*, supp. 6: 29–73.



- DLABOLA, J. 1981. Ergebnisse der tschechoslowakisch-iranischen entomologischen Expedition nach dem Iran (1970 und 1973) (mit Angaben über einige Sammelresultate in Anatolien). Homopt. Auchen. (II. Teil). *Acta ent. Mus. nat. Pragae*, 40: 127–311.
- HAUPT, H. 1927. Homoptera Palestinae I. *Bull. agric. exp. Stn., Tel Aviv*, 8: 1–53.
- LINNAVUORI, R. 1962. Hemiptera of Israel. III. *Ann. Soc. zool. bot. Fenn. "Vanamo"*, 24: 1–108.
- MOUSTERDE, P. 1970. Nouvelle flore du Liban et de la Syrie. Tome II. Dar el-Machreq Ed., Beyrouth, 727 pp.
- NAST, J. 1972. Palaearctic Auchenorrhyncha. An annotated check-list. Warszawa. 550 pp.
- OSSIANNILSSON, F. 1983. The Auchenorrhyncha (Homoptera) of Fennoscandia and Denmark. Part 3: Cicadellidae: Deltocephalinae. *Fauna Entomol. Scand.* 7: 594–979.
- RIBAUT, H. 1952. Homoptères Auchenorrhynques II. (Jassidae). *Faune de France*, 57, Paris, 474 pp.
- SCHULZ, K. 1976. Zur Kenntnis der Gattung *Jassargus* ZACHVATKIN (Homoptera, Auchenorrhyncha). *Ph. D.-Thesis, Philipps-University, Marburg/Lahn*, 256 pp.

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