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Rauno Linnavuori:

Studies on Palearctic
and African Heteroptera

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STUDIES ON PALEARTIC AND AFRICAN HETEROPTERA

R. Linnavuori
21220 Somersoja

LINNAVUORI, R. 1972. Studies on Paleartic and African Heteroptera. — Acta Ent. Fenn. 30, p. 1—36.

The article consists of taxonomic studies on Paleartic and African Heteroptera. The following new taxa are described: Plataspididae: *Coptosoma nebulosum abraxas* ssp.n., *C. aglaia* sp.n., *C. maridicum* sp.n., *C. maridicum augeias* ssp.n. and *C. athamas* sp.n. Pentatomidae: *Gonopsis gillonae* sp.n., *Scotinophara depressa* sp.n. and *Bathycoelia cythereia* sp.n. Coreidae: *Anoplocnemis dodona* sp.n., *A. eumelos* sp.n. and *Homoeocerus cleio* sp.n. Lygaeidae: *Spilostethus rivularis meleagros* ssp.n., *S. rivularis epimetheus* ssp.n., *Masoas koronis* sp.n. and *M. subtilis* sp.n. Tingidae: *Agramma elegantulum* sp.n. Miridae: *Deraeocoris nigriventris dryas* ssp.n., *Pleurochiloporus pyrrha* sp.n., *Megacoelum andromakhe* sp.n., *Calocoris demeter* sp.n., *Phytocoris dorikha* sp.n., *P. gandalicus* sp.n., *P. mariut* sp.n., *P. digla* sp.n., *P. laios* sp.n., *Stenotus proitos* sp.n., *S. chryseis* sp.n., *S. klepsydra* sp.n., *Charagochilus ibykos* sp.n., *Collaria danae* sp.n. and *Leaina belua* gen. et sp. n.

INTRODUCTION

The present article is primarily based on a Heteroptera material from the Ivory Coast, kindly sent for identification by Mrs. Dominique Gillon, of Abidjan. Although the fauna of this country has been elucidated by various authors in several publications the relatively numerous new species in her material suffice to show that the Heteroptera fauna in this part of Africa is much richer than reports have so far suggested. Besides the West African material the taxonomy of certain Heteropterous genera from NE Africa and the arid areas of the Palearctic region is concerned.

PLATASPIDIDAE

1. The nebulosum group of the genus *Coptosoma* Lp.

Key to the species

1 (2) Genital segment (♂) in caudal aspect ovate, distinctly higher than broad .. *nubilum* group
2 (1) Genital segment (♂) round in caudal aspect 3
3 (4) Stylus (Fig. 1 a) apically bidentate ..... *transversum* (Ww.)
4 (2) Stylus (Fig. 1 e) apically falcate *(nebulosum* group) 5
5 (6) Pale yellow, sparsely and regularly punctate with brown; punctures confluent only in the basal scutellar callosity. Paired conjunctival appendages of penis (Fig. 1 b) broad. Length 4.3 mm .... *variolosum* Mtd. (West Africa)
6 (5) Ground colouring of upper surface yellow-brown or whitish ochraceous; dark puncturing much denser, in many places confluent, forming smaller and larger dark patches and vermiculate lines. Conjunctival appendages (Fig. 1 c) sharp-tipped 7
7 (10) Larger forms, length at least 4.5 mm 8
8 (9) Larger, length 4.8—5.1 mm. Abdomen laterally broadly pale; also in the blackish median area of venter segmental margins often ± tinged with yellow-brown .... *nebulosum nebulosum* Mtd. (East Africa)
9 (8) Smaller, lengt 4.5—4.75 mm. Abdomen laterally narrowly pale, otherwise uniformly black ... *nebulosum confusum* Mtd. (East Africa)
10 (7) Smaller forms, length at most 4 mm 11
11 (12) Length ♂ 3.5—3.6 mm., ♀ 4 mm. Colour pattern rather contrasted, whitish yellow — black and dark brown. Base of scutellum rather sharply delimited, pale and impunctate. Dark puncturing in the rest of scutellum and basal part of pronotum rather uniformly spread .... *nebulosum abraxas* ssp.n. (Ivory Coast)
12 (11) Length ♀ 3.5—3.8 mm. Colour pattern as in *nebulosum nebulosum,* less contrasted, yellow-brown — black and dark brown. Basal scutellar callosity less distinct, provided with scattered punctures. Dark puncturing on the rest of scutellum and basal lobe of pronotum in places forming larger dark patches ..... *laeviusculum* Mtd. (Madagascar, Zanzibar)

C. nebulosum Mtd. ssp. *abraxas* ssp.n.

Length ♂ 3.5—3.6 mm., ♀ 4 mm. Colour pattern rather contrasted. Upper surface whitish yellow or yellow-ochraceous. Tylus brown, base of vertex black, with a triangular pale median spot. Anterior lobe of pronotum with a large, transverse, roughly triangular, black spot on either side; lateral lobes with a longitudinal band of confluent dark punctures; basal lobe and scutellum with evenly spread, confluent, dark puncturing, forming numerous vermiculate dark lines. Basal callosity of scutellum well delimited, narrowish, pale and impunctate. Under surface black, sides of venter with prominent yellow-brown callosities. Antennae and legs yellow-brown. The general colour pattern much as in *C. transversum* (Ww.).

Body as in the nominate form, but much smaller. Also the male genitalia (Fig. 1 d-e) similar, but pygophore in caudal aspect broader, slightly broader than high, and more strongly concave. Pygophore of the nominate form (Fig. 1 f) in caudal aspect round, as high as broad.

Material studied: Ivory Coast, Lamto, 1 ♂, type (in my collection) and 3 paratypes (same and coll. Gillon), 21. VII. 1964, Gillon.

The taxonomy of the *nebulosum* group is not yet completely known, since it is generally too little material of the forms described. *C. confusum* Mtd. is certainly only a race of *C. nebulosum* Mtd. and not a valid species. It is known from Mozambique, while the nominate form occurs in the northern parts of East Africa (Kenya and the adjacent areas). Of *C. laeviusculum* Mtd. only two females are known to me, one, the type, from Madagascar and one from Zanzibar. It resembles *C. nebulosum confusum,* but is considerably smaller and the genae are less strongly recurved mesad apically, leaving the tip of the tylus more broadly visible. But the last-named feature is individually variable, I have seen a similarly shaped head in a specimen of *confusum.* Also *C. laeviusculum* is apparently only a race of *nebulosum. C. abraxas* and *C. variolosum* Mtd. are West African derivatives of the *nebulosum* stock. The latter differs from *nebulosum* in the much sparser puncturing and the broader conjunctival appendages. Unfortunately, only the type,

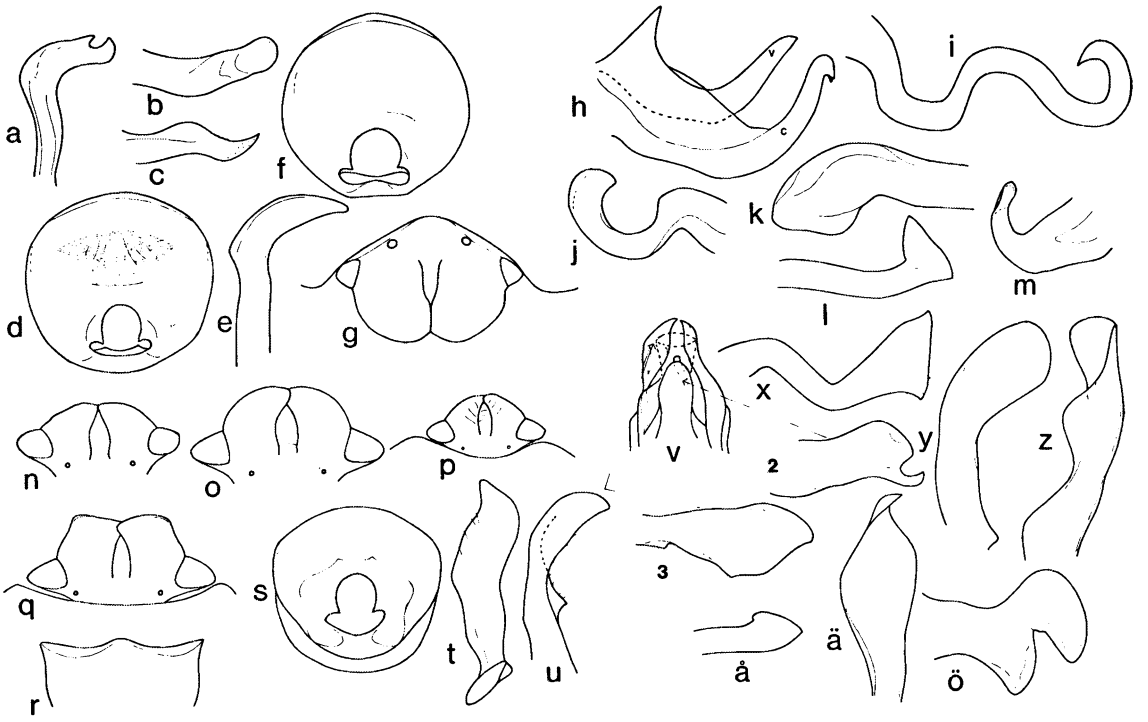

Fig. 1. *Coptosoma transversum* (Ww.): a stylus. — *C. variolosum* Mtd.: b conjunctival appendage. — *C. nebulosum* Mtd.: c same. — *C. nebulosum abraxas* ssp.n.: pygophore, caudal aspect; e stylus. — *C. nebulosum confusum* Mtd.: f pygophore, caudal aspect. — *C. aglaia* sp.n.: g head. — *C. athamas* sp.n.: h penis from side (v = vesica, c = unpaired ventral conjunctival appendage); y—z and ä stylus; å vesica from side; ö paired lateral conjunctival appendage. — *C. wombaliense* Scht.: i vesica from side; j ventral conjunctical appendage from side; k paired lateral conjunctival appendage; q head. — *C. maridicum maridicum* sp.n.: n head. — *C. pictulum subsimile* Mtd.: o same. — *C. inclusum* St.: p same. — *C. maridicum augeias* ssp.n.: r pygophore, ventral aspect; s same, caudal aspect; t—u stylus; v apex of penis, ventral aspect (2 = ventral conjunctival appendage from side, 3 = lateral conjunctival appendage); x vesica. — *C. pictulum* St.: 1 vesica from side; m ventral conjunctival appendage from side.

a male from Lux, Loango Coast, is known and the range of variability of the species in thus unknown. It seems to be a valid species, at any rate. *C. abraxas* also differs considerably from the other forms of the *nebulosum* complex and may possibly represent a separate species. To establish its taxonomic status more material of the *nebulosum* complex from various parts of Africa is needed.

2. *C. aglaia* sp.n.

Fig. 2 a. Length 5.2 mm., breadth 4.5 mm. Yellow-ochraceous. Base of head, a transverse band in anterior part of pronotum, basal margin of pronotum and a curvate transverse band on scutellum behind the basal callosity, blackish brown. Base of scutellum with a red transverse band bordering the dark basal margin. Basal scutellar callosity tinged with orangish. Under surface blackish, with broad latero-ventral callosities; antennae and legs yellow-brown.

Body slightly longer than broad, broadening distinctly caudad. Puncturing of upper surface very indistinct. Head (Fig. 1 g) 1.4 × as broad as long, slightly concave medially; genae broad, extending far beyond tylus, the apex of which is concealed; eyes rather small, ocular index 4.15. Pronotum broadening slightly caudad, antero-lateral lobes broadly rounded, lateral margins in posterior two-thirds diverging caudad, almost straight. Scutellum broadening distinctly caudad, basal callosity broad, rather well delimited. Tibiae not scored.

Material studied: Ivory Coast, Lamto, 1 ♀, type (my collection), 17. XII. 1969, Gillon.

C. atenes Karsch is a closely related species, differing in the strongly concave genae and in the colour pattern (yellow, with head, two large spots in anterior part of pronotum, base of pronotum broadly and a broad transverse band at middle of scutellum, black).

3. The *pictulum group* of the genus *Coptosoma*

The group consists of black species, with the

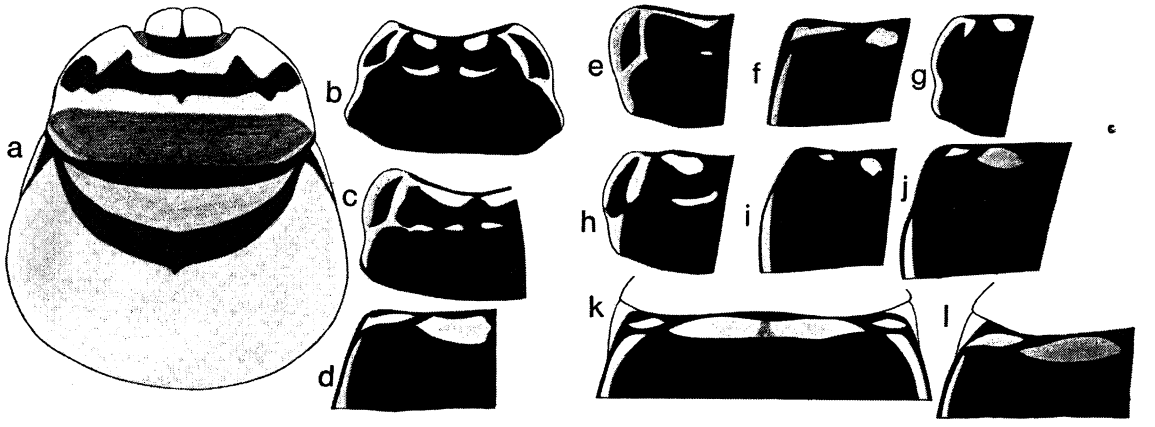

Fig. 2. *Coptosoma aglaia* sp.n.: a. — *C. wombaliense* Scht..: b pronotum. — *C. pictulum pictulum* St.: c same; d base of scutellum. — *C. pictulum subsimile* Mtd.: e—f same. — *C. inclusum* St.: g pronotum. — *C. maridicum maridicum* sp.n.: h pronotum; i base of scutellum. — *C. maridicum augeias* ssp.n.: j base of scutellum. — *C. athamas* sp.n.: k same (pale specimen); l same (dark specimen).

genae recurved mesad apically, concealing the apical part of the tylus.

Key to the species

1 (2) Anterior part of pronotum with a large ovate transverse white ring on either side, these rings contacting each other in the middle .... *binoculus* Jeann. (East Africa, Sudan)

2 (1) Pale pattern on pronotum different 3

3 (4) Pronotum with a single pale lateral band. Base of scutellum without pale submarginal spots; pale marginal band of scutellum present only apically .... *conspicuum* Scht. (Congo)

4 (3) Pronotum with two pale lateral bands, the median one sometimes ± broken 5

5 (8) Pale marginal band of scutellum not extending to basal margin 6

6 (7) Length 3 mm. ♀. Pale spots of basal scutellar callosity small, roundish and whitish yellow (Fig. 2 i) .... *maridicum maridicum* sp.n.

7 (6) Length 3—3.2 mm. ♂, 3.5—3.75 mm. ♀. Pale spots of basal scutellar callosity larger, ovate, often orangish (Fig. 2 j) .... *maridicum augeias* ssp.n.

8 (5) Pale marginal band of scutellum extending to basal margin (in dark specimens sometimes embrowned basally, but always at least faintly visible) 9
Head (Fig. 1 q) protruding, genae strongly concave apically, strongly expanded, apical margin of head ± angularly excavated. Penis in Fig. 1 i—k. Pygophore as in *maridicum* .. *wombaliense* Scht. (Congo, East Africa, Sudan)

10 (9) Head less protruding, genae at most faintly concave, distinctly tapering apicad 11

11 (15) Head longer (Fig. 1 o). Penis in Fig. 2 l—m. Dorsal margin of pygophore (♂) rather sharp 12

12 (13) Pale marking of upper surface whitish yellow. Pronotum (Fig. 2 c) with a transverse row of 4 pale spots behind calli. Pale spots of basal scutellar callosity (Fig. 2 d) large .... *pictulum pictulum* St. (Sudan, South and East Africa)

13 (14) Pale markings on upper surface brownish yellow and less developed (Fig. 2 e—f). Pronotum with at most two faint pale spots behind calli. Pale spots of basal scutellar callosity small .... *pictulum subsimile* Mtd. (Guinean)

15 (11) Head shorter 16

16 (17) Head (Fig. 1 p) narrower. Pale median lateral bands of pronotum (Fig. 2 g) incomplete. Submarginal basal spots of scutellum absent. Male genitalia as in *wombaliense* .. .. *inclusum St.* (South Africa)

17 (16) Head truncate and short as in *maridicum*. Pronotal pattern as in *wombaliense* (Fig. 1 b), pale median lateral band complete. Base of scutellum (Fig. 2 k—l) with distinct submarginal spots. Male genitalia in Fig. 1 h and y—ö ..... *athamas* sp.n.

A redescription of the previously known species will be published in a paper on the Hemipterous fauna of the Sudan (in press).

C. maridicum sp.n.

Fig. 2 h—i, Fig. 1 n. Length 3 mm, breadth 2.5

mm. Shiny black, with whitish yellow markings. Genae with a large triangular pale spot. Antennae yellow-brown. Pronotum with a broad double pale lateral band, the submarginal band not joined to the marginal one candally, anterior margin with two large pale spots, a curvate pale transverse stripe on either side behind calli. Lateral margin of corium pale. Pale spots of basal scutellar callosity small and roundish, submarginal basal spots very small, pale marginal band not extending to base. Venter with large pale lateral callosities. Legs yellow-brown, femora embrowned.

Body small, slightly longer than broad. Head short and broad, twice as broad as long (length measured from ocelli to apical margin) (1.7 × as broad as long in *pictulum)*, broadly rounded in outline, genae shallowly concave, recurved mesad apically and concealing apical part of tylus; vertex medially convex and distinctly punctate, laterally concave; ocular index 2.5. Proportions between antennal joints 5:2:7:6:10. Lateral lobes of pronotum roundedly produced, coarsely and densely punctate in the dark median area; anterior part densely and coarsely punctate around calli, also the median area punctate, a shallow, coarsely and densely punctate depression delimiting the anterior lobe caudally; posterior lobe of pronotum distinctly punctate, except in a narrow impunctate midline. Scutellum with a broad, well-delimited, finely punctate basal callosity; other parts densely and coarsely punctate, especially in latero-basal area; the pale marginal band only finely concolorously punctate.

Material studied: Sudan, Equatoria, Maridi-Ibba, 1 ♀, type (in my collection), 16.IV.1963, Linnavuori.

Near *C. pictulum* St., but much smaller, head considerably shorter, colour pattern different, etc.

C. maridicum Lv. ssp. *augeias* ssp.n.

Length ♂ 3.0—3.2 mm, ♀ 3.5—3.75 mm, breadth about 3 mm. As the nominate form, but considerably larger. Pale spots in basal scutellar callosity (Fig. 1 j) larger, ovate and often tinged with orangish.

Male genitalia in Fig. 1 r—x. Dorsal margin of pygophore strongly rounded.

Material studied: Ivory Coast, Lamto, 1 ♂, type (in my collection), 21. IV. 1967, Gillon; same locality, several paratypes (my collection, coll. Gillon), 1964—1969, Gillon, Pollet.

C. athamas sp.n.

Fig. 1 k—l. Length ♂ 2.75—3 mm, ♀ 3.5—3.75 mm. Black. Genae medially yellow-brown. Pronotal pattern as in *C. wombaliense* (Fig. 2 b): lateral pale bands complete, anterior margin with two large transverse spots, a transverse bar on either side behind callal area. Moreover, basal margin of pronotum near humeral angles often slightly paler. Pattern of scutellum: basal callal area often totally pale, with a slight median suffusion, in darker specimens medially black, but the dark area at most as broad as the pale areas, usually distinctly narrower, only very rarely slightly broader (in *maridicum* always distinctly broader); submarginal basal spots distinct; pale marginal band reaching the base, in dark specimens basally embrowned. Other colouring of the type common in the group.

As *C. maridicum augeias*. Humeral angles of pronotum slightly sharper in dorsal view. Basal scutellar callosity usually more distinctly separated from rest of scutellum by a furrow. Genital segment of ♂ as in the preceding species. Other genitalia in Fig. 1 h and y—ö.

Material studied: Ivory Coast, Lamto, 1 ♂, type (my collection), 14. I. 1966, Gillon; same locality, several paratypes (my collection, coll. Gillon), 1965, Gillon.

Differing from *C. pictulum* in the much shorter head, the male genitalia, etc.

PENTATOMIDAE

1. *Gonopsis gillonae* sp.n.

Fig. 3 a—b. Length ♂ 9.5—10 mm, ♀ 11—12 mm. Opaque or subopaque. Reddish brown, sometimes blackish. Puncturing of upper surface generally darker, especially on head and anterior part of pronotum. Vertex with impunctate narrow pale midline. Antennae yellow-brown, sometimes slightly tinged with reddish or embrowned, 1st and 2nd joints often with minute obscure brown spots. Pronotum with a narrow callose ridge just behind calli, a similar transverse ridge between humeral angles, and with 3 longitudinal callose ridges, starting from the preceding, extending to basal margin and from there, although weakening, further caudad to apical part of scutellum; all these ridges narrow and irregular, sometimes in parts almost absent, their colouring usually whitish, but sometimes also reddish, yellowish or even dark. Costal margin of elytra narrowly whitish and callose; longitudinal veins of corium and clavus also ± paler; membrane pale grey, the pale veins narrowly bordered with fuscous. Dorsum red. Connexivum reddish, segments partly embrowned, extreme lateral margin whitish. Pro- and mesothorax with a very narrow whitish callose longitudinal stripe on either side, these stripes not bordered with black. Legs yellowish brown, rarely blackish; femora densely and distinctly spotted with dark brown.

A remarkably small species. Body 1.7—1.8 × as long as broad at humeral angles. Head sharply triangular,

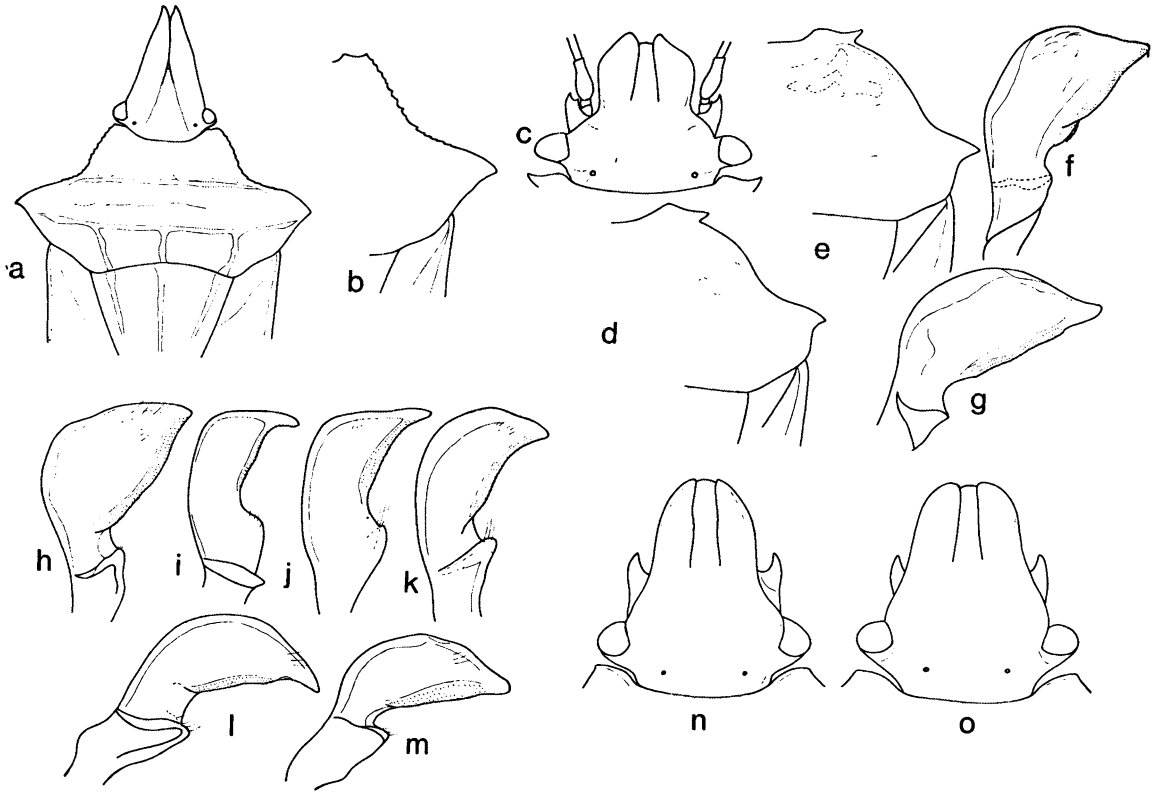

Fig. 3. *Gonopsis gillonae* sp.n.: a head and pronotum; b pronotum of another specimen. — *Scotinophara depressa* sp.n.: c head; d pronotum (♂); e same (♀); f—h stylus. — *S. fibulata* (Gm.): i—m stylus (i Sudan, Yei-Maridi; j—k two specimens from Sudan, Malakal; l Ethiopia, Addis Abeba; m Zaire, Banana). — *Atelocera spinulosa* (P.B.): n head of the neotype; o same of a specimen from Nairobi.

1.$_{29}$—1.$_{25}$ × as long as broad; the narrow, sharp-tipped genae extending far beyond the tylus, their upper surface slightly concave; vertex faintly convex, entire upper surface of head densely and distinctly punctate, save in a narrow midline and around ocelli on vertex; eyes small, ocular index 5.$_{4}$—5.$_{5}$. Antennae short, proportions between joints 10:18:14:18:26 (♂) or 11:18:15:19:27 (♀). Rostrum slightly beyond fore coxae. Pronotum 2.$_{13}$—2.$_{2}$ × as broad as long (total length), humeral angles bluntly triangular, lateral margins irregularly dentate; callal depressions distinct, medially punctate; puncturing of pronotum otherwise dense as on head; basal part of disk moderately convex, sometimes irregularly transversely rugose between the two transverse ridges mentioned above. Scutellum elongately triangular, 1.$_{3}$ × as long as broad; puncturing denser than on pronotum, save in the callose longitudinal ridges. Elytra slightly shorter than abdomen, clavus and corium densely punctate, puncturing slightly finer than on pronotum and scutellum. Thorax distinctly punctate. Puncturing of venter more irregular, surface of venter uneven.

Material studied: Ivory Coast, Lamto, 1 ♂, type (my collection), 17. XII. 1966, Gillon; same locality, 7 paratypes (my collection, coll. Gillon), 13. VII. 1965, 13. IX. 1966, Gillon.

The species is easily recognized by its small size, the blunt humeral angles, the characteristic narrow callose ridges on the pronotum, scutellum and thorax, the colouring, etc.

The new species is dedicated to Mrs. Dominique Gillon, of Abidjan, in recognition of her work on the Heteropterous fauna of the Ivory Coast.

2. *Scotinophara depressa* sp.n.

Resembling *S. fibulata* (Gm.). Characterized as follows:

1. Body large, length 8—9 mm, breadth 4.$_{5}$ mm, and remarkably depressed.

2. General colouring remarkably pale. Ground colouring yellow-brown, without any contrastedly blackish areas; puncturing brown. Head and impunctate callal depressions of pronotum brown. Pronotum, elytra and

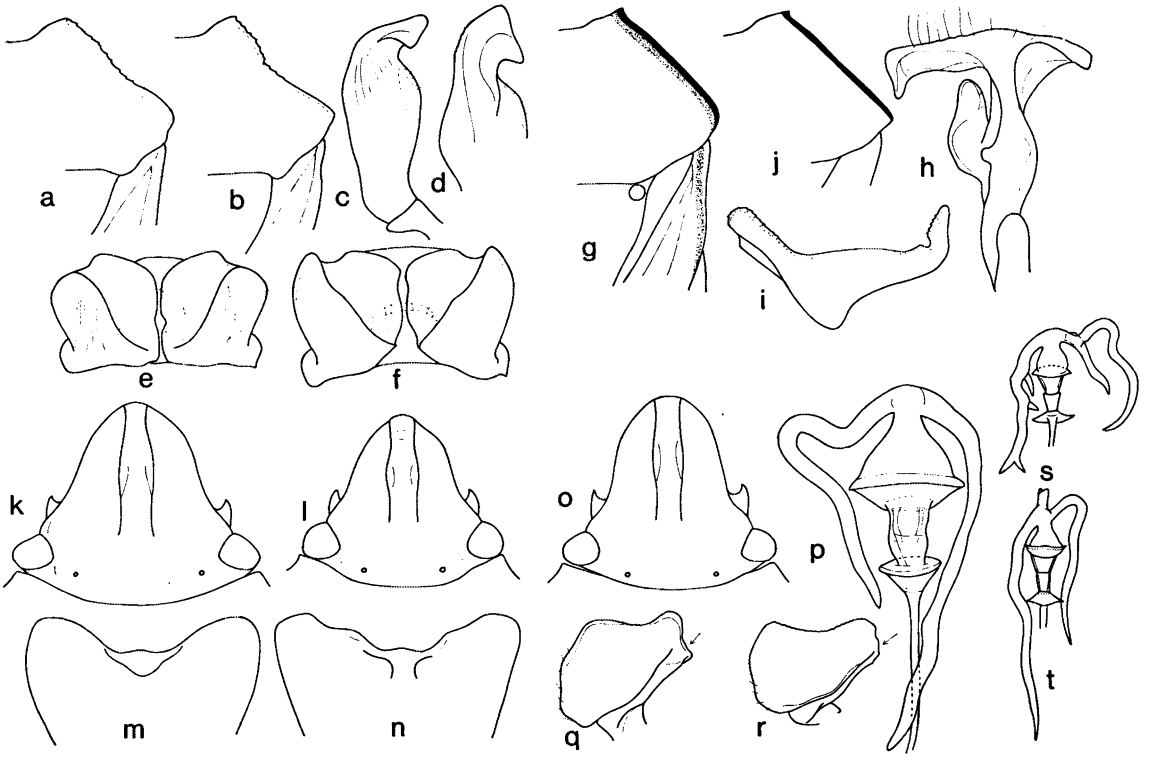

Fig. 4. *Atelocera spinulosa* (P.B.): a pronotum; c—d stylus; e anal tube from above. — *A. limata* (Gm.): b pronotum; f anal tube from above. — *Parantestia cincticollis* (Schm.): k head (♀); m pygophore (♂), ventral aspect; q stylus; s spermatheca. — *P. modesta* (Hv.): l head (♀); p spermatheca. — *P. propinqua* sp. n.: o head (♀); n pygophore (♂), ventral aspect; r stylus; t spermatheca. — *Bathycoelia rodhaini* Scht.: g pronotum and base of scutellum and elytron; h stylus, broad aspect; i same from above. — *B. cythereia* sp.n.: j pronotum.

scutellum often with minute purplish, ± confluent spots. Under surface, femora and base of tibiae dark brown.

3. Head (Fig. 3 c): genae rather narrow and sharp-tipped, extending distinctly beyond apex of tylus; disk faintly convex; antennal tubercles prominent.

4. Pronotum (Fig. 3 d—e): remarkably depressed, much flatter than in *fibulata;* antero-lateral horns pale; lateral margins in the specimens studied very narrowly laminate, rather strongly insinuated behind middle; humeral angles blunt; callal area faintly elevated.

5. Scutellum in ♀ not extending to apex of abdomen.

6. Stylus (Fig. 3 f—h) flattish, blade-shaped, much broader than in *fibulata.*

Material studied: Cameroun merid. 1 ♂, type (Mus. Budapest) and 2 paratypes (same and my collection).

Easily distinguished from *S. fibulata* by the large size, the depressed body and the much broader stylus. In the form of the stylus resembling *S. tibialis* (Sgn.) from Madagascar, although the flattened hypophysis is relatively longer. The large depressed body also distinguishes it from *tibialis. S. lamottei* Vill. differs in the smaller size, length 6—6.5 mm., the dark colour-inf, the raised callal region of the pronotum, etc.

The shape of the stylus of *S. fibulata* is rather variable, in contrast to the other species known to me. In some Sudanese specimens (Fig. 3 i—k) the hypophysis of the stylus is hook-shaped, while in the specimens from the Congo and Ethiopia it is blade-shaped (Fig. 3 l—m) (always much narrower than in *depressa,* anyhow). But since a corresponding variability also occurs within specimens of a single population (Fig. 3 j—k, two specimens of a population from Malakal), a splitting into two subspecies is scarcely possible.

3. On the variability of *Atelocera spinulosa* (P.B.)

Pentatoma spinulosa Palisot de Beauvois 1805, p. 83.

?syn. *Atelocerus raptorius* Germar 1837, p. 177.

?syn. *Atelocera parvula* DALLAS 1851, p. 178.

A widespread dark-coloured African species, with almost straight lateral margins of pronotum (Fig. 4 a). Male genitalia in Fig. 4 c—e and Fig. 5 o—p.

In the series of specimens studied considerable variability was observed in the shape of the head (Fig. 3 n—o): the head is distinctly narrower in West African specimens, while it is remarkably broad in specimens from East Africa and Ethiopia. A specimen from the Congo was intermediate between these two extreme forms. Also the length of the antennae and the shape of the scutellum is variable to some extent. The genitalia, on the contrary, are similar in all specimens studied.

A. spinulosa is evidently tending towards the formation of two geographical races. To fix the nomenclature I selected a male from Old Calabar, identified as *spinulosa* by Stål, in Mus. Vienna, as the neotype, since the original type has apparently been lost. The specimen belongs to the narrow-headed form, generally accepted as *spinulosa*. In this context I do not propose any name for the broad-headed form; this must await a revision of type specimens within the genus. At least the position of *A. parvula* Dl. and *A. raptoria* Gm. should be cleared up. The former was regarded as a synonym of *spinulosa* by SCHOUTEDEN (1912, p. 106). Of *A. raptoria* I have not been able to trace any authentic material. The species was described from South Africa and has been recorded from Sierra Leone and Gambia, too (STÅL 1876, p. 47). A male, identified as *raptoria* in the collection of the British Museum, examined by me, proved to belong to the nominate form of *spinulosa*. For confirmation of the synonymy between the two species, topotypic material from South Africa should be consulted.

Material studied: f. *typica:* Old Calabar, 2 exx. det. Stål, one of them, a male, selected as the neotype, coll. Signoret in Mus. Vienna. Ivory Coast, Dabou, 2 exx., 22. I. 1964, Gillon; Lamto, 2 exx., 10. VII. 1962, Gillon. the broad-headed form: Kenya, Eldoret, 2 exx., 16. I. 1970, P. Knudsen (my collection); Nairobi, 1 ex., 1903, F. Thomas, Mus. Vienna. Ethiopia, Maraquo, 1 ex., 1913, Taranetzkij and Terra Lekka, 1 ex., 1899, Dmitriev, in my collection, additional specimens in Mus. Leningrad. intermediate form: Congo, 1 ex., Mus. Vienna.

Material of *A. raptoria* studied: Gold Coast, Tamsoo, 1 ♂, British Museum.

A. limata Gm. is a closely related species, differing in the paler colouring and the insinuated lateral margins of the pronotum (Fig. 4 b). The male genitalia are similar, except that the anal tube differs in shape (Fig. 4 f). *A. arabica* Lv. (description in press), is another closely related species, differing from *spinulosa* in the much longer head, the more strongly insinuated lateral margins and sharper humeral angles of the pronotum, and the longer and sharper scutellum. The description will be published in a paper on the Hemiptera of the Sudan.

4. The *cincticollis group* of the genus *Parantestia* Lv.

The group consists of species with a characteristic colour pattern (olive green, cream and orange). Until now only one species, *P. cincticollis* (Schm.), was known. Examination of the type of *Caura modesta* Hv. proved that the species named does not belong to the genus *Caura* St., but has to be transferred to *Parantestia* and is, in fact, a close relative of cincticollis. Moreover, a third species, *P. propinqua* sp.n., was detected in my material from the Sudan.

The three species of the group closely resemble each other and can be characterized as follows:

P. cincticollis (Schm.)

1. Body larger, length 12—13.$_5$ mm.

2. More shiny, colour pattern contrasted (olive green, cream, orange).

3. Tylus tapering apicad, head (Fig. 4 k) less emarginate at sides.

4. Pronotum somewhat broader, about 2.$_{42}$ × as broad as long (total length); humeral angles more prominent.

5. Scutellum more elevated basally.

6. Puncturing on clavus and inner part of corium more coarse and black, on the last-named also irregular; mesocorium with numerous smaller and larger inpunctate callose patches; clavus and mesocorium cream, apical margin of latter reddish.

7. Pygophore as in Fig. 4 m, stylus as in Fig. 4 q. Length of penis 1.$_{13}$ mm., greatest breadth 0.$_{59}$ mm.

8. Tubules of spermatheca (Fig. 4 s) shorter, provided with branches.

Range: Congo, East Africa.

Material studied: East Africa, Lake Ikimba, East Vict. Nyanza, 1 ♂, 7. VII. 1913, Troitzkij and Tanganyika, Bukoba, 2 exx., XI. 1963, D. J. Greathead, in my collection.

A. propinqua sp.n.

1. Smaller, length 10—12 mm.

2. More opaque, colour pattern as in *cincticollis,* but less differentiated.

3. Tylus parallel-sided, head (Fig. 4 o) more emarginate at sides.

4. Pronotum somewhat narrower, about 2.$_{22}$ × as broad as long, humeral angles slightly blunter.

5. Scutellum basally less elevated.

6. Puncturing on clavus and inner part of corium

finer, almost concolorous, both clavus and mesocorium densely and uniformly punctate throughout; colouring of the named parts of elytra almost uniformly yellowish cream, tinged with reddish.

7. Pygophore as in Fig. 4 n, stylus in Fig. 4 r. Length of penis 0.90 mm., greatest breadth 0.50 mm.

8. Tubules of spermatheca (Fig. 4 t) long and simple; apical section of spermatheca narrow, ending in a plug-shaped apical process.

Material studied: Sudan, Equatoria, Loka forest, 1 ♂, type and 1 ♀ paratype, 8—10. IV. 1963, Linnavuori. Zaire, Lubumbashi, 1 ♂ paratype, 5. II. 1939. All types in my collection.

A. modesta (Hv.), n. comb.
Caura modesta HORVATH 1892, p. 257.

1. Length 11 mm.

2. Colouring as in *propinqua.*

3. Tylus parallel-sided, head (Fig. 4 l) less emarginate at sides, even broader than in *cincticollis.*

4. Pronotum as in *propinqua,* about 2.35 × as broad as long.

5. Scutellum as in *propinqua.*

6. Elytra as in *cincticollis,* but puncturing brown.

7. Male unknown.

8. Tubules of spermatheca (Fig. 4 p) long and simple, apical section broad, without apical process.

Material studied: Central Africa, 1 ♀, type, Holub, in Mus. Budapest.

5. On the *rodhaini* group of the genus *Bathycoelia* St.

The group consists of two large, strikingly coloured species, *B. rodhaini* Scht. and *B. cythereia* sp.n.

B. rodhaini Scht.

Fig. 4 g and Fig. 5 b—c. Length ♂ 20 mm, ♀ 22—23 mm, breadth 10—11 mm. Pale greenish, upper surface with a slight reddish tinge. Lateral margins of head black, bordered with pink medially. Eyes brown, ocelli red. Antennae yellow-brown, especially basally tinged with violet. Lateral margins of pronotum black, medially bordered with pink or violet. Scutellum with a distinct round orange callosity at either basal angle. Costal margin or elytra bordered with red in basal half, membrane hyaline. Paratergites with lateral margin and transverse segmental margins black, otherwise either uniformly green or, usually, provided with a longitudinal pink or violet band, sometimes also with a short black longitudinal band starting from the median end of the transverse black stripe in basal segmental margins. Under surface whitish green. Sides of head with a longitudinal black stripe above antennal pits. Lateral margins of abdomen black, narrowly bordered with violet.

A large, striking species. Body nearly twice as long as broad. Puncturing of upper surface fine. Head slightly broader than long (24:22), gradually tapering apicad, finely transversely wrinkled laterally, median parts very finely and sparsely punctate; in lateral parts puncturing more distinct and dense. Antennae gracile, proportions between joints 5:11:17:19:16. Rostrum beyond base of 5th visible sternite. Pronotum slightly more than twice as broad as long (total length) (65:31), lateral margins slightly curved of almost straight, humeral angles roundedly prominent; puncturing of disk fine but rather dense, callal area sparsely punctate. Scutellum slightly longer than broad (44:40); puncturing finer and sparser than in pronotum, that of elytra as in pronotum. Puncturing of thorax fine. Venter very indistinctly punctate, with fine irregular furrows; median sulcus deep, extending to genital segment. Male genitalia in Fig. 4 h—i, Fig. 5 l—m. Pygophore about 1.14 × as broad as long, breadth 2.47 mm, length 2.17 mm. Greatest breadth of stylus (broad aspect) 0.78 mm.

Range: Congo, West Africa.

Material studied: Ivory Coast, Lamto, 3 exx., 20—21. XI. 1963, 16. XII. 1967, Gillon. On *Bauhinia.*

B. cythereia sp.n.

Fig. 4 j and Fig. 5 a. Length ♂ 19 mm, ♀ 20—21 mm, breadth about 10 mm. Upper surface pale or bright green. Lateral margins of head black, indistinctly bordered with pale medially; eyes brown, ocelli red. Antennae violet. Lateral margins of pronotum black, narrowly bordered with whitish medially. Scutellum with a large round whitish yellow or orange callosity at either basal angle. Costal margin of elytra bordered with red in basal half. Colouring of connexivum unique: whitish green, with lateral margin, transverse segmental margins and obliquely transverse band caudad of basal third of each segment black; area between the last-named and the next segmental margin orangish red. Under surface whitish green. Legs green, tibiae and tarsi tinged with violet.

As *B. rodhaini,* but smaller and slightly narrower. Head slightly broader, 1.06—1.15 × as bro ad as long. Pronotum broader, 2.3—2.52 × as broad as long (total length); lateral margins straighter and more strongly diverging caudad, humeral angles sharper.

Proportions between antennal joints 4.5:10:16:18:14. Scutellum 1.1—1.12 × as long as broad.

Male genitalia in Fig. 5 d—f, Fig. 5 n. Breadth of pygophore 1.75 mm, length 1.63 mm. Breadth of stylus (broad aspect) 0.62 mm.

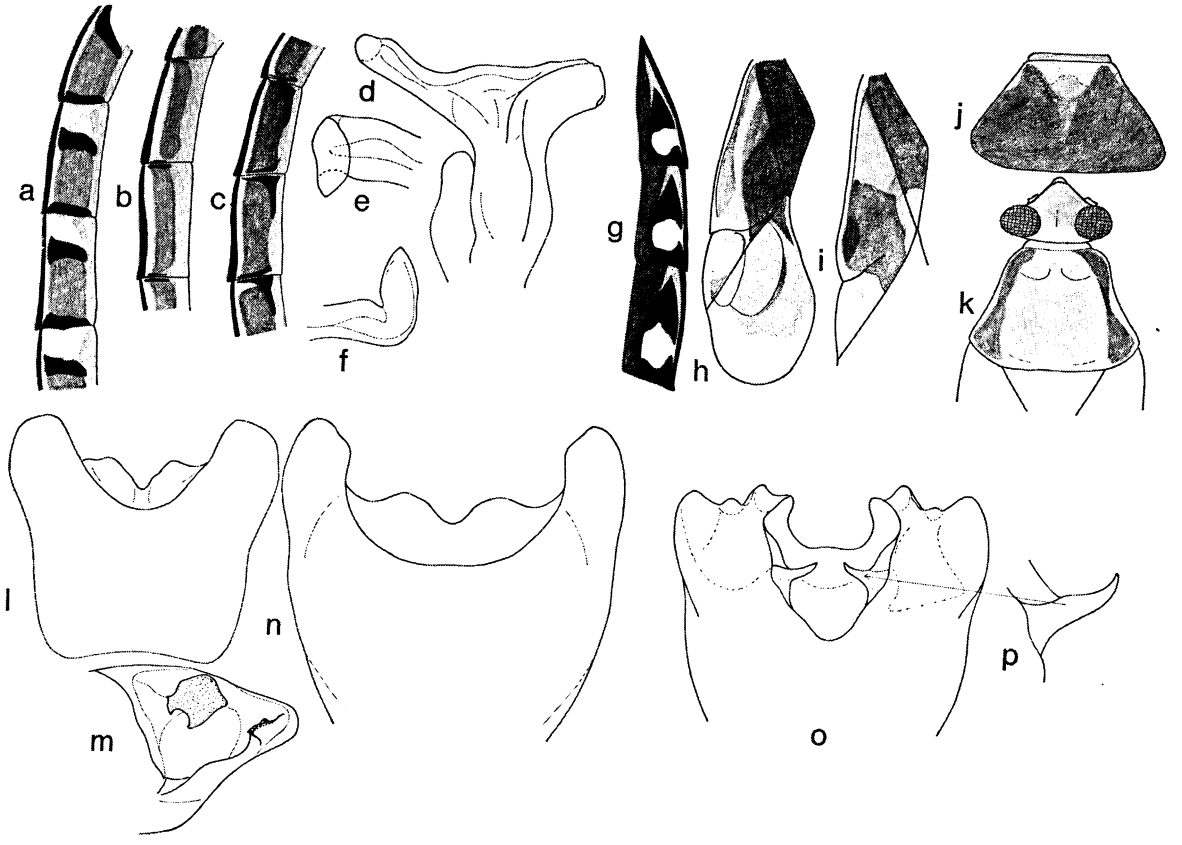

Fig. 5. *Bathycoelia cythereia* sp.n.: a connexivum; d stylus, broad aspect; e apex of hypophysis of same, median aspect; f same from above; n pygophore, ventral aspect. — *B. rodhaini* Scht.: b—c connexivum; l pygophore, ventral aspect; m right side of same, obliquely from above. — *B. thalassina nigromarginata* Bgr.: g connexivum. — *Atelocera spinulosa* (P.P.): o pygophore, ventral aspect; p appendage of same. — *Deraeocoris nigriventris dryas* ssp.n.: h elytron. — *Stenotus klepsydra* sp.n.: i same; j pronotum. — *S. chryseis* sp.n.: k head and pronotum.

Material studied: Ivory Coast, Lamto, 1 ♀, type (my collection), 23. III. 1969, Gillon; same locality, 1 ♀ paratype, 10. X. 1966, Gillon (coll. Gillon). Sierra Leone, Tungi, 1 ♂ paratype, 12. III. 1909, A. Pearse, British Museum.

6. *B. thalassina* (H.-S.) f. *nigromarginata* Bgr.

♀. Length 21 mm, breadth 10 mm. Green. Head and calli of pronotum yellowish green. Lateral margins of head narrowly black. Antennae violet, apex of 3rd and 4th joints (5th absent) black. Lateral margins of pronotum (Fig. 6 d) black, narrowly bordered with whitish green. Scutellum with a round yellow-white callosity at either basal angle. Costal margin of elytra in basal part narrowly reddish. Membrane brownish hyaline. Dorsum reddish. Paratergites (Fig. 5 g) olivaceous, lateral margin and a large triangular spot black, the last-named interrupted with a large roundish yellow-white spot; the black triangle bordered with whitish green basally. Under surface yellow-green. Sides of head with a longitudinal black stripe above antennal tubercles. Lateral margins of abdomen narrowly black. Legs yellowish green, tibiae and tarsi tinged with violet.

Body elongate, slightly more than twice as long as broad. Puncturing of upper surface distinct and dense, often somewhat rungose. Head broader than long (24:21), upper surface finely and densely wrinkled, rugose. Antennae gracile, proportions between joints 6:11:17:20:?. Rostrum to base of 5th visible sternite. Pronotum twice as broad as long (total length) (57:28), lateral margins shallowly curved, humeral angles blunt; puncturing of disk dense and distinct, only calli largely impunctate; disk also irregularly wrinkled, uneven. Scutellum longer than broad (42:36); punctur ig as in pronotum. Puncturing of elytra similar. Thorax finely punctate. Venter very indistinctly punctate, with

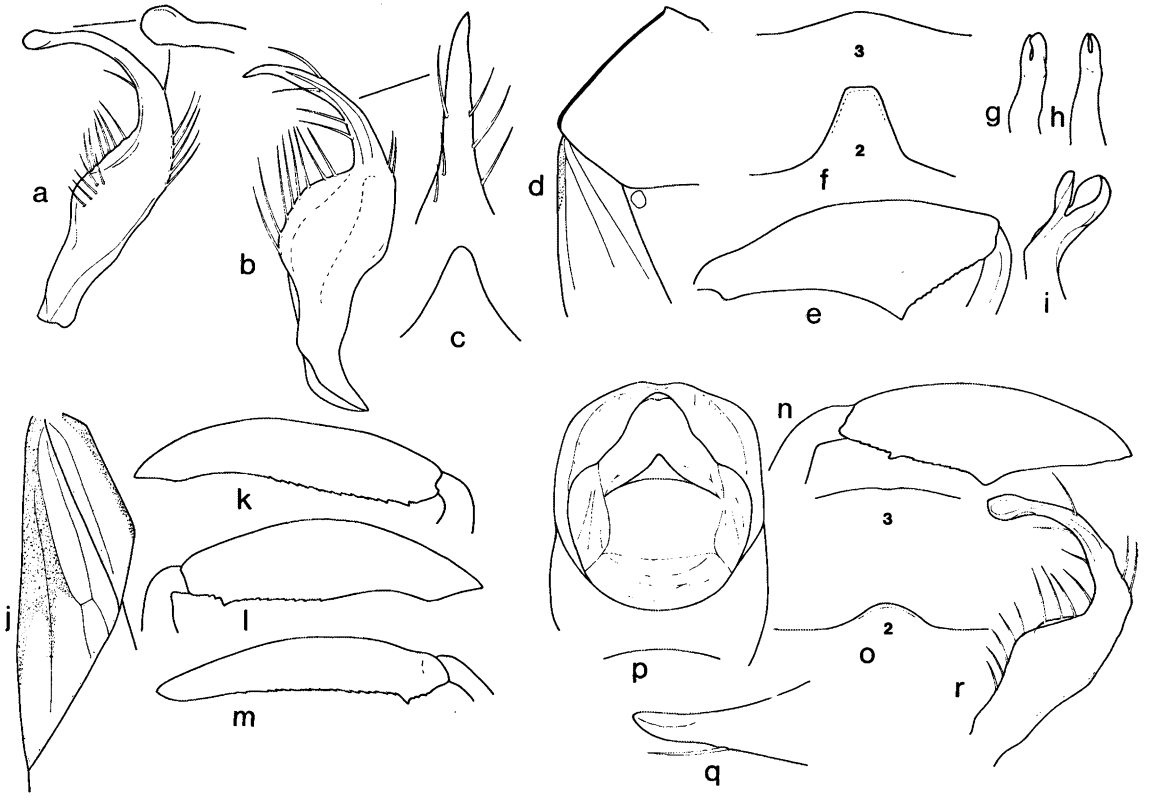

Fig. 6. *Bathycoelia thalassina nigromarginata* Bgr.: d pronotum and base of scutellum and elytron. — *Anoplocnemis dodona* sp.n.: a stylus; g—i apex of same in different aspects; e hind femur (♂); f median parts of 2nd and 3rd visible sternites (♂). — *A signatus* Dist.: b stylus; c medio-ventral process of pygophore. — *A. eumelos* sp.n.: n hind femur (♂); o median parts of 2nd and 3rd visible sternites (♂); p pygophore; q—r stylus. — *Paranoplocnemis moesta* (Dl.); j elytron; k hind femur (♂) (type of *moesta);* l same (specimen from Lamto); m same (♀) (Lamto).

fine irregular furrows; median sulcus deep, extending to genital segment.

Range: West Africa.

Material studied: Guinea, Mt. Nimba, 1 ♀ (*nigromarginata* det. Schouteden), Lamotte & Roy, Mus. Tervuren.

The species *B. nigromarginata* has been recorded by VILLIERS (1952, p. 305). I have not been able to find the original description, and Mrs. G. M. Black has informed me in a latter that she could not trace it in the lists of the British Museum either. Thus I do not know whether Bergroth really has described the species, or whether *B. nigromarginata* is only a manuscript name. At any rate *B. nigromarginata* undoubtedly is only a dark colour variety of the widespread *B. thalassina* (H.-S.).

COREIDAE

1. Additional notes on the *Anoplocnemis monacha* group

A recent collection contained two undescribed species of this group, in which the median prolongation of the 2nd visible sternite (♂) is only faintly raised apically. The species of the group can be distinguished as follows:

1 (2) Hind femora (♂) strongly reflected .... *monacha* (St.)
2 (1) Hind femora (♂) only slightly curvate 3
3 (4) A small slender species, length 16 mm. 1st antennal joint only 1.36 × as long as diatone ..... *aloma* Lv. in press
4 (3) Larger species, length at least 18 mm. 1st antenal joint longer 5
5 (8) Median prolongation of 2nd visible sternite (♂) long, ± triangular, extending at least to middle of 3rd sternite 6
6 (7) Antennae very gracile. Hind femora (♂) not strongly thickened, 3.2 × as long as their greatest width. Apex of stylus entire .... *chiron* Lv.

7 (6) Antennae thicker. Hind femora (♂) remarkably incrassate, only $2.8\times$ as long as broad. Hypophysis of stylus apically split .... *dodona* sp.n.

8 (5) Median prolongation of 2nd visible sternite (♂) very short, rounded 9

9 (10) Pygophore (♂) in dorsal aspect ovate, distinctly tapering apicad. Hair covering of upper surface golden ..... *amalthea* Lv.

10 (9) Pygophore (♂) in dorsal aspect almost parallel-sided, apex roundedly truncate. Hair covering of upper surface whitish .... *eumelos* sp.n.

A. dodona sp.n.

Length 20.5 mm. Resembling *A. vidua* (Schm.). Flying wings pale, basally dark.

Antennae rather gracile, proportions between joints 23:18:14:23, total length of antennae $2.2\times$ as long as basal width of pronotum, 1st joint $1.82\times$ as long as diatone. Ocular index 3.0. Hind femora (♂) (Fig. 6 e) short and remarkably incrassate, $2.8\times$ as long as broad (including median tooth), hind tibia $0.7\times$ as long as femur. Median prolongation of 2nd visible sternite (Fig. 6 f) tapering apicad, extending slightly beyond middle of 3rd sternite, only slightly raised apically. Pygophore as in *A. vidua*. Stylus (Fig. 6 g—i, Fig. 6 a) with remarkably long, gracile, apically split hypophysis.

Material studied: Ivory Coast, Lamto, 1 ♂, type, 6. IV. 1965, Gillon, my collection.

Easily distinguished from the related species by the incrassate hind femora, the structure of the 2nd and 3rd visible sternites and the shape of the styli.

A. eumelos sp.n.

Length 19 mm. Bright reddish brown. 4th antennal joint slightly paler. Membrane dark brown. Flying wings dark brown, base pale. Dorsum of abdomen red, tip embrowned. Connexivum immaculate, chocolate brown.

Body long and gracile, $3.3\times$ as long as broad at base of pronotum. Hair covering dense, whitish. Ocular index nearly 3.0. Proportions between antennal joints 20:16:12:20, total length of antennae $2.12\times$ as long as basal width of pronotum, 1st joint $1.66\times$ as long as diatone. Hind femora (♂) (Fig. 6 n) thick, considerably thicker than in *A. amalthea,* nearly $3\times$ as long as broad (including median tooth), hind tibia $0.65\times$ as long as femur. Median prolongation of 2nd visible sternite (Fig. 6 o) very short, not raised. Pygophore (Fig. 6 p) in dorsal aspect almost parallel-sided, apex broadly rounded; apical part of genital opening considerably narrower than in *A. amalthea,* owing to the broader lobes delimiting the opening laterally, these lobes distinctly upcurved medially. Stylus (Fig. 6 q—r) much as in *A. amalthea.*

Material studied: Zaire, Karemi, 1 ♂, type, V. 1912, Dr. Bayer, my collection.

Very closely related to *A. amalthea* Lv. from the Ivory Coast, but distinguished by the whitish hair covering, the thicker hind femora and especially in the shape of the pygophore.

A. ventralis (Ww.)

Two males from the Ivory Coast, Lamto, 9. X. 1964, Gillon, agree with the cotype of *A. ventralis* recently redescribed by me (Linnavuori 1971, p. 167—167). They are smaller than *A. vidua* (Schm.), and the antennae are more gracile and slightly longer, with the 1st joint 1.70—$1.77\times$ as long as the diatone. The hind legs are also somewhat more gracile.

As pointed out before, the male genitalia are similar to those of *A. vidua.* On the basis of the meagre material of *A. ventralis* it is not possible to decide whether *ventralis* is a valid species or, as it seems more probable, a race of the widespread and variable *vidua.*

A. signata Dist.

♂. Length 19 mm. Resembling *A. vidua,* but smaller. Apex of scutellum broadly and contrastedly pale. Last tergite largely blackish, with only basal margin pale. Flying wings pale.

Proportions between antennal joints 19:15:12:20, total length of antennae 1.9—$2.0\times$ as long as basal width of pronotum, 1st joint 1.4—$1.6\times$ as long as diatone. Hind femora $3.12\times$ as long as broad (including median tooth), tibia $0.62\times$ as long as femur. Male genitalia (Fig. 6 b—c) much as in *A. vidua.*

Material studied: East Africa, Kenya Colony, Trans Nzoia, 1 ♂, 6. V. 1919, T. Anderson, British Museum. Ethiopia, Belleta forest, 1 ♂, 13—14. VI. 1963, Linnavuori; Goma, Djimma, Abyssinia mer., 1 ♂, 23. VIII. 1904, Brozyin, my collection. Additional material from the last-named locality in Mus. Leningrad.

Variability: In the specimen from Kenya the antennae are shorter and somewhat thicker than in the Ethiopian specimens.

The species has not previously been recorded from Ethiopia. *A. signata* is undoubtedly a synonym of *A. sericeiventris* Leth., known only from Ethiopia. The specimens in Mus. Leningrad were identified as *sericeiventris* by Kiritshenko.

2. On the genus *Paranoplocnemis* Scht.

The genus *Paranoplocnemis* was established by Schouteden (1938, p. 251), with *Mictis moesta* Dl. as the generotype and only known species of the genus

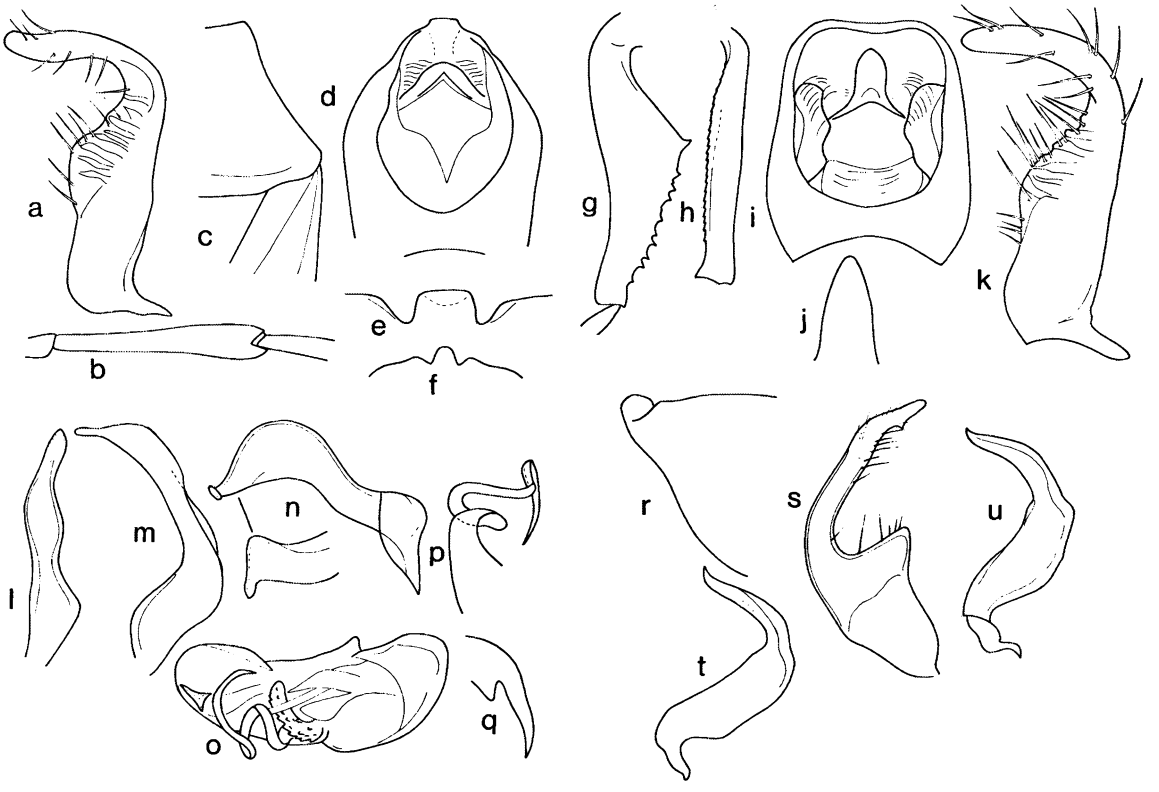

Fig. 7. *Paranoplocnemis moesta* (Dl.): a stylus (specimen from Lamto); k same (type of *whytei*); g hind tibia (♂ from Gambia); b same (♀ from Lamto); i pygophore (♂ from Lamto); j medio-ventral process of same (type of *moesta*). — *Homoeocerus cleio* sp.n.: b 3rd antennal joint (♂); c pronotum; d pygophore from above; r same, lateral aspect; e apex of same, caudal aspect; f same (dry preparate); s stylus. — *Agramma elegantulum* sp.n.: t stylus. — *A. lineatum* (Hv.): u same. — *Deraeocoris nigriventris dryas* ssp.n.: l right stylus; m left stylus; n hypophysis of same from above; o penis; p spiculum; q claw.

(*Anoplocnemis whytei* Dist. was regarded as a strict synonym of *moesta*).

The genus is closely related to *Anoplocnemis* St., but differs in the peculiarly shaped hind tibiae of the male (Fig. 7 g), which are flattened and curvate, with the median margin strongly expanded at the middle; the apical two-thirds of the median margin are also coarsely dentate. Other striking features are the colour pattern of the elytra and the peculiar transverse ridges on the basal part of the stylus. The colouring of the elytra, the hind legs and the male genitalia are illustrated in Figs. 6 j—m, 7 a and i—k.

An examination of the holotypes of *P. moesta* and *P. whytei* revealed certain differences between them. Consequently, I do not regard them as strict synonyms. *P. whytei* is, in my opinion, a geographical subspecies inhabiting East Africa, while *P. moesta* occurs in the Guinean subregion. The two forms differ from each other as follows:

P. moesta moesta (Dl.)

1. body considerably smaller and more gracile, length ♂ 20—21 mm, ♀ 22 mm, breadth at base of pronotum ♂ 5.5—6 mm., ♀ 7 mm.

2. antennae and especially hind femora appearing more gracile. 1st antennal joint 1.27—1.37 (in the type 1.37) × as long as diatone. length of hind femur (♂) 6.3 (type) or 6.6—6.8 mm, in ♀ 6.8 mm. breadth of hind femur (♂) 1.42 (type) — 1.73 mm, in ♀ 1.2 mm. length of hind tibia (♀) 4.80—5.25 mm, — 5.7 mm (type), in ♀ 6.2 mm.

3. dorsum of abdomen red.

Variability: the holotype from the Congo differs from the West-African specimens to some extent: The antennae are somewhat more gracile, with the 2nd—4th joints remarkably pale, orangish. The hind femora are more gracile, the hind tibiae longer and somewhat less coarsely dentate.

Range: Congo, West Africa.

Material studied: Congo, 1 ♂, type of *moesta*, in the British Museum. Gabon, 1 ♂ (det. as *whytei* by Blöte),

in Mus. Leiden. Ivory Coast, Lamto, several, 18. XII. 1964, Gillon.

P. moesta whytei Dist.

1. body much robuster, length 24 mm, breadth at base of pronotum 6.5 mm.

2. antennae and especially hind femora appearing thicker. 1 st antennal joint 1.23 × as long as diatone.
length of hind femur 7.8 mm.
breadth of hind femur 2.1 mm.
length of hind tibia 6.9 mm.

3. dorsum of abdomen black, only basal margins of tergites medially red.

Range: East Africa.

Material studied: Nyasaland, Nyika Mts., 6000—7000 ft., 1 ♂, type, VII. 1896, A. Whyte, British Museum.

3. *Homoeocerus cleio* sp.n.

Length ♂ 16 mm, ♀ 17—19 mm. Opaque. Ground colouring yellow, sometimes with a green tinge. Puncturing of head and anterior two-thirds of pronotum concolorous, head sometimes with a few very small dark tubercles, that of basal part between humeral angles darker, but not contrastedly so, lateral margins of pronotum sometimes deeper green. Antennae yellow-brown, apex of 2nd and 3rd joints slightly darker, 4 th joint paler, 1st—3rd joints densely covered with small dark tubercles. Scutellum pale, often with orangish tinge; puncturing concolorous. Clavus and corium often with greenish of reddish tinge, puncturing dense and dark; costal margin paler, sometimes deeper green, puncturing finer and concolorous; membrane brownish hyaline, rather pale. Flying wings pale. Dorsum of abdomen reddish, medially more yellowish; sides and especially apex darkened, connexivum pale. Under surface and legs uniformly yellow-brown. Thorax without black dots.

Closely resembling *H. katangensis* Scht. Rather robust, 3.1—3.2 × as long as broad at base of pronotum, parallel-sided. Head 1.25—1.3 × as broad as long, ocular index 2.16—2.23; antennal tubercles moderately swollen and somewhat recurved mesad above tylus; tuberculation of upper surface minute. Antennae (Fig. 7 b) moderately incrassate, distinctly thinner than in *katangensis,* their total length 2.26—2.34 × as long as basal width of pronotum, proportions between antennal joints 17:22:16:13; 1st joint incrassate, 1.3—1.4 × as long as diatone, 2nd joint slightly, 3rd distinctly expanding apicad, the latter more strongly expanded in ♂ than in ♀. Rostrum to middle of metasternum. Pronotum (Fig. 7 c) 1.22—1.26 × as broad as long, lateral margins straight, humeral angles blunt, puncturing of disk dense, surface uneven. Scutellum wrinkled and more sparsely punctate. Puncturing of elytra dense. Thorax distinctly punctate. Male genitalia in Fig. 7 d—f and Fig. 7 r—s.

Material studied: Ivory Coast, Lamto (Toumodi), 1 ♂, type, 18. XII. 1965 and some paratypes, 1965, Gillon; Sokovodougou, 1 paratype, 25. IV. 1968, Duviard. On *Anona.* Holotype and paratypes in my collection, paratypes also in coll. Gillon.

H. katangensis Scht.: lateral margins of pronotum narrowly red; base of pronotum between humeral angles with blackish puncturing, contrastedly delimited from the concolorously punctate anterior part of disk; humeral angles sharper; antennae thicker.

H. hulstaerti Scht.: lateral margins of pronotum narrowly reddish or brownish, base of pronotum contrastedly dark; antennae more gracile, 1st joint with a distinct longitudinal dark stripe on under surface.

H. overlaeti Scht.: head, pronotum and scutellum with dark puncturing; lateral margins of pronotum and costal margin of elytra pale orange or ivory.

H. uelensis Scht.: resembling *H. katangensis* in colouring, otherwise lateral margins of pronotum distinctly insinuated, humeral angles more prominent and sharper.

H. schoutedeni Vill.: vertex with a black longitudinal median stripe; pronotum with a black transverse bar between humeral angles, the last-named sharper; 1st antennal joint longer, 2.4 × as long as diatone (♀).

H. dan Vill.: vertex with a small black dash between ocelli; pronotum with lateral margins, two longitudinal discal bands and base between humeral angles, blackish; lateral margins of pronotum shallowly insinuated and humeral angles more prominent.

TINGIDAE

1. *Agramma elegantulum* sp.n.

Length 2.25—2.4 mm. Head black, frontal spines, antennal tubercles and margin of bucculae, whitish. Antennae yellow-brown. Pronotum golden brown, collar whitish, caudal process whitish yellow, its central carina dark brown. Elytra whitish yellow; raised vein limiting exocorium medially; another, less regular longitudinal raised vein bordering costal margin medially, dark brown; an irregular longitudinal raised vein at medio-apical angle of mesocorium near caudal pronotal process and extending to membrane, as well as some veins at apex of membrane also darkened. Under surface golden brown. Legs yellowish.

Very similar to *A. lineatum* (Hv.). The main differences:

1. length 2.25—2.4 mm., body robuster, ± distinctly tapering caudad.
2. vertex less convex.
3. pronotum broader.
4. elytra ± strongly tapering apicad in apical third.
5. all dark veins of elytra strongly raised.
6. exocorium triseriate, all cells of roughly equal size, fairly large.
7. mesocorium 4 areolae deep at broadest point, cells considerably larger; cells of membrane also distinctly larger.
8. stylus (Fig. 7 t) more gracile.

Material studied: Sudan, Blue Nile, Abu Hashim-Galegu, 1 ♂, type and many paratypes, 23—24. XI. 1962; Wad Medani, some paratypes, 26—28. VII. 1961. Sudan, Upper Nile, Pochalla, some paratypes, 13. I. 1963. Sudan, Kordofan, Umm Shuheita-Jebel Shivai, 2 paratypes, 6—7. II. 1963. Ethiopia, Koka, Artificial lake, 1 paratype, 6. VI. 1963, Linnavuori. Types in my collection. On *Cyperus*.

A. lineatum (Hv.)

1. length 2.5—2.75 mm., body more elongate, less tapering caudad.
2. vertex more convex.
3. pronotum narrower.
4. elytra moderately tapering apicad in apical third.
5. dark veins of elytra, especially the inner one (often ± pale) from tip of caudal prolongation of pronotum to membrane less raised.
6. exocorium at tip of caudal pronotal prolongation mainly quadriseriate, cells inequal in size, usually very small.
7. mesocorium 5—6 areolae deep at broadest point, cells small; areolae of membrane also smaller.
8. stylus (Fig. 7 u) thicker.

Material studied: Natal, Weenen, 1 ♀, type, IV. 1924, H. Thomasset, British Museum. Cameroon, Bas-Chari, near Fort-Foureau, several, 6. VIII. 1963, Péricart, Mus. Paris and my collection. On *Cyperus*.

MIRIDAE

1. *Deraeocoris nigriventris* Pop. ssp. *dryas* ssp.n.

Fig. 5 h. Length 3.75—4.5 mm. Shiny. Head black. 1st and 2nd antennal joints totally black, 3rd and 4th joints dirty yellow-brown, the last-named darker. Pronotum dark yellow-brown, calli shiny black or yellow-brown, lateral margins of disk tinged with dark brown. Scutellum black. Clavus, adjacent parts of corium and a subapical elongate spot in lateral margin dark brown; apex of cuneus also with a dark spot; rest of elytra yellowish brown, puncturing in corium dark. In dark specimens corium and clavus uniformly dark brown. Membrane, including cells and veins, basally dark brown, apically brownish hyaline. Under surface, including ostiolar peritremes, black. Legs pale, yellow-brown, femora with two dark rings, tibiae unicoloured pale (only a very indistinct trace of a basal dark ring visible), spines delicate, pale.

Body gracile, 3 × as long as broad at base of scutellum. Hair covering adpressed, concolorous. Vertex moderately convex, impunctate, ocular index 1.45. Antennae long and gracile, hair covering of joints semi-erect and concolorous, proportions between joints 14:37:18:19, 1st joint 0.67—0.74 × as long as diatone (14:19), 2nd 2.64—2.67 × as long as 1st, nearly twice as long as diatone (37:19) and as long as or slightly longer than basal width of pronotum. Rostrum to hind coxae. Pronotum 1.84 × as broad as head, 1.52 × as broad as long; collar raised, shiny, impunctate; calli fused to each other, well raised, impunctate, distinctly delimited by a transverse furrow anteriorly, by a punctate furrow posteriorly, the latter with two larger punctures close to each other at middle; posterior lobe of pronotum strongly convex, coarsely and densely punctate; lateral margins straight, strongly divering caudad; basal margin regularly and shallowly curved. Scutellum impunctate, finely transversely striated. Elytra extending well beyond abdomen, puncturing of clavus and inner corium resembling that of pronotum; lateral and apical parts of corium more sparsely and finely punctate, cuneus impunctate. Propleurae densely and coarsely punctate. Legs long and gracile. Proportions between joints of hind tarsi 9.5:13:14, claw in Fig. 7 q. Male genitalia in Fig. 7 l—p.

Material studied: Angola, Quedas Duque de Bragança, 1 ♂ type, 1970, and Carmona, 1 ♂ paratype, 1970, J. Quartau, my collection.

The nominate form (Eastern Africa) differs from the described race in the following respects: 1) Body considerably robuster. 2) Colouring paler: 1st antennal joint and basal two-thirds of 2nd yellow-brown. Upper surface pale yellow-brown, only scutellum with faint median infuscation. Clavus and large triangular patch in apical half of corium embrowned; membrane yellowish brown, only veins darkish. Legs with only faint brown annulation. 3) Head with considerably larger eyes, ocular index 1.29. 4) Puncturing of upper surface somewhat more obsolete.

Material studied: Eastern Africa, Victoria-Nyansa, Bukoba, 1 ♂ cotype, 13. IV. 1912, Troitskij, in Mus. Leningrad.

2. A new species of the genus *Collaria* Prov.

The African species of the genus *Collaria* can be distinguished as follows:

1 (4) Dark species, general colouring black or dark fuscous 2
2 (3) Pronotum narrowish, distinctly widening caudad only in basal third, humeral angles therefore prominent; pronotum black, lateral margins of basal lobe and humeral angles contrastedly pale ochraceous .... *nigra* Lv. in press (Ethiopia)
3 (2) Pronotum broader, regularly and distinctly broadening caudad in all basal lobe, humeral angles blunter. Pronotum black, only sides of collar yellowish ..... *villiersi* Cv. (Senegal)
4 (1) General colouring not predominantly black .. 5
5 (6) Pronotum immaculate ..... *danae* sp.n.
6 (5) Pronotum with black spots 7
7 (8) Pronotum with calli and a large roundish spot on either side of disk black; disk sparsely punctate, not rugose ..... *obscuricornis* Pop. (East Africa: Kilimandjaro, Meru)
8 (7) Pronotum with an elongate blackish spot on either side of disk, calli pale; disk densely punctate and rugose ..... *improvisa* Rt. (South and East Africa, Madagascar, Seychelles)

C. danae sp.n.

Length 6.5—7 mm. Colour differences of upper surface not contrasted. Head shiny, golden yellow, with a roundish shiny black apical spot occupying base of tylus and adjacent part of frons. Eyes blackish. Antennae dark brown, 1st joint yellow with apex blackish. Rostrum pale, tip black. Pronotum brownish, humeral angles and collar pale ochraceous, disk with a pale faint median line. Scutellum brown. Elytra shiny, brown, costal margin rather broadly pale ochraceous; cuneus pale ochraceous, usually with a faint brownish apical spot; membrane with veins dark smoky. Under surface and legs yellow-brown, femora with sparse fuscous spots. Genital segment (♂) medially blackish.

Body gracile. Hair covering long, pale, semidecumbent. Head rather convex, in profile regularly decliving ventrad until tip of tylus (in the other species tylus suddenly declivous, nearly vertical), vertex with a median sulcus, surrounded by a shallow depression, head otherwise smooth, impunctate, not rugose. Eyes large, ocular index 1.5 (♂) or 1.64 (♀). Antennae gracile, 1st joint and basal half of 2nd with long erect hairs; hair covering otherwise short, semierect; proportions between joints 23:66:60:45, 1st joint shorter than diatone (23:24.5 ♂, 20.25.5 ♀), 2nd joint 2.2 (♂) or 1.94 (♀) × as long as basal width of pronotum. Rostrum to hind coxae. Pronotum about 1.3 × as broad as long, 1.22—1.3 × as broad as head, relatively parallel-sided in apical half, distinctly widening caudad in basal part, humeral agnles rectangularly prominent, basal margin slightly insinuated medially; calli large, elevated; disk densely but rather obsoletely punctate and rugose, puncturing more obsolete than in *improvisa*. Scutellum moderately convex, transversely wrinkled. Elytra extending well beyond abdomen, clavus and adjacent parts of corium uneven, but only very indistinctly punctate. Legs long and gracile, with long erect hair covering.

Material studied: Ivory Coast, Lamto, 1 ♂, type, 18. VIII. 1965 and 3 paratypes, 14. VII.—18. VIII. 1965, Gillon. Types in my collection, a paratype also in coll. Gillon.

C. villiersi Cv. from Senegal differs in the dark fuscous to black colouring, with sides of the collar, the embolium, the base of the corium and the extreme base of the cuneus, yellowish. The 1st rostral segment is basally black. The eyes are much smaller, ocular index (♂) 2.0. The 1st antennal joints is longer than the diatone, the length of the 1st antennal joint is 1.1 mm., and of diatone 0.9 mm., and the 2nd joint is 2.5 × as long as the basal width of the pronotum.

3. *Stenotus chryseis* sp.n.

Length 5.5—6 mm. Head, pronotum and scutellum shiny. Head yellow-brown, tylus dark brown. Antennae reddish brown, 1st joint darker. Pronotum (Fig. 5 k) with a narrow, longitudinal dark brown band along lateral margins, disk tinged with golden yellow. Scutellum pale yellow. Elytra subopaque, pale yellow-brown, with a broad dilute fuscous longitudinal band from base of clavus to apical margin of corium, membrane brownish smoky, veins yellowish. Under surface pale yellow-brown; pro-, meso- and metapleurae with faint reddish dashes; venter with a longitudinal red band on either side. Legs yellow-brown, hind femora with traces of reddish irroration in apical part, knees sometimes red; tarsi, extreme apex of tibiae and tip of rostrum black. Tibial spines black.

Body gracile, > 3 × as long as broad. Head about 0.7 × as broad as pronotum, in apical view 1.35 (♂) or 1.13 (♀) × as broad as high, in profile slightly shorter (15:17) (♂) or longer (16:15) (♀) than high; eyes of ♂ large, prominent, ocular index 0.94—1.03 (♂) or 1.75 (♀). Proportions between first antennal joints (others absent) 20:61 (♂) or 17:50 (♀), 2nd joint about 1.5—1.6 × as long as basal width of pronotum. Rostrum to hind coxae. Pronotum narrow, in ♂ expanding more strongly caudad than in ♀, 1.7—1.8 × as broad as long (excluding collar), basal margin about twice as long as apical margin, lateral margins slightly insinuated; calli broad, well raised, impunctate; disk rather sparsely but distinctly punctate, punctures relatively coarse (about as in *transvaalensis* Dist.).

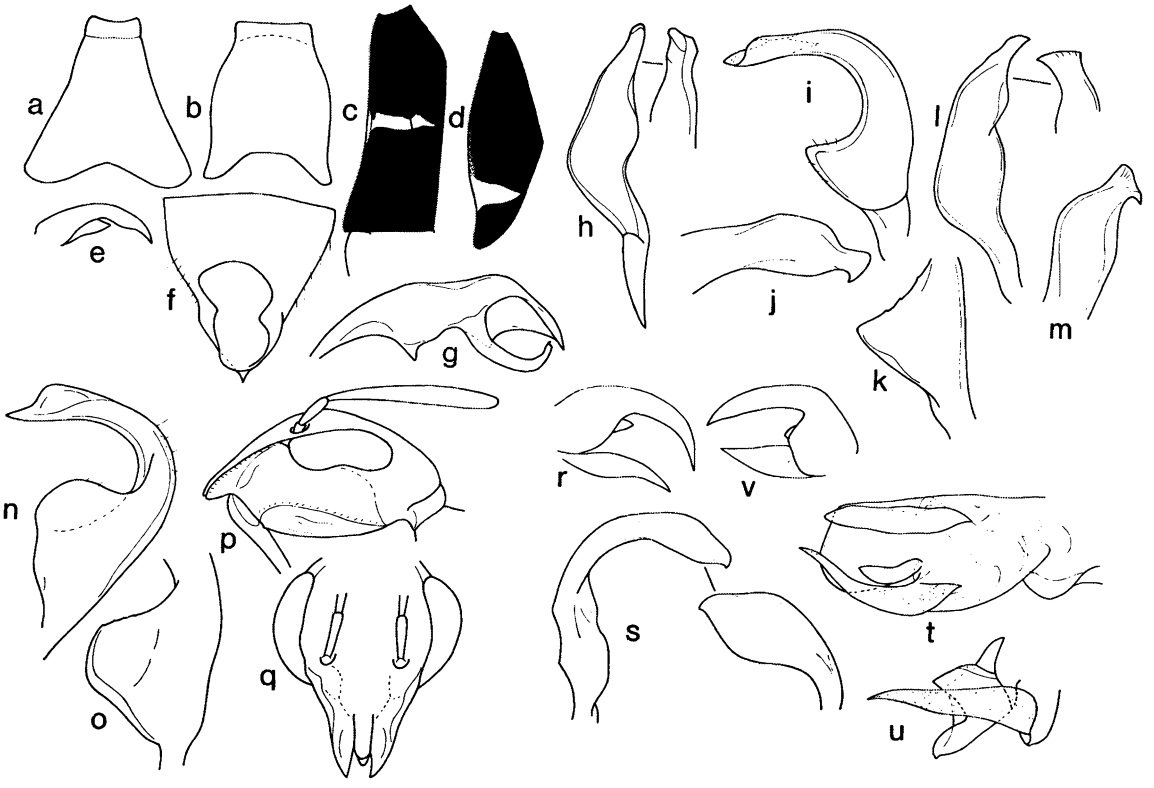

Fig. 8. *Leaina belua* gen.et sp.n: a pronotum (♂); b same (♀); c elytron (♂); d same (♀); p head from side; q same, frontal view; e claw; f pygophore, dorsal aspect; g theca. — *Stenotus chryseis* sp.n.: l right stylus; n left stylus; m hypophysis of same from above; o sensory lobe of same, broad aspect. — *S. transvaalensis* (Dist.): h right stylus; i left stylus; j hypophysis of same from above; k sensory lobe of same, broad aspect. — *Charagochilus ibykos* sp.n.: r claw; s left stylus; t—u penis. — *Proboscidocoris pallidiventris* Odh.: v claw.

Scutellum finely wrinkled, puncturing very indistinct. Elytra with yellowish hair covering, finely punctate. Male genitalia in Fig. 8 l—o, those of *transvaalensis* in Fig. 8 h—k.

Material studied: Ivory Coast, Lamto, 1 ♂, type and 2 paratypes, 12. X. 1965, Gillon. Type and a paratype in my collection, a paratype in coll. Gillon.

Easily recognized by the colouring, gracile body, etc. Closely related to *S. transvaalensis* (Dist.), mut differing in the colour pattern and the narrower body. Also, the sensory lobe of the left stylus is much broader than in *transvaalensis*. *S. gestroi* Pop., unknown to me, is smaller and robuster, length 5 mm, breadth 2 mm, body about 2.5 × as long as broad, and subopaque (wenig glänzend). The lateral bands of the pronotum are broad and red. The pronotum is also indistinctly punctate (sehr erloschen runzelig punktiert), while in *S. chryseis* the puncturing is coarse, although sparse.

4. *Stenotus klepsydra* sp.n.

Fig. 5 i—j. Length 4.5 mm. Shiny. Yellow-brown. Tylus, genae, frons and basal margin of head tinged with red. Antennae red, 3rd joint an dapical fourth of 2nd dark brown. Pronotum reddish brown, anterior margin and median spot between calli yellow-brown, ± tinged with fulvous, collar pale, tinged with orange. Elytra with conspicuous red markings: clavus, excluding apex, and a large, roughly quadrangular spot in apical half of corium red; membrane dark brown, veins red. Thorax and venter with red markings. Tip of rostrum dark. Femora reddish, tibiae yellow-brown, tarsi blackish, tibial spines black.

Body robust, about 2.75 × as long as broad at base of pronotum. Hair covering yellowish, short. Head 0.55 × as broad as basal width of proontum, in apical view 1.22 × as broad as high, in profile as long as high, frons convex, eyes small, ocular index 2.0. Proportions between antennal joints 15:38:25:?, 1st joint nearly 0.7 × as long as diatone, 2nd 1.73 × as long as diatone, slightly shorter than basal width of pronotum (38:40). Rostrum to hind coxae. Pronotum twice as broad as long (excluding collar), lateral margins straight, strongly diverging caudad; disk moderately convex, behind the small and faintly raised calli densely

and distinctly punctate. Scutellum finely rugose, very indistinctly punctate. Elytra as long as abdomen, clavus and corium densely and finely punctate.

Material studied; Sudan, Aloma Plateau, Yei-Iwatoka, 1 ♀, type, 12—13. IV. 1963, Linnavuori, my collection.

Of the *pylaon* group. Easily distinguished from the other species by the characteristic colour pattern, robust body, etc. The 1st antennal joint is pale only in *S. ruber* Pop. and *S. pulcher* Pop. In *S. ruber* the tarsi are pale, with only the last joint dark; the rostrum extends only to the middle coxae and the pronotum and the scutellum are less convex. The elytra are red, with the costal margin of the corium and the middle of the cuneus pale. *S. pulcher* is differently coloured, has larger eyes, etc.

5. *Charagochilus ibykos* sp.n.

Length 3.75—4.25 mm. Shiny black. Vertex with a faint pale spot near either eye. Antennae black, 2nd joint basally ± broadly yellow-brown, extreme base of 3rd joint white. Rostrum basally pale, apically mostly infumed. Extreme tip of cuneus paler. Membrane dark, with a small pale spot bordering apex of cuneus, apical vein of cells pale. Ostiolar peritremes dark. Anterior legs black, with tarsi slightly paler; other legs black, femora with a pale basal ring, apex of tibiae and tarsi pale.

Body large. Hair covering longish, dense, semidecumbent and dark. Body also clothed with silvery adpressed pubescence, most clearly visible on elytra and under surface, forming on elytra three longitudinal rows on clavus, less regular rows on base of corium, and separate patches on other parts of corium and cuneus. Head in apical view broader than high (24.5: 22), in lateral view about as long as high; base of vertex distinctly margined, ocular index 1.54—1.57. Proportions between antennal joints 8:35:15:16 (♂), 1st joint in both sexes 0.35—0.36 × as long as diatone, 2nd 1.4—1.5 × as long as diatone, 0.8—0.9 × as long as basal width of pronotum. Rostrum to hind coxae. Pronotum convex, sloping apicad; humeral angles rounded, collar raised, about as broad as 1st antennal joint; calli shiny, impunctate, disk densely and coarsely punctate and slightly rugose. Scutellum raised, puncturing as in pronotum. Clavus and adjacent parts of corium distinctly and densely punctate; puncturing in other parts of corium finer, in inner apical area indistinct; cuneal fracture distinct; larger membranal cell relatively rounded apically. Ostiolar peritremes rather large, orifices distinct. 2nd joint of hind tarsi slightly longer than 1st. Claw as in Fig. 8 r, without a basal tooth. Male genitalia in Fig. 8 s—u, spiculum of penis long and sharp, horn-shaped.

Material studied: Ivory Coast, Lamto, 1 ♂, type and 2 ♀ paratypes, 14. III. 1968, Pollet. Type and a paratype in my collection, a paratype also in coll. Gillon.

Easily recognized by the large size and black colouring. Superficially resembling certain species ot fhe genus *Proboscidocoris* Rt., but differing in the shorter head, the short 1st antennal joint and the structure of the claws, which in *Proboscidocoris* are more strongly curved and provided with a distinct basal tooth (Fig. 8 v). The structure of the male genitalia also resembles that of the genus *Charagochilus* Fb.

6. *Leaina* gen.n. *(Hallodapinae)*

Large black ant-like species. Elytra with a transverse white band at middle.

♂ macropterous, ♀ brachypterous. Hair covering long, black and erect; smooth pale hairs also present. Head (Fig. 8 p—q) elongate, considerably longer than broad, remarkably ant-like; eyes long and narrow, their basal corner far from the anterior margin of pronotum; upper surface of head only faintly convex, shallowly decliving apicad, base ecarinate; sides in front of eyes lamellate, owing to a sharp horizontal carina starting from apex of eyes; apex of genae sharply triangular, extending far beyond apex of tylus; under surface of head with a high longitudinal median ridge, otherwise strongly concave below eyes and the lateral ridges in apical part of head. Antennae starting from upper surface of head near lower corners of eyes, their 1st joint cylindrical, 2nd joint broadening apicad, strongly flattened, lamellate; other joints gracile, hair covering of antennae short and smooth. Rostrum short and gracile, extending to metasternum. Pronotum (Fig. 8 a—b) in ♂ strongly broadening caudad, moderately convex; collar broadish, lateral margins shallowly, basal margin strongly insinuated, in ♀ basal part of pronotum nearly parallel-sided. Scutellum elevated, but not provided with a special process. Elytra (♂) extending well beyond tip og abdomen, or (♀) reduced, covering only base of abdomen, acuminate and upcurved apically. Abdomen basally strongly constricted, ant-like. Legs long and gracile, femora and tibiae flattened; tibial spines black, longish; 2nd joint of hind tarsi longer than the others. Claw as in Fig. 8 e, pseudarolia well developed. Male genitalia of the Phylinae type, theca apically bifurcate.

Type: *L. belua* Lv.

Related to *Systellonotidea* Pop. and *Formicopsella* Pop., but differing from them and all genera known to me in the unique shape of the head. The Mediterranean genus *Myrmicomimus* Rt. has the sides of the head faintly carinate in front of the eyes, but the genae are adpressed towards the tylus and do not ex-

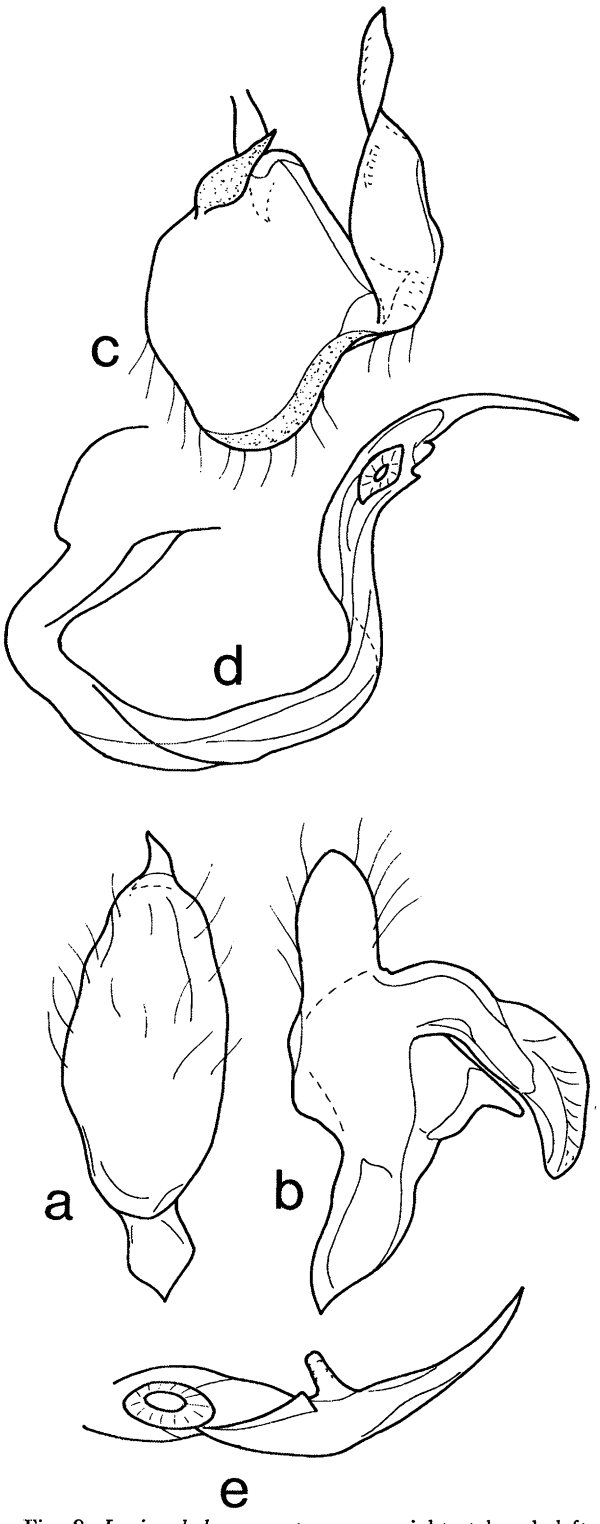

Fig. 9. *Leaina belua* gen.et sp.n.: a right stylus; b left stylus, lateral aspect; c same from above; d—e vesica.

tend beyond it apically, the under surface of the head is provided with two longitudinal keels medially, the 2nd joint of the hind tarsi is shorter than the 1st, etc.

L. belua sp.n.

Length 6.5—7 mm. Opaque. Black to blackish brown. Upper surface of head medio-apically ± yellow-brown. 1st antennal joint yellow-brown, others dark brown, base of 3rd pale. Elytra (Fig. 8 c—d) with a white transverse spot at middle, membrane dark brown. Legs dark brown, apex of fore femora, fore tibiae totally and apical two-thirds of other tibiae yellow-brown, legs in ♀ black, only tarsi basally pale.

Head 1.33 × as long as broad (apical view), in profile 1.8 × as long as high, ocular index 2.8. Proportions between antennal joints 10:50:35:21, 2nd joint strongly flattened, in ♀ more incrassate than in ♂. Pronotum and scutellum densely shagreened. Male genitalia in Fig. 8 f—g and Fig. 9.

Material studied: Ivory Coast, Lamto, 1 ♂, type, 14. VII. 1965, Gillon; 5 paratypes from same locality, 1964—1969, Gillon and Pollet. Type and paratypes in my collection, paratypes also in coll. Gillon.

LYGAEIDAE

1. On the red-coloured species of the *rivularis* group of the genus *Spilostethus* St.

The red-coloured species of the *rivularis* group of the genus *Spilostethus* St. were recently revised by SLATER (1964, p. 28—39), who also published excellent illustrations of them. The revision was mainly based on South African material. When I tried to identify a relatively large collection of the group from NE Africa and SW Arabia, several difficulties arose because the colour pattern in my specimens did not agree with the characters mentioned in SLATER's key. Consequently, I tried to find additional differences in the male genital structure. As stated already by SLATER, *S. taeniatus* (St.), *S. trilineatus* (St.) and *S. lemniscatus* (St.) differ from each other clearly in the male genitalia, especially in the shape of the genital opening of the pygophore, the form of the styli and of the lateral lobes of the sperm reservoir of the phallus. *S. rivularis* (Gm.) and *S. crudelis* (St.), on the other hand, are similar in genital structure and differ only in the colour pattern.

My material from NE Africa consists of two additional forms with the same genital structure, but easy to distinguish from *S. rivularis* and *crudelis* by the size and colour pattern, which was quite constant in the specimens studied. The taxonomic status of these four forms is problematic. They are either geographical

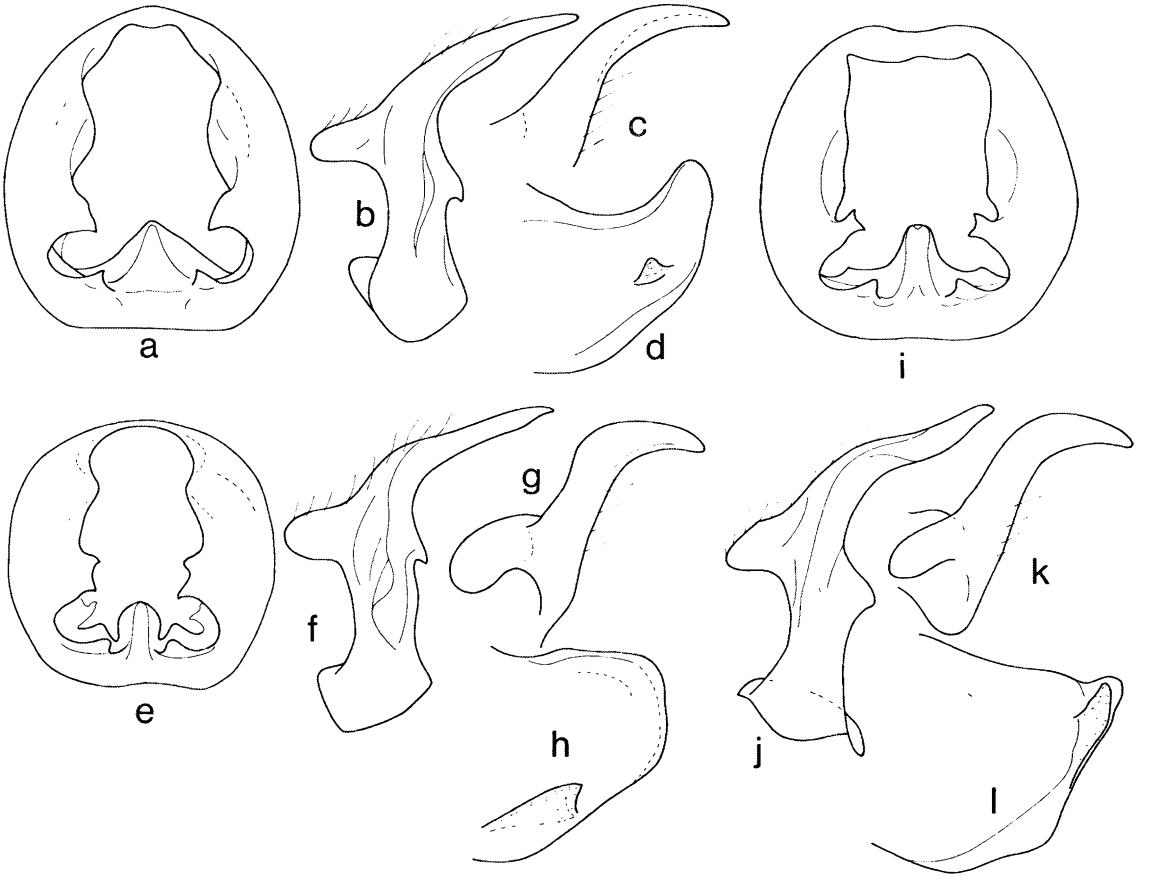

Fig. 10. *Spilostethus trilineatus* (F.): a pygophore, caudal aspect; b stylus; c hypophysis of same, broad aspect; d lateral lobe of sperm reservoir of phallus. — *S.rivularis* (Gm.): e—h same. — *S.lemniscatus* (St.): i—l same.

races of a single species, *S. rivularis,* or valid species. Concerning *crudelis* the latter seems more probable, since it and *rivularis* have the same range and apparently do not breed with each other, as no intermediate forms are known. I have regarded the two forms from NE Africa as geographical races of *rivularis,* since at present I have not seen any material of *rivularis* from the adjacent areas of East and Central Africa from which to establish whether they are also well isolated from *rivularis,* like *crudelis,* or whether intermediate forms exist at the borders of their ranges owing to the possible of breeding with *rivularis.*

Key to the species

1 (2) Pronotum with a percurrent narrow red median stripe. Scutellum also with a red midline ..... *taeniatus* (St.) (S. Africa, Sudan, Ethiopia)

2 (1) Red midline of pronotum remote from anterior margin. Scutellum black, only extreme apex sometimes paler 3

3 (4) Antennal tubercles red. Red midline of pronotum narrow and almost straight. Pygophore as in Fig. 10 a, ventral margin of genital opening with a broadly triangular median lobe, lateral lobes of genital opening ± triangular. Hypophysis of stylus (Fig. 10 b—c) slender. Lateral lobes of sperm reservoir of phallus (Fig. 10 d) elongately triangular, with a small triangular knob on lateral surface .... *trilineatus* (St.) (South and Equatorial Africa, Ethiopia, India)

4 (3) Antennal tubercles black. Red midline of pronotum roundedly expanded posteriorly (Fig. 11 b) 5

5 (8) Red median figure of head entire or at most slightly bifid apically, not Y-shaped 6

6 (7) Humeral angles of pronotum totally red. Male genitalia as in *rivularis* .....

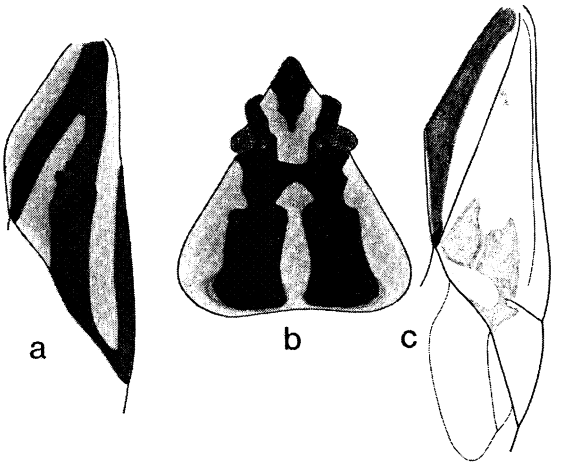

Fig. 11. *Spilostethus rivularis epimetheus* ssp.n.: a elytron. — *S.rivularis meleagros* ssp.n.: b head and pronotum. — *Pleurochiloporus pyrrha* sp.n.: c elytron.

crudelis (St.) (South Africa, Gambia, the last record should be verified)

7 (6) Humeral angles of pronotum black, with an ovate red spot. Pygophore (Fig. 10 i): ventral margin of genital opening with a narrowish median lobe; lateral margins with a narrow, apically bifid lobe. Stylus in Fig. 10 j—k. Lateral lobes of sperm reservoir of phallus (Fig. 10 l) broad, ventral margin with a chitinized band, forming a separate triangular lobe at apex ..... *lemniscatus* (St.) (S. Africa, record from Ethiopia undoubtedly refers to *rivularis epimetheus)*

8 (5) Red median figure of head Y-shaped 9

9 (10) Large from, length 12—14 mm, breadth 4—5 mm. Lateral margins of basal lobe of pronotum narrowly bordered with black. Red colouring of elytra dominant, the red bands distinctly broader than the black ones. Pygophore (Fig. 10 e): genital opening with a ± conical median lobe in ventral margin, lateral margins with a broadish, apically ± bifid lobe. Stylus in Fig. 10 f—g. Lateral lobes of sperm reservoir of phallus (Fig. 10 h) broad, apex broadly truncate, ventral margin with a triangular lobe .... *rivularis rivularis* (Gm.) (South and East Africa, Congo, Nigeria etc.)

10 (9) Smaller forms. Colour pattern different .. 11

11 (12) Lateral margins and humeral angles of pronotum broadly uniformly red as in *crudelis* (Fig. 11 b) .... *rivularis meleagros* ssp.n. (Sudan)

12 (11) Lateral margins of pronotum and humeral angles bordered with black. Pattern of elytra (Fig. 11 a): black bands broader than red ones ..... *rivularis epimetheus* ssp.n. (SE Sudan, SW Arabia, probably also Ethiopia)

S. rivularis rivularis (Gm.) .....

Length 14 mm. (according to STÅL 1865, p. 132 12—14 mm.), breadth 5 mm. (after STÅL 4—5 mm.). The largest and most robust form of the complex. Head with a well-developed Y-shaped median figure. Lateral margins and humeral angles of pronotum narrowly bordered with black. Red colouring of clavus and corium very extensive, covering a much larger portion of the surface than the black area; in many specimens the corium is almost entirely red, with only remnants of the black markings visible. Venter predominantly red, with only minor black markings at base and sides of each segment; last sternite largely black.

The form has a wide range in South, East and Central Africa, but does not seem to occur in NE Africa.

S. rivularis meleagros ssp.n.

Length 10—13 mm, breadth 3.2—4 mm. Body somewhat smaller and considerably more elongate than in the nominate form. The red Y of the head (Fig. 11 b) much broader than in the nominate form, with the stem about 0.5 × as broad as the synthlipsis (about 0.3—0.34 × in the nominate form). Pronotal pattern unique: lateral margins and humeral angles broadly red. Pattern of elytra as in the nominate form, although the black colouring is slightly more spread. Pattern of venter: black colouring more spread, forming larger patches than in the nominate form.

Range: a lowland form inhabiting the Sudan.

Material studied: Sudan, Blue Nile, Ingessana Mts. (a low hill area), 1 ♀ type and 1 ♀ paratype, 17—22. XI. 1962; Equatoria, 30 km N of Terakeka, 1 ♂ paratype, 4—5. III. 1963, Linnavuori. Types in my collection.

An interesting form, having the pronotal pattern as in *S. crudelis,* but differing in the Y-shaped median spot on the head. This spot is squarish in *crudelis,* no variability is known in this respect.

S. rivularis epimetheus ssp.n.

Length 10—11.5 mm., breadth 3.25—3.5 mm. The smallest form, much smaller than the nominate form. Body otherwise robuster than in the preceding subspecies. Pattern of head and pronotum as in the nominate form. Pattern of elytra (Fig. 11 a) as in *S. lemniscatus* (the red colouring represented by elongate narrow stripes covering much less of the surface than the black areas), save that the costal margin

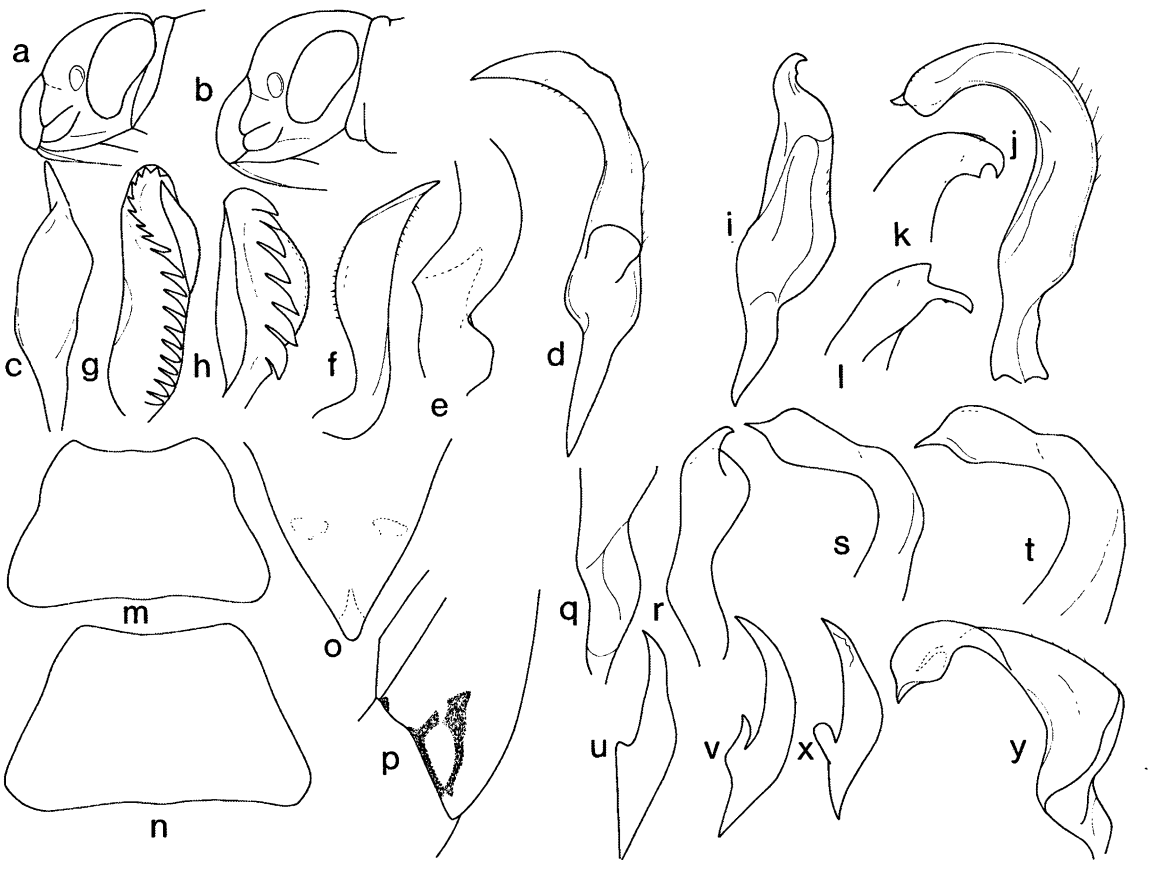

Fig. 12. *Masoas koronis* sp.n.: m pronotum. — *M.subtilis* sp.n.: n same; o scutellum; p pattern of elytron. — *Pleurochiloporus pyrrha* sp.n.: i right stylus; j left stylus; k—l hypophysis of same in different aspects. — *Calocoris caucasicus* (Pop.): s left stylus; u spiculum. — *C.iranus* Wgn.: r right stylus; t left stylus; v spiculum. — *C.demeter* sp.n.: q, y and x same. — *Phytocoris scitulus* Rt.: a head in profile. — *P.dorikha* sp.n.: b same; c right stylus; d left stylus; f hypophysis and e sensory lobe of same, broad aspect; g spiculum; a apical part of same in different aspect.

is basally red (completely dark in *lemniscatus*), although in the Yemen population only the extreme base is red. Black pattern of venter extensive, forming broad transverse bands along basal margins of sternites leaving only the apical half of the segments red.

Range: a mountain race inhabiting SE Sudan and SW Arabia and presumably also Ethiopia (recorded as *lemniscatus*).

Material studied:

Sudan, Imatong Mts., near Gilo, alpine zone above the tree limit, 1 ♂, type and several paratypes, 18—24. III. 1963, Linnavuori.

Yemen, many paratypes, Hada near San'a, ca. 8500 ft., 14. I. 1938; Jebel Jelal above Nakil Isla, ca. 10000 ft., 8. III. 1938; Jebel Masnah, SW of Ma'lar, 9. III. 1938; Jebel Sumara, ca. 9300 ft., 2. I. 1938; Summit of Jebel Kohl near San'a, 1. I. 1938; Ghaiman, near San'a, slopes of Jebel Girwan, ca. 9000 ft., 17. II. 1938; San'a, ca. 7900 ft., I. 1938; Wadi Ghailana, tributary of Wadi Siham, 11. III. 1938; Scott & Britton.

South Yemen, some paratypes, Jebel Jihaf, ca. 7700 ft., 4. X. 1937, Scott & Britton.

Holotype and paratypes in my collection, paratypes also in the British Museum.

Resembling *S. lemniscatus* in size and colouring, but readily distinguished by the male genitalia.

2. The genus *Masoas* Dist.

Of the small genus *Masoas* Dist. (= *Tamasanka* Dist.) only three species have hitherto been known. Two of them, *M. limbatus* (Dist.) and *M. transvaalensis* Dist., are lowland species inhabiting South and East Africa, Angola and Congo. The third species, *M. grandis* Scd., is known from East Africa and the

Congo and is apparently a mountain species, altitude of the known localities 900—2250 m above sea level, although it has been found in lowland biotopes too.

My material from NE Africa consists of two undescribed species, both monticolous, *M. subtilis* inhabiting high mountains above the tree limit and *M. koronis* occurring in cloud forest of lower slopes of mountains. Both species are closely related to *M. limbatus* and have certainly evolved from the *limbatus* stock after penetrating into the mountain areas of Ethiopia and adapting there to the new environments, rather widely isolated from the general range of the genus.

Key to the species

1 (2) Corium with a large apical dark brown patch .. *transvaalensis* Dist. (South and East Africa, Zaire)

2 (1) Corium without a large apical brown patch .. 3

3 (4) A large species, length ♂ 4.9 mm., ♀ 5.5 mm. Pronotum with a distinct white midline, lateral margins very weakly carinate ..... *grandis* Scd. (Zaire, East Africa)

4 (3) Smaller species. Pronotum without a distinct pale midline, lateral margins distinctly carinate 5

5 (6) Lateral margins of pronotum clearly insinuated at middle, distinctly lamellate (Fig. 12 m). Puncturing of posterior part of pronotum coarse and remarkably sparse, a relatively distinct impunctate longitudinal midline present. Antennae appearing long and relatively incrassate ..... *koronis* sp.n. (Ethiopia)

6 (5) Lateral margins of pronotum only very shallowly insinuated (Fig. 12 n), very narrowly carinate; puncturing of disk very dense and rather fine, a distinct impunctate midline absent. Antennae shorter and more gracile .. 7

7 (8) Smaller, length ♀ 3.5 mm., and narrower. Scutellum as long as broad, black, with a transverse impunctate whitish callosity on either side of the base of the apical half (Fig. 12 o) .. .. *subtilis* sp.n. (Ethiopia)

8 (7) Bigger, length ♂ 3.7 mm., ♀ 4.5 mm., and broader. Scutellum broader than long, without well delimited transverse callosities (irregular pale spots sometimes present, but these always punctate) .... *limbatus* (Dist.) (South Africa)

M. subtilis sp.n.

Length 3.5 mm. Subopaque. Head blackish, tylus and a medio-basal spot on vertex, ochraceous. 1st antennal joint infuscate with apex and base pale. 2nd and 3rd joints uniformly yellow-ochraceous. Pronotum ochraceous, anterior part with a broad black transverse band, narrowly broken at middle, posterior portion with 6 irregular brown longitudinal stripes. Scutellum black, apex and two ovate transverse callosities at base of apical half (Fig. 12 o) whitish. Elytra ochraceous; apical margin of clavus, inner apical angle of corium, a V-shaped figure in apical margin of corium (Fig. 12 p) and two small basal spots dark fuscous. Thorax black, margins of segments pale. Abdomen dark, connexivum with pale spots. Femora dark brown, apex narrowly whitish. Tibiae and tarsi pale ochraceous, knees infuscate.

Body 2.3 × as long as broad. Hair covering of upper surface smooth and pale. Head 1.3 × as broad as long. Vertex 3.67 × as broad as eye, densely punctate. Proportions between antennal joints 5:9:12:?, joints finely hairy. Pronotum (Fig. 12 n) narrowish, 1.74 × as broad as long at middle, distinctly tapering apicad, lateral margins almost straight and very narrowly carinate; disk rather convex, totally, densely and rather finely punctate; distance between punctures usually less than the diameter of puncture. Scutellum as long as broad, densely punctate, with a medio-basal depression; apical part with two transverse impunctate callosities. Puncturing of elytra dense. Fore femora with one larger and two small subapical teeth.

Material studied: Ethiopia, Mai Chew, alt. ca 3000 m., 1 ♀, type, 1.VI.1963, Linnavuori, in my collection. From mountain meadows in the *Erica arborea* zone above the tree limit.

M. limbatus (Dist.) is larger, length ♂ 3.7 mm., ♀ 4.5 mm., and especially ♀ considerably broader. The antennal joints 2nd—4th are rather dark yellow-brown, not contrastedly pale as in *subtilis*. The head is 1.3 (♂) —1.4 (♀) × as broad as long. The pronotum is broader, 1.8—1.9 × as broad as long medially. The scutellum is broader than long (27:25), the apical part provided at most with an irregularly delimited, punctate pale spot on either side.

M. koronis sp.n.

Length ♂ 3.7 mm., ♀ 4.5 mm. Shiny. Yellow-brown, with a greyish tinge and well-developed dark pattern. Head black, tylus and a median longitudinal stripe on vertex pale. Antennae yellow-brown, 1st joint with a broad blackish ring, also extreme base of 2nd and 3rd joints often dark. Anterior lobe of pronotum reddish brown, calli black; basal lobe pale greyish of greyish ochraceous, with 6 longitudinal blackish bands, the two median bands sometimes absent. Scutellum black, apex and two elongate spots in basal half pale. Corium with distinct fuscous spotting along veins in apical half; membrane brownish hyaline, with fuscous shadows at middle and apex. Dorsum of abdomen black, connexivum with alternating pale and black spots. Under surface mainly blackish, segmental margins often

± pale. Femora black or dark reddish brown, apex pale. Tibiae dark brown, with a broad pale median ring. Tarsi dark, 1st joint basally paler.

Body about 2.4 × as long as broad. Hair covering yellowish and semidecumbent. Head 1.35—1.36 × as broad as long, densely and finely punctate, mediobasal pale spot of vertex impunctate; ocular index about 3.1 (♂) or 3.55 (♀). Antennae long and incrassate, proportions between joints 5:9:12:15 (♂) or 6:10:13:17 (♀), total length of antennae 1.83—1.9 × as long as diatone (in *limbatus* only about 1.35 ×). Rostrum, as in the other species, near to middle coxae. Pronotum (Fig. 12 m) about 1.83—1.9 × as broad as long medially, lateral margins distinctly insinuated and more broadly carinate than in the other species; anterior lobe finely and rather densely punctate; puncturing of basal lobe coarse and sparse, distance between punctures often greater than diameter of a puncture, a relatively distinct ± callose and impunctate median line present. Scutellum as broad as long, base concave and minutely punctate, apical part with an irregular, ± distinct slightly callose median line, otherwise coarsely punctate; tip callose. Elytra as long as abdomen or slightly longer, puncturing coarser and somewhat sparser than in *limbatus*. Legs as in *limbatus*.

Material studied: Ethiopia, Belleta forest, 1 ♂, type and some paratypes, 13—14. VI. 1963, Linnavuori, in my collection. Swept from under vegetation in a cloud forest.

Differing from the other species in the shape and puncturing of the pronotum and the long and thicker antennae.

MIRIDAE

1. The genus *Pleurochiloporus* Rt.

The Ethiopian genus *Pleurochiloporus* Rt. has recently been treated by ODHIAMBO (1958). Of the genus four species have been described, one of them, *P. rufolineatus* Odh., being a synonym of a previously described species, however. Material of various Hemiptera from Kenya, sent by Mr. Per Knudsen, Eldoret, Kenya, contained an additional underscribed species, *P. pyrrha* sp.n. Moreover, I have a previously unknown species from Ethiopia that will be described in a paper on the Hemiptera of the Sudan (in press).

CARVALHO (1955, p. 106) has regarded *Pleurochiloporus* as a representative of the tribe *Hyalopeplini*. The genus is, in fact, closely related to *Megacoelum* Fb. (tribe *Mirini*), but differs in the shape of the head: the tylus in profile is vertical and the frons distinctly protruding apicad; a distinct notch is thus formed between it and the tylus. In *Megacoleum* the head slopes regularly ventrad; in profile the tylus is distinctly curvate and joined to the frons without a notch. Moreover, the lateral margins of the pronotum are ± distinctly subcarinate and the penis is not provided with a chitinized spiculum, which is well developed in *Megacoelum*.

All species of the genus are closely related to each other. They are inhabitants of the savannah and savannah forest region, *P. quadripunctatus* Rt. and apparently also *P. bipunctatus* Pop. known from the Cape Province having adapted to more arid conditions in steppe-like biotopes. *P. subhyalinus* Pop (= *rufolineatus* Odh.) is polyphagous and found on *Cajanus indicus, Gossypium hirsutum, Zea mays, Sesamum indicum, Crotalaria* and *Gynandropsis* (ODHIAMBO op.cit.). I have collected *P. quadripunctatus* on *Otostegia integrifolia* in Eritrea.

Key to the species

1 (4) Larger robust species, length 8 mm. or more. Elytra rather opaque. Claval commissure never red 2

2 (3) Head with two longitudinal red stripes. Humeral angles of pronotum with a round black spot .. .... *quadripunctatus* Rt. (Eritrea, Ethiopia)

3 (2) Head without red markings. Humeral angles of pronotum immaculate .... *bipunctatus* Pop. (South Africa)

4 (1) Smaller species, length < 8 mm. Elytra strongly shiny, hyaline. Claval commissure in fully coloured specimens red 5

5 (6) Humeral angles of pronotum immaculate. Vertex of ♂ much narrower than eye, ocular index 0.72 ..... *pyrrha* sp.n. (Kenya)

6 (5) Humeral angles of pronotum with a round black spot. Vertex in both sexes broader than eye 7

7 (8) Length < 7 mm. Veins of membrane always pale. Ocular index 1.13—1.43 (♂) or 1.25—1.71 (♀) ..... *subhyalinus* Pop. (East Africa, Sudan, Cameroon, Ethiopia)

8 (7) Length 7—7.5 mm. Veins of membranal cells in ♂ bright red, in ♀ pale. Ocular index (♂♀) 1.46—1.53 .. *rubrinervis* Lv. in press (Ethiopia)

P. pyrrha sp.n.

Length 7.5 mm. Shiny. Pale greenish. Head yellow, antennal tubercles, sides of frons and two spots on base of vertex tinged with orangish. 1st and 2nd antennal joints pale orangish, extreme apex of the latter and 3rd and 4th joints totally dark brown. Eyes dark brown. Pronotum pale green, with 3 irregular, not contrasted, reddish longitudinal bands,

one at middle, broken at calli, one along either lateral margin; disk with a faint orangish spot on either side of the median band behind calli; base of pronotum dark fuscous. Scutellum greenish yellow, base with two dark brown longitudinal bands of the same shape as in *subhyalinus* ♂, but much shorter. Elytra (Fig. 11 c) greenish yellow, hyaline; commissural margin of clavus bright red, scutellar and commissural margins otherwise broadly margined with dark brown, apex of clavus with a black spot; apex of corium with a dark brown suffusion; membrane pale brownish hyaline, veins green. Under surface greenish yellow, sides of pronotum with a narrow longitudinal red stripe. Legs yellowish, fore and middle femora spotted with brown apically, apical half of hind femora darkened, tibiae apically green, tarsi green. Tibial spines dark.

Elongate. Hair covering sparse, long, semi-erect, yellowish. Head $0.6\times$ as broad as pronotum, in apical view broader than high (33:25), in profile higher than long (24:20); eyes very large, ocular index 0.72, vertex with a median sulcus; frons finely microsculptured, roundedly protruding apically, in profile a distinct notch between it and the vertical tylus. Antennae long, proportions between joints 30:70:49:29, 1st joint shorter than diatone (30:33), with a few black bristles, 2nd joint $1.27\times$ as long as basal width of pronotum. Rostrum to apex of hind coxae. Pronotum $1.83\times$ as broad as long medially, structure as in *subhyalinus*. Scutellum convex. Elytra long, transparent. Male genitalia in Fig. 12 i—l.

Material studied: Kenya, Eldoret, 1 ♂, type, Per Knudsen, in my collection.

The new species is easily recognized by the narrow vertex, the colouring, the long hair covering of the upper surface and the genitalia.

2. A new species of the genus *Megacoelum* Fb. from Egypt

The genus *Megacoelum* Fb. has recently been treated by me (LINNAVUORI 1965) and WAGNER (1967). The Palaearctic species of the genus fall within three group. The first group consists of *M. pellucens* Pt. (= *persimile* Rt.) and is characterized by the remarkably long and peculiarly coloured antennae. The second group is recognized by the long erect hair covering of the upper surface of the body and of the inner surface of the hind tibiae. It contains four species: *M. beckeri* Fb., *M. quercicola* Lv., *M. pulchricorne* Rt. and *M. angustum* Wgn. In the third group the hair covering of the upper surface is short or absent and the hairs on the inner surface of the hind tibiae are short. The species of this group can be distinguished as follows:

1 (4) Pronotum, scutellum and elytra uniformly yellowish or greyish brown, immaculate .. 2
2 (3) Smaller, length 5.5—6.2 mm. Ocular index 0.53—0.60 (♂) or 0.95 (♀). On *Zollikoferia spinosa* ..... *zollikoferiae* (Ldb.) (Canary Is., Spanish Sahara)
3 (2) Bigger, length 8.0—8.2 mm. Ocular index 0.67 (♂) or 0.80 (♀). On *Tamarix* .... *sordidum* Rt. (Egypt)
4 (1) Upper surface with reddish or brown markings 5
5 (10) Rostrum extending beyond hind coxae .. 6
6 (7) Vertex very narrow, ocular index (♀) 0.78. On *Haloxylon* .. *andromakhe* sp.n. (Egypt)
7 (6) Vertex much broader 8
8 (9) 3rd antennal joint slightly longer than basal width of pronotum. On *Myrtus communis* .. .. *myrti* Lv. (Turkey, Cyprus)
9 (8) 3rd antennal joint considerably shorter than basal width of pronotum. On deciduous trees like *Tilia* ..... *infusum* (H.-S.) (Europe)
10 (5) Rostrum extending only to middle coxae .. 11
11 (12) Eyes unusually large, ocular index 0.49 (♂) or 0.8 (♀). On *Indigofera* .... *oculare* Wgn. (Iran, Arabia, Somalia)
12 (11) Vertex broader 13
13 (14) Elytra yellow-brown, scutellar margin of clavus embrowned. Legs yellow-brown. Ocular index 0.7 (♂) or 1.0 (♀) ..... *brevirostre* Rt. (Cyprus, Israel, Turkey-Iran, Turkestan)
14 (13) Elytra greenish, cuneus red. Tibiae green. Ocular index 0.8 (♂) or 1.2 (♀) .... *tricolor* Wgn. (Iran)

M. andromakhe sp.n.

Length 7.5 mm. Opaque. Whitish ochraceous, tinged with reddish. Frons with fine red spotting forming faint broken lateral arcs. Eyes pale grey. Antennae whitish ochraceous, 1st joint with minute sanguineous spotting. Pronotum tinged with reddish, lateral margins of anterior part sanguineous, a narrow delicate longitudinal red stripe on anterior margin between calli. Scutellum with faint red spotting. Elytra pale reddish ochraceous, scutellar margin of clavus dark fuscous, inner apical angle of corium and inner basal angle of the pale cuneus with a dark brown spot; membrane pale brown, veins red. Under surface tinged with reddish, sides of prothorax with a faint longitudinal sanguineous stripe. Legs pale yellow-brown, femora and base of hind tibiae with minute sanguineous dotting.

Upper surface with delicate smooth pale hairs, best visible on elytra. Head $0.6\times$ as broad as pronotum, in apical view $1.3\times$ as broad as high, finely shagreened; vertex narrow, with a deep median sulcus;

eyes very large, ocular index 0.78. Antennae long, proportion between joints 30:80:60:31; 1st joint thick, with a few black bristles, 0.55 ×, 2nd joint 1.48 × and 3rd joint 1.11 × as long as basal width of pronotum. Rostrum beyond hind coxae. Pronotum densely microsculptured, disk also transversely wrinkled. Legs incrassate; anterior and middle femora with a few black bristles apically, bristles of hind femora more numerous; hind tibiae with dark bristles, hairs of inner surface very short, much shorter than cross section of tibia.

Material studied: Egypt, Sinai, Wadi Feiran, 1 ♀, type, in my collection, 25—29. IX. 1962, Linnavuori. On *Haloxylon schweinfurthi.*

Easily recognized by the opaque upper surface, the large eyes, the incrassate 1st antennal joint, the colouring, etc.

3. On the subgenus *Calocorisellus* Wgn. of the genus *Calocoris* Fb.

The subgenus *Calocorisellus* was described in 1968 by WAGNER, who included in it *C. tegularis* Pt., *C. villiersi* Wgn., *C. iranus* Wgn. and *C. sanguineovittatus* Rt. Of them the last-named is distinguished by the sanguineous markings on the elytra, while *C. tegularis* and *C. villiersi* are characterized by the robust and large body. The third group, recognized by the smaller and elongate body, consists of *C. iranus* and two related forms, *C. caucasicus* (Pop.) and *C. demeter* sp.n. The former, originally described as *Creontiades* Dist., is very closely related to *iranus,* e.g. the male genitalia are practically similar. *C. iranus* could, in fact, be merely a geographical race of *caucasicus.* Since certain differences can be found, however, I have retained it as a valid species. Its taxonomic status can finally be solved only by studying material from areas between the type localities, Caucasia and Baluchistan. The third form, *C. demeter,* could also be an extreme race of *caucasicus,* but since its range is relatively widely separated from that of the others, and since some genital differences were also found, I have described it as a species.

The main range of the genus is Eremian, stretching from North Africa to Central Asia. The species live on various desert plants, I have collected *C. tegularis* from *Farsetia ramosissima* in the semideserts of the Sudan.

Key to the species

1 (2) Elytra with intensive sanguineous pattern .. .. *sanguineovittatus* Rt. (Palestine)
2 (1) Elytra pale, at most veins of membrane red 3
3 (6) Large robust species 4
4 (5) Length 7—7.5 mm. Vertex narrower, ocular index 0.86 (♂) or 1.02 (♀). Antennae shorter: 1st joint about 0.57—0.6 × as long as diatone, 2nd 1.15 (♂) or 1.07 (♀) × as long as basal width of pronotum .... *tegularis* Pt. (Algeria, Sudan)
5 (4) Larger, length of ♂ 7.5—7.7 mm., of ♀ 6.7—7.75 mm. Vertex broader, ocular index 1.0 (♂) or 1.44 (♀). Antennae longer, 1st joint 0.70—0.74 × as long as diatone, 2nd 1.1—1.13 × as long as basal width of pronotum .. .. *villiersi* Wgn. (Iran, Transcaspia)
6 (3) Elongate species 7
7 (8) Length ♂ 7.5 mm. Antennae long and relatively dark, 1st joint 0.65—0.69 × as long as diatone, 2nd about 1.5 × as long as basal width of pronotum. Pronotum considerably narrower, 1.67 × as broad as long (incl. collar) .... *caucasicus* (Pop.) (Caucasia)
8 (7) Length ♂ < 7 mm. Antennae shorter and paler. Pronotum broader, about 1.74 × as broad as long 9
9 (10) Veins of membrane, apical margin of corium and inner margin of cuneus pink. Antennae short, 1st joint 0.51 × as long as diatone, 2nd only 1.11 × as long as basal width of pronotum. Hind tibia 1.8 × as long as basal width of pronotum .... *demeter* sp.n. (Arabia)
10 (9) Veins of membrane pale. Antennae longer, 1st joint 0.54—0.64 × as long as diatone, 2nd 1.12—1.27 × as long as basal width of pronotum. Hinda tibia (♂) 2.2 × as long as basal width of pronotum .... *iranus* Wgn. (Iran, Baluchistan)

C. caucasicus (Pop.), comb.n.

Creontiades caucasicus POPPIUS 1912, p. 6.

1. Length (♂) 7.5 mm. Body elongate. Colouring pale.

2. Hair covering predominantly dark, pale hairs mainly visible only on basal part of elytra.

3. Ocular index 0.80—0.82.

4. Antennae relatively dark, long; proportions between joints 20:75:36:21, 1st joint 0.65—0.69 × as long as diatone, 2nd 1.5 × as long as basal width of pronotum.

5. Pronotum narrower than in the other species, about 1.67 × as broad as long (incl. collar), calli broad.

6. Hind tibia 2.1 × as long as basal width of pronotum, tarsus 0.26 × as long as tibia, proportions between joints 7:13:12.

7. Male genitalia (Fig. 12 s and u) much as in

iranus; enlarged apex of hypophysis of left stylus relatively narrow.

Range: Caucasia.

Material studied: Caucasia, Erivanskaje gub., Etsimiadzin, 2 ♂ cotypes, one of them designated here as the lectotype in Mus. Helsinki, 2 ♂♂ in my collection, 6. VII. 1909, Brjanskin.

C. iranus Wgn.

1. Smaller, length 6.4—6.5 mm. (♂), 7.0—7.3 mm. (♀). Body somewhat robuster. Colouring pale.

2. Pale hair covering more abundant, also clearly visible between dark hairs on apical part of elytra.

3. Ocular index 0.87—0.95 (♂), 1.2—1.3 (♀).

4. Antennae paler and shorter; proportions between joints 17:60:35:?, 1st joint 0.54—0.64 × as long as diatone, 2nd 1.12—1.27 × as long as basal width of pronotum.

5. Pronotum distinctly broader, about 1.74 × as broad as long, disk somewhat more convex, more even and shiny, calli broad.

6. Hind tibia (♂) 2.2 × as long as basal width of pronotum, tarsus 0.26 × as long as tibia, proportions between joints 6:9:11.

7. Male genitalia in Fig. 12 r, t and v.

Range: Iran, Baluchistan.

Material studied: Iran, Baluchistan, Iranshar, 2 exx., 1—16. IV. 1954, Richter & Schäuffele, my collection.

C. demeter sp.n.

1. Length (♂) 6.5 mm. Body form as in *iranus.* Colouring pale. Veins of membrane, inner apical margin of corium and inner margin of cuneus pink, medio-apical parts of corium with a very faint pinkish tinge.

2. Hair covering as in *iranus.*

3. Ocular index 0.87.

4. Antennae pale and remarkably short, proportions between joints 15:52:27:14, 1st joint 0.51 × as long as diatone, 2nd 1.11 × as long as basal width of pronotum.

5. Pronotum broad as in *iranus,* 1.74 × as broad as long, calli small.

6. Hind tibia 1.8 × as long as basal width or pronotum, tarsus rather short, 0.23 × as long as tibia, proportions between joints 6:10:11.

7. Male genitalia in Fig. 12 q, y and x. Left stylus more strongly curved, its basal part broader, apical part of hypophysis considerably broader. Spiculum somewhat thicker.

Range: Arabia.

Material studied: Saudi Arabia, Er Riyadh, 1 ♂, type, 18—30. III. 1959, Dr. Diehl, my collection.

4. The *scitulus* group of the genus *Phytocoris* Fn.

Small reddish brown species, with all tibiae distinctly ringed with black.

The subgeneric position of the group is somewhat problematical. It agrees with *Ribautomiris* Wgn. in the small size, in the short 1st antennal joint, at most slightly longer than diatone, and in the short head (Fig. 12 a—b), in which the frons is only moderately convex, forming a shallow depression between it and the tylus. On the other hand, it also resembles certain species of the subgenus *Compsocerocoris* Rt. Typical species of that subgenus are larger, with the 1st antennal joint distinctly longer than the diatone, and the frons is strongly convex, so that a strong notch is formed between it and the tylus. Some species, however, are small, 5 mm. or less in length, with the 1st antennal joint only as long as the diatone or nearly so (*viberti* Hv., *carayoni* Wgn.). In other respects also, these species strongly resemble representatives of the *scitulus* group, although the notch between the frons and the tylus is slightly stronger.

Also, certain differences in the genital structure can be found. The hypophysis of the left stylus is blade-shaped in the *scitulus* group, narrow and ± expanded apically in *Compsocerocoris.* The spiculum is long and always provided with many teeth in *Compsocerocoris,* while it is usually short and provided with few teeth in the *scitulus* group. *P. dorikha,* at least, has a long spiculum.

In my opinion, the *scitulus* group agrees better with *Ribautomiris* than with *Compsocerocoris,* although it has a relatively isolated position in the former.

The group has a Pontomediterranean range, the other representatives of *Ribautomiris* being inhabitants of the Mediterranean area. The subgenus *Compsocerocoris* is mainly West-Mediterranean, although one species, *C. cyprius* Wgn., is known from Cyprus.

Key to the species

1 (2) Vertex remarkably narrow, in ♂ narrower (ocular index 0.92, in ♀ slightly broader than eye. General colouring remarkably dark. 1st antennal joint (♂) 0.86 × as long as diatone. On *Pinus pallasiana* .... *scituloides* Ldb. (Cyprus)

2 (1) Vertex distinctly broader than eye in both sexes 3

3 (4) 2nd antennal joint white, with 3 distinct black rings. Ocular index 1.12—1.18 (♂), 1.4—1.67 (♀). 1st antennal joint 1.02 (♂) or 1.14 (♀) × as long as diatone. Comb-shaped spiculum with 3 teeth. On *Olea europaea* .... *oleae* Lv. (Israel)

4 (3) 2nd antennal joint yellow-brown, with apex and a subbasal ring somewhat darker (rarely with traces of 3 dark rings). Vertex broader 5

5 (6) Antennae rather incrassate and dark, 2nd joint dark yellowish brown, with apex and a subbasal ring somewhat darker. Ocular index (♂) 1.8. Spiculum with several teeth .... *dorikha* sp.n. (Iran)

6 (5) Antennae gracile, 2nd joint pale yellow-brown, extreme base white, apex and a narrow subbasal ring dark (sometimes also with a faint third dark ring). Spiculum with 5—6 teeth 7

7 (8) Length 4.7—5.2 mm. Ocular index 1.26 (♂), 1.64 (♀). Spiculum with 5—6 teeth. On *Taxus baccata* ..... *scitulus scitulus* Rt. (Caucasia)

8 (7) Length 4.5—5 mm. Ocular index 1.35 (♂), 1.72—1.92 (♀). Spiculum with 6 teeth .... *scitulus frater* Krz. (Crimea)

Of the other species of *Ribautomiris* only *P. buxi* Rib. has all tibiae annulated with black. It differs from the *scitulus* group, for example in the uniformly pale yellowish head. In the other species (*P. minor* Kbm., *P. fieberi* Bol., *P. parvulus* Rt., *P. cedri* Ldb., *P. pini-halepensis* Ldb., *P. parvuloides* Wgn. and *P. tauricola* Lv.) at most the fore tibiae are ornamented with dark rings.

P. dorikha sp.n.

Length 5.25 mm. Ochraceous, with rich reddish and dark brown markings. Y-shaped median figure of tylus, continuing as a short midline onto the frons, and sutures of lorae and genae dark brown; frons and vertex with a broad irregular reddish longitudinal band on either side, base of vertex with filigreed dark brown markings. Eyes greyish. 1st antennal joint blackish brown, with yellow-brown spots, the dark colour dominant; 2nd joint dark yellowish brown, its base and median ring somewhat paler; other joints dark brown, extreme base of 3rd joint paler. Pronotum reddish brown, basally tinged with dark brown; basal margin narrowly and some faint areas in other parts of disk paler. Scutellum heavily marked with dark brown. Elytra reddish ochraceous, with abundant dark brown irroration forming larger dark patches on inner part of corium and clavus; membrane milky, irrorated with brown; veins pale, slightly tinged with reddish. Under surface with abundant reddish and dark brown markings, propleurae with a longitudinal dark band. Femora heavily marked with dark brown; tibiae with distinct dark rings, narrower than the alternating yellowish brown areas; tarsi dark.

Small. Body nearly 4 × as long as broad at base of pronotum. With silvery adpressed and longer semidecumbent yellowish hairs. Head in apical view only slightly broader than high (23:22), lorae only roundedly prominent; head in profile (Fig. 12 b) higher than long (20:15), frons moderately convex, a shallow notch between it and tylus; ocular index 1.8. Antennae moderately incrassate, proportions between joints 23: 45:29:22, 1st joint with long erect pale setae, as long as diatone, 2nd joint 1.3 × as long as basal width of pronotum. Rostrum to hind coxae. Pronotum 1.52 × as broad as head, 1.8 × as broad as long (incl. collar), lateral margins straight. Femora with long erect hairs, tibiae also with some long erect hairs, longer than the cross section of tibia. Male genitalia in Fig. 12 c—h. Pygophore without processes. Hypophysis of left stylus blade-shaped. Spiculum provided with a row of about 19 teeth and with a finely serrate rounded lobe in apical part.

Material studied: Iran, Shachkuh (superior), 1 ♂, type, my collection, 16. VI. 1914, Kiritshenko.

5. On the *salsolae* group of the genus *Phytocoris* Fn.

The *salsolae* group of the subgenus *Eckerleinius* Wgn. consists of large pale species. The comb-shaped spiculum of the vesica is long and provided with several teeth. The range of the group lies within the Eremian subregion, the centre of origin apparently being in North Africa, from where most of the species are known. In the East it is replaced by the *incanus* group, with a small spiculum provided with a small number of teeth. The species live on halophytes or various steppe or desert plants.

Key to the species

1 (12) 1st antennal joint short, less than 1.2 × as long as diatone 2

2 (3) 1st antennal joint only 0.88—0.90 × as long as diatone. Ocular index 1.39 (♂) or 1.8 (♀). Spiculum with 10 teeth. Length of body ♂ 5.0—5.2 mm., ♀ f.brach. 4.25—4.35 mm. On *Artemisia herba-alba* . . *libycus* Wgn. (Libya)

3 (2) 1st antennal joint longer 4

4 (9) 1st antennal joint at most 1.1 × as long as diatone 5

5 (6) 1st antennal joint with apex and 2 irregularly broken median rings dark fuscous, 1.1 × as long as diatone. Ocular index (♂) 1.33. Spiculum strongly bent, its apical part with 12, basal part with 6 teeth. Length of body 6.5 mm ..... *strigilifer* Lv. (Arabia)

6 (5) 1st antennal joint with only faint brownish irroration 7

7 (8) Ocular index 1.62—1.70 (♂), 2.1 (♀). Spiculum with a row of 10 irregularly distributed teeth. Length of body 5.8—6.7 (♂), ♀ f. brach. 4.0—5.0. On *Salsola* and *Suaeda fruticosa* .... *salsolae* Pt. (NW Africa, Spain)

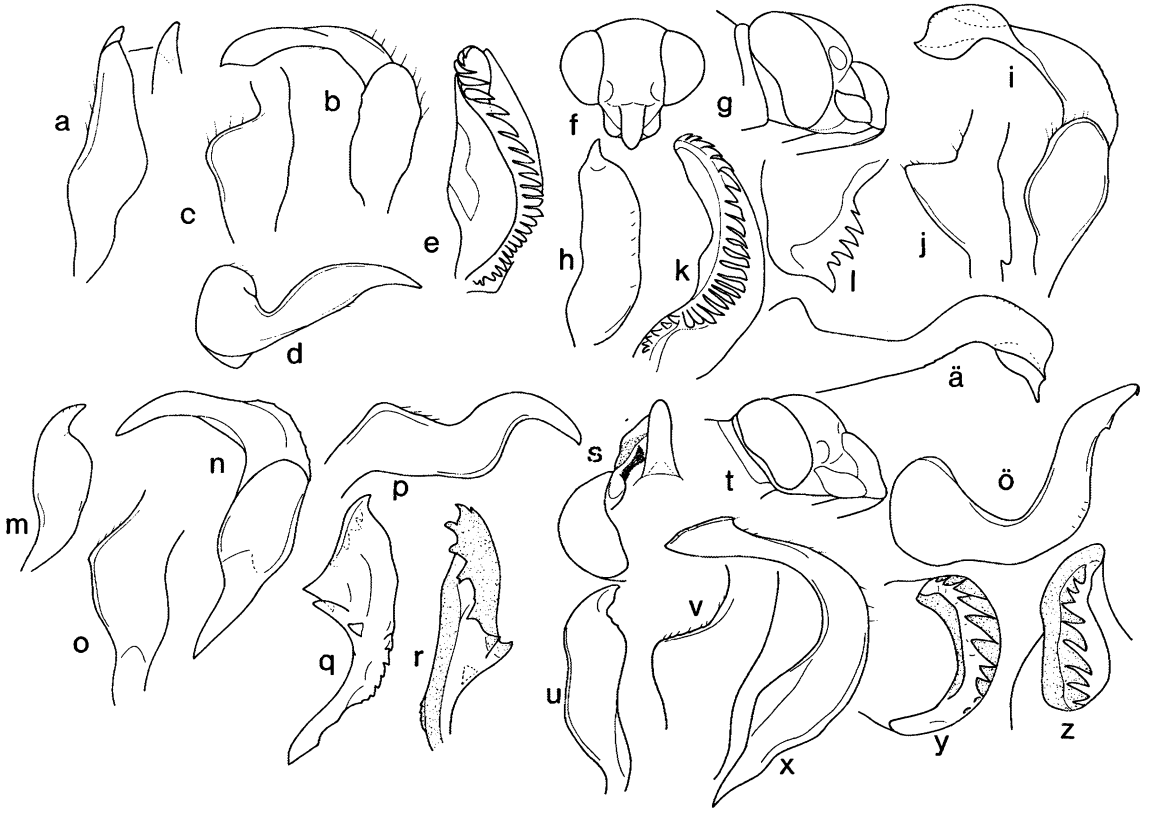

Fig. 13. *Phytocoris gandalicus* sp.n.: f head, apical view; g same from side; h right stylus; i left stylus; ä hypophysis and j sensory lobe of same in broad aspect; k spiculum; l lower end of same in a different aspect. — *P.mariut* sp.n.: a right stylus; b left stylus; c sensory lobe and d hypophysis of same in broad aspect; e spiculum. — *P.digla* sp.n.: s head, apical view; t same from side; u right stylus; x left stylus; v sensory lobe and ö hypophysis of same in broad aspect; y—z spiculum in different aspects. — *P.laios* sp.n.: m right stylus; n left stylus; p hypophysis and o sensory lobe of same in broad aspect; q—r spiculum in different aspect.

8 (7) Ocular index 1.2 (♂). Spiculum with 9 thick teeth in a regular row. Length of body 6.5 mm. (♂) .... *swirskii* Lv. (Israel, Egypt)

9 (4) 1st antennal joint longer 10

10 (11) Length of body 8.75 mm. 2nd antennal joint yellowish brown, with extreme base whitish. Ocular index 1.5 (♂). 1st antennal joint 1.18 × as long as diatone. Spiculum long, with about 26 large teeth. On *Retama* .... *gandalicus* sp.n. (Egypt)

11 (10) Length of body 6.7—7.6 mm. 2nd antennal joint with apex and a subbasal ring darker fuscous. Ocular index 1.36 (♂). 1st antennal joint 1.16 × as long as diatone. Spiculum with large teeth only in apical half, basal half only minutely serrate as in *incanus* Fb .. .. *rjabovi* Krz. (Caucasia)

12 (1) 1st antennal joint more than 1.2 × as long as diatone 13

13 (14) Vertex narrow, ocular index 1.07—1.09 .... *mariut* sp.n. (Egypt)

14 (13) Vertex much broader 15

15 (16) Ocular index 1.61 (♂), 1.80—1.85 (♀). Base of pronotum with a double row of dark spots. 2nd antennal joint with apex and a basal ring darker fuscous. On *Haloxylon schweinfurthi* .... *priesneri* Wgn. (Egypt)

16 (15) 2nd antennal joint without a dark basal ring. Base of pronotum with a single row of dark spots. Vertex much narrower, ocular index < 1.3 17

17 (18) Length ♂ 7—7.5 mm. 2nd—4th antennal joints remarkably dark .... *caucasicus* Krz. (Caucasia)

18 (17) Length 5.5—5.7 mm. (♂), 4.50—4.75 mm. (♀ f.brach.). Antennae pale. On halophytes ..... *meinanderi* Wgn. (Canary Is.)

P. gandalicus sp.n.

Length 8.75 mm. Pale greyish ochraceous, with abundant fuscous irroration. Apical part of head with brown markings on inner margin of lorae, tylus and antennal tubercles; frons with distinct dark lateral arcs. Eyes dark brown. Antennae yellow-brown; 1st joint with rich, ± confluent brown irroration; extreme base of 2nd and 3rd joints slightly paler. Pronotum with faint brown irroration, basal margin with a single row of dark spots. Scutellum largely embrowned, apex and sides paler. Elytra pale grey, with a fairly evenly distributed abundant brown irroration; apical part of corium with a more distinct longitudinal dark dash, costal margin and apical margin of corium with some dark spots; membrane milky, with dense dark irroration; veins pale. Meso- and metathorax largely dark brown. Legs yellow-brown. Apical part of fore and middle femora with brown irroration, that of hind femora denser and more spread, extending near to base; tibiae with narrow dark rings, even the pale areas finely irrorate; tarsi brown, 2nd joint pale.

Body long and elongate, about 4 × as long as broad at base of pronotum. With dense double hair covering, pale hairs adpressed, dark hairs, present especially on pronotum, semidecumbent. Head (Fig. 13 f—g) in apical view 1.16 × as broad as high, the apical part below eyes remarkably short, lorae prominent; head in profile 1.22 × as long as high, frons rather weakly convex, tylus prominent, almost vertical; ocular index 1.5. Antennae long and gracile, proportions between joints 33:66:50:26, 1st joint gracile, provided with rather short and few pale bristles and dense adpressed pale hairs, 1.18 × as long as diatone, 2nd joint 1.32 × as long as basal width of pronotum. Rostrum to hind coxae. Pronotum 1.8 × as broad as head, twice as broad as long (incl. collar), lateral margins slightly insinuated. Tibial spines shortish, pale. Male genitalia in Fig. 13 h—l and ä. Pygophore with only a small knob on left side. Spiculum with 26 teeth in an undulating row.

Material studied: Egypt, Wadi Gandali, 1 ♂, type, in Mus. Leningrad, 1. II. 1916. On *Retama raetam.*

Easily recognized by the large size, the shape of the head, etc.

P. mariut sp.n.

Length 7.5 mm. Colouring as in the preceding species, but general colouring somewhat more brownish; head pale, nearly immaculate; eyes paler brown. Dark irroration of 1st antennal joint more scanty. Basal margin of pronotum whitish, bordered with a narrow dark brown band, broken at middle. Elytra with a slight reddish brown tinge, pattern otherwise as in *gandalicus.* Also, pattern of under surface and legs as in *gandalicus,* dark rings of tibiae more distinct. Apex of 1st joint, 2nd joint and base of 3rd joint of hind tarsi pale.

Body about 4.2 × as long as broad at base of pronotum. Hair covering dense and long, consisting of pale adpressed and longish semidecumbent black hairs. Head in apical view 1.28 × as broad as high, apical part below eyes rather short, although longer than in *gandalicus;* head in profile short, about as long as high, resembling that of *salsolae,* but frons flatter. Eyes large, ocular index 1.07—1.09. Antennae gracile, proportions between joints 33:55:35:21, 1st joint slender, with several pale long setae, distinctly longer than the cross section of the joint, length of the joint 1.25—1.27 × as long as diatone, 2nd joint 1.16—1.24 × as long as basal width of pronotum; hair covering of antennae distinctly longer than in *salsolae,* for example. Rostrum extending to hind coxae. Pronotum 1.7 × as broad as head, twice as broad as long (incl. collar), lateral margins almost straight. Spinulation and pilosity of legs of the normal type of the group. Male genitalia in Fig. 13 a—e. Pygophore simple. Hypophysis of left stylus in lateral aspect only gradually expanding apicad (apex suddenly expanded in *gandalicus*). Spiculum with 26 teeth in a regular, curvate row.

Material studied: Egypt, Kinji Mariut, 1 ♂, type, in Mus. Leningrad and 1 ♂ paratype, my collection, 12. III. 1923.

Easily recognized by the large eyes, the long pilosity, etc.

6. On the subgenus *Eriamiris* Wgn. of *Phytocoris* Fn.

The subgenus *Eriamiris* Wgn. is recognized especially by the long pale hair covering of the legs. The distribution is strictly Eremian, the range stretching from North Africa to Iran and the adjacent areas of USSR. The species of the subgenus can be distinguished with the following key:

1 (2) Upper surface pale, immaculate .... *albohirsutus* Rt. (Algeria)
2 (1) Upper surface with a distinct dark pattern.. 3
3 (16) Large species, length at least 6.5 mm 4
4 (5) Head in apical view unusually short, apical part below eyes only 0.33 × as high as eye. Length of ♂ 7.25 mm. Ocular index (♂) 1.4 ..... *desertorum* Rt. (Algeria)
5 (4) Head in apical view considerably higher .. 6
6 (7) Tibiae without dark rings. Scutellum (♂) as long as broad, in ♀ slightly shorter. Length of body 6.6—7.0 mm. ♂, ♀ f.brach. 5.0 mm. Ocular index 1.45—1.50 (♂), 1.7 (♀) .... *longiscutum* Wgn. (Algeria)

7 (6) Tibiae with dark rings. Scutellum broader than long 8
8 (9) Basal margin of pronotum not bordered with dark fuscous. Spiculum (Fig. 13 y—z) short, strongly curved, concave, provided with 10 thick marginal teeth. Length of body 7.75 mm. Ocular index 1.26 (♂) .... *digla* sp.n. (Egypt)
9 (8) Basal margin of pronotum usually ± distinctly bordered with dark brown. Spiculum different. Smaller species 10
10 (11) 1st antennal joint (♂) 1.5 × as long as diatone ..... *scapatus* Wgn. (Morocco)
11 (10) 1st antennal joint considerably shorter .. 12
12 (13) Lorae, seen from above, strongly triangularly prominent. Spiculum straight, with a regular row of about 14 teeth. Dark species .... *zarudnyi* Rt. (Iran, Transcaspia)
13 (12) Lorae, seen from above, only roundedly prominent. Spiculum ± curvate, tooth row irregular. Paler species 14
14 (15) Lorae, seen from above, rather strongly roundedly prominent. Hypophysis of left stylus in lateral aspect narrow .... *aietes* Lv. (Iran)
15 (14) Lorae, seen from above, completely rounded. Hypophysis of left stylus in lateral aspect broad, blade-shaped .. *kerzhneri* Lv. (Iran)
16 (3) Small species, length at most 6 mm 17
17 (18) 1st antennal joint only 0.75—0.80 × as long as diatone ..... *pilipes* Rt. (Algeria)
18 (17) 1st antennal joint considerably longer .. 19
19 (20) 1st antennal joint 1.20—1.21 × as long as diatone. Ocular index (♂) 1.40—1.41. Spiculum (Fig. 13 q—r) with a peculiar, triangularly expanded apical part .... *laios* sp.n. (Iran)
20 (19) 1st antennal joint at most 1.15 × as long as diatone. Vertex narrower 21
21 (22) Basal margin of pronotum with a dark brown transverse band .... *tripolitanus* Wgn. (Algeria, Libya)
22 (21) Base of pronotum without a dark transverse band ..... *brevirostris* Wgn. (Iran)

P. digla sp.n.

Length 7.75 mm. Pale greyish ochraceous. Head pale, tylus with fuscous markings, inner margin of lorae red, genae with a dark transverse band below antennal tubercles, frons with faint traces of lateral arcs, vertex with a faint C-shaped reddish spot on either side. Eyes dark brown. Pronotum with fuscous irroration, especially in anterior part and laterally, disk behind calli largely pale, basal margin with only very faint brownish spots, partly immaculate. Scutellum medially irregularly marked with dark brown. Elytra rather densely irrorate with brown; membrane milky, with dense fuscous irroration, veins pale. Under surface pale, propleurae with two longitudinal reddish brown stripes. Legs pale ochraceous, femora apically irrorate with dark. Fore and middle tibiae with narrow dark rings, those of hind tibiae indistinct; tarsi pale.

Elongate, about 4.6 × as long as broad at base of pronotum. Hair covering of upper surface dense, longish, semidecumbent, pale. Head (Fig. 13 s—t) in apical view slightly broader than long (28:26), lorae bluntly angularly prominent; head in profile as high as long, frons moderately convex, a distinct notch between it and tylus; ocular index 1.26. Antennae absent in the specimen studied. Rostrum to hind coxae. Pronotum 1.6 × as broad as head, 1.8 × as broad as long (incl. collar), rather narrow, lateral margins shallowly insinuated. Legs, especially tibiae, provided with long whitish hairs as well as spines, much longer than the cross section of the tibia. Male genitalia in Fig. 13 u—z and ö. Pygophore simple. Spiculum short, curved, concave, provided with 10 teeth.

Material studied: Egypt, Wadi Digla, 1 ♂, type, in Mus. Leningrad, 12. XII. 1923.

P. laios sp.n.

Length 5.5—6 mm. Pale ochraceous. Tylus with a Y-shaped midline and some lateral markings dark brown, sutures of lorae and of genae purplish, frons with dark brown lateral arcs, vertex with indistinct fulvous or brownish markings. Eyes dark greyish brown. Antennae yellow-brown, 1st joint heavily marked with dark brown, the dark colour often dominant, extreme base of 2nd joint slightly paler, 3rd and 4th joint a little darker. Pale basal margin or pronotum narrowly bordered with a dark brown band, broken at middle by an indistinct pale midline running over pronotum; lateral margins rather broadly and irregularly darkened; anterior part, including calli, with obscure irregular darker markings, disk behind largely pale. Scutellum with faint irregular dark median markings. Elytra whitish grey, rather densely irrorate with dark brown; membrane milky, with brown irroration; veins pale. Propleurae with two longitudinal dark bands. Under surface otherwise with irregular brown markings. Legs pale ochraceous, femora densely and distinctly mottled with dark fuscous in apical half, fore and middle tibiae with narrow dark rings, hind tibiae with two dark basal rings, otherwise with only minute dark dots, last tarsal joint embrowned.

Small, body 4 × as long as broad at base or pronotum. Hair covering dense, longish, semidecumbent, pale. Head in apical view slightly broader than long (24:22), lorae bluntly prominent; head in profile as high as long, a distinct notch between frons and tylus; ocular index 1.40—1.41. Proportions between antennal

joints 29:51:33:21, 1st joint with long erect pale hairs, 1.20—1.21 × as long as diatone, 2nd joint 1.50—1.56 × as long as basal width of pronotum. Rostrum beyond hind coxae. Pronotum 1.41 × as broad as head, nearly 1.9 × as broad as long (incl. collar), lateral margins insinuated. Legs, especially tibiae, with long erect pale hairs. Male genitalia in Fig. 13 m—r. Pygophore simple. Hypophysis of left stylus narrow in lateral aspect. Spiculum strongly triangularly expanded apicad.

Material studied: Iran, Schachrud, 1 ♂ type and 2 ♂ paratypes, in my collection, 24—25. V. 1914, Kiritshenko.

Very closely related to *P. brevirostris* Wgn., but pronotum with a dark transverse basal band, rostrum longer, genitalia different, etc.

7. On the *vitticollis* group of the genus *Stenotus* Jak.

The group may be recognized by the four longitudinal dark bands on the pronotum. Its range stretches from South Africa to Eritrea. All species are closely related to each other but can be distinguished as follows:

1 (2) Elytra very long. Rostrum extending to hind coxae. Length of body 8.0—8.3 mm .... *longipennis* Rt. (Eritrea, E. Africa)

2 (1) Elytra not unusually long. Rostrum to middle coxae. Length of body < 8 mm 3

3 (4) Hair covering smooth and short. Pronotum strongly rugose, coarsely and densely punctate. Scutellum without medio-basal black triangles. Femora tinged with reddish .... *vitticollis* Rt. (S. Africa, records from Ethiopia probably refer to *proitos)*

4 (3) Hair covering longer, semi-erect. Pronotum finely punctate and rather smooth. Scutellum with two medio-basal black triangles. Femora irrorate with brown apically 5

5 (6) Bigger, length 6.5—7.5 mm., and narrow. Eyes (♂) large, ocular index 0.95 .... *nigroquadristriatus* (Kk.) (S. Africa)

6 (5) Smaller, length 5.75—6.5 mm., and robust. Vertex distinctly broader than eye in both sexes ..... *proitos* sp.n. (Ethiopia)

S. proitos sp.n.

Length 5.75—6.5 mm. Shiny. Pale greyish ochraceous. Head yellow-brown, tylus black, sending a dark brown median stripe on to frons; sides of frons and of vertex narrowly blackish, the former also provided with faint brown lateral arcs, the latter paler than the other parts of head. Eyes dark brown. Antennae dark yellowish brown or nearly dark brown, base of 1st and 2nd joints blackish. Pronotum with 4 longitudinal blackish bands, the median bands, starting from the pale calli, narrow, distinct only apically, basally fainter and brown, evanescent in basal margin; the lateral bands, starting from anterior margin, ± broken behind calli, then expanding and forming a distinct black triangle along lateral margin in posterior part of disk. Scutellum with sides and two triangular median spots in basal margin black. Dark pattern of elytra not contrasted, fuscous, forming a longitudinal band in clavus and in inner margin of corium and a longitudinal dash in apical part of corium; membrane brown, veins nearly concolorous. Sides of thorax and venter with a dark longitudinal band. Legs yellow-brown; femora apically irrorated with dark brown; tarsi blackish, 1st joint somewhat paler; tibial spines pale.

Body robust, 3.0 (♀)—3.3 (♂) × as long as broad at base of pronotum. Hair covering of upper surface long, dense, erect, pale. Eyes relatively small, ocular index 1.31—1.5 (♂), 1.77—1.88 (♀). Proportions between antennal joints 16:48:30:24 (♂) or 18:54:36:26 (♀), 1st joint rather thick, 0.62—0.67 × as long as diatone, with brown semi-erect hairs, 2nd joint slightly shorter than basal width of pronotum (48:51). Rostrum to middle coxae. Pronotum broad, 1.7—1.78 × as broad as long (incl. collar), lateral margins almost straight; calli small, moderately convex; disk rather weakly convex, finely and relatively sparsely punctate, only indistinctly rugose. Scutellum faintly rugose. Elytra distinctly longer than abdomen, measured from base of corium to tip of cuneus 3.4 × as long as broad, very indistinctly punctate. Proportions between joints of hind tarsi 13:7:9. Genitalia much as in *nigroquadristriatus.*

Material studied: Ethiopia, Lake Zuai, 1 ♂, type and many paratypes, 6. VI. 1963; Machi, 2 paratypes, 9. VI. 1963, Linnavuori, in my collection. In arid *Acacia* savannahs.

S. nigroquadristriatus (Kk.) is very similar but bigger, length 6.5—7.5 mm., and much narrower, ♂ nearly 4 × as long as broad at base of pronotum. The dark pattern is more distinct, e.g. the median bands of the pronotum are broad and contrastedly black. The hair covering is shorter and the eyes much larger, ocular index (♂) 0.95. The pronotum is narrower, 1.65 × as broad as long, the lateral margins are insinuated, the calli more elevated and the disk more convex and more rugose. The elytra are longer and narrower, measured from the base of the corium to the tip of the cuneus 4.8 × as long as broad.

Material studied: South Africa, Natal, Howick, 1 ♂ cotype, selected here as the lectotype, Junod, in Mus. Helsinki.

S. vitticollis Rt. is bigger, length 7.4—7.5 mm. The apical part of the head and the 1st antennal joints

are black. The calli of the pronotum are black and joined to the longitudinal bands; an inverted U-shaped black figure is thus formed on either side of the pronotum. The medio-basal black spots of the scutellum are absent. The cuneus is reddish. The femora are also tinged with red. The hair covering of the upper surface is short and smooth. The pronotum is 1.9 × as broad as long, with the disk more coarsely and densely punctate and strongly rugose.

Material studied: South Africa, Transvaal, 1 ♀ cotype, selected here as the lectotype, coll. Fruhstorfer, in Mus. Helsinki.

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