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Studies on the South- and Eastmediterranean Hemipterous Fauna

R. LINNAVUORI

24 figures

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I. CONTRIBUTIONS TO THE HEMIPTEROUS FAUNA OF LIBYA

The insect fauna of Libya is no doubt the least known within the countries around the Mediterranean. For instance, there is no larger survey about the Hemiptera of this large country. On my way to the Sudan in August 1962 I had an opportunity to take some samples along the coastal road in Libya. Although I had only a few days to use and the time — the late summer aspect — was the worst possible for collecting insects, I succeeded, at any rate, in finding several Hemiptera species not previously recorded for Libya. These and the other species are listed below as a small contribution to the knowledge of the fauna of that country. Besides my own finds some species in my collection collected by Dr. H. ECKERLEIN in Coburg, Germany, have also been included.

SURVEY OF THE COLLECTING BIOTOPES

The coastal belt from Zouara on the Tunisian border to Benghazi in Cyrenaica is low and eremian. In some parts, e.g. near Zouara, there are salt marshes with halophytic vegetation composed of different *Chenopodiaceae*, *Limoniastrum*, *Thymelea hirsuta*, etc. In other places there are coastal dunes or sandy or stony desert. The vegetation here consists of scanty steppes often of *Artemisia* type. Here grasses like *Imperata cylindrica* and *Panicum* sp. and herbaceous plants such as *Artemisia* spp., thorny *Compositae*, *Umbelliferae* (e.g. *Pithyranthus tortuosus*), *Urginea maritima*, etc., are to be found. The most important bushes are *Retama raetam* and in moister and \pm saline places *Atriplex halimus* and *Tamarix* spp. Along roads there are often cultivated *Eucalyptus* trees.

The fauna of this area is strongly Eremian, consisting of species (*Tholagmus chobauti*, *Tenosius proletarius*, *Euthetus humilis*, *Stenophthalmicus fayoumensis*, *Vachiria natica*, *Pachynomus lethierryi* etc.) occurring in the neighbouring desert areas too. In the maritime salt marshes some common Mediterranean species (e.g. *Brachynema cinctum*, *Engistus boops* and *Henestaris laticeps*) also occur, although their number seems to be rather small.

The most interesting area, forming a strong contrast to the otherwise eremian country, is the so-called »Green Mountains» between El Merj (formerly Barca) and Derna in Cyrenaica. The mountains and hills of this area are formed mainly of calcareous rock, from which the prevailing eroded reddish ferriferous and calcareous loose soil, known as »terra rossa», has also been derived. Owing to the higher topography the area receives a considerably higher annual rainfall than the other parts of Libya. Consequently the vegetation is formed of dense macchia forests resembling the corresponding biotopes in Tunisia and Palestine. The forest is especially luxurious in wadis such as the magnificent canyon-shaped Wadi-el-Kuf. The most important trees are *Juniperus phoenicea*, *Cupressus*, *Ceratonia siliqua*, *Olea europaea* and *Quercus* sp. In drier places and as undergrowth in the forests there occur dense macchias formed of shrubs such as *Myrtus communis*, *Pistacia lentiscus*, *Rhamnus alaternus* and *Rosmarinus officinalis*. The commonest herbaceous plants are different *Labiatae*, *Compositae* and in moister shady places *Adiantum capillus-veneris*, etc.

The fauna in this area is extremely interesting. It consists of forms otherwise occurring in the Atlas countries on the one hand and in Palestine and Syria on the other. These forms have been able to reach Cyrenaica during the former more favourable climatic conditions in North Africa, while the immense surrounding desert areas nowadays form an effective barrier to their spread. Owing to this long isolation many forms in Cyrenaica have split into separate geographical subspecies (e.g. *Orthotylus junipericola contractulus* and *Brachynotocoris cyprius inermis*) or often even evolved into separate species closely related to their ancestors in the Atlas countries or in the Syrio-Anatolian region in the Orient. The number of endemics is therefore comparatively high and additional studies are urgently needed for this unique green spot in the middle of the desert region of North Africa.

SPECIES LIST

Cydnidae

Macroscytus brunneus (F.) — El Merj—Gubba road, 1 spec., 30—31. VIII. 1962. New to Libya. At lamp. Holomediterranean.

Pentatomidae

Ancyrosoma leucogrammes (GL.) — nr. Tripolis, 1 spec., 27. VIII. 1962. New record for Libya. On dry, sandy hill-side steppe. Holomediterranean.

Tholagmus chobauti PT. — nr. Benghazi, many, 30. VIII. 1962. On *Pithyranthus tortuosus*.

Menaccarus dohrnianus (M. R.) — Zouara—Tripolis road, 1 spec., 27. VIII. 1962. From dune vegetation. New to Libya. Eremian.

Sciocoris sahlbergi E. WGN. — nr. Gubba, many, 1. IX. 1962. On *Stachys* sp. growing on a calcareous rock. New to Libya. Eremian, occurring in Egypt, the Sudan, Palestine and Turkey.

S. angusticollis Pt. — nr. Benghazi, 1 spec., 30. VIII. 1962.

Holcostethus strictus (F.) — El Merj, 1 spec., 31. VIII. 1962. Swept from macchia.

Codophila varia (F.) — nr. Tobruk, some, 1. IX. 1962.

Brachynema cinctum (F.) — nr. Tobruk, 1 spec., 1. IX. 1962. From halophytes. New to Libya. Holomediterranean.

Holcogaster exilis Hv. — El Merj, many, 31. VIII. 1962. On *Juniperus phoenicea* and (certainly occasionally) *Pistacia lentiscus*. The specimens are somewhat smaller than usual. New to Libya. Holomediterranean with a southern distribution.

Acrosternum millierei (M. R.) — El Merj, 1 spec., 31. IX. 1962; nr. Tobruk, some, 1. IX. 1962.

A. heegeri Fb. — El Merj, 1 spec., 30. IX. 1962; El Merj—Gubba road, 1 spec., 31. VIII. 1962; nr. Tobruk, 1 spec., 1. IX. 1962.

Coreidae

Gonocerus freyi Mc. — El Merj, 2 spec., 31. VIII. 1962. On *Juniperus phoenicea*. A rare endemic species.

Alydidae

Euthetus humilis Hv. — nr. Tripolis, 1 spec., 27. VIII. 1962. Swept from a dry sandy hill with grasses, *Artemisia* and *Retama*. New to Libya. Previously known only as the type specimen from Tunisia.

Tenosius proletarius (SCHAUUM.) — nr. Tripolis, 2 spec., 27. VIII. 1962. Together with the preceding. New to Libya. Ethiopian.

Rhopalidae

Corizus hyoscyami (L.) — El Merj—Gubba road, 1 spec., 31. VIII. 1962.

Rhopalus subrufus (GML.) — El Merj—Gubba road, 1 spec., 31. VIII. 1962. New record for Libya. Cosmopolitan.

Liorhyssus hyalinus (F.) — 100 km E of Homs, 2 spec., 28. VIII. 1962; nr. Tripolis, 2 spec., 27. VIII. 1962.

Lygaeidae

Lygaeus pandurus (Scop.) — 100 km E of Homs, 1 spec., 28. VIII. 1962; nr. Tobruk, some, 1. IX. 1962.

Melanocoryphus persimilis Hv. — El Merj—Gubba road, 2 spec., 31. IX. 1962.

Orsillus depressus DL. — El Merj, many, 31. IX. 1962. On *Juniperus phoenicea*. New record for Libya. Holomediterranean.

Hemestaris laticeps Ct. — Zouara—Tripolis road, 1 spec., 27. VIII. 1962. New to Libya. Holomediterranean.

Engistus boops (DF.) — Zouara—Tripolis road, 2 spec., 27. VIII. 1962. From halophytes together with the preceding. New to Libya. Holomediterranean.

Stenophthalmicus fayoumensis C. — 100 km E of Homs, 1 spec., 28. VIII. 1962; Zouara—Tripolis road, some, 27. VIII. 1962. On *Imperata cylindrica* and *Panicum* sp. on dunes. Eremian. New to Libya.

Bycanistellus naso STÅL — 100 km E of Homs, 1 spec., 28. VIII. 1962. On dune vegetation. New to Libya. Eremian.

Remaudierana annulipes (BÄR.) — El Merj, 1 spec., 30. VIII. 1962.

Camptocera glaberrima (Wk.) — Homs, 1 spec., 27. VIII. 1962.

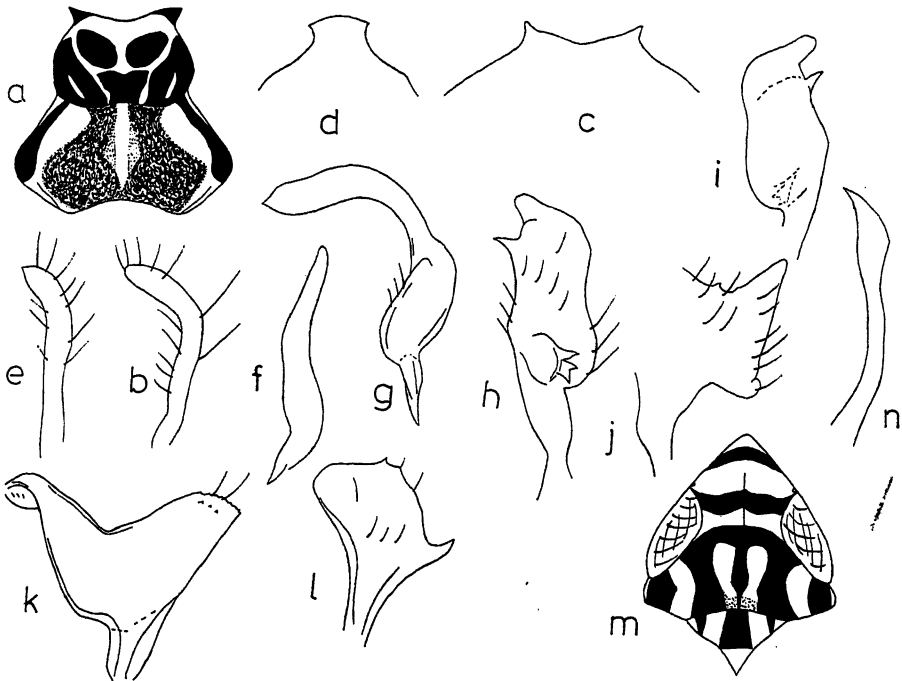


Fig. 1. *Sphedanolesthes ornaticollis* n. sp.: a pronotum; b stylus; c apical lobe of pygofer. — *S. lividigaster* (M.) (from Spain): d apical lobe of pygofer; e stylus. — *Deraeocoris eremicus* n. sp.: f right stylus; g left stylus. — *Orthotylus junipericola contractulus* n. ssp.: h—i right stylus; j sensory lobe of left stylus. — *Brachynotocoris cypricus inermis* n. ssp.: k left stylus; l right stylus. — *Wadkufia elegans* n. gen. et sp.: m head, pronotum and scutellum; n anterior tentorium branch. — Orig.

Reduviidae

Ectomocoris ululans (R.) — El Merj, some, 30. VIII. 1962. At lamp. New to Libya. Holomediterranean.

Vachiria natalica STÅL — nr. Tripolis, 1 spec., 27. VIII. 1962.

Sphedanolesthes ornaticollis n. sp.

7 mm. Head black, basal part with a yellowish median stripe; ocelli connected with eyes by a yellowish stripe. Antennae blackish brown. Pronotum reddish brown (fig. 1 a), basal margin and median stripe lighter; with black or blackish brown markings as in the figure. Scutellum black, apex medially yellowish. Elytra with corium and clavus coffee-brown, veins concolorous; membrane hyaline, faintly smoky. Paratergites yellowish or reddish with a large squarish dark spot in each. Under surface of abdomen dirty yellowish and of thorax blackish with margins of segments reddish. Legs coffee-brown, femora with indistinct darker rings.

Vertex $1.8 \times$ as broad as eye. Head, pronotum and scutellum with relatively long and dense, erect brownish hairs. Proportions between antennal joints $40 + 19 + 30 + 30$ (1 unit = 0.088 mm.); 1st joint $0.87 \times$ as long as basal width of pronotum. Pronotum with antero-

lateral angles sharply prominent; the rounded globose lobes of the anterior part shining and glabrous in black areas, while the reddish areas are duller and provided with a dense, tomentose, lighter, smooth hair covering; basal part relatively flat, with a longitudinal median depression; surface relatively opaque and densely microsculptured with small, irregular punctures; basal lateral angles rounded. Elytra slightly longer than abdomen. Hair covering of legs rather long and erect. Male genitalia: The caudal process of pygofer (fig. 1 c) broad and apically insinuated; angles sharp and curved ventrad. Stylus (fig. 1 b) distinctly curved apically.

El Merj—Gubba road, 1 ♂ type, 31. VIII. 1962; El Merj, 1 ♂ paratype, 31. VIII. 1962. Swept from macchia.

Most closely related to *S. lividigaster* (M.), which has, however, a uniformly black pronotum and different genitalia (fig. 1 d—e) with the caudal lobe of the pygofer much narrower and not insinuated apically and with the stylus much straighter. *S. sanguineus* (F.) is much bigger, the 1st antennal joint is as long as the basal width of the pronotum, etc.

Pachynomus lethierryi PT. — El Merj, 1 spec., 30. VIII. 1962. At lamp. New to Libya. Eremian.

Anthocoridae

Anthocoris nemoralis (F.) — El Merj—Gubba road, 2 spec., 31. VIII. 1962.

Miridae

Creontiades pallidus (RB.) — Homs, some, 27. VIII. 1962; Zouara—Tripolis road, 1 spec., 27. VIII. 1962.

Lygus pallidulus (BLANCH.) — El Merj, 1 spec., 30. VIII. 1962.

L. cervinus (H. S.) — Wadi-el-Kuf, some, ECKERLEIN leg. On *Olea europaea*. New to Libya. Euro-Siberian.

Deraeocoris eremicus n. sp.

Length 3.6 mm, breadth 1.52 mm. Shining. Uniformly yellow-brown. 2nd and 3rd antennal joints apically darkened. Corium at most slightly infusate apically.

Elongate. Upper surface glabrous. Vertex $1.15 \times$ (♂) or $2 \times$ (♀) as broad as eye. Proportions between antennal joints $8 + 31 + 12 + 10$ (♂) or $8 + 25 + 10 + 9$ (♀); antennae remarkably short, especially in ♀; basal width of pronotum $1.3 \times$ (♂) or $1.6 \times$ (♀) as long as 2nd joint; 3rd joint $0.46 \times$ (♂) or $0.65 \times$ (♀) as long as diatone. Pronotum with straight lateral margins; calli joined to each other, forming an elevated transverse bar; puncturing of the disk coarse, somewhat sparser than in *D. addendus*. Puncturing of elytra rather dense. Rostrum extending to hind coxae. Male genitalia: Right stylus as in fig. 1 f. Hypophysis of left stylus (fig. 1 g) broader than in the related species.

nr. Tobruk, 1 ♂ type and some paratypes, 1. IX. 1962. Swept from a low shrub (possibly *Haloxylon* sp.) in a stony desert.

Near *D. addendus* Lv. This species is more opaque, however, with a long hair covering on the upper surface, and distinct dark brown markings on the elytra and often also on the pronotum; the vertex (♂) is 1.05 — $1.06 \times$ or 1.77 — $2.0 \times$ (♀) as broad as the eye; the antennae are longer (the basal width of the pronotum is 1.05 — $1.07 \times$ (♂) or 1.31 — $1.36 \times$ (♀) as long as the 2nd joint and the 3rd joint is $0.56 \times$ (♂) or $0.65 \times$ (♀) as long as the diatone), the pronotum is somewhat narrower, often with distinctly insinuated lateral margins and denser puncturing. Moreover the species lives on *Tamarix*. *D. martini* PT. is much bigger (4.1—5.3 mm) and more robust; the vertex 1.3 — $1.33 \times$ (♂) as broad as the eye and the basal width of the

pronotum $1.2 \times (\text{♂})$ or $1.4 \times (\text{♀})$ as long as the 2nd antennal joint. *D. pilipes* Rt. has long, erect hairs on the 2nd antennal joint, a black puncturing on the upper surface, etc.

Trigonotylus pallidicornis Rt. — Homs, 2 spec., 27. VIII. 1962. New to Libya. Eremian.

Cyrtopeltis tenuis Rt. — Homs, some, 27. VIII. 1962.

Orthotylus junipericola Lv. ssp. *contractulus* n. ssp.

♂ 2.6 mm, ♀ 2.3 mm. As the nominate form, but vertex $1.9 \times (\text{♂})$ or $2 \times (\text{♀})$ as broad as eye; 2nd antennal joint $0.88 \times$ as long as basal width of pronotum and with dissimilar genitalia: right stylus (fig. 1 h—i) with a basal lobe bearing 3 teeth; hypophysis sharp and directed laterad; the body of the stylus is bluntly produced apical above the hypophysis. Left stylus (fig. 1 j) with hypophysis strongly triangularly produced in upper angle, while the basal angle is roundedly rectangular. Vesical appendages as in the nominate form.

El Merj, 1 ♂ type, 4 paratypes, 31. VIII. 1962. On *Juniperus phoenicea*.

Brachynotocoris cyprius E. WGN. ssp. *inermis* n. ssp.

As nominate form, but styli of ♂ different: Right stylus (fig. 1 k) bearing only one strong tooth, while the apex of the stylus is provided with only a very faint tooth (well developed in the nominate form); the left stylus (fig. 1 l) has a more produced sensory lobe and the upper margin of the stylus (broad aspect) is strongly insinuated.

El Merj—Gubba road, 1 ♂ type, 2 paratypes, 31. VIII. 1962. On *Olea europaea*. The nominate form known from Cyprus and Israel.

Platyseranus putoni Rt. — nr. Tripolis, 1 spec., 27. VIII. 1962; Zouara—Tripolis road, some, 27. VIII. 1962. On *Retama*. New to Libya. Eremian.

Dimorphocoris bergevini LDB. — Djebel Nefoussa, 1 spec., 1. V. 1961, ECKERLEIN. Previously known from Algeria.

Stenoparia putoni FB. — Kussabat, 2 spec., 3. V. 1961; Kseia, 3 spec., 2—5. VI. 1961, ECKERLEIN. Holomediterranean, not previously recorded from Libya.

Roudairea crassicornis Pt. Rt. — Djebel Nefoussa, 1 spec., 1. V. 1961, ECKERLEIN. Eremian, previously known from Algeria and Tunisia.

Megalocoleus cunealis Rt. — Kseia, 1 spec., 2—3. V. 1961, ECKERLEIN. Eremian, previously known from Algeria.

Amblytulus vittiger Rt. — Zouara, many, 29. IV. 1961, ECKERLEIN. Previously known from Algeria.

Tytthus parviceps (Rt.) — El Merj, 1 spec., 30. VIII. 1962. At lamp. New to Libya. Intertropical.

Psallus varians (H. S.) — Wadi-el-Kuf, some, 2. V. 1963 and Gubba, 1 spec., 2. V. 1963, ECKERLEIN. European. New record for Libya.

P. aurora (M. R.) — nr. Benghazi, 1 spec., 30. VIII. 1962. Swept from desert vegetation, probably from *Artemisia* sp. New to Libya. Westmediterranean.

P. (Compsidolon) scutellaris Rt. — Tarhuna, 1 spec., 4. V. 1963, ECKERLEIN. Previously known from Algeria.

P. (Compsidolon) saundersi Rt. — 10 km S of Tripolis, 1 spec., 30. IV. 1961, ECKERLEIN. Previously known from Algeria.

Malacotes phlomidis LDB. — Wadi-el-Kuf, some, 2. V. 1963, ECKERLEIN. On *Phlomis* sp. Westmediterranean. New record for Libya.

Campylomma nicolasi Pt. Rt. — Homs, 1 spec., 27. VIII. 1962; 100 km E of Homs, 2 spec., 28. VIII. 1962.

C. oertzeni Rt. — 100 km E of Homs, 1 spec., 28. VIII. 1962.

Auchenocrepis alboscutellata Pt. — Zouara—Tripolis road, 2 spec., 27. VIII. 1962.

Maurodactylus alutaceus FB. — Djebel Nefoussa, 2 spec., 1. V. 1961; Tarhuna, 1 spec., 4. V. 1963, ECKERLEIN. Westmediterranean. New to Libya.

Tuponia tamaricicola LDB. — Zouara—Tripolis road, 2 spec., 27. VIII. 1963. Eremian. New record for Libya. On *Tamarix*.

T. richteri E. WGN. — Homs, 1 spec., 28. VIII. 1962; Zouara—Tripolis road, some, 27. VIII. 1962. On *Tamarix*. Eremian. New to Libya.

Cicadidae

Cicada barbara (Stål) — El Merj, 3 spec., 31. VIII. 1962. Common on *Ceratonia siliqua* and other trees. New to Libya. Westmediterranean.

Cercopidae

Neophilaenus longiceps (Pt.) — 100 km E of Homs, many, 28. VIII. 1962. Common on dune grasses. Westmediterranean. New to Libya.

Cicadellidae

Cicadulina bipunctella (Mts.) — Homs, 3 spec., 27. VIII. 1962. At lamp. New to Libya. Intertropical.

Laburrus quadratus (For.) — nr. Gubba, 1 spec., 1. IX. 1962. Swept from under vegetation of a macchia. New to Libya. Westmediterranean.

Stirellus instabilis (Rib.) — nr. Tripolis, 1 spec., 27. VIII. 1962; Zouara—Tripolis road, some, 27. VIII. 1962. On dry steppes. New to Libya. Pontomediterranean.

Neoliturus guttulatus (Kbm.) — nr. Gubba, 1 spec., 1. IX. 1962; El Merj, 2 spec., 31. VIII. 1962. New record for Libya. Holomediterranean.

N. dubiosus (Mats.) — 100 km E of Homs, 1 spec., 28. VII. 1962. New record for Libya. Westmediterranean.

Opsius scutellaris (Leth.) — Homs, 2 spec., 27. VIII. 1962. At lamp. New to Libya. Eremian.

Phlepsius ornatus (Perr.) — El Merj, 3 spec., 31. VIII. 1962. New record for Libya. Holomediterranean.

Selinocephalus harterti Bgv.? — nr. Tripolis, 2 spec., 27. VIII. 1962; Zouara—Tripolis road, 1 spec., 27. VIII. 1962. From dry steppes. Identification somewhat uncertain in the absence of males. Previously known from Algeria.

Platymetopius zizyphi Bgv. — nr. Tobruk, 1 spec., 1. IX. 1962. On *Zizyphus*. Eremian. Previously known only from Algeria.

Aconurella prolixa (Leth.) — Homs, 1 spec., 27. VIII. 1962. Eremian. New record for Libya.

Psammotettix alienus (Dlb.) — Homs, 1 spec., 27. VIII. 1962; El Merj, some, 30. VIII. 1962. New to Libya. Euro-Siberian.

Grypotes staurus Iv. — nr. Gubba, some, 1. IX. 1962.

Wadkufia n. gen.

Of *Stegelytrinae*. With bright red markings. Parallel-sided. Head somewhat narrower than pronotum. Anteclypeus strongly broadening apicad; frontoclypeus relatively narrow; genae shallowly insinuated below eyes; ocellocular area narrow.

Crown sharply angularly produced; frontal region flat, discal region concave and finely longitudinally striated; postfrontal suture rather distinct. Ocelli in fore margin near eyes. Anterior tentorium branches (fig. 1 n) simple. Pronotum short and broad, finely transversely wrinkled. Elytra without appendix; venation as in fig. 2 a, veins without knobs. Anterior and middle tibiae relatively thin; the spinulation of the former 1 + 5, of the hind knees 2 + 2 + 1. Male genitalia: Pygofer deeply incised dorsally; side lobes short and broad, setose, without appendages. Anal tube membranous. Valve relatively large. Plates narrow, macrosetae in disorder. Stylus with a narrow basal part; apophysis claw-like, preapical angle roundedly produced; stylus rather weakly joined to plate. Connective T-shaped, stem rather long. Penis with 2 long basal appendages; gonopore apical.

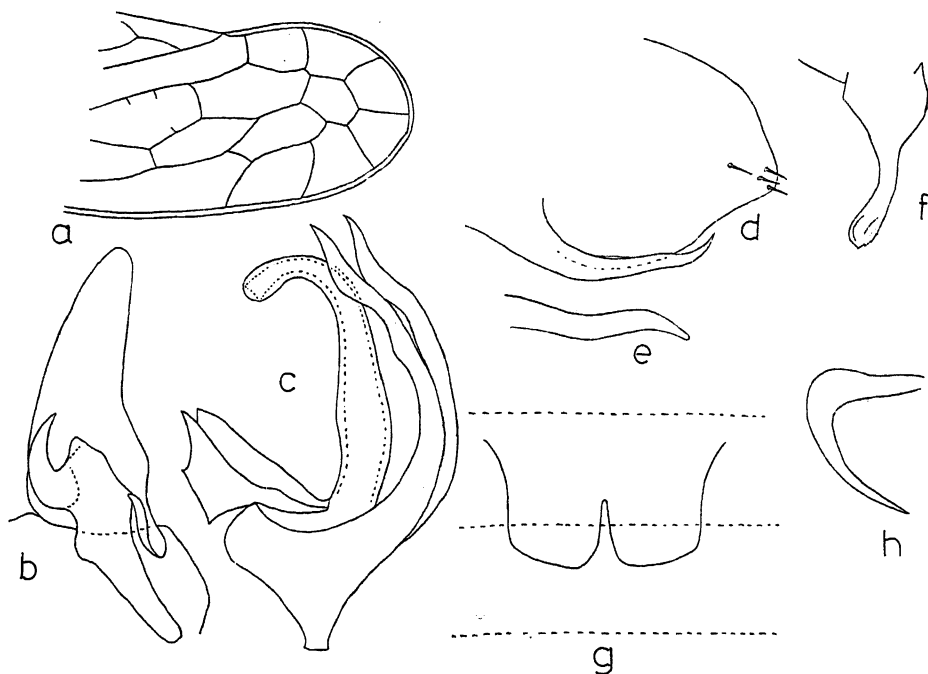


Fig. 2. *Wadkufia elegans* n. gen. et sp.: a elytron; b genital plate (without macrosetae) and stylus; c penis, lateral aspect. — *Empoasca juniperina* n. sp.: d side lobe of pygofer, lateral aspect; e appendage of same, ventral aspect; f appendage of anal tube; g dorsal abdominal apodemes. — *Chlorita quadridens* n. sp.: h appendage of anal tube. — Orig.

Type: *W. elegans* Lv.

Resembling *Stegelytra* M. R., but narrower, crown more strongly produced, genae narrower, spinulation of fore and middle tibiae regularly arranged in two rows, veins of elytra without knobs, etc.

W. elegans n. sp.

5 mm. Face golden brown, frontoclypeus with reddish lateral arcs. Crown (fig. 1 m) whitish, with 2 bright red transverse bands. Pronotum and scutellum whitish, the former with 5, the latter with 3 bright red longitudinal bands. Elytra golden brown; base of clavus with 2 somewhat callose whitish longitudinal stripes, apex of claval commissure with 3 callose whitish spots; apex of clavus, apical area and the neighbouring subapical area of corium dark brown; veins mainly red. Under surface brownish. Fore and middle legs pale greyish. Hind legs dark brown; apex of femora, margins of tibiae and tarsi reddish.

Body structure as above. Male genitalia as in fig. 2 b—c.

Wadi-el-Kuf, 1 ♂ type and 3 ♂♂ paratypes, 31. VIII. 1962. On *Quercus* sp.

Idiocerus ocellaris (M. R.) — El Merj, some, 31. VIII. 1962. On *Pistacia lentiscus*. New to Libya. Holomediterranean.

Austroagallia sinuata (M. R.) — El Merj, 1 spec., 31. VIII. 1962; Zouara—Tripolis road, 1 spec., 27. VIII. 1962. New to Libya. Holomediterranean.

Batrachomorphus signatus LDB.? — Homs, 1 ♀, 27. VIII. 1962. New to Libya. Eremian.

Empoasca decipiens PL. — Homs, 1 spec., 27. VIII. 1962. New to Libya. Holomediterranean.

E. juniperina n. sp.

3—3.25 mm. Olivaceous green. Basal margin of pronotum tinged with whitish. Elytra olivaceous green with obscure whitish patterns (the most remarkable ones in base and apex of clavus, in the middle of corium and in the subapical area); apex smoky. Under surface greenish. Legs bright green.

Body relatively robust. Vertex of uniform length (♂) or distinctly angularly produced (♀). Male genitalia: Appendages of side lobes (fig. 2 d—e) rather short. Appendages of anal tube (fig. 2 f) thick, broadening apically. Other genitalia of the type usual within the genus. Dorsal abdominal apodemes short (fig. 2 g).

El Merj, 1 ♂ type and many paratypes, 31. VIII. 1962. On *Juniperus phoenicea*.

Easily recognized by the colouring. Male genitalia much as in *E. decipiens*, but the dorsal abdominal apodemes much shorter and broader.

E. (Asymmetrasca) decedens PL. — Homs, some, 27. VIII. 1962. New to Libya. Holomediterranean.

Chlorita quadridens n. sp.

2 mm. Externally as *C. nervosa* (Fb.). Male genitalia: Appendages of anal tube (fig. 2 h) falcate. Penis (fig. 3 a—b) with 4 basal teeth. Other genitalia of the common type in the genus. Zouara—Tripolis road, 1 ♂ type and some paratypes, 27. VIII. 1962. On *Artemisia* sp.

Eupteryx kufensis n. sp.

2.25 mm. Of the group of *E. melissae* Cr. Crown with 2 transversely triangular apical spots and one roundedly squarish basal spot black. Otherwise as *E. melissae*. Male genitalia: Side lobes of pygofer (fig. 3 e) with 2 sharp teeth. Penis (fig. 3 c—d) simple, apex bifid. Other genitalia of the type usual in the genus.

Wadi-el-Kuf, 1 ♂ type, 31. VIII. 1962. On an unidentified *Labiatae*.

In the genital structure near *E. schuleri* RIB. and *E. graeca* (LDB.), but differing in the shape of the penis and in the teeth of the pygofer, and from *E. graeca* also in the dark patterns on the crown.

Helionidia tamaricis (Pr.) — Homs, 1 spec., 27. VIII. 1962; Zouara—Tripolis road, some, 27. VIII. 1962.

Erythroneura (Zygina) amicola n. sp.

2.5 mm. Yellowish green. Vertex with 2 round black apical spots. Pronotum olivaceous in the middle and basally; anterior margin lighter with 2 round black spots and some small brown dots and dashes. Scutellum with black basal triangles. Elytra olivaceous with some whitish spots, apex smoky. Under surface black, with margins of segments yellowish. Legs pale yellow.

Small, gracile species of the *distinguenda (fasciaticollis)* group. Male genitalia: Apex of stylus as in fig. 3 h. Side lobes of pygofer with a process in caudo-dorsal angle as in fig. 3 i. Penis (fig. 3 f—g) with 2 short, falcate apical appendages.

nr. Tobruk, 1 ♂ type and 1 ♀ paratype, 1. IX. 1962. On *Crataegus* sp.

E. (Zygina) sanguinosa (R.) — El Merj, 1 spec., 31. VIII. 1962. New to Libya. Holomediterranean.

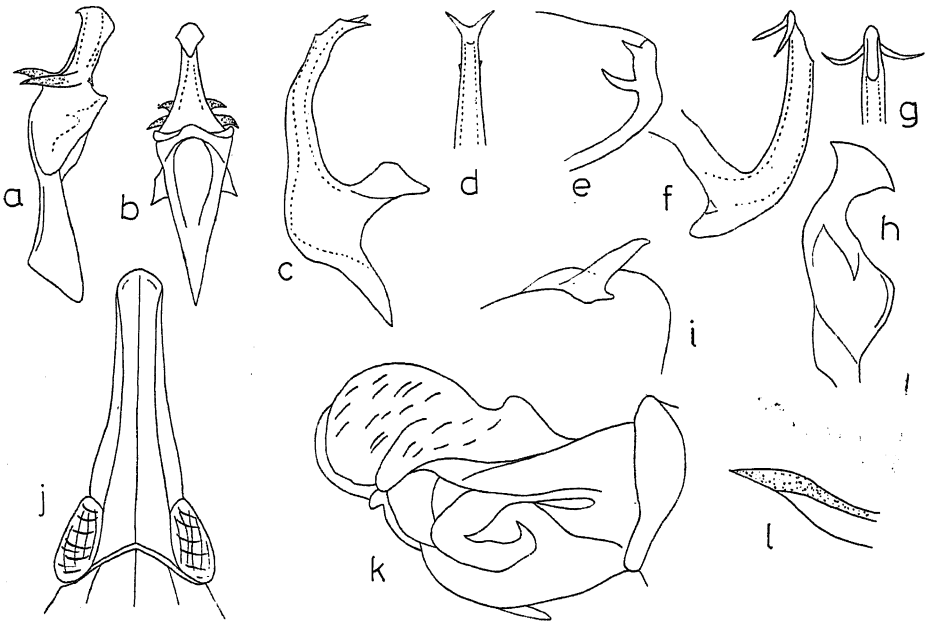


Fig. 3. *Chlorita quadridens* n. sp.: a penis, lateral aspect; b same, dorsal aspect. — *Eupteryx kufensis* n. sp.: c penis, lateral aspect; d apex of same, ventral aspect; e side lobe of pygofer, median aspect. — *Erythroneura amicola* n. sp.: f penis, lateral aspect; g apex of same, ventral aspect; h stylus; i side lobe of pygofer, median aspect. — *Dictyophara merjensis* n. sp.: j head; k penis, lateral aspect; l appendage of same. — Orig.

*Dictyopharidae**Dictyophara merjensis* n. sp.

11—12 mm. Greenish. Face between keels reddish or fulvous. Scutellum fulvous brown. abdomen yellow-brown.

Crown (fig. 3 j) strongly produced, in apical part parallel-sided, apex somewhat expanded; median length 4.1—4.4 × as long as basal width. Proportion between the length of the head and the total length of the body 1 : 4.4—5.8. Frons shallowly concave in profile. Elytra with a dense apical vein-net (as in *oranensis*). Hind tibiae with 5 spines. Male genitalia: Penis (fig. 3 k—l) stout, appendages short, falcate. Other genitalia as in *oranensis*.

El Merj, 1 ♂ type, 2 paratypes, 31. VIII. 1962; El Merj—Gubba road, 1 paratype, 31. VIII. 1962. On *Pistacia lentiscus*.

General appearance as in *D. oranensis* MATS., but with the head structure nearly as in *D. striata* OSH., although not related to the species of the *striata* group.

Nymphorgerius immundus (Hv.) ssp. *cyrenaicus* n. ssp.

Fig. 4 a—b. 4—4.2 mm. Dull. Reddish brown. Face, crown, pronotum and scutellum minutely irrorate with fuscous. Elytra with minute dark punctures, especially along veins. Abdomen dorsally densely punctate with dark, each segment also bearing a transverse row of coarse pits laterally. Legs brownish, punctate with dark.

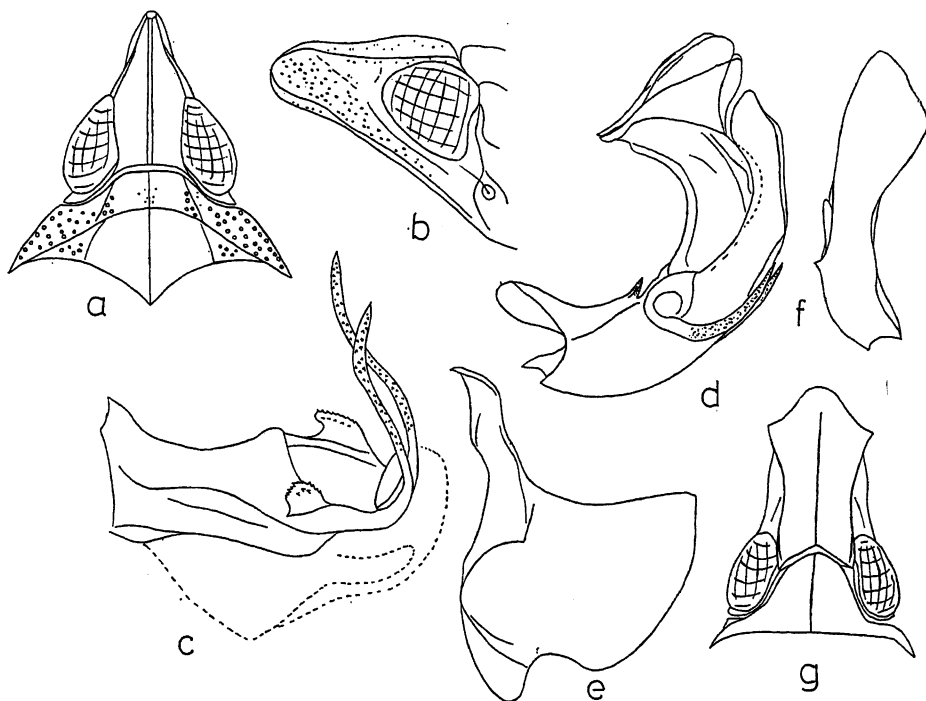


Fig. 4. *Nymphorgerius immundus* (Hv.) *cyrenaicus* n. ssp.: a head, pronotum and scutellum; b head from side; c penis. — *Hysteropterum cyrenaicum* n. sp.: d penis, lateral aspect; e stylus; f anal tube. — *Sfaxia producta* n. sp.: g head and pronotum. — Orig.

Ovate, body about $1.9 \times$ as long as broad. Crown $1.15 \times$ as long as pronotum and scutellum together, $2.3 \times$ as long as basal width, narrowly triangular; lateral margins parallel in basal half, strongly (and a little sinuately) converging apically; disk flat, median carina very distinct even in apex; parts of frons visible in dorsal view. Frons slightly concave in profile. Clypeus moderately convex with a median carina. Frons with 3 sharp, parallel keels; lateral longitudinal keel below eye obsolete or evanescent; coarse pits between this and the lateral facial keel. Pronotum with sharp keels and distinct roundish pits, under surface without shining knobs. Scutellum with distinct keels. Rostrum extending near to apex of abdomen. Hind tibiae with 5—6 spines. Male genitalia: Stylus of the usual type. Anal tube short and broadly ovate. Penis (fig. 4 c) weakly sclerified, with 2 long minutely dentate appendages and 2 roundish dentate lobes. Anal tube (♀) tapering apicad, about as long as broad.

El Merj, 1 ♂ type, some paratypes, 31. VIII. 1962. Swept from a dense macchia.

Cixiidae

Pseudoliarus fuscofasciatus (MEL.) ssp. *aegyptiacus* W. WGN. — Zouara—Tripolis road, 1 spec., 27. VIII. 1962. Previously known only from Egypt.

Delphacidae

Calligypona propinqua (Fb.) — Homs, 1 spec., 27. VIII. 1962; El Merj—Gubba road, 1 spec., 31. VIII. 1962.

Issidae

Hysteropterum deserticola Lv. — 10 km E of Homs, 1 spec., 28. VIII. 1962; Zouara—Tripolis road, 1 spec., 27. VIII. 1962. Previously known from Israel.

H. cyrenaicum n. sp.

3 mm. As *H. suturale* MEL., but frons somewhat less broadening downwardly, apophysis of stylus (fig. 4 e) longer, anal tube (fig. 4 f) more distinctly expanded ventrad apically and penis (fig. 4 d) dissimilarly shaped apically.

El Merj, 1 ♂ type and 1 ♂ paratype, 31. VIII. 1962. Swept from a macchia.

Sfaxia inermipes Bgv. — Zouara—Tripolis road, 1 spec., 27. VIII. 1962. Previously known from Tunisia.

S. producta n. sp.

Fig. 4 g. 4.5 mm. Dirty greyish ochraceous, with faint fuscous irroration. Lateral margins of frons with dark fuscous spots. Fore and middle femora and tibiae with dark rings.

Elongate. Upper surface considerably concave in lateral view. Crown strongly produced, spatulate, $2.2 \times$ as long as basal width, concave with a faint median keel; frons visible laterally in dorsal view. Frons narrow, in upper margin rectangularly produced laterad, after this broadening moderately downwardly, with 3 keels starting from upper margin and extending to base of clypeus; the median keel sharp, the lateral keels moderately diverging downwardly. Pronotum with a median keel. Elytra as long as abdomen, leaving the pygofer uncovered; a small hump present; longitudinal veins distinct, cross veins less raised. Hind tibiae unarmed.

Zouara—Tripolis road, 1 ♀ type, 27. VIII. 1962.

Differs greatly from *S. inermipes* in the strongly produced head, but having, nevertheless, the same frontal structure, the unarmed hind tibiae, etc. In the shape of the head it resembles the genus *Phasmena* MEL. This genus, however, has only one complete median keel on the frons, the lateral keels being either absent or extending from the upper margin obliquely to the lateral margin at the anterior angles of the eyes and the hind tibiae are provided with one spine.

Tettigometridae

Tettigometra virescens (Pz.) — El Merj, some, 31. VIII. 1962. On *Juniperus phoenicea*. Holo-mediterranean. New record for Libya.

T. picta Fb. — nr. Gubba, some, 1. IX. 1962. Westmediterranean. New to Libya.

T. tafratensis Bgv. — nr. Tobruk, 4 spec., 1. IX. 1962. Swept from a low shrub (possibly *Haloxylon* sp.) in a stony desert. A rare Eremian species, previously known from Morocco and Israel.

Flatidae

Phantia viridipennis LETH.? — Zouara-Tripolis road, 1 ♀, 27. VIII. 1962. Previously known from the Atlas countries.

P. indicatrix Wk. — nr. Tripolis, 1 spec., 27. VIII. 1962. Swept from *Artemisia* steppe. Eremian. New for Libya.

Rhinophantia longiceps (Pt.) — 100 km E of Homs, some, 28. VIII. 1962. Swept from *Artemisia* steppe. New to Libya. Eremian.

II. CONTRIBUTIONS TO THE HEMIPTEROUS FAUNA OF TUNISIA AND SPANISH MOROCCO

In August 1962, I had an opportunity to make a short field trip to Tunisia. Although the trip was made during the late summer aspect, a considerable number of Hemiptera species was collected. Since the material consists of some interesting or even new species, it seems to me justified to publish the finds in the following list. Moreover, several species sent me by Mr. ANSELMO PARDO ALCAIDE of Melilla, Spanish Morocco, and some finds made by Dr. H. ECKERLEIN of Coburg, Germany, have been included.

SURVEY OF THE COLLECTING BIOTOPES

1. Porto Farina

A salt-marsh on the Mediterranean coast. Dense vegetation of *Juncus* in wet places and *Atriplex halimus* bushes in drier. Nearby a dry, calcareous hill with low shrubs (e.g. *Pistacia lentiscus* and various *Labiatae*) was studied.

2. Ain Draham

An interesting mountain area (600—1300 m) near the Algerian border with large forests of *Quercus suber* and *Q. Mirbecki*. Of the other trees *Fraxinus* sp. and *Alnus glutinosa* in wet places could be mentioned. On hillsides too dry for trees, a dense macchia of *Rosmarinus officinalis*, *Erica arborea*, etc., together with several xerophilous herbaceous plants exists.

3. Oued Melleque

A shallow river with sand and gravel bottom with a *Juncus* zone bordering the shores in places. Farther from the water dense thickets of *Nerium oleander* and *Tamarix*.

4. Le Kef—Ebba Ksour road

Mainly *Artemisia* steppes with sun-parched vegetation at the time visited. In higher places sparse *Pinus* and *Juniperus* forests, in depressions some swamps with *Juncus*, *Typha* and *Atriplex parvifolia* were observed.

5. n r. S b i b a

A higher mountain area (1000—1300 m). At the foot of the mountain *Artemisia* steppes, consisting mainly of *A. herba-alba*. Higher up a zone of *Pinus halepensis* and near the top also *Juniperus phoenicea*.

6. K o r b a - N a b e u l r o a d

Coastal dunes with *Chenopodiaceae*, *Juncus* and *Tamarix*.

7. E l H a m m a d e G a b é s

Inland dunes with *Panicum turgidum*.

SPECIES LIST

Cydnidae

- Thyreocoris fulviventris* (Sc.) — Spanish Morocco: El Garme, Kebdana, 1 spec., PARDO.
Macroscytus brunneus (F.) — Spanish Morocco: Melilla, 1 spec., PARDO. Tunisia: Cébola B. Ammor, 1 spec., 15. VIII. 1962; Korba—Nabeul road, 1 spec., 21. VIII. 1962. At lamp.
Crocistethus basalis (Fb.) — Spanish Morocco: Melilla, 1 spec., PARDO.
Sehirus melanopterus (H. S.) — Spanish Morocco: Melilla, 2 spec., PARDO.

Pentatomidae

- Odontoscelis dubius* E. WGN. — Spanish Morocco: Granja del Muluya, 1 spec., PARDO. New to Morocco. Holomediterranean.
Odontotarsus grammicus (L.) — Tunisia: Korba—Nabeul road, 1 spec., 21. VIII. 1962.
Psacasta tuberculata (F.) — Spanish Morocco: Melilla, 1 spec., PARDO.
Periphymopsis lethierryi (Pt.) — Spanish Morocco: Melilla, some, PARDO.
Eurygaster hottentotta (F.) — Spanish Morocco: Melilla, 1 spec., PARDO.
E. austriaca (SCHR.) — Spanish Morocco; Tizi Ifri, 1 spec., PARDO.
Tarisa camelus Rt. — Spanish Morocco: Melilla, 1 spec., PARDO. New to Morocco. Eremian. Also found in Algeria.
Ventocoris falcatus (CYR.) — Spanish Morocco: Melilla, many, PARDO. Tunisia: Ain Draham, some, 16—18. VIII. 1962; Oued Melleque, some, 19. VIII. 1962.
Putonia torrida STÅL — Spanish Morocco: Melilla, some, PARDO.
Ancyrosoma leucogrammes (GL.) — Tunisia: nr. Kairouan, 1 spec., 22. VIII. 1962.
Tholagmus chobauti Pt. — Tunisia: nr. Kairouan, some, 22. VIII. 1962. On *Pityranthus tortuosus*. New to Tunisia. Eremian.
Aelia acuminata (L.) — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962; Le Kef—Ebba Ksour road, 1 spec., 19. VIII. 1962.
A. germari Ks. — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962.
A. cognata Fb. — Spanish Morocco: Isaguen, 1 spec., PARDO.
Eysarcoris inconspicuus (H. S.) — Tunisia: Le Kef—Ebba Ksour road, some, 19. VIII. 1962.
Holcostethus strictus (F.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962.
Carpocoris mediterraneus TAM. ssp. *atlanticus* TAM. — Spanish Morocco: Ametras, B. Seyyel, some, PARDO; Melilla, some, PARDO. Tunisia: Ain Draham, many, 16—18. VIII. 1962; Porto Farina, many, 15. VIII. 1962; Sbiba, some, 20. VIII. 1962.

- Codophila varia* (F.) — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962; Oued Melleque, 2 spec., 19. VIII. 1962; Porto Farina, 2 spec., 15. VIII. 1962; Sbiba, 2 spec., 20. VIII. 1962.
- Dolycoris numidicus* Hv. — Spanish Morocco: Melilla, 1 spec., PARDO; Tizi Ifri, 1 spec., PARDO.
- Chroanthia ornatula* (H. S.) — Tunisia: El Hamma de Gabés, 1 spec., 22—23. VIII. 1962.
- Brachynema germari* (KLT.) — Tunisia: Oued Melleque, some, 19. VIII. 1962.
- Holcogaster fibulata* (GM.) — Spanish Morocco: Tizi Ifri, many, PARDO. Holomediterranean. The first record from Africa.
- Eurydema ornatum* (L.) f. *picitella* Kk. — Tunisia: Le Kef—Ebba Ksour road, some, 19. VIII. 1962; Porto Farina, some, 15. VIII. 1962; Siliana, some, 20. VIII. 1962.
- Nezara viridula* (L.) — Tunisia: Korba—Nabeul road, 1 spec., 21. VIII. 1962.
- Acrosternum millierei* (M. R.) — Tunisia: Cébola B. Ammor, some, 15. VIII. 1962. At lamp. New for Tunisia. Holomediterranean.
- A. heegeri* Fb. — Tunisia: Ain Draham, some, 16—18. VIII. 1962; Cébola B. Ammor, 1 spec., 15. VIII. 1962; Korba—Nabeul road, 1 spec., 21. VIII. 1962.
- Piezodorus lituratus* (F.) — Tunisia: Ain Draham, some, 16—18. VIII. 1962. On *Quercus*.
- Rhaphigaster haraldi* Ldb. — Tunisia: Ain Draham, 2 adults and 3 larvae, 16—18. VIII. 1962. On *Quercus suber*. Endemic in the Atlas countries.

Stenocephalidae

- Dicranocephalus setulosus* (Fr.) — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962. New to Tunisia. Holomediterranean.

Coreidae

- Gonocerus insidiator* (F.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962; Porto Farina, 1 spec., 15. VIII. 1962. On *Pistacia*. New to Tunisia. Holomediterranean.
- Syromastus rhombeus* (L.) — Spanish Morocco: Melilla, 2 spec., PARDO; Tizi Ifri, 2 spec., PARDO.
- Haploprocta sulcicornis* (F.) — Tunisia: Ain Draham, 3 spec., 16—18. VIII. 1962.
- Enoplos ventralis* D. — Spanish Morocco: Melilla, 1 spec., PARDO. Tunisia: Korba, 1 spec., 16—17. V. 1961 and nr. Tunisia, 1 spec., 20. V. 1961, ECKERLEIN.
- Centrocoris subinermis* REY. — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962; Korba—Nabeul road, 2 spec., 21. VIII. 1962; Le Kef—Ebba Ksour road, 2 spec., 19. VIII. 1962.
- Prionotylus brevicornis* (M. R.) — Spanish Morocco: Gurugu, 1 spec., PARDO. Tunisia: Ain Draham, some, 16—18. VIII. 1962; Korba—Nabeul road, 1 spec., 21. VIII. 1962; Porto Farina, 1 spec., 15. VIII. 1962.
- Phyllomorpha laciniata* (VIL.) ssp. *algirica* G. M. — Spanish Morocco: Melilla, some, PARDO. Tunisia: Ain Draham, some, 16—18. VIII. 1962.
- Coriomeris affinis* (H. S.) — Tunisia: Ain Draham, many, 16—18. VIII. 1962; Korba—Nabeul road, 1 spec., 21. VIII. 1962. New to Tunisia. Holomediterranean.

Alydidae

- Camptopus lateralis* (GM.) — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962; Oued Melleque, 1 spec., 19. VIII. 1962.

Rhopalidae

- Liorhyssus hyalinus* (F.) — Spanish Morocco: Melilla, 1 spec., PARDO. Tunisia: Korba—Nabeul road, 1 spec., 21. VIII. 1962.

- Rhopalus lepidus* (FB.) — Tunisia: Korba—Nabeul road, some, 21. VIII. 1962.
Brachycarenum tigrinus (SCHL.) — Tunisia: Le Kef—Ebba Ksour road, 2 spec., 19. VIII. 1962.
Stictopleurus abutilon (R.) ssp. *pictus* (FB.) — Spanish Morocco: Tizi Ifri, 1 spec., PARDO.
 Tunisia: Ain Draham, many, 16—18. VIII. 1962; Le Kef—Ebba Ksour road, 2 spec., 19. VIII. 1962; Oued Melleque, 1 spec., 19. VIII. 1962; Porto Farina, 1 spec., 15. VIII. 1962.
Maccevethus lineola (F.) — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962.
Agraphopus lethierryi STÅL — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962; El Hamma de Gabés, 1 spec., 22—23. VIII. 1962; Korba—Nabeul road, 1 spec., 21. VIII. 1962; Oued Melleque, 2 spec., 19. VIII. 1962.
Chorosoma schillingi (SCHML.) — Tunisia: Ain Draham, some, 16—18. VIII. 1962. New to Tunisia. European.

Lygaeidae

- Lygaeus pandurus* (SCOP.) — Spanish Morocco: Tizi Ifri, 1 spec., PARDO. Tunisia: Ain Draham, some, 16—18. VIII. 1962; Porto Farina, some, 15. VIII. 1962.
L. equestris (L.) — Spanish Morocco: Tizi Ifri, 3 spec., PARDO. Tunisia: Ain Draham, 3 spec., 16—18. VIII. 1962.
Melanocoryphus persimilis Hv. — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962.
M. gibbicollis (C.) — Tunisia: Korba—Nabeul road, 1 spec., 21. VIII. 1962.
Apterola pedestris (STÅL) — Tunisia: Korba—Nabeul road, 3 spec., 21. VIII. 1962.
Nysius ståljanus Hv. — Spanish Morocco: Melilla, 1 spec., PARDO.
N. cymoides (SPIN.) — Spanish Morocco: Melilla, 1 spec., PARDO.
N. graminicola (KLT.) — Spanish Morocco: Melilla, 1 spec., PARDO. Tunisia: Ain Draham, many, 16—18. VIII. 1962; Le Kef—Ebba Ksour road, some, 19. VIII. 1962.
Cymus clavivulus (FN.) — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962. New to Tunisia. Holarctic.
C. minutus LDB. — Tunisia: Ain Draham, some, 16—18. VIII. 1962; Oued Melleque, many, 19. VIII. 1962. On *Juncus*. New to Tunisia. Eremian. Previously known from Egypt and Israel.
C. melanocephalus FB. — Spanish Morocco; Melilla, many, PARDO.
Kleidocerys resedae (Pz.) — Spanish Morocco: Melilla, 1 spec., PARDO. New to Morocco. Holarctic.
K. truncatulus (Wk.) ssp. *ericae* (Hv.) — Tunisia: Ain Draham, many, 16—18. VIII. 1962. On *Erica arborea*. New to Tunisia. Holomediterranean.
Henestaris laticeps (CR.) — Tunisia: Ain Draham, some, 16—18. VIII. 1962; Korba—Nabeul road, many, 21. VIII. 1962; Le Kef—Ebba Ksour, some, 19. VIII. 1962.
H. curtulus Hv. — Spanish Morocco; Melilla, some, PARDO.
Geocoris (Piocoris) erythrophthalmus (P. S.) — Tunisia: Le Kef—Ebba Ksour road, 1 spec., 19. VIII. 1962. New to Tunisia. Holomediterranean.
G. (Piocoris) luridus (FB.) — Tunisia: Siliiana, 3 spec., 20. VIII. 1962. On *Tamarix*.
G. lineola (RB.) — Tunisia: nr. Kairouan, 1 spec., 22. VIII. 1962.
Stenophthalmicus biskrensis Pr. — Tunisia: El Hamma de Gabés, some, 22—23. VIII. 1962. On *Panicum turgidum*.
Platyplax inermis (RB.) — Spanish Morocco: Tafersit, 1 spec., PARDO. Tunisia: Le Kef, 1 spec., ECKERLEIN. New to Morocco. Holomediterranean.
Cymophyes decolor STÅL — Tunisia: nr. Kairouan, 1 spec., 22. VIII. 1962. New to Tunisia. Eremian.

Leptodermus scortecii Mc. — Tunisia: Matmata (Gabés), some, ECKERLEIN. New to Tunisia. Eremian. Previously known only from Libya.

Microplax interrupta (Fb.) — Spanish Morocco: Melilla, 2 spec., PARDO.

M. albofasciata (C.) — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962. New to Tunisia. Holomediterranean.

Metopoplax ditomoides (C.) — Spanish Morocco: Melilla, 1 spec., PARDO; Tizi Ifri, 1 spec., PARDO.

Oxycarenus pallens (H. S.) ssp. *luteolus* HOB., n. status.

O. luteolus HOBERLANDT 1943, p. 46.

The species has a remarkable geographical variability. The European specimens are dark: head black, pronotum with a black transverse band, femora blackish, etc. The Tunisian specimens are uniformly pale, except that the head and the transverse band of the pronotum are yellow and the 4th antennal joint somewhat infuscate. The Egyptian specimens are similar, but the 3rd antennal joint is also sometimes somewhat infuscate. I have also seen such specimens from Transcaspia. Of my specimens from Israel two belong to the nominate form (Dan and Jerusalem), while the others resemble the Egyptian ones, except that the dark colouring is \pm spread on the ventral surface. My specimens from Turkey are already near the nominate form. There is also some variability in the antennal joints: in one specimen from Tunisia the 2nd joint is $1.06 \times$ as long as the 3rd (recorded to be as long as the 3rd in the type specimen of *luteolus*), but usually it is $1.1-1.3 \times$ as long as the 3rd, as in the nominate form. Since it is from Tunisia that *O. luteolus* was described, I consider my specimens to belong to it and, moreover, regard it as a southern subspecies of *pallens*.

Tunisia: Ain Draham, many, 16—18. VIII. 1962; Le Kef—Ebba Ksour road, some, 19. VIII. 1962. — The specimens from Spanish Morocco, Melilla, PARDO leg., belong to the nominate form.

Macroplax fasciata (H. S.) — Spanish Morocco: Tizi Ifri, 1 spec., PARDO. Tunisia: Ain Draham, many, 16—18. VIII. 1962.

Bycanistellus naso (STÅL) — Spanish Morocco: Melilla, 1 spec., PARDO.

Remaudiereana annulipes (BÄR.) — Tunisia: Korba—Nabeul road, some, 21. VIII. 1962.

Tropistethus holosericeus (SCH.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962. New to Tunisia. European.

Ischnocoris punctulatus Fb. — Spanish Morocco: Melilla, 1 spec., PARDO. Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962. New to Tunisia. Euro-Siberian.

Lamprodema maurum (F.) — Spanish Morocco: Melilla, 1 spec., PARDO. Tunisia: Korba—Nabeul road, 1 spec., 21. VIII. 1962.

Plinthisus minutissimus Fb. — Tunisia: Ain Draham, many, 16—18. VIII. 1962. From epiphytic mosses on *Quercus* trunks. New to Tunisia. Holomediterranean.

Aphanus rolandri (L.) — Tunisia: Ain Draham, some, 16—18. VIII. 1962. At lamp.

Rhyparochromus minusculus (Rt.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962. New to Tunisia. Holomediterranean.

R. phoeniceus (R.) v. *autrani* (Hv.) — Spanish Morocco: Tizi Ifri, 1 spec., PARDO.

R. inarimensis (C.) — Tunisia: Ain Draham, 16—18. VIII. 1962. New to Tunisia. Holomediterranean.

Beosus maritimus (Scop.) — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962.

Emblethis angustus Mtd. — Spanish Morocco: Melilla, 1 spec., PARDO.

E. parvus Mtd. — Spanish Morocco: Sidi Sadek, 1 spec., PARDO.

Scolopostethus brevis Sd. — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962. New to Tunisia. Holomediterranean.

Camptocera glaberrima (Wk.) — Tunisia: Cébola B. Ammor, some, 15. VIII. 1962; Korba—Nabeul road, 1 spec., 21. VIII. 1962. New to Tunisia. Eremian.

Berytidae

Neides aduncus Fb. — Spanish Morocco: Tizi Ifri, 1 spec., PARDO.

Berytinus signoreti (Fb.) — Tunisia: Oued Melleque, 1 spec., 19. VIII. 1962.

Piesmidae

Piesma rotundata Hv. — Tunisia: Porto Farina, many, 15. VIII. 1962.

Tingidae

Galeatus scrophicus Sd. — Tunisia: Korba—Nabeul road, 1 spec., 21. VIII. 1962. New to Tunisia. Holomediterranean.

Elasmotropis testacea (H. S.) ssp. *egena* Pr. — Tunisia: Korba—Nabeul road, 1 spec., 21. VIII. 1962.

Tingis liturata (Fb.) — Spanish Morocco: Melilla, some, PARDO.

Copium teucarii (Host) — Spanish Morocco: Melilla, some, PARDO.

Dictyla nassata (Pt.) — Spanish Morocco: Melilla, 1 spec., PARDO.

Monosterra ribesi E. Wgn. ssp. *alni* E. Wgn. — Tunisia: Ain Draham, some, 16—18. VIII. 1962. On *Alnus glutinosa*. New to Tunisia. Westmediterranean.

Agramma dubia (Hv.) — Tunisia: Le Kef—Ebba Ksour road, 1 spec., 19. VIII. 1962. New to Tunisia. Westmediterranean.

Aradidae

Aradus flavicornis Dm. — Tunisia: Ain Draham, many, 16—18. VIII. 1962. At lamp. New to Tunisia. Ethiopian.

Reduviidae

Reduvius villosus F. — Spanish Morocco: Melilla, 3 spec., PARDO.

Vachiria natolica Stål — Tunisia: El Hamma de Gabés, 1 spec., 22—23. VIII. 1962.

Rhinocoris erythropus (L.) — Tunisia: Ain Draham, some, 16—18. VIII. 1962; Korba—Nabeul road, some, 21. VIII. 1962; Oued Melleque, some, 19. VIII. 1962; Sbiba, 1 spec., 20. VIII. 1962.

Sphedanolesthes sanguineus (F.) — Spanish Morocco: Tizi Ifri, 2 spec., PARDO.

Coranus aegyptius (F.) — Tunisia: Korba—Nabeul road, 1 spec., 21. VIII. 1962.

Nabidae

Nabis (*Himacerus*) *mirmicoides* (O. C.) — Spanish Morocco: Melilla, many, PARDO.

Nabis (s.str.) *pseudoferus* Rem. — Spanish Morocco: Melilla, 3 spec., PARDO. New to Morocco. Holomediterranean.

N. (*Aspilaspis*) *viridis* Br. — Tunisia: Oued Melleque, 2 spec., 19. VIII. 1962.

Anthocoridae

Anthocoris nemoralis (F.) — Spanish Morocco: Tizi Ifri, many, PARDO. Tunisia: Ain Draham, many, 16—18. VIII. 1962.

Orius niger W. — Spanish Morocco: Melilla, some, PARDO. Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962.

O. laevigatus (FB.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962. New to Tunisia. Holomediterranean.

Brachysteles rufescens (C.) — Tunisia: Cébola B. Ammor, 2 spec., 15. VIII. 1962. New to Tunisia. Holomediterranean.

Cardiastethus fasciiventris (G&G.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962.

Microphysiidae

Myrmedobia coleoptrata (FN.) — Spanish Morocco: Gurugu, 1 spec., PARDO.

Miridae

Phytocoris minor KBM. ? — Spanish Morocco: Isaguen, 2 spec., PARDO. New to Morocco. The specimens are considerably darker than usual; the male genitalia, however, are very similar to those of European specimens. Holomediterranean.

P. algiricus RT. — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962; Tabarka, 2 spec., 10—15. V. 1961, ECKERLEIN. On *Quercus suber*. New to Tunisia. Previously known from Algeria. Endemic.

Megacoelum quercicola n. sp.

7 mm. Pale ochraceous. Head often with 2 red median stripes continuing onto pronotum. 2nd, 3rd and 4th antennal joints usually reddish apically. Pronotum \pm darkened basally. Scutellum with a broad median dark fuscous band. Elytra ochraceous; clavus dark fuscous

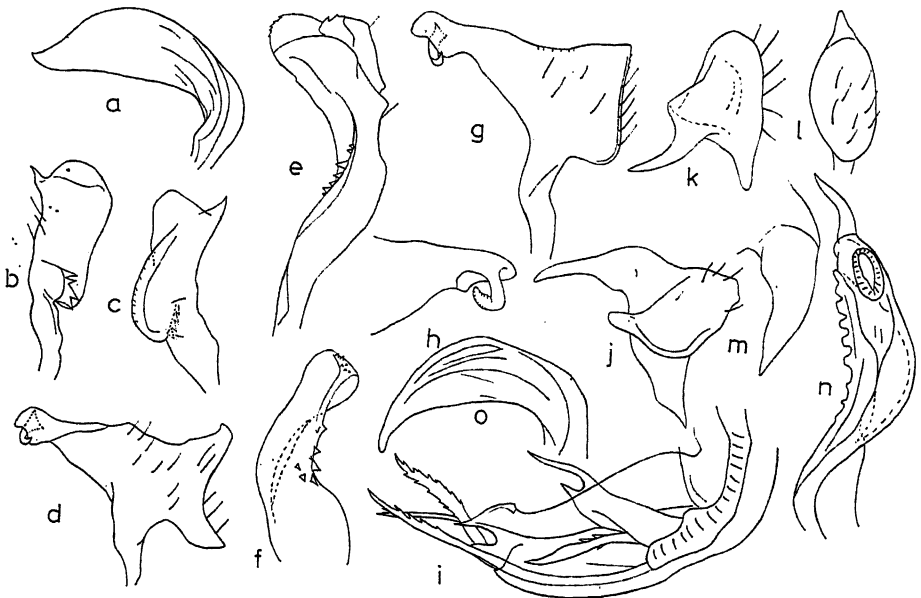


Fig. 5. *Megacoelum quercicola* n. sp.: a spiculum of vesica. — *M. beckeri* (FB.): o same. — *Orthotylus junipericola* n. sp.: b—c right stylus; d left stylus. — *O. junipericola regularis* n. ssp.: e—f right stylus; g left stylus; h hypophysis of same; i chitinized appendages of vesica. — *Tinicephalus dentifer* n. sp.: j left stylus; k same, from above; l right stylus; m theca; n apex of vesica. — Orig.

along scutellar and commissural margins; a broad transverse fascia in apex of corium also dark fuscous (pattern as in *M. myrti* Lv.); cuneus reddish; membrane dark smoky, veins dark or reddish. Under surface and legs ochraceous. Hind femora dotted with red, hind tibiae with red stripes.

Elongate and relatively narrow. Remarkably shining. Upper surface with erect, long, brownish hairs. Vertex $0.81 \times$ (σ) or $0.9 \times$ (ρ) as broad as eye. Antennae gracile, proportions between the joints $23 + 65 + 45 + ?$ (σ) or $28 + 65 + 48 + ?$ (ρ) (1 unit = 0.033 mm); 1st joint $0.42-0.50 \times$, 2nd joint $1.20-1.25 \times$ and 3rd joint $0.9 \times$ as long as basal width of pronotum. Pronotum shining, microsculpturing only faint. Hind femora and tibiae with long, erect hairs; longest hairs twice as long as diameter of tibia, length of hairs 0.30 mm. Tibiae in addition with dark bristles. Rostrum extending to hind coxae. Male genitalia: Spiculum of vesica (fig. 5 a) remarkably broad. Other genitalia of the common type.

Tunisia, Ain Draham, 1 σ type, some paratypes, 16-18. VIII. 1962. On *Quercus suber*.

Very near *M. beckeri* (Fb.) (the erect hair covering). The latter is robuster and duller, vertex $0.9 \times$ (σ) or $1.25 \times$ (ρ) as broad as eye, microsculpturing of the pronotum more distinct and hairs of the hind tibiae shorter ($1.45 \times$ as long as the diameter of the tibia, length of hairs 0.24 mm). Spiculum of vesica as in fig. 5 o. Host plant *Pinus* spp.

Calocoris tunetanus E. WGN. — Spanish Morocco: Melilla, 1 spec., PARDO.

Lygus gemellatus (H. S.) — Tunisia: Ain Draham, 1 spec., 16-18. VIII. 1962; Le Kef—Ebba Ksour road, some, 19. VIII. 1962. On *Artemisia*. New to Tunisia. Euro-Siberian.

L. kalmi (L.) — Spanish Morocco: Melilla, some, PARDO.

Cyphodema instabile (Lc.) — Spanish Morocco: Melilla, 1 spec., PARDO.

Polymerus cognatus (Fb.) — Tunisia: Korba—Nabeul road, 1 spec., 21. VIII. 1962.

Charagochilus gyllenhalii (Fn.) — Tunisia: Ain Draham, 1 spec., 16-18. VIII. 1962. New to Tunisia. Euro-Siberian.

Deraeocoris pilosula LDB. — Spanish Morocco: Tizi Ifri, 1 spec., PARDO.

D. lutescens (SCHL.) — Spanish Morocco: Melilla, 1 spec., PARDO.

D. serenus DGL. SC. — Tunisia: Porto Farina, some, 15. VIII. 1962. New to Tunisia. Holomediterranean.

Capsodes sulcatus (Fb.) — Spanish Morocco: Melilla, some, PARDO.

Trigonotylus pulchellus (H.) — Tunisia: Cébola B. Ammor, 1 spec., 15. VIII. 1962. New to Tunisia. Holomediterranean.

Macrolophus nubilus (H. S.) — Tunisia: Ain Draham, some, 16-18. VIII. 1962.

M. caliginosus E. WGN. — Tunisia: Ain Draham, 1 spec., 16-18. VIII. 1962; Oued Melleque, 2 spec., 19. VIII. 1962. New to Tunisia. Holomediterranean.

Cyrtopeltis geniculata Fb. — Spanish Morocco: Melilla, 1 spec., PARDO. New to Morocco. Westmediterranean.

Hypomimus chobauti (Pt.) — Spanish Morocco: Granja del Mulya, 3 spec., PARDO.

Alloemimus unifasciatus (Rt.) — Tunisia: Oued Zeroud, many, 7. V. 1961, ECKERLEIN.

Mimocoris coarctatus (M. R.) — Spanish Morocco: Taurirt, 1 spec., PARDO. Tunisia: Tabarka, 1 spec., ECKERLEIN. New to Tunisia. Westmediterranean.

Pilophorus scutellaris Rt. — Tunisia: Ain Draham, 1 spec., 16-18. VIII. 1962. On *Quercus suber*.

P. pusillus Rt. — Tunisia: Ain Draham, 2 spec., 16-18. VIII. 1962. On *Alnus glutinosa*. New to Tunisia. Holomediterranean.

Orithotylus junipericola n. sp.

σ 2.7 mm, ρ 2.4 mm. Head, pronotum, scutellum and antennae yellowish. Elytra green, costal margin whitish green; membrane smoky, veins nearly concolorous. Under surface and legs greenish yellow.

Small, parallel-sided; ♀ more robust. Upper surface with blackish and lighter hairs. Head about $0.78 \times$ as broad as basal width of pronotum, short and strongly sloping ventrad; vertex $1.8 \times$ (♂) or $2.2 \times$ (♀) as broad as eye, base distinctly margined. 2nd antennal joint as long as basal width of pronotum. Male genitalia: Right stylus (fig. 5 b—c) with a basal lobe provided with 4 teeth; apex with a sharp-tipped process, otherwise rounded. Left stylus (fig. 5 d) with sensory lobe strongly produced both in upper and lower corner. Vesical appendages as in the following subspecies.

Tunisia: Sbiba, 1 ♂ type, 4 paratypes, 20. VIII. 1962. On *Juniperus phoenicea*.

Resembling *O. macrophthalmus* E. WGN., but differing in the smaller eyes [in *macrophthalmus* the vertex is $1.1 \times$ (♂) or $1.85-1.7 \times$ (♀) as broad as the eye] and in the genitalia.

O. junipericola Lv. ssp. *regularis* n. ssp.

♂ 2.9 mm. As the nominate form, but somewhat bigger and with dissimilar styli. Male genitalia: Right stylus (fig. 5 e—f) elongate, bearing several basal teeth, also apex serrate. Left stylus (fig. 5 g—h): sensory lobe rounded in lower, rectangular in upper corner. Vesical appendages as in fig. 5 i.

Tunisia: Korba—Nabeul road, 1 ♂ type, 21. VIII. 1962.

O. flavosparvus (C. Sv.) — Tunisia: Cébola B. Ammor, 3 spec., 15. VIII. 1962. New to Tunisia. Holarctic.

O. griseinervis E. WGN. — Tunisia: Ain Draham, some, 11. V. 1961, ECKERLEIN.

O. curvibennis Rt. — Tunisia: nr. Gabés, 2 spec., 27. IV. 1961, ECKERLEIN. Previously known only from Algeria.

Pseudoloxops coccineus (M. D.) — Tunisia: Ain Draham, some, 16—18. VIII. 1962. At lamp. New to Tunisia. Holomediterranean.

Brachynotocoris puncticornis Rt. — Tunisia: Ain Draham, many, 16—18. VIII. 1962. At lamp. New to Tunisia. Holomediterranean.

Platycranus putoni Rt. — Tunisia: nr. Kairouan, 1 spec., 22. VIII. 1962.

Halticus macrocephalus Fb. — Spanish Morocco: Melilla, 2 spec., PARDO.

Conostethus roseus (Fn.) — Spanish Morocco: Melilla, some, PARDO.

C. venustus (Fb.) — Spanish Morocco: Granja del Muluya, 1 spec., PARDO; Melilla, 2 spec., PARDO.

Oncotylus nigricornis Sd. — Tunisia: Bebesa, 1 spec., 13. VI. 1961, ECKERLEIN.

Pronototropis longicornis Rt. — Spanish Morocco: Melilla, 1 spec., PARDO.

Pachyxyphus caesareus Rt. — Spanish Morocco: Melilla, 1 spec., PARDO.

Tinicephalus rubiginosus Fb. — Spanish Morocco: Melilla, some, PARDO.

T. dentifer n. sp.

3.1—3.2 mm. Yellowish green or dirty yellowish ochraceous. Head yellowish. Apical part of scutellum pale red. Membrane hyaline; cells, median stripe and apex infumed. Femora with small dark dots.

♂ parallel-sided, ♀ ovate. Upper surface with lighter smooth hairs and black, more erect setae. Head strongly declivous. Vertex $1.8 \times$ (♂) or $2.21 \times$ (♀) as broad as eye. Antennae thick (♂) or relatively gracile (♀), with black hairs; proportions between the joints $6 + 20 + 15 + 8$ (♂) or $7 + 18 + 16 + 8$ (♀), 2nd joint $0.9 \times$ (♂) or $0.7 \times$ (♀) as long as basal width of pronotum. Pronotum $1.86 \times$ (♂) or $1.35 \times$ (♀) as broad basally as diatone; lateral, fore and basal margins straight. Elytra extending well beyond abdomen. Rostrum extending to middle coxae. Prosternal xyphus convex, with a median longitudinal depression. Fore coxae with a marginal row of black bristles. Legs with black hair covering, tibiae with black spines. 3rd joint of hind tarsi as long as 2nd. Claws as in *T. varensis*, but arolia somewhat shorter.

Male genitalia: Right stylus (fig. 5 l) ovate. Left stylus (fig. 5 j—k): sensory lobe with a blunt process, hypophysis falcate and turned laterad. Theca as in fig. 5 m. Vesica (fig. 5 n) relatively short and thick, with a subapical row of blunt teeth, apex sharp-tipped.

Spanish Morocco: Melilla, 1 ♂ type, some paratypes; Granja del Muluya, Kebdana, 1 paratype, PARDO.

Related to *T. varensis* E. WGN. in the black bristles of the fore coxae, in the concave prosternal xyphus and in resembling certain species of the genus *Megalocoleus*. It differs from *varensis* in the smaller size, in the red scutellum, the pale cuneus, the broader head, etc.

Thermocoris munieri Pr. — Tunisia: Nabeul, 2 spec., 13. V. 1961, ECKERLEIN. New to Tunisia. Holomediterranean.

Macrotylus nigricornis Fb. — Spanish Morocco: Granja del Muluya, some, PARDO; Melilla, 1 spec., PARDO.

M. atricapillus (Sc.) — Tunisia: Le Kef—Ebba Ksour road, 1 spec., 19. VIII. 1962; Oued Melleque, some, 19. VIII. 1962. New to Tunisia. Holomediterranean.

M. bipunctatus Rt. — Spanish Morocco: Melilla, 3 spec., PARDO. New to Morocco. Westmediterranean.

Camptotylus yersini (M. R.) — Tunisia: Siliana, 1 spec., 20. VIII. 1962. New to Tunisia. Westmediterranean.

Psallus vidali E. WGN. — Spanish Morocco: Melilla, some, PARDO; Tizi Ifri, 3 spec., PARDO.

P. (Asthenarius) dichrous KRN. (= *Sthenarus wagneri* Cv.) — Spanish Morocco: Melilla, some, PARDO; Tizi Ifri, some, PARDO.

Auchenocrepis minutissima (Rb.) — Spanish Morocco: Melilla, 1 spec., PARDO.

A. alboscutellata Pr. — Tunisia: Oued Melleque, 1 spec., 19. VIII. 1962; nr. Souk el Arba, 1 spec., 19. VIII. 1962.

Maurodactylus alutaceus (Fb.) — Tunisia: nr. El Guetar, some, 5. V. 1961 and nr. El Tjem, some, 6. V. 1961, ECKERLEIN. New to Tunisia. Westmediterranean.

Tuponia brevisrostris Rt. — Spanish Morocco: Granja del Muluya, 1 spec., PARDO.

T. michalki E. WGN. — Tunisia: Cébola B. Ammor, 1 spec., 15. VIII. 1962; Oued Melleque, some, 19. VIII. 1962; Siliana, some, 20. VIII. 1962; nr. Souk el Arba, some, 18. VIII. 1962. New to Tunisia. Pontomediterranean.

Gerridae

Gerris cinereus (Pt.) — Tunisia: nr. Oued Melleque, many, 19. VIII. 1962; nr. Souk el Arba, many, 19. VIII. 1962.

Veliadae

Velia concii TAM. — Spanish Morocco: Melilla, 2 spec., PARDO. Tunisia: nr. Beja, some, 10. V. 1961, ECKERLEIN.

Microvelia pygmaea (Df.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962.

Naucoridae

Naucoris maculatus F. — Tunisia: Oued Melleque, some, 19. VIII. 1962.

Notonectidae

Enithares sobria STÅL — Morocco: Massa River, nr. Tiznit, some, 27—29. VII. 1959, ECKERLEIN. New to Morocco. Ethiopian.

Corixidae

Micronecta meridionalis (C.) — Tunisia: nr. Souk el Arba, some, 19. VIII. 1962.

M. vidali Ps. — Tunisia: nr. Souk el Arba, many, 19. VIII. 1962.

Corixa affinis LCH. — Tunisia: Oued Melleque, 1 spec., 19. VIII. 1962.

C. panzeri FB. — Tunisia: Qued Melleque, 2 spec., 19. VIII. 1962. New to Tunisia. European.

Cicadidae

Cicada barbara STÅL. — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962; Oued Melleque, some, 19. VIII. 1962.

Cercopidae

Aphrophora salicina (GZE.) — Spanish Morocco: Tarquist, 1 spec., PARDO.

Neophilaenus longiceps (PT.) — Tunisia: El Hamma de Gabés, many, 22—23. VIII. 1962; Le Kef—Ebba Ksour road, some, 19. VIII. 1962; Korba—Nabeul road, some, 21. VIII. 1962; Porto Farina, some, 15. VIII. 1962. On grasses, e.g. *Panicum* in sandy places, especially on dunes.

N. campestris (FN.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962; Le Kef—Ebba Ksour road, some, 19. VIII. 1962.

Membracidae

Acanthophyes chloroticus (FRM.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962.

Cicadellidae

Cicadulina bipunctella (MATS.) — Tunisia: Cébola B. Ammor, some, 15. VIII. 1962; El Hamma de Gabés, some, 22—23. VIII. 1962. New to Tunisia. Intertropical.

Balclutha rosea (Sc.) — Spanish Morocco: Granja del Muluya, 3 spec., PARDO. New to Morocco. Intertropical.

Laburnus quadratus (FOR.) — Tunisia: Le Kef—Ebba Ksour road, many, 19. VIII. 1962; Oued Melleque, 2 spec., 19. VIII. 1962; Sbiba, some, 20. VIII. 1962; Siliana, some, 20. VIII. 1962. On *Artemisia*. New to Tunisia. Westmediterranean.

Euscelis plebeius (FN.) (f. *superplebeius* MÜLL.) — Tunisia: Ain Draham, 2 spec., 16—18. VIII. 1962.

Phycotettix paryphantus (LETH.) — Spanish Morocco: Melilla, some, PARDO.

P. desbrochersi (LETH.) — Spanish Morocco: Melilla, some ♀♀, PARDO. Previously known from Algeria. The generic position uncertain in the absence of males.

Stirellus panicicola n. sp.

♂ 2.4—2.9 mm, ♀ 4.5—4.8 mm. Usually uniformly pale ochraceous. ♀ sometimes with lateral arcs on frontoclypeus, some dots on crown and pronotum, elytral cells basally and apically and 3 longitudinal stripes on dorsal surface of abdomen, fuscous.

Long and gracile, especially ♀. Crown rectangularly produced anteriorly, 1.5 × as long as middle as next to eyes, 1.2—1.3 × as long as basal width. Brachypterous: Elytra with appendix reduced, extending to the middle of pygofer (♂) or to 8th tergite (♀). Male genitalia: Plate and stylus as in *S. instabilis* (RIB.), but macrosetae in disorder. Side lobe of pygofer (fig. 6 b) slightly upturned apically, with a row of macrosetae dorsally. Penis (fig. 6 a) with stem undately sinuate in lateral aspect. Ovipositor unusually long, extending far beyond pygofer.

Tunisia: El Hamma de Gabés, 1 ♂ type, many paratypes, 22—23. VIII. 1962. On *Panicum turgidum* on inland dunes.

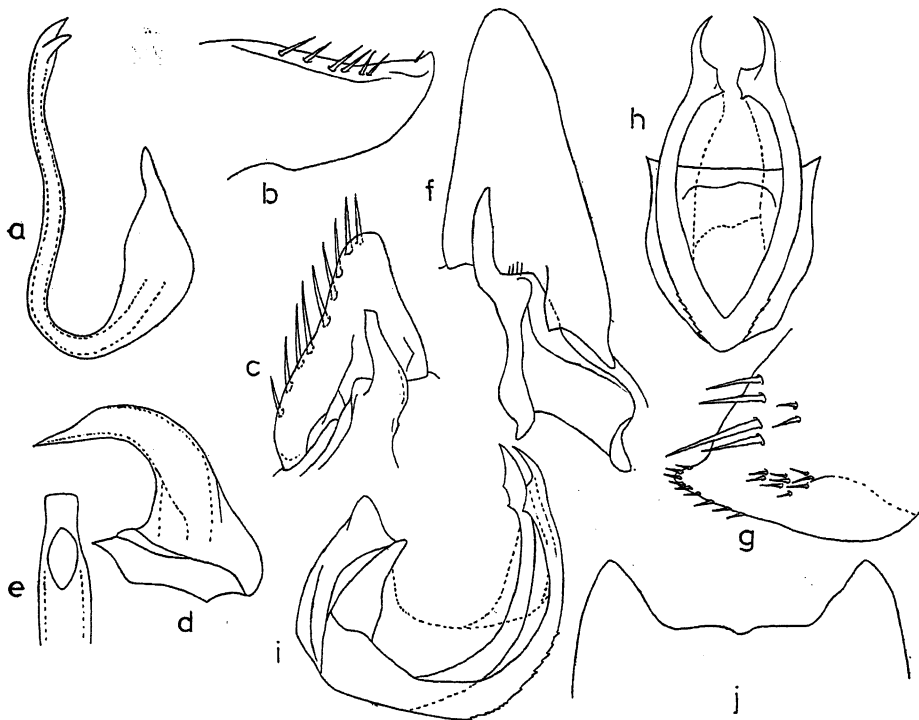


Fig. 6. *Stirellus panicicola* n. sp.: a penis, lateral aspect; b side lobe of pygofer. — *Allygus palliceps* n. sp.: c genital plate and stylus; d penis, lateral aspect; e apex of same, ventral aspect. — *Aindrahamia silvicola* n. gen. et sp.: f genital plate (without macrosetae) and stylus; g side lobe of pygofer; h penis, ventral aspect; i same, lateral aspect; j 7th sternite (♀). — Orisg.

Exitianus capicola (STÅL) — Tunisia: Cébola B. Ammor, 1 spec., 15. VIII. 1962.

Hardya tenuis (GERM.) — Spanish Morocco: Tizi Ifri, some, PARDO.

Neoliturus haematoceps (M.R.) ssp. *opacipennis* (LETH.) — Tunisia: Cébola B. Ammor, 3 spec., 15. VIII. 1962; Le Kef—Ebba Ksour road, 1 spec., 19. VIII. 1962.

N. fenestratus (H.S.) — Spanish Morocco: Melilla, 1 spec., PARDO. Tunisia: Le Kef—Ebba Ksour road, 1 spec., 19. VIII. 1962.

N. guttulatus (KBM.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962. New to Tunisia. Holomediterranean.

Opsius lethierryi W.WGN. — Spanish Morocco: Granja del Muluya, 2 spec., PARDO; Melilla, some, PARDO. Tunisia: Cébola B. Ammor, some, 15. VIII. 1962; Le Kef—Ebba Ksour road, some, 19. VIII. 1962; Korba—Nabeul road, 2 spec., 21. VIII. 1962; Oued Melleque, some, 19. VIII. 1962; Siliana, some, 20. VIII. 1962.

O. scutellaris (LETH.) — Tunisia: Cébola B. Ammor, 1 spec., 15. VIII. 1962; Siliana, 1 spec., 20. VIII. 1962.

Phlepsius spinulosus W.WGN. — Spanish Morocco: Tizi Ifri, 1 spec., PARDO. Tunisia: Ain Draham, some, 16—18. VIII. 1962.

Allygus modestus (Sc.) — Spanish Morocco: Melilla, 1 spec., PARDO. New to Morocco. West-mediterranean.

A. palliceps n. sp.

♂ 5.5—6 mm, ♀ 7 mm. As *A. theryi* Hv., but 1) vertex and pronotum (♂) greyish ochraceous without any larger dark markings, the former with only 2 very small dark apical spots, the latter at most with faint traces of dark irroration; also in ♀ the vertex is pale with only 4 black spots in anterior margin; 2) smaller; 3) genital plates (fig. 6 c) with lateral margins distinctly insinuated; the connective longer, extending near to the apex of the plates with stem more gracile (in *theryi* the lateral margins of the plates are roundedly curved and the connective more robust and shorter, extending only to the middle of the plates) and penis (fig. 6d—e) considerably more gracile than in *theryi*. 7th sternite (♀) as in *theryi*.

Tunisia: Ain Draham, 1 ♂ type, 4 paratypes, 16—18. VIII. 1962.

Aindrahamia n. gen.

External characters as in *Allygus* Fv., but with penis of entirely different type: biramose with membranous, poorly delimited dorsal part; gonopore (not limited) on the membranous dorsal surface.

Type: *A. silvicola* Lv.

A. silvicola n. sp.

7 mm. Yellowish brown. Frontoclypeus with only faint traces of brownish lateral arcs. Crown (♂) without markings or (♀) with 2 small apical and 2 small basal black dots. Pronotum (♂) unmarked or (♀) with scanty dark brown irroration. Scutellum with golden brown basal triangles and discal area, and with 2 small round dark spots in the middle. Elytra (♂) uniformly golden brown; veins concolorous or partly, especially in clavus and costal margin, whitish. In ♀ the cells are everywhere marked with dark fuscous irroration. Under surface and legs yellowish brown, the latter with blackish markings.

Elongate. Head slightly broader than pronotum. Anteclypeus nearly parallel-sided. Crown of uniform length, sloping apicad; in ♀ a slight transverse subapical depression present. Pronotum with lateral margins long and nearly parallel, disk transversely wrinkled. Elytra with 3 subapical cells; extra cross-veins in clavus, in the upper discal cell and in the apical part of the costal margin. Spinulation of fore tibiae 5 + 5. Male genitalia: Genital plates (fig. 6 f) long, lateral margins not insinuated; macrosetae uniseriate, short, arising from the lateral margin. Stylus (fig. 6 f) with apophysis straight, preapical angle blunt, basal part broad. Pygofer broad, sclerified; side lobes (fig. 6 g) short, unarmed. Anal tube broad, relatively short, sclerified. Connective Y-shaped, rather long. Penis (fig. 6 h—i) with a well developed socle, biramose, the branches minutely serrate, dorsal surface membranous and poorly delimited. 7th sternite (♀) broadly insinuated (fig. 6 j).

Tunisia: Ain Draham, 1 ♂ type and 1 ♀ paratype, 16—18. VIII. 1962.

Selenocephalus harterti Bv.? — Tunisia: Sbiba, 2 spec., 20. VIII. 1962. New to Tunisia. Eremian.

Platymetopius notatus Fv. — Tunisia: Ain Draham, some, 16—18. VIII. 1962. At lamp. New to Tunisia. Westmediterranean.

P. perplexus n. sp.

General habitus and colouring as in *P. obsoletus* (SGN.) and *P. ferrarii* HPT. (size, short crown, face not concave in upper margin, etc.), but male genitalia as in *P. filigranus* (Sc.) (illustrated

in RIBAUT 1952, p. 234), elytra with fine brown irroration (although less pronounced than in *filigranus*) and 7th sternite (♀) (fig. 7 a) straight with only a very small median notch (deeply narrowly notched in *filigranus*). *P. filigranus* is also bigger, 6—6.5 mm, elytra tinged with greenish and crown more strongly produced and face distinctly concave in upper margin.

Tunisia: Ain Draham, 1 ♂ type, 3 paratypes, 16—18. VIII. 1962. At lamp.

Chiasmus translucidus M.R.

C. nigricans MATSUMURA 1908, p. 44 is apparently a synonym. My material consists of entirely black to typically marked *translucidus* specimens with intermediate forms.

Spanish Morocco: Granja del Muluya, Kedbana, some, PARDO; Melilla, 1 spec., PARDO.

Psammotettix striatus (L.) — Tunisia: Ain Draham, some, 16—18. VIII. 1962; Cébola B. Ammor, some, 15. VIII. 1962; Oued Melleque, 1 spec., 19. VIII. 1962. New to Tunisia. Holo-mediterranean.

P. erraticus nom. nov.

P. putoni RIBAUT 1952, p. 244—245, LINNAVUORI 1958, p. 302.

According to information from W. WAGNER *P. putoni* THEN 1898 = *P. halophilus* EDWARDS 1924.

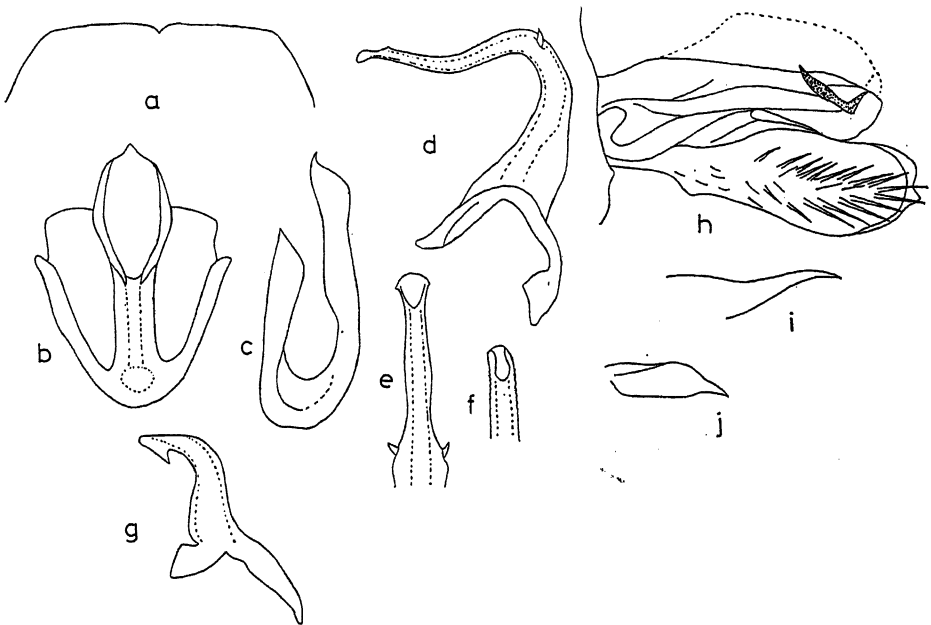


Fig. 7. *Platymetopius perplexus* n. sp.: a 7th sternite (♀). — *Psammotettix erraticus* n. sp.: b penis, ventral aspect; c same, lateral aspect. — *Placotettix flexuosus* n. sp.: d penis, lateral aspect; e apex of same, ventral aspect; f same, of another specimen. — *Erythroneura alnicola* n. sp.: g penis, lateral aspect. — *Dictyophara acuminata hispanica* n. ssp.: h penis, lateral aspect; i appendage of the same; j same of the nominate form. — Orig.

Penis as in fig. 7 b—c, and in RIBAUT 1952, p. 245. In the shape of the penis the species resembles certain forms of *P. exilis* Hv. These species are readily distinguished, anyhow, by their size: *P. erraticus* is much bigger, length 3.0—3.6 mm, breadth at head > 0.95 mm, *P. exilis* is small and slender, length 2.8—2.7 mm, breadth at head 0.84 mm. Moreover, *P. exilis* has not been found in South Europe. *R. nodosus* RIB. regarded as a form of *erraticus* by RIBAUT (op.cit.) is, in my opinion, a valid species. At any rate no intermediate forms are known to me.

Italy: Mti Sibillini, Pian Perduto, 1 ♂ type and some paratypes, VII. 1954. Type in my collection, paratypes in the Mus. Nat. Verona.

Grypotes staurus Iv. — Tunisia: Le Kef—Ebba Ksour road, some, 19. VIII. 1962; Siliana, 1 spec., 20. VIII. 1962.

Goniagnathus brevis (H.S.) — Tunisia: Ain Draham, 3 spec., 16—18. VIII. 1962.

Placotettix flexuosus n. sp.

As *P. taeniatifrons* (KBM.), but penis (fig. 7 d—f) undately curved in apical part (lateral aspect), with 2 small teeth of variable size at about the middle (sometimes absent), with apex not expanded in ventral aspect and with gonopore lying much nearer to apex.

Tunisia: Ain Draham, 1 ♂ type, many paratypes, 16—18. VIII. 1962.

Cechenotettix martini (LETH.) — Tunisia: Le Kef—Ebba Ksour road, some, 19. VIII. 1962. New to Tunisia. Westmediterranean.

Stegelytra putoni M.R. — Spanish Morocco: Tizi Ifri, some, PARDO.

Paradorydium dimorphum Lv. — Tunisia: El Hamma de Gabés, some, 22—23. VIII. 1962. On *Panicum turgidum*. Previously known from Israel.

Cephalelus bleusei Pt. (fig. 9) — Spanish Morocco: Sidi Sadek, 1 spec., 9. VIII. 1960, PARDO. Previously known from Algeria.

Idiocerus lituratus (FN.) — Spanish Morocco: Tarquini, 1 spec., PARDO. European. New to Morocco.

I. dimidiatus RIB. — Tunisia: Le Kef—Ebba Ksour road, some, 19. VIII. 1962. On *Populus alba*. New to Tunisia. Westmediterranean.

I. ustulatus (M.R.) — Tunisia: Le Kef—Ebba Ksour road, some, 19. VIII. 1962. On *Populus alba*. New to Tunisia. Holomediterranean.

Austroagallia avicula (RIB.) — Spanish Morocco: Melilla, 1 spec., PARDO.

A. sinuata (M.R.) — Tunisia: Ain Draham, some, 16—18. VIII. 1962; Cébola B. Ammor, 2 spec., 15. VIII. 1962; Le Kef—Ebba Ksour road, 1 spec., 19. VIII. 1962; Oued Melleque, 1 spec., 19. VIII. 1962. New to Tunisia. Holomediterranean.

Macropsidius punicus (Lv.) — Tunisia: Siliana, 1 spec., 20. VIII. 1962.

Hephathus nanus (H.S.) — Spanish Morocco: Melilla, 1 spec., PARDO.

Empoasca decipiens PL. — Tunisia: Cébola B. Ammor, some, 15. VIII. 1962. Holomediterranean. New to Tunisia.

E. pteridis (DLB.) — Spanish Morocco: Monte Arruit, some, PARDO. New to Morocco. European.

Eupteryx rostrata RIB. — Tunisia: Ain Draham, some, 16—18. VIII. 1962. New to Tunisia. Westmediterranean.

Youngiada aurovittata (DGL.) — Tunisia: Ain Draham, 4 spec., 16—18. VIII. 1962. New to Tunisia. Westmediterranean.

Helionidia tamaricis (Pt.) — Tunisia: Cébola B. Ammor, some, 15. VIII. 1962; Siliana, some, 20. VIII. 1962.

Erythroneura (Zygina) lunaris (M.R.) — Spanish Morocco: Tarquini, 1 spec., PARDO. New to Morocco. Westmediterranean.

E. (Zygina) nivea (M.R.) — Tunisia: Le Kef—Ebba Ksour road, some, 19. VIII. 1962. On *Populus alba*. New to Tunisia. Holomediterranean.

E. (Zygina) alnicola n. sp.

3—3.8 mm. Yellowish or whitish yellow. Crown sometimes with 2 round red spots. Pronotum rarely with reddish basal markings. Scutellum with black basal spots. Mesosternum black. Elytra white or greenish yellow, apex slightly smoky; red markings very variable: sometimes entirely absent, sometimes basal two-thirds excluding a triangular area in basal part of costal margin brightly red, usually only clavus with a \pm developed brightly red spot in the middle. Hind tarsi (δ) with 3rd joint and apical two-thirds of 2nd, black.

Gracile. Crown relatively angularly produced. Male genitalia: Penis (fig. 7 g) and other genitalia as in *E. lunaris*.

Tunisia: Ain Draham, 1 δ type, some paratypes, 16—18. VIII. 1962. On *Alnus glutinosa*.

Near *E. nivea* (M.R.), but more gracile, crown somewhat more strongly produced, the red markings more spread on the elytra, the apex of the hind tarsi (δ) black and the penis with the dorsal apical lamellae sharp-tipped as in *E. lunaris*. *E. eburnea* (Fb.) has a dissimilarly shaped penis with a denticulated area in the middle of the ventral surface and with only very small, rounded dorsal subapical lamellae. *E. tiithide* (FERR.) has a dissimilar red colour pattern on crown and pronotum and the penis is provided with only small and rounded subapical dorsal lamellae.

E. (Zygina) bistignata (M.R.) — Tunisia: Ain Draham, 1 spec., 16—18. VIII. 1962. New to Tunisia. Holomediterranean.

Dictyopharidae

Dictyophara striata OSH. — Spanish Morocco: Midar (B.Tuzin), 1 spec. PARDO.

D. infumata Bgv. — Spanish Morocco: Ixmooart, Melilla, 1 spec., PARDO. Tunisia: Sbiba, 2 spec., 20. VIII. 1962. Swept from the *Pinus* zone. New to Tunisia. Endemic. Originally described from Algeria.

D. acuminata LDB. ssp. *hispanica* n. ssp.

As the nominate form, but crown considerably shorter, $3.7 \times$ as long as basal width ($4.8 \times$ in the nominate form). Genitalia as in the nominate form, but the aedeagal appendages somewhat sharper (fig. 7 h—i).

Spain: Malaga, 1 δ type, in my collection.

D. anatina Pr.

Crown 2.1 — $2.2 \times$ as long as broad basally. Male genitalia: Pygofer and anal tube as in fig. 8 a. Stylus as in fig. 8 b. Penis (fig. 8 c) with characteristic, apically biramose and serrate appendages.

Tunisia: Ain Draham, many, 16—18. VIII. 1962. At lamp.

D. curvata MATS. and *D. oranensis* MATS.

MATSUMURA (1910, p. 16—18) has described the species mentioned above. They can be distinguished by the length of the crown; that in *oranensis* is shorter and broader, 2.8 — $3.3 \times$ as long as broad basally, while in *curvata* it is 3.1 — $3.5 \times$ as long. The male genitalia are similar in both forms (fig. 8 d—g); the unusually long and nearly semicircularly curved aedeagal appendages are characteristic. Since in the length of the head there is also no strict limit between these forms, I regard them as geographical subspecies.

D. curvata curvata MATS. — Tunisia: Ain Draham, many, 16—18. VIII. 1962; Porto Farina, 1 spec., 15. VIII. 1962. Swept from *Pistacia* and from macchia. Also at lamp.

D. curvata oranensis MATS. — Spanish Morocco: Beni Hadife, 1 spec., PARDO; Muley Rechid, Melilla, 1 spec., PARDO; Taurirt, Melilla, 1 spec., PARDO.

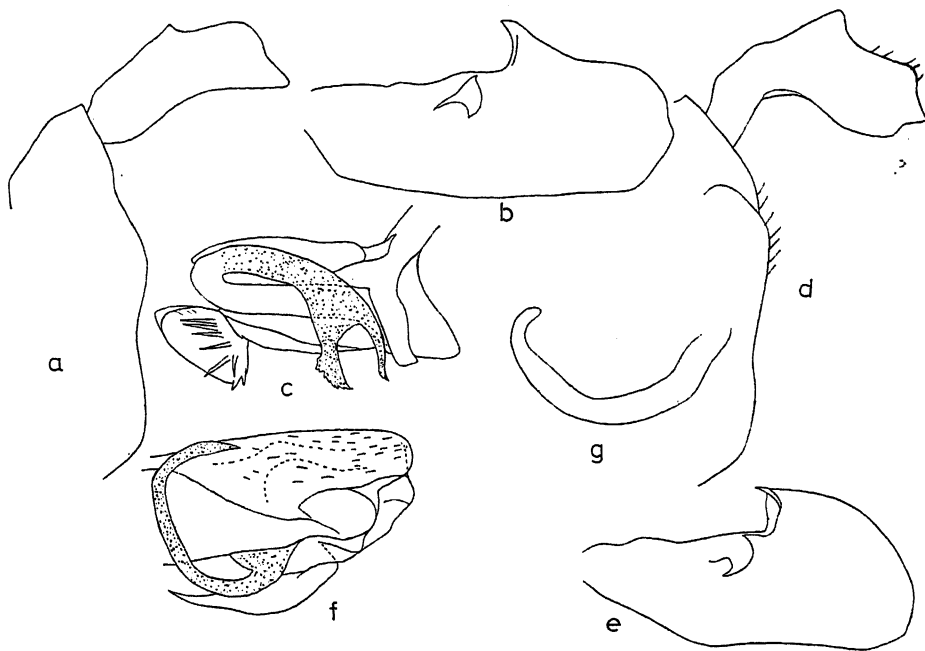


Fig. 8. *Dictyophara anatina* Pr.: a anal tube and pygofer, lateral aspect; b stylus; c penis, lateral aspect. — *D. curvata oranensis* MARS.: d anal tube and pygofer, lateral aspect; e stylus; f penis, lateral aspect; g appendage of the same of another specimen. — Orig.

D. obtusiceps LETH. — Tunisia: Le Kef—Ebba Ksour road, 1 spec., 19. VIII. 1962. On *Atriplex parvifolia*. New to Tunisia. Endemic. Previously known from Morocco and Algeria.

Bursinia seminitens Hv. — Tunisia: Le Kef—Ebba Ksour road, many, 19. VIII. 1962. Common on *Artemisia* steppes.

B. asphodeli Hv. — Spanish Morocco: Mt. Mauro, Melilla, 1 spec., PARDO; Sidi Sadek, Melilla, 1 spec., PARDO. Algeria: Ain Aissa, some, OUTIN.

B. elongatula n. sp.

5.5—6 mm. Opaque. Uniformly pale testaceous without any dark irroration (except a faint one on lateral surface of head).

Body elongate, 1.8—1.9 × as long as broad. Crown strongly produced (fig. 9 a—b), 3.7—4.1 × as long as basal width, 2.25—2.30 × as long as pronotum and scutellum together, parallel-sided, apex rounded. Face slightly concave in upper margin, otherwise straight in profile. Frons narrow, with 3 keels, the lateral ones slightly curved; lateral longitudinal keels below eye extending to apex, but faint and visible only as a shallow furrow apically; 2 rows of pits between this and the lateral frontal keel. Pronotum with 3 carinas, concolorously pitted, especially laterally. Scutellum with 3 keels. Elytra dull, coriaceous. Rostrum extending to apex of abdomen. Anterior femora with whitish longitudinal ridges, between them and the marginal ridges lined or densely spotted with fuscous; anterior tibiae infuscate.

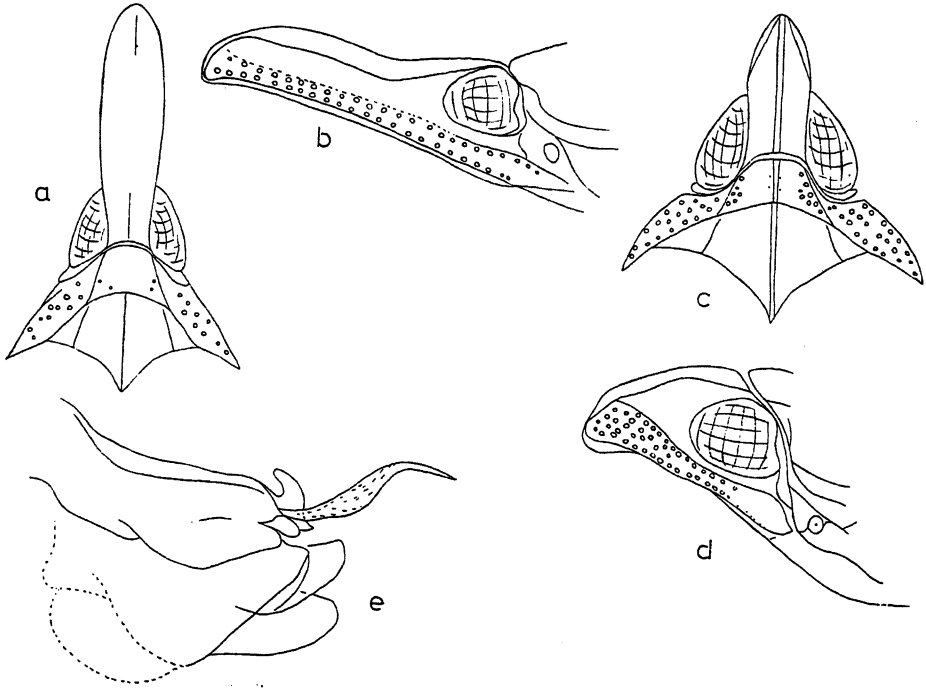


Fig. 9. *Bursinia elongatula* n. sp.: a head, pronotum and scutellum; b same, lateral view. — *Nymphorgerius pardoi* n. sp.: c—d same; e penis, lateral, aspect. — Orig.

Tunisia: Le Kef—Ebba Ksour road, 1 ♂ type, 4 paratypes, 19. VIII. 1962; Siliana, 2 paratypes, 20. VIII. 1962; Sbiba, 2 paratypes, 20. VIII. 1962. On *Artemisia* steppes.

Following HORVATH's key (1910, p. 179—180) the species is traced to *B. hemiptera* (O.C.) (structure of the anterior legs). *B. hemiptera* differs, however in, the following respects: 1) body considerably broader, 2.3—2.4 × as long as broad, 2) elytra somewhat shining and transparent, 3) colouring darker, 4) head with lateral longitudinal keels below eyes distinct even at apex and 5) abdomen with dark spotting (Material studied: Italy, Puglie, Peschili, 2 ♂♂, Servadei). *B. flava* Hv. resembles my species in the colouring, but differs in having the anterior femora without whitish keels and fuscous stripes.

The species has certainly been recorded as *B. hemiptera* from Tunisia by MATSUMURA (op. cit., p. 14).

B. fasciata Hv. — Tunisia: Ain Draham, many 16—18. VIII. 1962. Swept from macchia. In ♀ the elytra lack the transverse whitish band.

Nymphorgerius immundus (Hv.)

As ssp. *cyrenaicus* Lv., but crown distinctly shorter, nearly as long as pronotum and scutellum together, twice as long as broad basally. In ssp. *cyrenaicus* the crown is 1.15 × as long as the pronotum and the scutellum together and 2.3 × as long as broad basally.

Tunisia: Le Kef—Ebba Ksour road, some, 19. VIII. 1962; Sbiba, 2 spec., 20. VIII. 1962. From *Artemisia* steppes. Algeria: Oran, 1 spec. (type); Batna, 1 spec., Bergevin.

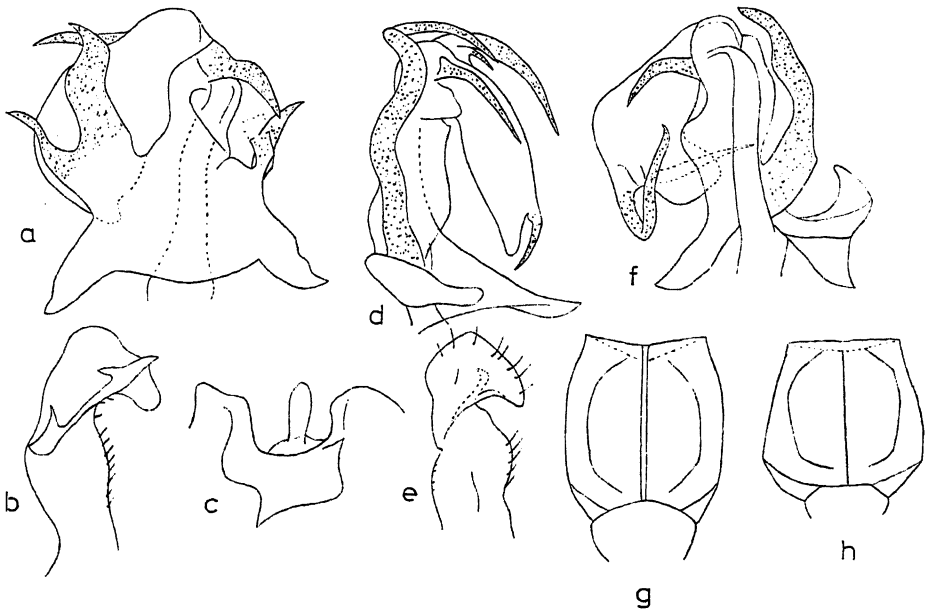


Fig. 10. *Oliarius concolor* Fb.?: a penis; b stylus; c apex of anal tube, ventral aspect. — *Oliarius* sp.: d penis; e stylus. — *Hyalesthes productus* LETH.: f penis. — *Hysteropterum lividum* BGV.: g face. *H. drahamense* n. sp.: h same. — Orig.

N. pardoii n. sp.

4 mm. Uniformly light reddish brown with only very faint dark irroration on the face and the propleura; the latter somewhat lighter caudally.

Small, 1.8 × as long as broad. Crown (fig. 9 c—d) 2.1 × as long as broad, parallel-sided in basal half, strongly tapering in apical one; lateral margins somewhat upcurved, median carina very prominent. Face distinctly concave in upper part (in profile) (fig. 9 d) otherwise straight. Clypeus narrowly ovate with a sharp median ridge. Frons parallel-sided, with 3 parallel keels, the median keel very distinct; lateral longitudinal keel below eye obsolete, coarse pits between this and the lateral facial keel. Pronotum short, with 3 keels and coarse pits laterally. Scutellum with 3 relatively faint keels. Elytra short, without dark irroration. Rostrum extending to apex of abdomen. Hind tibiae with 6—7 spines. Penis as in fig. 9 e. Other genitalia as in *N. cyrenaicus* Lv.

Spanish Morocco: Melilla, 1 ♂ type, PARDO.

In *N. immundus* (Hv.) and *N. rupicola* (Bgv.) the face is not concave in profile. *N. peyerimhoffi* BGV. is somewhat bigger and the frons is more broadly concave in profile.

Orgerius conspersus PT. — Algeria: Chairfontaine, some, J. SAHLBERG.

O. saboureti BGV. — Spanish Morocco: Melilla, 2 spec. and some larvae, PARDO.

O. alluaudi BGV. — Spanish Morocco: El Haus, Tetuan, 1 spec., PARDO.

O. albofasciatus PT. — Spanish Morocco: Gurugu, Melilla, 1 spec., PARDO; Zaid (Ulad Zetut), Melilla, 1 spec., PARDO; Taforal, 1 spec., PARDO.

Cixiidae

Oliarus tangira MATS.? — Spanish Morocco: Tizi Ifri, 1 spec., PARDO. The specimen (♀) differs from the original description in the somewhat smaller size and broader crown.

O. concolor FB. — Tunisia: Ain Draham, 4 spec., 16—18. VIII. 1962. At lamp. Male genitalia: Stylus as in fig. 10 b. Anal tube (fig. 10 c.) broadly ovate, an asymmetric process present in the middle of the apical margin. Penis as in fig. 10 a. The identification of several *Oliarus* species is uncertain in the absence of a modern revision of the genus. *O. concolor* has also been recorded from Ain Draham by PUTON (1886, p. 9).

O. sp.

Penis as in fig. 10 d. Stylus as in fig. 10 e. Anal tube without appendages.

Tunisia: Korba—Nabeul road, some, 21. VIII. 1962; Porto Farina, 3 spec., 15. VIII. 1962. Possibly *O. pallidiolus* MATS., although the colouring is dark.

Hyalesthes obsoletus SGN. — Tunisia: Siliana, 1 spec., 20. VIII. 1962.

H. luteipes FB. — Tunisia: Ain Draham, some, 16—18. VIII. 1962. New to Tunisia. Holo-mediterranean.

H. productus LETH. — Tunisia: Ain Draham, 3 spec., 16—18. VIII. 1962. Previously known from Algeria. Penis as in fig. 10 f.

Hemipteris seticulosus (LETH.) — Tunisia: Siliana, some, 20. VIII. 1962.

H. letourneuxi (LETH.) — Tunisia: Siliana, 1 spec., 20. VIII. 1962; nr. Souk el Arba, 1 spec., 19. VIII. 1962.

Delphacidae

Nephropsia tuberipennis (M.R.) — Spanish Morocco: Granja del Muluya, 1 spec., PARDO.

Kelisia putoni C. — Spanish Morocco: Melilla, 2 spec., PARDO. New to Morocco. Westmediterranean.

Delphacinus putoni (Sc.) — Tunisia: Oued Melleque, some, 19. VIII. 1962. Swept from *Juncus*.

Issidae

Caliscelis dimidiata C. — Tunisia: Korba—Nabeul road, 2 spec., 21. VIII. 1962.

Hysteropterum punctulatum RB. — Spanish Morocco: Melilla, 3 spec., PARDO.

H. issifrons BGV. — Tunisia: Sbiba, 2 spec., 20. VIII. 1962. Previously known from Algeria.

H. lividum BGV.

The specimens agree with the description of *H. lividum* BERGEVIN 1923, p. 83—86 in the angularly produced crown, in the considerable hump on the elytra and in the well-developed flying wings, which are nearly as long as the elytra, but differ in the somewhat smaller size (about 5 mm), whilst the light spot on the elytra is less distinct and ♂ also has dark markings like ♀. Face as in fig. 10 g. Male genitalia: Stylus (fig. 10 c) with a long and angularly curved apophysis. Anal tube (fig. 11 d) narrowly ovate. Penis (fig. 11 a—b) with a couple of long, falcate appendages and 11 triangular apical lobes.

Spanish Morocco: Melilla, 3 spec., PARDO; Tizi Ifri, many, PARDO. Originally known from Rabat, Morocco.

H. drahamense n. sp.

3.75—4 mm. Yellowish brown. Frons with dense, fuscous irroration, larger round dark spots often present in lateral margin. Elytra brown; longitudinal veins dark brown, cross veins concolorous; costal margin and apical cells embrowned. Fore and middle femora and tibiae with fuscous rings.

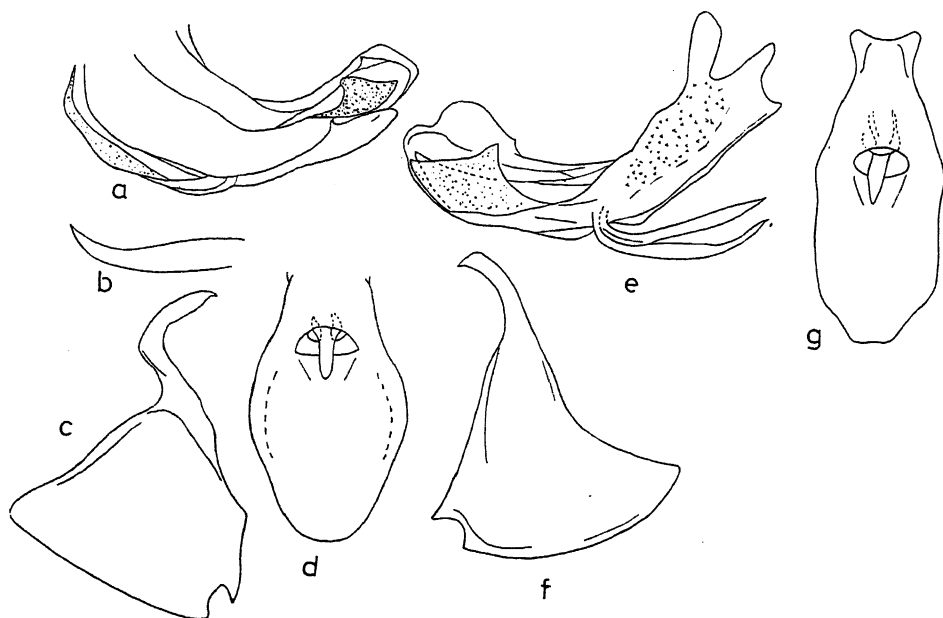


Fig. 11. *Hysteropterum lividum* Bev.: a penis, lateral aspect; b appendage of the same; c stylus; d anal tube, dorsal aspect. — *H. S-album* n. sp.: e penis, lateral aspect; f stylus; g anal tube, dorsal aspect. — Orig.

Relatively robust. Crown $3.3 \times$ as broad as median length, anterior margin nearly truncate. Frons flattish, as long as broad; strongly broadening downwardly, keels faint; upper margin straight (fig. 10 h). Elytra: hump relatively small, vein-net dense, also cross veins distinctly elevated, costal margin broadened basally. Flying wings reduced or present at most as a narrow flap. Hind tibiae with 1 spine. Male genitalia as in *H. lividum*.

Tunisia: Ain Draham, 1 ♂ type and 5 paratypes, 16—18. VIII. 1962. Swept from macchia.

Very near *H. lividum*, but much smaller and more robust, anterior margin of crown truncate (distinctly angularly produced and 2.4 — $2.5 \times$ as broad as long in *lividum*), frons broader and dissimilarly shaped and with faint keels (more parallel-sided, 1.1 — $1.2 \times$ as long as broad and with a strong median keel in *lividum* (fig. 10 g)); elytra with a smaller and not lighter hump and shorter apical and subapical cells and flying wings reduced.

H. S-album n. sp.

Fig. 14. 3.5 — 4 mm. Pale greyish ochraceous. Face with faint brownish irroration; sometimes larger round fuscous spots in lateral margin. Crown with 2 faint and \pm irregular brownish figures of the same shape as in *H. paludum*. Pronotum and scutellum with a fuscous, longitudinal median band, interrupted by the narrow, pale median keel. Elytra brownish; costal margin broadly whitish; a well delimited shallowly S-shaped white figure starting from the basal radiation point of the sectors and extending near to lower apical angle of corium; veins dark brown in the brownish area, otherwise whitish. Under surface pale ochraceous. Legs greenish ochraceous, fore femora with fuscous markings.

Relatively elongate. Vertex of uniform length, $2.85 \times$ as broad as long, anterior margin nearly truncate. Frons $1.1 \times$ as long as broad, distinctly broadening downwards, somewhat convex; median keels less prominent, lateral keels very faint, forming together a circular area; upper margin nearly straight. Clypeus prominent. Elytra with a considerable hump, costal margin broadly turned mesad basally; longitudinal veins elevated, cross veins faint. Flying wings reduced. Hind tibiae with 2 spines. Male genitalia: Stylus (fig. 11 f) with a long shallowly curved apophysis. Anal tube (fig. 11 g) narrow and flat. Penis (fig. 11 e) with 2 falcate appendages and 2 large sharply triangular apical lobes.

Variability: one male uniformly pale testaceous; elytra; however, with a trace of the whitish figure.

Spanish Morocco: Melilla, 1 ♂ type, 5 paratypes, PARDO.

Well characterized by the colour markings of the elytra.

H. paludum Bcv.

Male genitalia as in the closely related *H. deserticola* LV. (LINNAVUORI 1962, p. 15—17).

Spanish Morocco: Melilla, many, PARDO. Tunisia: Ain Draham, some, 16—18. VIII. 1962.

H. paludum Bcv. ssp. *altivagum* n. ssp.

As the nominate form (upper margin of frons possibly somewhat less concave, although individual variability in this also occurs in the nominate form), but anal tube (♂) considerably broader, $1.5 \times$ as long as broad (1.8 — $1.9 \times$ in the nominate form) (fig. 12 a—b). The apical processes of penis variable in shape (fig. 12 c—d).

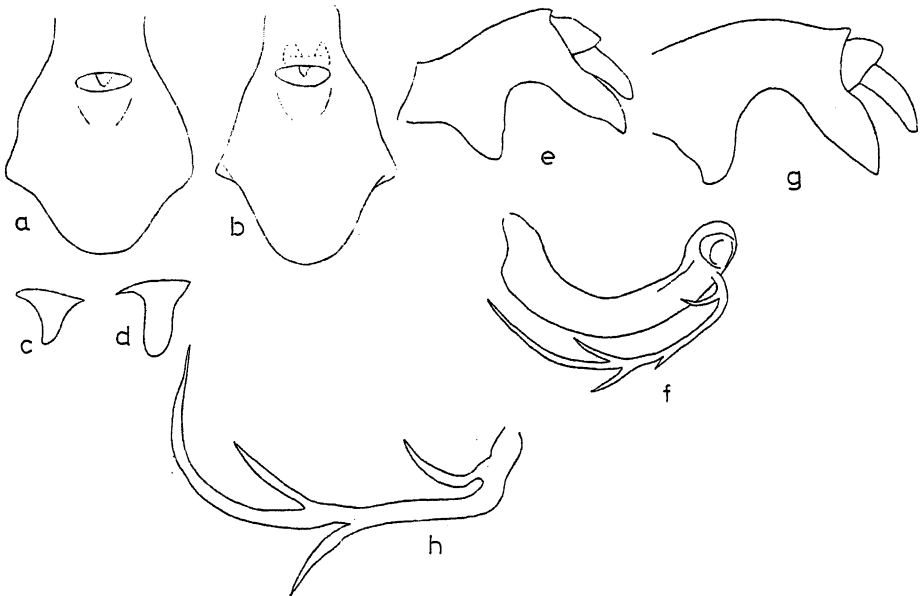


Fig. 12. *Hysteropterum paludum altivagum* n. ssp.: anal tube (dorsal aspect) a specimen from Siliana, b from Sbiba; c—d apical appendages of the penis of two specimens from Sbiba. — *Cyphopterum aguense* n. sp.: e anal tube, lateral aspect; f penis, lateral aspect. — *C. maroccanum* LDB.: g anal tube, lateral aspect; h appendage of the penis. — Orig.

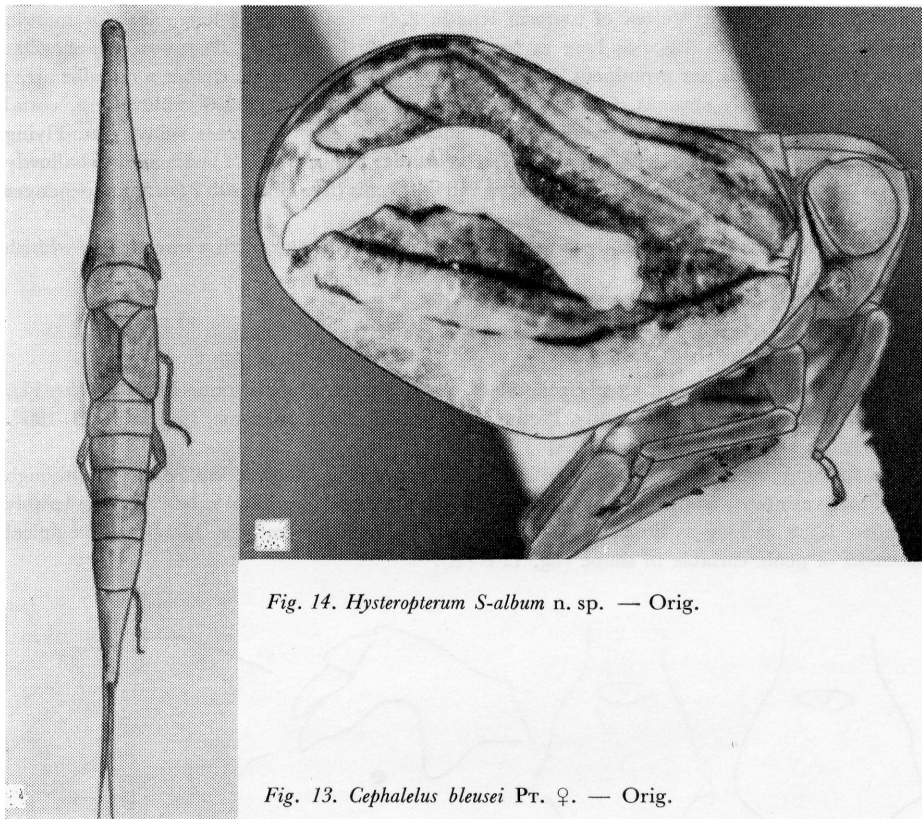


Fig. 14. *Hysteropterum S-album* n. sp. — Orig.

Fig. 13. *Cephaleus bleusei* Pt. ♀. — Orig.

Tunisia: Sbiba, 1 ♂ type, many paratypes, 20. VIII. 1962. On *Artemisia* steppes in higher mountains.

Issus patruelis STÅL — Tunisia: Ain Draham, many, 16—18. VIII. 1962. Swept from macchia, Previously known from Algeria.

Tettigometridae

Tettigometra virescens (Pz.) — Spanish Morocco: Melilla, 2 spec., PARDO. Tunisia: Ain Draham, many, 16—18. VIII. 1962; Le Kef—Ebba Ksour road, some, 19. VIII. 1962; Siliana, some, 20. VIII. 1962;

T. picta FB.—Tunisia: Ain Draham, many, 16—18. VIII. 1962; Le Kef—Ebba Ksour road, some, 19. VIII. 1962; Siliana, some, 20. VIII. 1962; Sbiba, some, 20. VIII. 1962.

T. impressifrons M. R. — Spanish Morocco: Melilla, 3 spec., PARDO.

T. obliqua Pz. — Spanish Morocco: Melilla, 2 spec., PARDO; Tizi Ifri, 1 spec., PARDO. Tunisia: Ain Draham, some, 16—18. VIII. 1962.

T. costulata FB. — Tunisia: Oued Melleque, 1 spec., 19. VIII. 1962; Siliana, 2 spec., 20. VIII. 1962.

T. tafratensis Bgv. — Spanish Morocco: Melilla, 1 spec., PARDO.

Flatidae

Phantia viridipennis LETH. — Tunisia: Le Kef—Ebba Ksour road, some, 19. VIII. 1962. On *Atriplex parvifolia*. New to Tunisia. Eremian.

Cyphopterum aguaense n. sp.

As *C. maroccanum* LDB., but somewhat robuster, ♂ with elytra a little less tapering apically and ♀ with frons broader. Male genitalia: Anal tube (fig. 12 e) with a deep ventral insinuation in the middle (lateral aspect) as in *maroccanum* (fig. 12 g). Penis (fig. 12 f) with appendages longer and only weakly upcurved apically, provided with 4 processes. In *maroccanum* the appendages are strongly upcurved apically (fig. 12 h) and provided with only 3 processes, the apical ones being much longer than in *aguaense*.

Spanish Morocco: Cabo de Agua, 1 ♂ type, 1 ♀ paratype, PARDO.

Types of the new species are preserved in the author's collection. Some of the paratypes have been given to the Zoological Museum of Helsinki University.

III. HEMIPTEROLOGICAL OBSERVATIONS FROM TURKEY

The Hemipterous fauna of Turkey has recently been keenly studied. The most comprehensive work was done by the Expedition of the National Museum of Prague in 1947. The results have been published by HOBERLANDT (1948 and 1955) and DLABOLA (1957). In the first-mentioned publications all previous records on the Heteroptera of Turkey are also mentioned. Afterwards G. SEIDENSTÜCKER of Eichstätt, Germany, has made field trips to Turkey nearly every year and in several minor publications described a number of species new to that country and even to science. Consequently the Hemipterous fauna of Turkey must be regarded as relatively well known compared, for instance, with the neighbouring areas in the Middle East.

On my return from a field trip to Africa in 4—16. VIII. 1963 I had an opportunity to visit Turkey and collect some insect material from there. Since the previous collections have almost always been done during the early and mid-summer aspects, it seems justifiable to publish my finds to elucidate the late summer aspect in Turkey. The fauna of this aspect on the whole is extremely poor owing to the withering of most of the lower vegetation in the prevailing high temperature and the near of total drought. One may take samples of 100 sweeps by net from the steppes of Central Anatolia without catching a single Hemipterous specimen in it. Even in the luxuriant tree vegetation of the Pontic Mountains on the Black Sea coast not much was to be found.

In contrast to this general poverty the occurrence of xerophilous and thermophilous species is to be expected in these climatic conditions. Such are presumably the species from the central and southern parts of Turkey recorded for the first time in the following list. In addition some species of the European faunal element also represent new records for Turkey.

THE MAIN COLLECTING LOCALITIES

During the very limited time I could only take samples from different biotopes along my route from Syria to Greece (Yauladagi-Iskenderun-Adana-Pozanti-Aksaray-Ankara-Bolu-Izmit-Istanbul-Greece) with a short digression to Akçakoca on the Black Sea coast. The main collecting localities are listed below:

1. The Yauladagi region.

Calcareous mountain area on the Syrian border. In higher places *Pinus halepensis* forests with sparse under growth mainly composed of *Erica arborea*. In more open sunny places also short macchia of *Quercus calliprinos*, *Poterium* and *Myrtus communis* is to be found. In every respect the region resembles the neighbouring areas in Syria.

2. Iskenderun

On the coastal belt. Area studied: a small hill N of the town with dense macchia of the same shrubs as in the previous region and with thorny *Compositae*. Nearby a dry wadi with dense vegetation of *Vitex agnus-castus* and *Myrtus*.

3. The Taurus Mountains on the route Adana-Pozanti.

In the lower parts of the southern slopes macchia and deciduous tree formation was found, composed of *Quercus calliprinos*, *Q. aegilops*, *Myrtus*, etc.

At higher altitudes there are coniferous forests consisting of *Pinus brutia*, *P. nigra*, *Juniperus phoenicea* and *J. oxycedrus*. In deep river valleys, especially near Pozanti, *Platanus orientalis*, *Elaeagnus orientalis*, *Salix* sp. and *Tamarix* sp. were found.

4. About 50 km S of Aksaray

A salt steppe with luxurious halophytic vegetation, e.g. of *Salicornia*, *Salsola*, *Stachys* and *Artemisia* species. The only biotope in which the insect abundance was high. The dominant species were *Orthotylus minutus* and *Psallopsis longicornis*, less abundant *Tuponia stachys* and *Solenoxypus fuscovenosus*.

5. Hirfenli

A dry hill steppe near the northern end of the salt lake Tuz Gölü. Vegetation consisted of grasses and *Genista* sp. aff. *Tchihafchewi*. Xerothermophilous species as *Leprosoma*, *Gonianotus kareli*, *Platycranus orientalis* and *Phytocoris irroratus*.

7. Near Gerede

Higher mountain area with *Pinus* and *Juniperus*.

8. Akçakoca road

The Pontic Mountains along the Black Sea coast. Dense deciduous forests.

SPECIES LIST

Pentatomidae

- Solenostedium bilunatum* (LEF.) ssp. *ledereri* (FB.) — Yauladagi, 1 spec., 5. VIII. 1963.
Odontotarsus robustus JAK. — nr. Gülek, 2 spec., 6. VIII. 1963; Silivri, 2 spec., 15. VIII. 1963.
O. purpureolineatus (R.) — Silivri, 1 spec., 15. VIII. 1963.

O. purpureolineatus (R.) ssp. *obsoletus* Hv. — Ulukişla, 1 spec., 7. VIII. 1963.

O. karatasensis Hob. — nr. Gülek, 1 spec., 6. VIII. 1963; Yauladagi—Belen, 1 spec., 5. VIII. 1963.

To this species must also be referred the specimens recorded as *O. rufescens* Fv. by me (1960, p. 6) from Israel, where the genuine *rufescens* does not seem to occur. *O. karatasensis* thus has a Syrio—Anatolian distribution.

Psacasta tuberculata (F.) — Iskenderun, 1 spec., 6. VIII. 1963.

Eurygaster integriceps Pr. — Gülek, 1 spec., 6. VIII. 1963; Ulukişla, 1 spec., 7. VIII. 1963.

Tarisa fraudatrix Hv. — 50 km S of Aksaray, 1 spec., 7. VIII. 1963. From halophytes on a salt steppe.

Ventocoris fischeri (H. S.) — Hirfenli, some, 7—8. VIII. 1963. Among grasses in a dry hill side steppe.

Leprosoma inconspicuum BÄR. — Hirfenli, 2 spec., 7—8. VIII. 1963. In the same place as the preceding species. A rare Holomediterranean species.

L. tuberculatum JAK. — Hirfenli, 1 spec., 7—8. VIII. 1963. Together with the former species. A rare species with Caspian distribution.

Ancyrosoma leucogrammes (GL.) — Silivri, 1 spec., 15. VIII. 1963; Yauladagi—Belen, some, 5. VIII. 1963.

Tholagnus flavolineatus (F.) — Silivri, 2 spec., 15. VIII. 1963.

Graphosoma semipunctatum (F.) — nr. Adana, some, 6. VIII. 1963.

Mustha spinulosa (LEF.) — nr. Gülek, 1 spec., 6. VIII. 1963.

Sciocoris helferi Fv. — Hirfenli, some, 7—8. VIII. 1963. From a dry hill side steppe.

S. sahlbergi E. WGN. — Yauladagi, 1 spec., 5. VIII. 1963. From a *Myrtus-Poterium* macchia in a *Pinus halepensis* forest. Eremian.

S. cursitans (F.) — Akçakoca road, 3 spec., 12. VIII. 1963.

Aelia acuminata (L.) — Iskenderun, 1 spec., 6. VIII. 1963; Yauladagi—Belen, 1 spec., 5. VIII. 1963.

A. glebana Fr. — Silivri, 1 spec., 15. VIII. 1963; Ulukişla, 1 spec., 7. VIII. 1963; Greece, nr. Amfipolis, 1 spec., 16. VIII. 1963.

Staria lunata H. — Akçakoca road, some, 12. VIII. 1963; Yauladagi—Belen, some, 5. VIII. 1963. The specimens are somewhat smaller than the European ones, but seem to belong to the nominate form and not to the ssp. *maroccana* LDB. occurring in Africa and Israel. STICHEL (1961, p. 568) has regarded *maroccana* as a valid species. I have examined the type of *maroccana* (type no. 7534) in Zool. Mus. Helsinki and have not found any distinct differences in the shape of the propleurae and of the head as mentioned by STICHEL and therefore prefer to regard it as a subspecies of *lunata* as previously (1960, p. 16).

Pitedia pinicola (M. R.) — nr. Gerede, 2 spec., 11. VIII. 1963. On *Pinus*. New to Turkey. Euro-Siberian.

Carpocoris mediterraneus TAM. — Hirfenli, 1 spec., 7—8. VIII. 1963; Iskenderun, some, 6. VIII. 1963; Yauladagi—Belen, some, 5. VIII. 1963.

C. fuscipinus (Boh.) — Ulukişla, 1 spec., 7. VIII. 1963.

Codophila lunulata (Gz.) — Ulukişla, some, 7. VIII. 1963; Greece, nr. Amfipolis, some, 16. VIII. 1963.

C. varicornis (JAK.) — Greece, Lake Bourou, 1 spec., 16. VIII. 1963. From halophytic vegetation.

Dolycoris baccarum (L.) — nr. Gerede, 1 spec., 11. VIII. 1963.

Holcogaster exilis Hv. — Gülek, some, 6. VIII. 1963; Pozanti, some, 7. VIII. 1963. On *Juniperus phoenicea*.

Eurydema ornata (L.) v. *pictella* Kk. — nr. Gülek, some, 6. VIII. 1963; Silivri, some, 15. VIII. 1963; Greece, nr. Amfipolis, some, 16. VIII. 1963.

Acrosternum millierei (M. R.) — Iskenderun, some, 6. VIII. 1963.

Coreidae

Gonocerus juniperi H. S. — Gülek, many, 6. VIII. 1963. On *Juniperus phoenicea*.

G. acuteangulus (Gz.) — Akçakoca road, 1 spec., 12. VIII. 1963; Silivri, 1 spec., 15. VIII. 1963.

Syromastes rhombeus (L.) — Gülek, 1 spec., 6. VIII. 1963.

Enoplops disciger (KLT.) — Ulukişla, 1 spec., 7. VIII. 1963.

Centrocoris spiniger (F.) — Pozanti, 2 spec., 7. VIII. 1963; Silivri, 1 spec., 15. VIII. 1963; Greece, nr. Amfipolis, 2 spec., 16. VIII. 1963.

Coriomeris affinis (H. S.) — Iskenderun, some, 6. VIII. 1963; Silivri, 1 spec., 15. VIII. 1963.

C. denticulatus (SCOP.) — Pozanti, 1 spec., 7. VIII. 1963.

Stenocephalidae

Dicranocephalus agilis (SCOP.) — Akçakoca road, 1 spec., 12. VIII. 1963.

D. albipes (F.) — nr. Gülek, 2 spec., 6. VIII. 1963.

Alydidae

Camptopus lateralis (GM.) — nr. Gülek, 1 spec., 6. VIII. 1963; Silivri, some, 15. VIII. 1963; Yauladagi—Belen, 2 spec., 5. VIII. 1963.

Rhopalidae

Corizus hyoscyami (L.) — nr. Gülek, 1 spec., 6. VIII. 1963; Ulukişla, 1 spec., 7. VIII. 1963.

Liorhysus hyalinus (F.) — Iskenderun, 1 spec., 6. VIII. 1963; 50 km S of Aksaray, some, 7. VIII. 1963.

Rhopalus subrufus (GML.) — Iskenderun, 3 spec., 6. VIII. 1963.

R. parumpunctatus SCHL. — Pozanti, 2 spec., 7. VIII. 1963.

Brachycarenum tigrinus (SCHL.) — 50 km S of Aksaray, 1 spec., 7. VIII. 1963; nr. Gülek, 1 spec., 6. VIII. 1963; Pozanti, 1 spec., 7. VIII. 1963; Ulukişla, some, 7. VIII. 1963.

Stictopleurus abutilon (R.) ssp. *pictus* (FB.) — Yauladagi—Belen, 2 spec., 5. VIII. 1963.

Chorosoma schillingi (SCHML.) — Hirfenli, many, 7—8. VIII. 1963.

Pyrrhocoridae

Scantius aegyptius (L.) — Ulukişla, 1 spec., 7. VIII. 1963.

Lygaeidae

Lygaeus saxatilis (SCOP.) — 50 km S of Aksaray, 1 spec., 7. VIII. 1963.

L. pandurus (SCOP.) — Yauladagi—Belen, 1 spec., 5. VIII. 1963.

L. equestris (L.) — nr. Gerede, 1 spec., 11. VIII. 1963; Pozanti, 1 spec., 7. VIII. 1963; Silivri, 1 spec., 15. VIII. 1963; Ulukişla, 1 spec., 7. VIII. 1963.

Melanocoryphus syriacus RT. — Pozanti, 1 spec., 7. VIII. 1963.

Arocatus longiceps STÅL — Gülek, some, 6. VIII. 1963; Pozanti, 1 spec., 7. VIII. 1963. On *Platanus orientalis*. New record for Turkey. Pontomediterranean.

- Orsillus depressus* DL. — Gülek, some, 6. VIII. 1963. On *Juniperus phoenicea*.
- Nysius cymoides* (SPIN.) — 50 km S of Aksaray, some, 7. VIII. 1963.
- N. punctipennis* (H. S.) — Akçakoca road, 3 spec., 12. VIII. 1963.
- Cymus obliquus* HV. — Akçakoca road, 1 spec., 12. VIII. 1963; Greece, nr. Amfipolis, 1 spec., 16. VIII. 1963. Not previously recorded from Turkey or Greece. European.
- Kleidocerys truncatulus* (WK.) ssp. *ericae* (HV.) — Akçakoca road, many, 12. VIII. 1963. On *Erica arborea*. New record for Turkey. Holomediterranean, also occurring in Central Europe.
- Henestaris halophilus* BURM. — Greece, Lake Bourou, 1 spec., 16. VIII. 1963.
- H. lateps* (CT.) — Greece, Lake Bourou, many, 16. VIII. 1963.
- Geocoris erythrocephalus* (P. S.) — Akçakoca road, some, 12. VIII. 1963; nr. Gülek, some, 6. VIII. 1963; Iskenderun, some, 6. VIII. 1963; Pozanti, some, 7. VIII. 1963; Yauladagi—Belen, some, 5. VIII. 1963.
- Oxycarenus pallens* (H. S.) — Ulukişla, 2 spec., 7. VIII. 1963.
- Macroplox fasciata* (H. S.) — Yauladagi—Belen, many, 5. VIII. 1963.
- Paromius gracilis* (RB.) — Greece, nr. Amfipolis, 1 spec., 16. VIII. 1963.
- Tropistethus holosericeus* (SCH.) — Akçakoca road, 1 spec., 12. VIII. 1963.
- Peritrechus nubilus* (FN.) — Akçakoca road, 1 spec., 12. VIII. 1963. New record for Turkey. Holomediterranean with a large extension into Central Europe.
- Trichaphanus fuentei* (PT.) — nr. Kizilcahamam, some, 10. VIII. 1963. On *Salix* trees along a river bank. WAGNER (1962) has proved *T. nitidicollis* KIR. to be a synonym of *T. fuentei* PT., but his synonymizing of *Trichaphanus* KIR. with *Microtomideus* RT. is incorrect as was also definitely shown by SEIDENSTÜCKER (1963, p. 418).
- Beosus quadripunctatus* (ML.) — Akçakoca road, some, 12. VIII. 1963.
- Ischnopeza hirticornis* (H. S.) — Yauladagi—Belen, 1 spec., 5. VIII. 1963.
- Emblethis ciliatus* HV. — Hirfenli, some, 7—8. VIII. 1963.
- Gonianotus kareli* (HOB.) — Hirfenli, 2 ♀♀, 7—8. VIII. 1963. Among grasses on a dry hillside steppe. Originally described as *Emblethis*, but it seems to belong to *Gonianotus*. Endemic.
- Gastrodes grossipes* (DEG.) — nr. Gerede, 1 spec., 11. VIII. 1963.

Berytidae

- Gampsocoris punctipes* (GM.) — Iskenderun, 1 spec., 6. VIII. 1963; Pozanti, 1 spec., 7. VIII. 1963.

Piesmidae

- Piesma kolenatii* (FB.) — 50 km of Aksaray, some, 7. VIII. 1963. Swept from halophytes in a salt steppe.

Tingidae

- Elasmotropis testacea* (H. S.) — Ulukişla, 1 spec., 7. VIII. 1963.
- Lasiacantha hedenborgi* STÅL — Yauladagi—Belen, 2 spec., 5. VIII. 1963.
- Physatocheila confinis* HV. — nr. Bolu, many, 11. VIII. 1963; nr. Gülek, some, 6. VIII. 1963. On *Amygdalus* and *Quercus aegilops*.
- Dictyla echi* (SCHR.) — Gülek, 1 spec., 6. VIII. 1963; Ulukişla, 1 spec., 7. VIII. 1963; Greece, nr. Amfipolis, 1 spec., 16. VIII. 1963.
- Monosteira pardoi* E. WGN. — nr. Ankara, many, 10. VIII. 1963; Pozanti, many, 7. VIII. 1963. On *Salix* trees along river banks. New record for Turkey. Holomediterranean.
- Agramma atricapilla* (SPIN.) — Greece, Lake Bourou, some, 16. VIII. 1963.

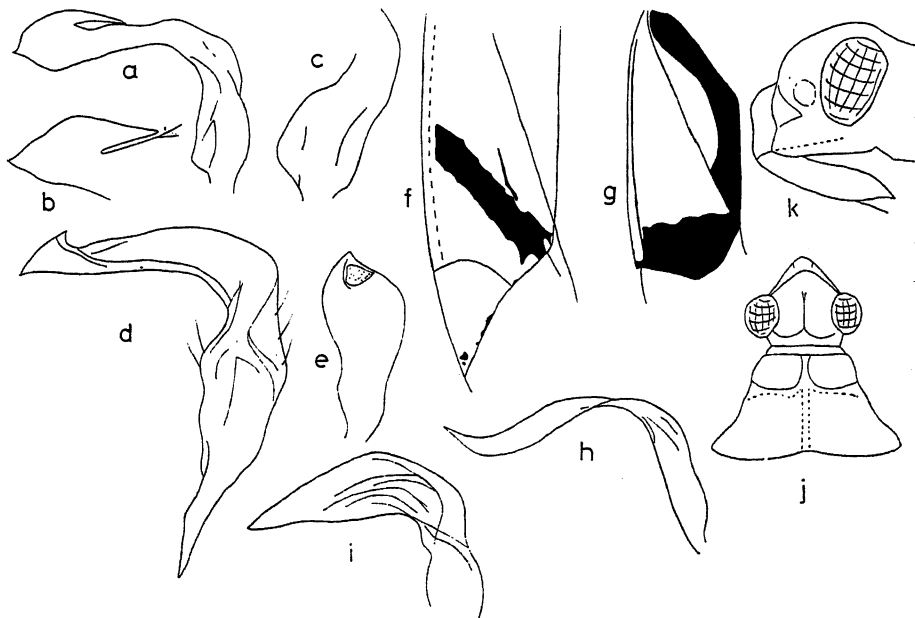


Fig. 15. *Phytocoris tristis* n. sp.: a left stylus, lateral aspect; b hypophysis and c sensory lobe of same in different aspects. — *P. irroratus* n. sp.: d left stylus, lateral aspect; e right stylus. — *P. tauricola* n. sp.: f elytron. — *Megacoelum myrti* n. sp.: g elytron; h spiculum of vesica. — *M. infusum* (H. S.) (specimen from Finland): i spiculum of vesica. — *Acrorrhinium conspersum* N. sp. ♀: j head and pronotum; k head, lateral view. — Orig.

Reduviidae

Callistodema fasciatum (KLT.) — Pozanti, many, 7. VIII. 1963. On *Tamarix* along a river bank.

Rhinocoris iracundus (PD.) — nr. Adana, 1 spec., 6. VIII. 1963.

R. punctiventris (H. S.) — Yauladagi—Belen, 2 spec., 5. VIII. 1963.

Sphedanolesthes pulchellus (K.) — Pozanti, 1 spec., 7. VIII. 1963. Swept from ground vegetation on a dry hill in the *Pinus* region.

Nagusta goedeli (KLT.) — nr. Ankara, some larvae, 9. VIII. 1963. On *Salix* trees on a brook bank.

Nabiidae

Nabis mirmecoides (O. C.) — Akçakoca road, 2 spec f. macr., 12. VIII. 1963.

N. sareptanus D. — 50 km S of Aksaray, 3 spec., 7. VIII. 1963. From the halophytic vegetation of a salt steppe. New to Turkey. Holomediterranean.

N. feroides REM. — 50 km S of Aksaray, many, 7. VIII. 1963. From a salt steppe.

N. pseudoferus REM. — Akçakoca road, some, 12. VIII. 1963; Pozanti, 2 spec., 7. VIII. 1963.

N. viridis (BR.) — Pozanti, 1 spec., 7. VIII. 1963.

Anthocoridae

Montandoniella dacica Pr. — nr. Bolu, some, 11. VIII. 1963. On *Amygdalus*. New to Turkey. A rare Pontomediterranean species.

Temnostethus pusillus (H. S.) — nr. Bolu, 2 spec., 11. VIII. 1963. On *Amygdalus*. New record for Turkey. European.

Anthocoris nemoralis (F.) — nr. Bolu, many, 11. VIII. 1963; Kizilcahamam, 1 spec., 11. VIII. 1963. On *Amygdalus* near Bolu.

Orius niger (W.) — Pozanti, 1 spec., 7. VIII. 1963; Ulukişla, 1 spec., 7. VIII. 1963.

O. laticollis (Rt.) — Kizilcahamam, many, 11. VIII. 1963. On *Salix* trees on a river bank.

O. sibiricus E. WGN.? — nr. Bolu, 2 ♀♀, 11. VIII. 1963. On *Amygdalus*. Not previously recorded from Turkey. Probably Caspian. Identification somewhat uncertain in the absence of males.

Cardiastethus nazareus Rt. — Yauladagi—Belen, 2 spec., 5. VIII. 1963.

Miridae

Phytocoris tristis n. sp.

4.2—4.5 mm. Colouring as in *P. signaticollis* Lv., but the fulvous and reddish colouring of the upper surface more intensive and spread.

Remarkably more gracile than *P. signaticollis*, body about $3.6 \times$ as long as broad at pronotum. Hair covering of the upper surface dark brownish on pronotum, light golden on elytra. Vertex $0.82 \times$ (σ) or $1.3 \times$ (φ) as broad as eye. Proportions between antennal joints $27 + 53 + 40 + ?$ (σ) or $30 + 56 + 41 + ?$ (φ) (1 unit = 0.033 mm), 1st joint $1.12 \times$ (σ) or $1.36 \times$ (φ) as long as diatone. Pronotum $1.9 \times$ as broad as long. Male genitalia as in *P. signaticollis*, but left stylus (fig. 15 a—c) with a shorter and apically blunter hypophysis; breadth of stylus at hypophysis 0.39 mm (0.45 mm in *signaticollis*).

nr. Gülek, 1 ♂ type and 2 paratypes, 6. VIII. 1963, on *Quercus aegilops*; nr. Izmit, 3 paratypes, 13. VIII. 1963, on *Quercus* sp.

Very near *P. signaticollis* Lv., but more gracile, with longer 1st antennal joint, with darker hair covering, narrower pronotum, etc. Also closely related to *P. hākani* E. WGN., but left stylus without teeth on inner side.

WAGNER (1963, p. 20) has regarded *P. signaticollis* as a possible synonym of *P. crucifer* Rt. from Algeria. This opinion is incorrect. I have examined the types of *P. crucifer* (both unfortunately females). That species is much more gracile, $3.5 \times$ as long as broad at pronotum ($3.2 \times$ in *signaticollis*), with vertex $3.5 \times$ as broad as eye ($3.2 \times$ in *signaticollis*), pronotum $1.9 \times$ as broad as long ($2.1 \times$ in *signaticollis*, in which the pronotum is remarkably transverse); moreover, the vertex has 3 whitish spots and the pronotum a whitish cruciate mark. As pointed out by me previously (1960, p. 60), there is a certain difference in the male genitalia between the East- and Westmediterranean *Stictophytocoris* species. It appears rather probable that *P. crucifer* is a derivative of the Westmediterranean stock, since many species of the genus have a relatively delimited distribution.

P. tiliae (F.) — nr. Bolu, 3 spec., 11. VIII. 1963. On *Amygdalus*. New record for Turkey. European.

P. pini KBM. — nr. Gerede, some, 11. VIII. 1963. On *Pinus* sp. New to Turkey. European.

P. pini-halepensis LDB. — Yauladagi, 2 spec., 5. VIII. 1963. On *Pinus halepensis*. New record for Turkey. Previously known from Cyprus and Israel.

P. tauricola n. sp.

3.75—4 mm. Pale greyish with a faint reddish tinge. Vertex with a fulvous transverse band, broken at middle, in basal margin. Antennae: 1st joint blackish brown with a few whitish

spots; 2nd joint uniformly whitish, slightly infumed apically; 3rd joint dark with base narrowly whitish. Pronotum with apical ring marked with fulvous, basal margin with a sharply delimited blackish brown transverse band. Scutellum with basal margin and 2 very faint longitudinal median stripes fulvous, apex with 2 minute fuscous spots. Elytra with a sharply delimited oblique dark fuscous fascia starting from the medioapical angle of corium (fig. 15 f), cuneus faintly tinged with fulvous, apex and median margin with fuscous spots; membrane dark smoky with minute light irroration and a larger light area near apex of cuneus, veins light. Under surface greyish ochraceous, tinged with reddish. Anterior and middle femora with dark brown irroration. Hind femora apically dark fuscous with light spots; hind tibiae uniformly pale ochraceous.

Small, resembling *P. parvulus* RT. in body form. Upper surface with black erect hairs and with smooth light tomentous hairs on elytra. Head $1.4 \times$ as high as long in lateral aspect. Vertex $1.6 \times$ as broad as eye. Proportions between the antennal joints $14 + 36 + 24 + ?$; 1st joint remarkably short, $0.7 \times$ as long as diatone, provided with black and relatively smooth hairs; 2nd joint $1.2 \times$ as long as basal width of pronotum. Pronotum basally $1.6 \times$ as broad as diatone. Tibial spines light.

Gülek, 1 ♀ type and some ♀♀ paratypes, 6. VIII. 1963. On *Juniperus phoenicea*.

Of the *parvulus* group (*Ribautomiris* E. WGN.). Much as *P. parvulus* RT., but 1st antennal joint much shorter ($0.9 \times$ as long as diatone in *parvulus*), vertex $1.6 \times$ as broad as eye ($1.9-2.0 \times$ in *parvulus*), with sharply delimited dark markings on pronotum and elytra and with a shorter haircovering on the upper surface. There is apparently also a difference in the biology, since I have collected *P. parvulus* from *Buxus sempervirens* in Czechoslovakia. *P. parvuloides* E. WGN. is much darker, with conspicuous fuscous irroration on upper surface, dark 2nd antennal joint, etc.

P. pseudinsignis E. WGN.? — Akçakoca road, 2 ♀♀, 12. VIII. 1963.

P. irroratus n. sp.

♂ f. macr. 5.6 mm, ♀ f. brach. 4.1—4.7 mm. Ground colouring whitish. Head with faint fulvous markings on either side. 1st antennal joint densely irrorate with dark fuscous, other joints unicoloured, whitish. Pronotum with traces of 4 faint, fulvous, longitudinal bands. Scutellum with a broad, median dark fuscous, longitudinal, irregular band, interrupted by a pale, narrow, longitudinal line in the middle; in ♀ the dark markings very reduced, often forming only faint dark irroration on either side of the pale median line. Elytra (♂): outer part of clavus, inner part of corium and cuneus with \pm intensive dark brown irroration, apical margin of corium with a bigger dark spot; membrane densely irrorated with dark brown, veins pale. In ♀ the elytra are nearly unicoloured with only traces on the dark irroration. Abdomen and under surface with reddish irroration. Femora with dark irroration, hind femora with 2 dark rings in apical part, hind tibiae with a subapical dark ring.

Parallel-sided, $3.7 \times$ as long as broad at elytra (♂) or narrowly ovate, $2.6 \times$ as long as broad at elytra (♀). Upper surface with yellowish hair covering. Head long, seen in anterior view as broad as high (♂, ♀), in lateral view distinctly longer than high with tylus prominent and separated by a distinct depression from the frons and nearly vertically sloping apically. Vertex $1.85-2.0 \times$ (♂) or $2.55 \times$ (♀) as broad as eye, frons globose. Proportions between the antennal joints $30 + 64 + 42 + 27$ (♂); 1st joint with white, relatively long and dense erect setae, $1.2-1.33 \times$ (♂) or $1.2-1.28 \times$ (♀) as long as diatone; 2nd joint (♂) $2.13 \times$ as long as 1st and $1.6 \times$ as long as basal width of pronotum. Rostrum extending beyond hind coxae. Pronotum (♂) strongly broadening caudad, $1.7 \times$ as broad as head, lateral margins somewhat insinuated, or (♀) trapezoidal, $1.28 \times$ as broad as head, with lateral margins distinctly insinuated. Elytra (♂) much longer than abdomen, or (♀) with membrane totally reduced.

Tibial spines light brownish, arising from small dark dots. 1st joint of hind tarsi $0.6 \times$ as long as 2nd and 3rd joints together. Male genitalia: Styli as in fig. 15 d—e. Comb of vesica with numerous small teeth as in *P. phrygicus* E. WGN.

Type, a male and some paratypes, Hirfenli, 7—8. VIII. 1963. Swept from grasses on a dry hillside steppe.

Close to *P. phrygicus* E. WGN., but differing in the dark irroration of the 1st antennal joint and of the upper surface, in the ocular index (the vertex 1.60 — $1.65 \times$ (σ) or $2.4 \times$ (φ) as broad as the eye in *phrygicus*) and in the shorter 1st antennal joint ($1.4 \times$ (σ) or $1.48 \times$ (φ) as long as the diatone in *phrygicus*). From *P. niveatus* Hv. it differs in the smaller size, different colouring, shorter 1st antennal joint, more globose frons, etc.

Megacoelum myrti n. sp.

5—6 mm. Lighter or darker reddish brown. Head reddish ochraceous, usually \pm tinged with bright red. Antennae ochraceous, 3rd and 4th joints sometimes apically darkened. Pronotum blackish or coffee-brown, anterior margin, especially calli, reddish; also disk \pm tinged with reddish, basal margin narrowly whitish. Scutellum blackish or dark brown, basal angles reddish. Elytra reddish brown; scutellar and commissural margins of clavus and a transverse apical fascia on corium blackish (fig. 15 g); cuneus dark reddish; membrane dark smoky, veins dark brown. Under surface and legs reddish.

A small species. Shining. Vertex $0.76 \times$ (σ) or $1.11 \times$ (φ) as broad as eye. Proportions between the antennal joints $24 + 60 + 55 + 28$ (σ) or $24 + 60 + 51 + 30$ (φ); 1st joint with a few black bristles, 0.5 — $0.6 \times$ as long as basal width of pronotum, 2nd joint 1.3 — $1.4 \times$ and 3rd joint $1.2 \times$ as long as the same. Pronotum shining, transversely wrinkled and rugose. Hind femora with 2 rows of black bristles on ventral surface. Tibiae with black bristles. Rostrum extending slightly beyond hind coxae. Male genitalia about as in *M. infusum* (H.S.), but spiculum of vesica unusually narrow (fig. 15 h).

Iskenderun, 1 σ type, some paratypes; 6. VIII. 1963; nr. Gülek, some paratypes, 6. VIII. 1963; Yauladagi-Belen, some paratypes, 5. VIII. 1963. Moreover a paratype from Baba-Dagh, J. SAHLBERG and a paratype from Cyprus, Kyrenia, Ammos, 7. VII. 1939, H. LINDBERG. On *Myrtus communis*.

Near *M. infusum* (H. S.), but much smaller, with different colour patterns on elytra, etc. Spiculum of vesica of *M. infusum* as in fig. 15 i. *M. infusum* lives on deciduous trees, I have found it on *Tilia cordata* in Finland. Confused with *M. pulchricorne* Rt., known to me in the female type only.

A redescription: Pale ochraceous. 2nd, 3rd and 4th antennal joints bright red apically. Vertex with 2 longitudinal red bands continuing onto pronotum, which in addition has a bright red band bordering the lateral margins. Scutellum with 2 red median bands. Elytra pale ochraceous, medially slightly tinged with reddish; cuneus whitish, basal margin reddish; membrane light smoky, veins pale, apically reddish. Body more robust. Vertex $1.33 \times$ as broad as eye. Proportions between the antennal joints $25 + 60 + 45 + 25$; 1st joint $0.5 \times$, 2nd joint $1.17 \times$ and 3rd joint $0.9 \times$ as long as basal width of pronotum. Brunate, Spain, 1 φ , the type.

M. pulchricorne seems to be Westmediterranean. The records from the Orient are dubious. The specimen from Turkey in coll. Reuter is *myrti*, as pointed out above. Mr. W. RICHTER has kindly sent me a specimen from the series recorded as *pulchricorne* by WAGNER (1957, p. 77) from Iran (the specimen is from Iran, Baluchistan, Sangun). The specimen belongs to *M. brevirostre* Rt., however.

Adelphocoris vandalicus (R.) — Greece, nr. Amfipolis, 1 spec., 16. VIII. 1963.

A. ticinensis (M. D.) — Akçakoca road, 1 spec., 12. VIII. 1963.

- A. lineolatus* (Gz.) — Akçakoca road, 1 spec., 12. VIII. 1963; Silivri, 1 spec., 15. VIII. 1963.
- Dichroscytus cyprius* LDB. — Gülek, 1 spec., 6. VIII. 1963. On *Juniperus phoenicea*.
- Lygus pratensis* (L.) — Akçakoca road, some, 12. VIII. 1963.
- L. gemellatus* (H. S.) — Greece, nr. Amfipolis, some, 16. VIII. 1963; Lake Bourou, 2 spec., 16. VIII. 1963.
- L. rugulipennis* POP. — Akçakoca road, 1 spec., 12. VIII. 1963.
- L. pallidulus* (BLANCH.) — nr. Gülek, 2 spec., 6. VIII. 1963.
- Camptozygum aequalis* (VL.) — Yauladagi, 1 spec., 5. VIII. 1963. On *Pinus halepensis*. Not previously recorded from Turkey. European.
- Polymerus cognatus* (FB.) — Ulukişla, 1 spec., 7. VIII. 1963.
- Deraeocoris ruber* (L.) — nr. Gerede, 1 spec., 11. VIII. 1963. New to Turkey. Holarctic.
- D. serenus* (DGL. SC.) — 50 km S of Aksaray, some, 7. VIII. 1963; Ulukişla, some, 7. VIII. 1963.
- D. cyprius* E. WGN. — Yauladagi, 3 spec., 5. VIII. 1963. On *Pinus halepensis*. Previously known only from Cyprus.
- D. lutescens* (SCHL.) — nr. Ankara, some, 10. VIII. 1963.
- Alloetomus gothicus* (FN.) — nr. Gerede, some, 11. VIII. 1963. On *Pinus* sp. New to Turkey. European.
- Trigonotylus pulchellus* (H.) — Iskenderun, 2 spec., 6. VIII. 1963. New to Turkey. Ponto-mediterranean with a large extension into Central Europe.
- Fulvius punctum-album* (R.) — Pozanti, 1 spec., 7. VIII. 1963. Under loose bark of a *Pinus* stub.
- Macrolophus caliginosus* E. WGN. — Yauladagi—Belen, some 5. VIII. 1963.
- Cyrtopeltis turcica* SD. — Yauladagi—Belen, 2 spec., 5. VIII. 1963.
- Acrorrhinium conspersum* NH.
- ♀. Fig. 24. 4.2 mm. Dull. Dark coffee-brown. With minute light irroration on head, pronotum and scutellum. 1st antennal joint blackish brown, with a few (3) seta-bearing whitish knobs; 2nd joint greyish brown. Pronotum with a light broken median stripe. Elytra with scanty faint light irroration; a blackish unirrorate triangle starting near the commissural margin of clavus, extending onto corium and continuing as an oblique band near to the costal margin; clavus at tip of scutellum with a roughly \cap -shaped whitish figure bordering the blackish triangle; also corium with a more indistinct lighter area just basad of the blackish figure; apicolateral angle of corium whitish; cuneus blackish brown, somewhat shining; membrane dark smoky, veins concolorous. Legs dark coffee-brown, knees lighter.
- Resembling *Phytocoris* in general appearance. Head (fig 15 j—k) relatively small, $0.7 \times$ as broad as basal width of pronotum. Vertex $1.5 \times$ as broad as eye, slightly convex and with a faint median sulcus. In lateral aspect the head is a little higher than long with the tylus remarkably prominent. Proportions between the antennal joints $17 + 53 + ? + ?$, 1st joint $0.81 \times$ as long as diatone, 2nd joint $1.7 \times$ as long as basal width of pronotum; hair covering of antennae smooth, 1st joint with a whitish erect seta in each light knob. Rostrum extending beyond hind coxae. Hair covering of upper surface short, smooth and silvery, moreover light erect setae present. Pronotum with lateral margins distinctly insinuated in the middle; apical ring relatively broad; calli distinct and elevated, separated by a transverse depression from the basal portion of the disk; basal portion somewhat swollen in the middle, but without a distinct carina. Scutellum strongly sloping caudad in basal part, apex elevated. Claws of the *Cremnocephalus* type.
- Gülek, 1 ♀, 6. VIII. 1963. On *Juniperus phoenicea*.
- Pilophorus pusillus* RT. — nr. Bolu, many, 11. VIII. 1963. On *Amygdalus*.
- P. cinnamopterus* (KBM.) — nr. Gerede, 3 spec., 11. VIII. 1963. On *Pinus* sp. New to Turkey. Holarctic.

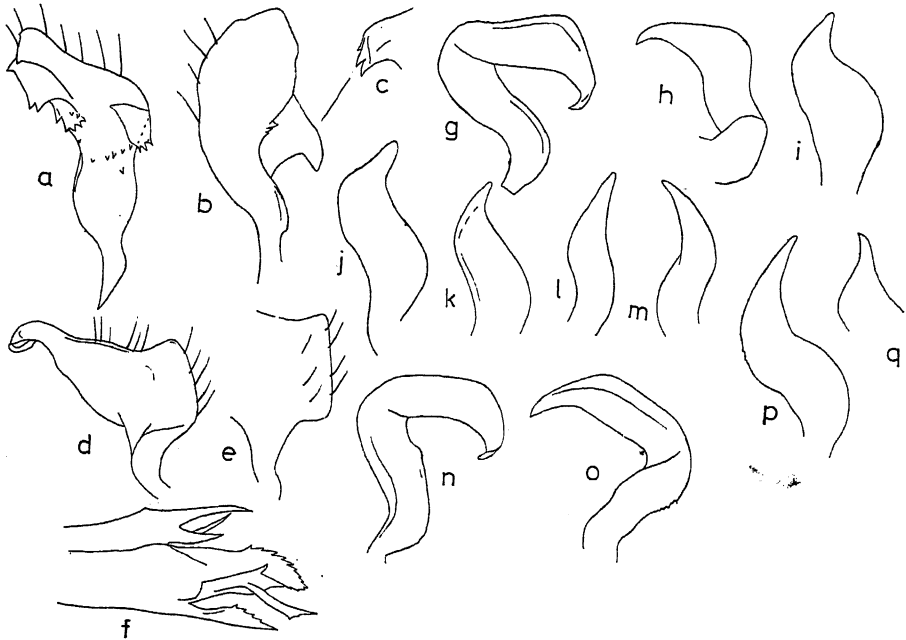


Fig. 16. *Orthotylus junipericola terminalis* n. sp.: a—c right stylus from different angles; d left stylus; e sensory lobe of same of another specimen; f appendages of vesica. — *Platycranus orientalis* n. sp.: g—h left stylus; i—m right stylus from different angles. — *P. metriorhynchus* Rt. (specimen from S France): n—o left stylus; p—q right stylus from different angles. — Orig.

Orthotylus nassatus (F.) — nr. Bolu, 1 spec., 11. VIII. 1963. On *Amygdalus*. New to Turkey. European.

O. diaphanus (KBM.) — nr. Ankara, some, 10. VIII. 1963; nr. Kizilcahamam, some, 11. VIII. 1963. On *Salix* trees. New record for Turkey. Euro-Siberian.

O. hodiernus Lv. — Gülek, many, 6. VIII. 1963. On *Juniperus phoenicea*. Previously known from Israel.

O. junipericola Lv. ssp. *terminalis* n. ssp.

♂ 2.4—2.7 mm, ♀ 2.1—2.3 mm. As the nominate form, but considerably smaller; pronotum and scutellum bright green; vertex 1.6 (♂) or 2 × (♀) as broad as eye; 2nd antennal joint 0.83—1.0 × as long as basal width of pronotum; right stylus (fig. 16 a—c) distinctly curved apically, bearing numerous small teeth; left stylus with a rounded and relatively less prominent sensory lobe (fig. 16 d—e) and vesical appendages (fig. 16 f) much shorter and broader.

Gülek, 1 ♂ type, many paratypes, 6. VIII. 1963. On *Juniperus phoenicea*.

The nominate form occurs in Tunisia and another subspecies (ssp. *contractulus* Lv.) in Libya.

O. minutus JAK. — 50 km S of Aksaray, many, 7. VIII. 1963. Swept from *Chenopodiaceae* in a salt steppe.

O. palustris Rt. — Greece, Lake Bourou, many, 16. VIII. 1963. New to Greece.

Heterotoma dalmatina E. WGN. — Akçakoca road, 1 spec., 12. VIII. 1963.

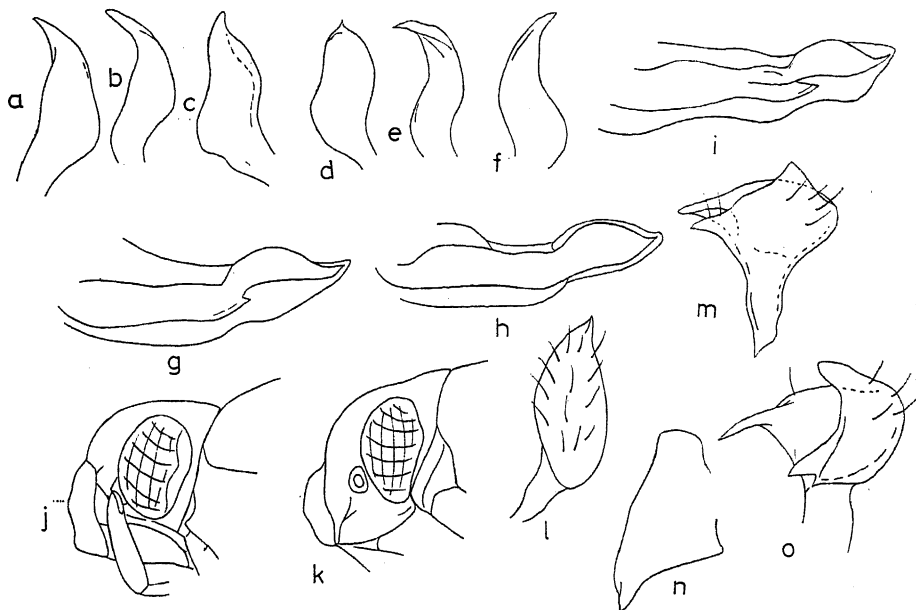


Fig. 17. *Platycranus remanei* E. WGN.: a—c right stylus from different angles; i spiculum of vesica. — *P. minutus* E. WGN.: d—f right stylus in different aspects; h spiculum of vesica. — *P. orientalis* n. sp.: g spiculum of vesica. — *Oncotylus pyrethri* Bock.: j head (♂), lateral view; k same of *O. nigdensis* Lv. — *Psallus galilaeus* n. sp.: l right stylus; m left stylus; n theca. — *P. punctulatus* Pr.: o left stylus. — Orig.

Malacocoris chlorizans (Pz.) — nr. Bolu, 2 spec., 11. VIII. 1963. On *Amygdalus*.

Brachynotocoris viticinus Sd. — Iskenderun, some, 6. VIII. 1963. On *Vitex agnus-castus*.

Platycranus orientalis n. sp.

♂ 4.0—4.2 mm, ♀ 3.3—4.0 mm. Green. Head and pronotal calli pale yellowish. 1st antennal joint greenish, 2nd joint basally greenish, otherwise yellowish, other joints slightly darker. Scutellum basally yellowish. Membrane light smoky, veins pale ochraceous or yellowish. Under surface and legs greenish yellow.

Elongate, resembling *P. metriorrhynchus* Rt. in general appearance. ♂ 3.9, ♀ 3.2—3.48 as long as broad. Upper surface with silvery hairs. Vertex 2.1—2.67 × (♂) or 3.1—3.8 × (♀) as broad as eye. Proportions between antennal joints 9 + 30 + 28 + ? (♂) or 9 + 30 + 25 + ? (♀); 1st joint 0.70—0.75 × (♂) or 0.64—0.67 × (♀) as long as synthlipsis; 2nd joint 3.3—3.8 × (♂) or 3.3 × (♀) as long as 1st. Pronotum 1.4 × (♂) or 1.09—1.17 × (♀) as broad basally as diatone. Elytra (♂) long, cuneus 2.2 × as long as broad basally or (♀) shorter, extending only somewhat beyond abdomen. Rostrum extending nearly to the hind coxae. Male genitalia: Styli in different aspects as in fig. 16 g—m. Spiculum of vesica as in fig. 17 g.

Hirfenli, 1 ♂ type, many paratypes, 7—8. VIII. 1963. On *Genista* sp. aff. *Tchihafschewi* on a dry hillside steppe.

Much as *P. metriorrhynchus* Rr., but considerably smaller (length of *metriorrhynchus* ♂ 4.5—5.4 mm, ♀ 3.6—4.0 mm), and with much shorter 1st antennal joint [in *metriorrhynchus* 0.9—0.92 × (♂) or 0.70—0.80 × (♀) as long as synthlipsis]. The right stylus is also remarkably shorter and broader. The male genitalia of *metriorrhynchus* in fig. 2 n—q.

P. remanei E. WGN. is remarkably shorter, only 3.2 × as long as broad, with cuneus 1.8 × as long as basal width (♂); the 1st antennal joint is yellow, 0.6 × (♂) or 0.5—0.55 × (♀) as long as synthlipsis and the 2nd joint 4.0 × (♂) or 3.7 × (♀) as long as the 1st. Male genitalia as in fig. 17 a—c, i. Known only from France.

P. minutus WGN. is also very similar, but somewhat less elongate, colouring less intensely green (dirty yellowish green at least in the specimens in my collection); the 2nd antennal joint is somewhat longer, about 3 × as long as synthlipsis (about 2.58 × in *orientalis*); the right stylus (fig. 17 d—f) has a shorter apex in the broad aspect and is more strongly curved in the narrow one and the spiculum of the vesica (fig. 17 h) is thicker. ♀ is somewhat less elongate with the same colour difference as the male, the 2nd antennal joint is slightly longer and the cuneus somewhat shorter. Known only from Sierra Nevada in Spain.

Hypseloecus visci (Pt.) — nr. Bolu, some, 11. VIII. 1963. On *Amygdalus*. New to Turkey. Mediterranean with an extension into Central Europe.

Oncotylus nigdensis Lv. and *O. pyrethri* (Bck.)

At the time when I described the former species (1961b, p. 210—211) the male of *O. pyrethri* was unknown to me. I have since then obtained for my collection a male bearing the label »Sarepta, BECKER» and so belonging to the type series and moreover seen a male in coll. Reuter. Since the species resemble each other strongly, a comparison is given below:

<i>pyrethri</i> ♂	<i>nigdensis</i> ♂
1. vertex 1.76—2.0 × as broad as eye.	1. vertex 1.56 × as broad as eye.
2. head 0.88 × as long as high in lateral aspect	2. head only 0.52 × as long as high in lateral aspect.
3. tylus strongly prominent, anterior margin nearly vertical in lateral aspect (fig. 17 j).	3. tylus less prominent, anterior margin obliquely curved ventrad in lateral aspect (fig. 17 k).
4. 2nd antennal joint as long as basal width of pronotum.	4. 2nd antennal joint 1.12—1.25 × as long as basal width of pronotum.
5. pronotum less transverse, 1.6 × as broad as head.	5. pronotum distinctly transverse, 1.7—1.8 × as broad as head.
6. femora and tibiae unicoloured.	6. femora with some dilute darker apical spots; tibial spines arising from small dark dots.

Psallopsis longicornis (JAK.) — 50 km S of Aksaray, many, 7. VIII. 1963. Common on different halophytes in a salt-marsh. New to Turkey. Caspian.

Solenoxyphus fuscovenosus (FB.) — 50 km S of Aksaray, many, 7. VIII. 1963. Together with the preceding. New to Turkey. Pontomediterranean.

Macrotylus atricapillus (Sc.) — Yauladagi-Belen, some, 5. VIII. 1963. New to Turkey. Holo-mediterranean.

Camptotylus reuteri JAK. — Greece, Lake Bourou, some, 16. VIII. 1963.

Orthonotus rossicus (Rt.) — nr. Bolu, 2 spec., 11. VIII. 1963. On *Amygdalus*.

Psallus ancorifer (FB.) probably ssp. *vesicatus* E. WGN. — nr. Bolu, 1 ♀, 11. VIII. 1963. On *Amygdalus*.

P. punctulatus Pt. — Kizilcahamam, some 28. V. 1960, ECKERLEIN.

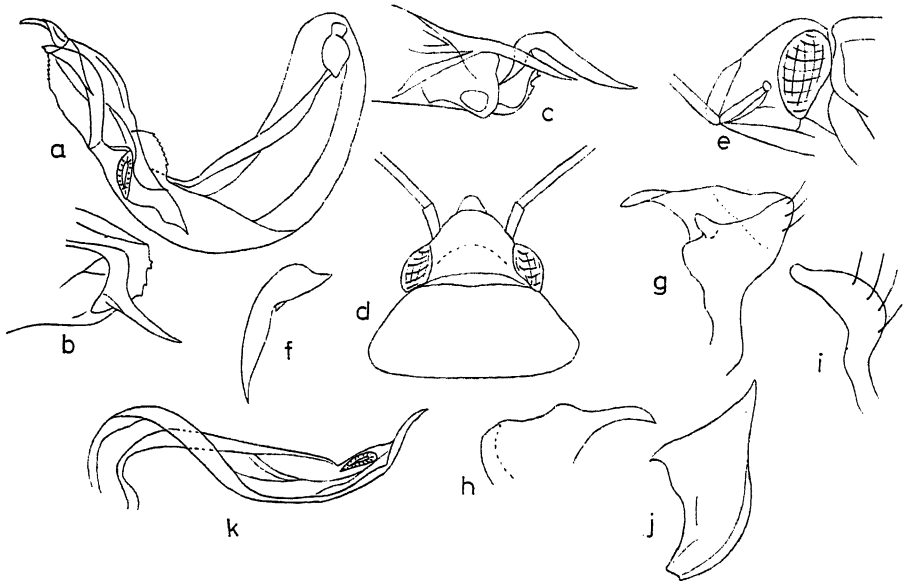


Fig. 18. *Psallus galilaeus* n. sp.: a vesica; b apex of same. — *P. punctulatus* Pt.: c apex of vesica. — *Juniperia rubescens* n. gen. et sp.: d head and pronotum; e head, lateral view; f claw; g left stylus; h hypophysis of same in a different aspect; i right stylus; j theca; k vesica. — Orig.

P. galilaeus n. sp.

P. punctulatus LINNAVUORI 1961a, p. 20 nec Pt.

3.2—3.3 mm. Whitish grey. Head with faint fulvous markings. Antennae greyish ochraceous. Pronotum densely (δ) or sparsely (φ) dotted with reddish in basal two-thirds. Scutellum (δ) red with a median line and basal angles whitish grey or (φ) whitish with a few red dots. Elytra (δ) with corium and clavus red, cuneus white, membrane hyaline with some fuscous clouds and veins whitish or (φ) clavus and corium whitish with numerous red dots, otherwise as in δ . Undersurface with some fulvous or reddish markings. Femora dotted with fuscous; tibiae with black spines arising from round dots of the same colour.

δ elongate, $2.75 \times$ as long as broad, φ ovate, $2.1 \times$ as long as broad. Vertex (δ) $2 \times$ or (φ) $2.2 \times$ as broad as eye. Proportions between antennal joints $5 + 20 + 13 + 8$ (δ) or $5 + 24 + ? + ?$ (φ); 2nd joint $0.62 \times$ (δ) or $0.72 \times$ (φ) as long as basal width of pronotum. Hair covering of upper surface dense, yellowish; also darker hairs present. Male genitalia: Right stylus (fig. 17 l) narrowly ovate. Left stylus (fig. 17 m): sensory lobe with a relatively short and blunt dorsal projection. Theca (fig. 17 n) short and thick. Vesica (fig. 18 a—b) very thick, bearing a single apical spine.

Israel, Tivon, 1 δ type, 2. I. 1957, STERNLICHT; Shimron 1 φ paratype, 11. IV. 1957, STERNLICHT. On *Quercus ithaburensis*.

Much as *P. punctulatus*, but cuneus white. In *punctulatus* the left stylus also has a strongly prominent dorsal projection in the sensory lobe (fig. 17 o) and the vesica is much longer and thinner, bearing two apical spines (fig. 18 c). *P. jeitensis* E. WGN. (known to me in the female sex

only) is smaller, elytra red (also cuneus), hair covering of upper surface denser and longer with the darker hairs longer and more numerous, and pronotum much more transverse.

Juniperia n. gen.

Very small species, resembling *Psallus* in general habitus and in colouring. General colouring pink. Upper surface with long yellowish hair covering. Head small but distinctly produced apicad with tylus clearly visible in lateral aspect; vertex distinctly convex. Facets of eyes distinctly globose. Antennae arising from near the eyes, gracile, completely pale, with light hair covering. Rostrum extending to hind coxae. Pronotum strongly transverse, lateral and basal margins straight, disk flat. Femora reddish, knees and tibiae uniformly pale with light spines. Hind tarsi long, proportions between the joints 5:8:10, i.e. 3rd joint distinctly longer than 2nd; claws long, only slightly curved, arolia very small, scarcely visible (fig. 18f). Male genitalia: Vesica simple, S-shaped curved, ending in one curved apical spine; secondary gonopore near the apex.

Type: *J. rubescens* Lv.

Of the *Psallus-Plagiognathus* group. Differing from *Psallus* in the simple hair covering of the upper surface and in the structure of the claws, which are distinctly curved and provided with well developed arolia in *Psallus*. Moreover the *Psallus* species have, at least usually, the femora dark spotted apically, the tibial spines dark and arising from dark dots and the vesica dissimilarly shaped (U-shaped) and often bearing a dentate apical process. In the genus *Plagiognathus* the new genus most nearly resembles the subgenus *Parapsallus* E. WGN. in the long 3rd joint of the hind tarsi and in the rather straight claws with small arolia as well as in the globose facets of the eyes. *Juniperia* differs from *Plagiognathus*, however, in the red colouring, in the unspotted legs (in *Plagiognathus* the femora are apically dark spotted or in some species uniformly blackish and the tibiae are always provided with black setae arising from distinct blackish dots that are clearly developed even in the pale-coloured species; usually the knees are also blackish. Moreover, the 1st antennal joint and the base of the 2nd are usually provided with black markings). The vesica in *Plagiognathus* ends in two apical spines and the secondary gonopore is located relatively far from the apex.

J. rubescens n. sp.

1.9—2.1 mm. Pale red. Head, pronotum and scutellum tinged with yellowish. Antennae uniformly yellowish. Elytra with costal margin tinged with whitish; membrane lighter or darker smoky, veins reddish. Under surface and femora bright red, other parts of legs pale yellowish.

Very small. Head small, about $0.8 \times$ as broad as basal width of pronotum (fig. 18 d—e). Vertex $1.25 \times$ (σ) or $2 \times$ (φ) as broad as eye. Proportions between the antennal joints about $3.25 + 15.5 + 9 + ?$; antennae thicker in male; 2nd joint about $0.78 \times$ as long as basal width of pronotum. Elytra somewhat longer than abdomen. Male genitalia: Right stylus (fig. 18 i)

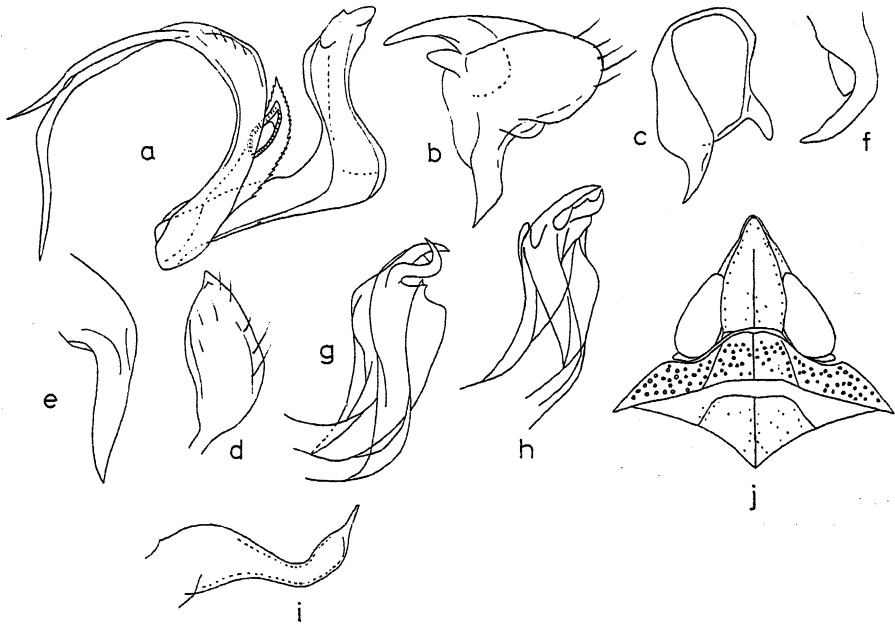


Fig. 19. *Plagiognathus amygdali* n. sp.: a vesica; b left stylus from side; c same from above; d right stylus; e theca; f claw. — *Tuponia statices* JAK.: g apex of vesica. — *T. statices anatolica* n. ssp.: h same. — *Chlorita brevispina* n. sp.: i appendage of anal tube. — *Sphenocratus curticeps* n. sp.: j head, pronotum and scutellum. — Orig.

shallowly C-shaped curved. Left stylus (fig. 18 g—h): sensory lobe with a short process, hypophysis claw-like. Theca (fig. 18 j) thick. Vesica (fig. 18 k) thin, S-shaped curved, ending in one apical spine.

Pozanti, 1 ♂ type, some paratypes, 7. VIII. 1963; Yauladagi—Belen, 1 paratype, 5. VIII. 1963. On *Juniperus oxycedrus*.

Plagiognathus bipunctatus Rt. — Iskenderun, some, 6. VIII. 1963; nr. Gülek, some, 6. VIII. 1963.

P. (Chlorillus) amygdali n. sp.

3.8—3.75 mm. Pale whitish grey with a slight greenish tinge. Relatively dull. Antennae yellowish, 1st joint with only a faint subapical transverse fuscous mark. Elytra with smoky fuscous pattern as in *P. pictus* Fv. Femora with black dots, especially apically. Tibiae with black spots each bearing a black spine; knees with a small blackish spot; tarsi slightly infusate.

Elongate. Upper surface with light and black hairs. Head small, about $0.7 \times$ as broad as basal width of pronotum. Vertex $1.17 \times$ (♂) or $1.6 \times$ (♀) as broad as eye. Facets of eyes convex. 2nd antennal joint slightly longer than basal width of pronotum. Pronotum strongly transverse, about $2.28 \times$ as broad as long. Legs gracile. Claws as in fig. 19 f. Male genitalia: Right stylus as in fig. 19 d. Left stylus (fig. 19 b—c): sensory lobe with a blunt process, hypophysis thin and slightly curved laterad. Theca as in fig. 19 e. Vesica (fig. 19 a) S-shaped curved, ending in two long falcate appendages; secondary gonopore in a membranous, serrate band, relatively far from apex.

nr. Bolu, 1 ♂ type, many paratypes, 11. VIII. 1963. On *Amygdalus*.

Differs from *P. pictus* in the unmarked head, the pale antennae, the small head, the strongly transverse pronotum, etc.

Atomoscelis onustus (FB.) — 50 km S of Aksaray, 1 spec., 7. VIII. 1963. New record for Turkey. Holomediterranean.

Campylomma annulicornis (SGN.) — nr. Ankara, some, 10. VIII. 1963; nr. Kizilcahamam, some, 11. VIII. 1963. On *Salix* trees along river banks.

C. viticis LDB. — Iskenderun, some, 6. VIII. 1963. On *Vitex agnus-castus*.

Auchenocrepis reuteri JAK. — Pozanti, 2 spec., 7. VIII. 1963.

Tuponia eckerleini E. WGN. — Pozanti, some, 7. VIII. 1963.

T. seidenstueckeri E. WGN. — Pozanti, some, 7. VIII. 1963.

T. punctipes RT. — 50 km S of Aksaray, 1 spec., 7. VIII. 1963. On *Statice* in a salt steppe. New to Turkey. Probably Caspian. Previously known from Iran and Turkestan.

T. statice JAK. ssp. *anatolica* n. ssp.

As the nominate form, but vesica (fig. 19 h) apically considerably narrower, maximum breadth 0.075 mm (0.105 mm in the nominate form (fig. 19 g)).

50 km S of Aksaray, 1 ♀ type, many paratypes, 7. VIII. 1963. On *Statice* together with the preceding species.

Isometopus diversiceps Lv. — nr. Bolu, 1 spec., 11. VIII. 1963. On *Amygdalus*.

Gerridae

Gerris argentatus SCHML. — nr. Adana, some, 6. VIII. 1963.

Mesoveliadae

Mesovelia vittigera Hv. — nr. Adana, some, 6. VIII. 1963.

Pelagoniidae

Ochterus marginatus LT. — nr. Adana, 1 spec., 6. VIII. 1963.

Pleidae

Plea atomaria (PAL.) — nr. Adana, 1 spec., 6. VIII. 1963.

Notonectidae

Anisops sardea H. S. — nr. Adana, some, 6. VIII. 1963.

Notonecta marmorea F. — nr. Ankara, 2 spec., 8—10. VIII. 1963; nr. Kizilcahamam, some, 11. VIII. 1963.

Corixidae

Corixa punctata ILL. — nr. Ankara, 1 spec., 10. VIII. 1963; nr. Kizilcahamam, 1 spec., 11. VIII. 1963.

Sigara mayri (FB.) — nr. Adana, 2 spec., 6. VIII. 1963.

S. samani HOB. — nr. Adana, some, 6. VIII. 1963.

S. lateralis (LCH.) — nr. Adana, many, 6. VIII. 1963; nr. Ankara, many, 8—10. VIII. 1963.

S. nigrolineata (FB.) — nr. Ankara, many, 8—10. VIII. 1963.

Micronecta pusilla Hv. — nr. Adana, many, 6. VIII. 1963.

Cicadidae

Lyristes plebeius (SCOF.) — nr. Gülek, some, 6. VIII. 1963.

Cicada orni (L.) — nr. Gülek, 2 spec., 6. VIII. 1963.

Pagiphora annulata (BRLE.) — Yauladagi, 1 spec., 5. VIII. 1963.

Cercopidae

Lepyronia coleoptrata (L.) — Greece, nr. Amfipolis, 1 spec., and Lake Bourou, 1 spec., 16. VIII. 1963.

Aphrophora alni (FN.) — Akçakoca road, 1 spec., 12. VIII. 1963.

Philaenus spumarius (L.) — Akçakoca road, 1 spec., 12. VIII. 1963; Izmit, 2 spec., 13. VIII. 1963.

P. impictifrons Hv. — Yauladagi, 2 spec., 5. VIII. 1963. Previously known from Palestine and Syria.

Neophilaenus campestris (FN.) — Pozanti, 1 spec., 7. VIII. 1963; Yauladagi—Belen, 1 spec., 5. VIII. 1963.

Cicadellidae

Balclutha rosea (Sc.) — Iskenderun, 1 spec., 6. VIII. 1963.

Euscelis alsius Rib. — nr. Ankara, 1 spec., 10. VIII. 1963; nr. Gülek, 1 spec., 6. VIII. 1963; Ulukışla, 1 spec., 7. VIII. 1963. New to Turkey. Holomediterranean.

Euscelidius mundus (HPT.) — Iskenderun, 1 spec., 6. VIII. 1963. New to Turkey. Probably Iranian.

Hardya anatolica ZACHV. — nr. Gerece, 1 spec., 11. VIII. 1963.

Stirellus instabilis (Rib.) — Yauladagi—Belen, 1 spec., 5. VIII. 1963. New to Turkey. Pontomediterranean.

S. acuticeps (Rib.) — Iskenderun, 1 spec., 6. VIII. 1963. Not previously recorded from Turkey. Syrio—Anatolian.

Neoliturus haematoceps (M. R.) ssp. *opacipennis* (LETH.) — 50 km S of Aksaray, some, 7. VIII. 1963; Hirfenli, 1 spec., 7—8. VIII. 1963.

N. fenestratus (H. S.) — 50 km S of Aksaray, 1 spec., 7. VIII. 1963; nr. Gülek, 1 spec., 6. VIII. 1963.

Opsius cypriacus LDB. — Pozanti, many, 7. VIII. 1963. Previously known from Cyprus.

Phlepsius intricatus (H. S.) — Akçakoca road, 1 spec., 12. VIII. 1963.

Selinocephalus griseus (F.) — nr. Izmit, 1 spec., 13. VIII. 1963.

S. pallidus KBM. — Gülek, 1 spec., 6. VIII. 1963; nr. Kizilcahamam, 1 spec., 11. VIII. 1963.

Platymetopius undatus (DEG.) — nr. Izmit, 1 spec., 13. VIII. 1963.

P. major (KBM.) — nr. Izmit, 1 spec., 13. VIII. 1963. New to Turkey. European.

Doratura homophyla (FL.) — Iskenderun, 3 spec., 6. VIII. 1963.

Aconura oculata (LDB.) — 50 km S of Aksaray, some, 7. VIII. 1963. From halophytes in a salt steppe. Previously known from Cyprus and Greece.

Aconurella proluxa (LETH.) — 50 km S of Aksaray, 1 spec., 7. VIII. 1963.

Psammotettix majusculus Lv. — Pozanti, 2 spec., 7. VIII. 1963. New for Turkey. Syrio—Anatolian.

P. cerinus (LDB.) — Iskenderun, 1 spec., 6. VIII. 1963.

Grypotes staurus Iv. — Yauladagi—Belen, 3 spec., 5. VIII. 1963.

Goniagnatus bolivari (MEL.) — Pozanti, 1 spec., 7. VIII. 1963.

Fieberiella lindbergi W.WGN. — Pozanti, 2 spec., 7. VIII. 1963. Previously known from Cyprus.

especially along lateral margins. Pronotum coarsely and densely pitted. Scutellum yellowish ochraceous; disk between keels with minute dark spots. Elytra coriaceous, everywhere with numerous small, round black punctures. Dorsal surface of abdomen (excluding genital segment) densely spotted with dark, each segment in addition with a transverse row of coarse pits laterally. Under surface ochraceous, partly with a greenish tinge. Legs dirty greenish, with numerous dark spots.

Ovate, 1.9 × as long as broad. Crown as long as pronotum and scutellum together, 1.54 × as long as basal width, elongately triangular, with lateral margins somewhat curved; disk slightly concave with a distinct median ridge (evanescent apically); parts of genae and of frons visible in dorsal view. Frons slightly concave in profile; clypeus convex and provided with a sharp median carina. Frons with 3 parallel and sharp keels; lateral longitudinal keel below eye distinct, extending to apex of crown. Pronotum and scutellum with distinct keels. Under surface of pronotum with a shining knob in the black transverse band on either side. Rostrum extending to pygofer. Hind tibiae with 5—7 spines. Anal tube broader than long.

Hirfenli, 1 ♀ type, 7—8. VIII. 1963. Swept from grasses in a dry hillside steppe.

Resembling *S. cypriacus* LDB., but crown much shorter.

Cixiidae

Oliarus melanochaetus FB. — nr. Ankara, some, 8—10. VIII. 1963; nr. Izmit, some, 13. VIII. 1963; Silivri, some, 15. VIII. 1963. On *Salix* and *Quercus*.

O. bourouensis n. sp.

As *O. angustiformis* LV., but much smaller, length 4.75 mm. Male genitalia: Pygofer and anal tube as in *O. angustiformis*, but left side lobe without spine. Stylus as in fig. 20 b. Penis (fig. 20 a) with 2 basal and 4 apical spines.

Greece: Lake Bourou, 1 ♂ type and 1 ♀ paratype, 16. VIII. 1963. Swept from halophytic vegetation.

O. major (KBM.) — nr. Ankara, 1 spec., 8—10. VIII. 1963; nr. Gerede, some, 11. VIII. 1963; Ulukişla, 1 spec., 7. VIII. 1963.

O. barajus DLAB. — Pozanti, 1 spec., 7. VIII. 1963.

O. quinquecostatus (DF.) — Akçakoca road, 3 spec., 12. VIII. 1963.

Hyalesthes luteipes FB. — nr. Ankara, some, 8—10. VIII. 1963; Kizilcahamam, some, 11. VIII. 1963; Silivri, some, 15. VIII. 1963.

Delphacidae

Calligypona propinqua (FB.) — Iskenderun, some, 6. VIII. 1963.

Conomelus limbatus (F.) — Akçakoca road, 1 spec., 12. VIII. 1963.

Achilidae

Epiptera marginicollis (SPIN.) — Pozanti, 2 spec., 7. VIII. 1963. From dry *Pinus* branches.

Akotropis quercicola LV. — Yauladagi, 1 spec., 5. VIII. 1963. On *Quercus calliprinos*.

Meenoplidae

Meenoplus albosignatus FB. — nr. Ankara, some, 8—10. VIII. 1963; nr. Gerede, some, 11. VIII. 1963. On *Salix*.

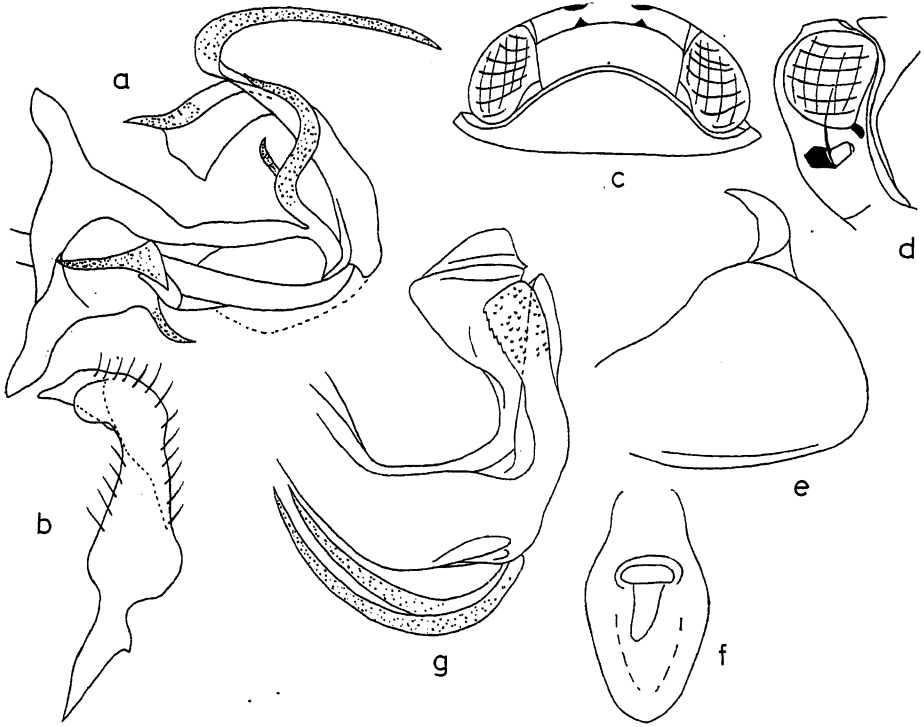


Fig. 20. *Oliarus bourouensis* n. sp.: a penis; b stylus. — *Hysteropterum oculatum* n. sp.: c head and pronotum; d head, lateral view; e stylus; f anal tube; g penis, lateral aspect. — Orig.

Issidae

Mycterodus intricatus Stål? — Iskenderun, 1 ♀, 6. VIII. 1963; Yauladagi, 1 ♀, 5. VIII. 1963.

Conosimus coelatus M. R. — Greece, nr. Amfipolis, 1 spec., 16. VIII. 1963.

Hysteropterum grylloides (F.) — Greece, nr. Amfipolis, 1 spec., 16. VIII. 1963.

H. bilobum Fb. — Pozanti, some, 7. VIII. 1963; Yauladagi—Belen, some, 5. VIII. 1963; Greece, nr. Amfipolis 1 spec., 16. VIII. 1963.

H. oculatum n. sp.

Fig. 20 c—d. 4.5 mm. Ochraceous. Frons with 2 large roundish shining black spots at level of eyes and with 2 small triangular black spots in upper margin; sides with an irregular row of small dark round spots; genae with a black squarish spot at antennal pits. Elytra greyish brown; longitudinal veins dark brown, transverse veins concolorous.

Relatively robust. Crown 3.5 × as broad as long, anterior and basal margins sharp. Frons remarkably convexly prominent in upper part, broadening downwards, 1.1 × as long as maximum width, lateral keels visible, median keel obsolete, upper margin straight. Elytra with distinct longitudinal veins, transverse veins faint; costal margin narrow. Hind tibiae with 2 spines. Male genitalia: Stylus (fig. 20 e) with a short, curved process. Anal tube (fig. 20 f) flat.



Fig. 21. *Hysteropterum pseudarmatum* n. sp.: a penis, lateral aspect; b appendage of same. — *H. despectum* n. sp.: c penis, lateral aspect; d apex of same, ventral aspect; e anal tube; f stylus. — *H. campestre bidens* n. ssp.: g penis, lateral aspect. — Orig.

Penis (fig. 20 g) stout, with a pair of falcate appendages starting from the middle in the ventral surface and directed basad; apex with 2 dentate lobes on the ventral surface.

Italy, Toscana, Isola Elda, 1 ♂ type (in coll. A. Servadei, Padova), 9. VI. 1957, A. SERVADEI leg.

Easily recognized by the form and patterns of the head. Somewhat resembling *Semissus acuminatus* (LETH.), but crown not pentagonal and frons less produced.

H. pseudarmatum n. sp.

As *H. armatissimum* Lv., but crown somewhat longer. Penis robust (fig. 20 a) and provided with 2 serrate appendages (fig. 20 b). Other genitalia as in *armatissimum*.

Italy, Lucania, Nova Siri, 1 ♂ type (in my collection) and 1 paratype, 26. VII. 1957, SERVADEI; Lugonegro, 1 paratype, 30. VII. 1957, SERVADEI; Rivello, 1 paratype, 30. VII. 1957, SERVADEI.

Previously confused with *H. armatissimum*, which should include only the specimens from Puglie (LINNAVUORI 1962, p. 19).

H. despectum n. sp.

3—3.5 mm. Brownish yellow. Frons dotted with dark brown laterally; median area between keels without irroration, at most some dark shadows present or rarely darkened with a median transverse whitish spot. Clypeus with dark lateral stripes. Genaë with some fuscous spots. Crown with a V-shaped darkened figure enclosing a median whitish triangular area. Pronotum and scutellum with 2 ± distinct dark median bands. Elytra with ± spread dark fuscous irroration and spotting. In pale specimens only commissural margin of clavus with a fuscous mark, in dark specimens an irregular whitish transverse band present, starting from the middle of the clavus. Femora with 2 dark rings.

Small and relatively narrow. Crown bluntly roundedly angularly produced, about $0.7 \times$ as long as broad. Frons flattish, unusually long and narrow, $1.6 \times$ as long as broad; lateral margins nearly parallel, upper margin straight; median keel sharp, lateral keels obsolete joining each other in upper margin. Elytra with a relatively dense vein net. Costal margin narrow. Hind femora with 2 spines. Male genitalia: Stylus (fig. 21 f) nearly semicircular, with a short apical process. Anal tube (fig. 21 e) flat. Penis (fig. 21 c—d) short and stout, bearing 4 claw-like apical processes and 2 serrate lobes.

50 km S of Aksaray, 1 ♂ type and many paratypes, 7. VIII. 1963; Hirfenli, some paratypes, 7—8. VIII. 1963. Very common on different halophytes in a salt steppe. Also found in a dry hillside steppe at Hirfenli.

Mostly resembling *H. armatissimum* Lv. in general appearance. Easily recognized in the narrow frons and in the male genitalia.

H. maculipes MEL. — Yauladagi—Belen, 1 spec., 5. VIII. 1963.

H. suturale MEL. — Iskenderun, 1 spec., 6. VIII. 1963; Yauladagi—Belen, 1 spec., 5. VIII. 1963.

H. campestre LDB. ssp. *bidens* n. ssp.

3 mm. As the nominate form but entirely pale ochraceous. Penis as in fig. 21 g, appendages of the aedeagal sheath with 2 large and several small teeth.

Ulukišla, 1 ♂ type, 7. VIII. 1963; Pozanti, 1 paratype, 7. VIII. 1963.

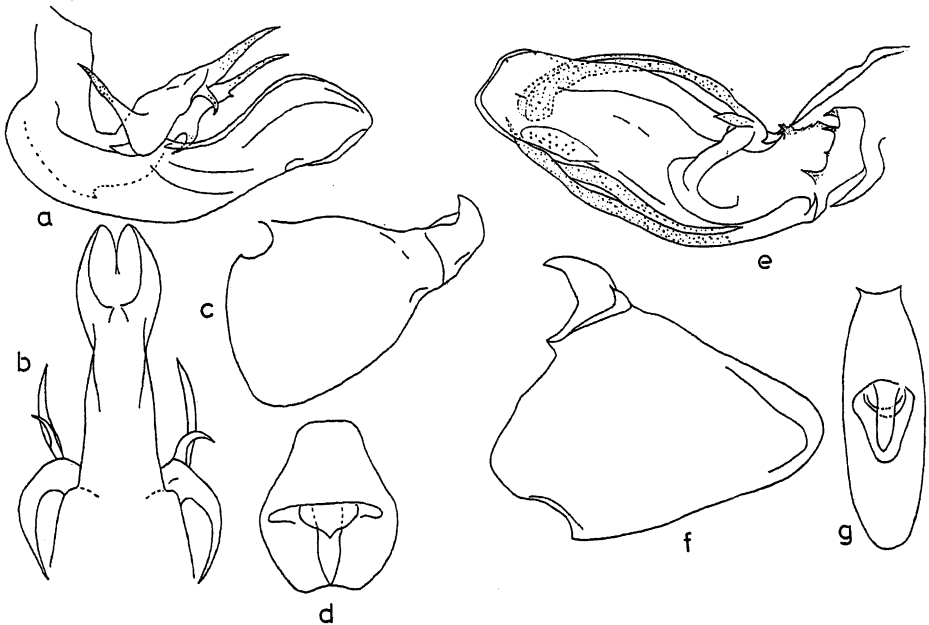


Fig. 22. *Hysteropterum trifasciatum* n. sp.: a penis, lateral aspect; b same, ventral aspect; c stylus; d anal tube. — *Megissus acutus* n. gen. et sp.: e penis, lateral aspect; f stylus; g anal tube. — Orig.

H. trifasciatum n. sp.

3.5 mm. Ochraceous. Face densely irrorate with dark fuscous. Genae with 2 dark maculae and faint irroration. Crown with a semicircular dark figure on either side of coronal suture. Pronotum and scutellum laterally with dark markings. Elytra whitish, with 2 broad, obliquely transverse dark fuscous bands, apical margin infuscate; 3 whitish transverse bands are so formed. Femora with dark markings.

Small but relatively robust. Crown straight in anterior margin, $2.7 \times$ as broad as long. Frons flattish, $1.1 \times$ as long as broad; lateral margins shallowly curved, median keel sharp, lateral keels obsolete. Elytra with a relatively dense vein net; costal margin narrow. Hind femora with 2 spines. Male genitalia: Stylus (fig. 22 c) with a short, thick apical process. Anal tube (fig. 22 d) short and broad, apical margin insinuated. Penis (fig. 22 a—b) with stem long and provided with 2 trifalcate basal appendages.

Yauladagi—Belen, 1 ♂, type, 5. VIII. 1963.

Most nearly resembling *H. campestre* LDB., but easily recognized by the colourmarkings and the genitalia.

Megissus n. gen.

Fig. 23 c. Large, elongate species, body strongly tapering caudad. Crown of uniform length; anterior margin rounded. Frons somewhat convexly prominent

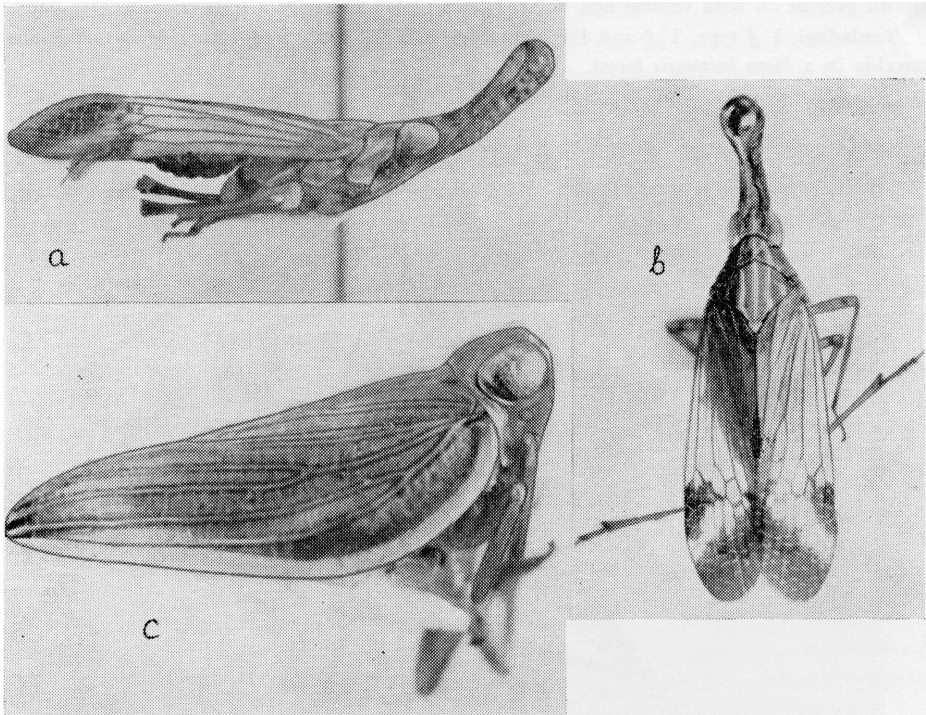


Fig. 23. *Callodictya krueperi* (Fv.): a lateral, b dorsal view. — *Megissus acutus* n. sp. et gen.: c lateral view. — Orig.

in upper part, flattish in lower, nearly parallel-sided, upper margin straight; only faint traces of the 3 keels present. Clypeus with a faint median keel. Pronotum and scutellum without keels, basal margin of the former straight. Elytra much longer than abdomen, strongly acuminate apically; longitudinal veins strong, the numerous transverse veins rather obsolete, costal margin narrow. Flying wings absent. Hind tibiae with 2 spines.

Type: *M. acutus* Lv.

Easily recognized by the large size, the acuminate elytra and the structure of the head.

M. acutus n. sp.

7 mm. Yellow-brown. Frons with a marginal row of round black spots laterally and in upper margin; median area faintly infuscate, in upper part whitish ochraceous with a fuscous transverse band. Elytra greyish brown, costal margin whitish; longitudinal veins bordered with fuscous, apex with 3 blackish stripes.

Crown $3 \times$ as broad as long. Frons $1.1 \times$ as long as broad. Male genitalia: Stylus (fig. 22 f) narrowly parabolic, apical process thick. Anal tube (fig. 22 g) flat, long and narrow. Penis (fig. 22 e) short and robust; a pair of long falcate appendages starting from base and directed apicad present on both ventral and dorsal surface; base also with a transverse dentate band.

Yauladagi, 1 ♂ type, 1 ♂ and 1 ♀ paratypes, 5. VIII. 1963. Swept from *Myrtus*—*Poterium* macchia in a *Pinus halepensis* forest.

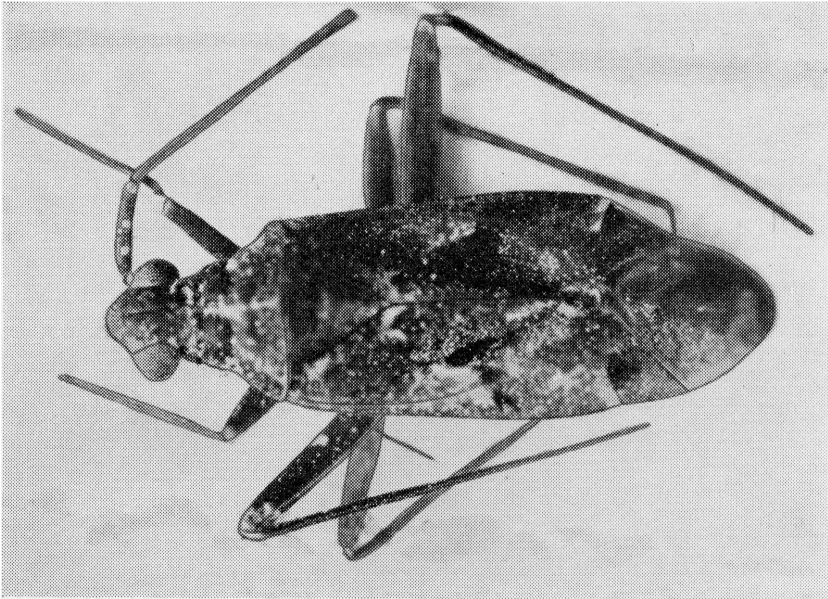


Fig. 24. *Acrorrhinium conspersum* НН. — Orig.

Tettigometridae

Tettigometra virescens (Pz.) — Gülek, 2 spec., 6. VIII. 1963; Yauladagi—Belen, 2 spec., 5. VIII. 1963. On *Juniperus phoenicea*.

T. obliqua Pz. — nr. Ankara, 1 spec., 8—10. VIII. 1963; nr. Bolu, 1 spec., 11. VIII. 1963; Silivri, 1 spec., 15. VIII. 1963.

Flatidae

Phantia subquadrata (H. S.) — Yauladagi—Belen, 1 spec., 5. VIII. 1963.

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SELOSTUS

TIETOJA ETELÄISTEN JA ITÄISTEN VÄLIMERENMAIDEN NIVELKÄRSÄISISTÄ

Tutkimuksen ensimmäisessä osassa on luetteloitu kirjoittajan elokuun lopulla ja syyskuun alussa 1962 Libyassa tekemät nivelkärsäislöydöt. Libyan hyönteiseläimistö on erittäin heikosti tunnettu, mikä ilmenee esimerkiksi siitä, että vain muutaman keräilypäivän aikana onnistuttiin löytämään lukuisia maalle uusia nivelkärsäislajeja, joista 1 suku, 11 lajia 2 alalajia tieteelle uusia.

Toinen osa sisältää tekijän elokuussa 1962 Tunisiassa tekemät nivelkärsäislöydöt sekä ANSELMO PARDO ALCAIDEN, Melilla, Espanjan Marokosta keräämät ja tekijän kokoelmiin lähettämät lajit. Tässä luvussa on selitetty 1 suku, 15 lajia ja 4 alalajia tieteelle uusina sekä mainittu lukuisia Tunisialle ja Marokolle uusia lajeja.

Kolmannessa osassa on luetteloitu kirjoittajan elokuussa 1963 Turkissa tekemät nivelkärsäislöydöt. Vaikka keräily suoritettiin loppukesänaspektin aikana, jolloin hyönteisrunsas alueella on erittäin vähäinen, löydettiin kuitenkin verrattain monta lajia, joukossa useita Turkista aikaisemmin ilmoittamattomia. Näistä ilmeisesti suuri osa on ksero- tai termofiilisiä, jotka aikuistuvat vasta loppukesän erikoisissa olosuhteissa. Tutkimuksessa on selitetty uusina 2 sukua, 12 lajia ja 3 alalajia Turkista, 1 laji Israelista ja 2 lajia Italiasta.