

ACTA ENTOMOLOGICA FENNICA

Julkaissut — Edidit

SUOMEN HYÖNTEISTIETEELLINEN SEURA — SOCIETAS ENTOMOLOGICA FENNICA

26

Delphacidae (Homoptera, Fulgoroidea) from the Sudan Republic

R. G. FENNAH

Commonwealth Institute of Entomology, c/o British Museum, London, England

266 figures

(Zoological contribution from the Finnish expeditions to the Sudan No. 18)

HELSINKI 1969

RECEIVED 14. XII 1968
PRINTED 27. X 1969

TABLE OF CONTENTS

| | |
|---|----|
| INTRODUCTION | 7 |
| SPECIES LIST | 8 |
| <i>Afrosydne</i> | 9 |
| <i>Eurysa</i> | 11 |
| <i>Asiracina</i> | 12 |
| <i>Thriambus</i> | 12 |
| <i>Cemus</i> | 19 |
| <i>Numata</i> | 21 |
| <i>Malaxodes</i> | 23 |
| <i>Nycheuma</i> | 23 |
| <i>Numatodes</i> | 24 |
| <i>Euidella</i> | 25 |
| <i>Euidopsis</i> | 26 |
| <i>Aneuides</i> | 27 |
| <i>Micreuides</i> | 30 |
| <i>Euidastor</i> | 32 |
| <i>Perkinsiella</i> | 34 |
| <i>Peregrinus</i> | 35 |
| <i>Hapalomelus</i> | 35 |
| <i>Neogadora</i> | 37 |
| <i>Curtometopum</i> | 39 |
| <i>Rhinotettix</i> | 40 |
| <i>Embolophora</i> | 40 |
| <i>Corbulo</i> | 40 |
| <i>Nilaparvata</i> | 40 |
| <i>Afrokulpa</i> | 42 |
| <i>Tuya</i> | 45 |
| <i>Stolbax</i> | 54 |
| <i>Sogatodes</i> | 56 |
| <i>Sogatella</i> | 56 |
| <i>Matutinus</i> | 57 |
| <i>Sardia</i> | 59 |
| <i>Clydonagma</i> | 61 |
| <i>Eripison</i> | 63 |
| <i>Triloris</i> | 65 |
| <i>Sembrax</i> | 69 |
| <i>Orcaenas</i> | 72 |
| <i>Strophalinx</i> | 74 |
| <i>Isogaetis</i> | 76 |
| <i>Map of the collecting localities</i> | 76 |

INTRODUCTION

This report is concerned mainly with a collection of Delphacidae made in Equatoria and adjacent Provinces of the Sudan Republic by Dr. R. LINNAVUORI from November 1962 to April 1963. The opportunity has been taken to describe some interesting specimens from Africa in the accessions of the British Museum (Natural History).

Most of the bibliographic references cited in this study are in accordance with those given in full by MERCALF (1944), the remainder are listed at the end.

The striking feature of the collection from Equatoria is that notwithstanding its relatively small size it contains a remarkably high proportion of new species. These in themselves suffice to show that the Delphacid fauna in this part of Africa is much richer than reports have so far suggested, and their proportion in relation to the total collection leaves little room for doubt that many other new species must still await discovery.

Some of these new species could not meaningfully be assigned to any existing genus, and others, while apparently congeneric with known species, differed substantially both from them and from one another. Such diversity inevitably raised the problem of generic definition. The criteria of relationship at generic level in Delphacidae include general similarity of body size, proportions, and (within limits) coloration, and similarity in the broader features of genitalic structure in both sexes. Of these it is similarity in male genitalic structure that can be most readily recognised. It is obviously desirable that superficial characters common to both sexes should be used to define genera, but in many Delphacidae there are no characters that serve to define a genus and are also susceptible of clear and unambiguous description. Numerical proportions can be cited, but serve only as an approximate guide; many useful differences, such as those between fine and coarse carinae, or greater or less transverse convexity of the frontal disc, are difficult to quantify. Most of the new genera erected in the present

study are therefore to be interpreted primarily from the structure of the male genitalia: other characters used in their definition are tentative almost in inverse proportion to the number of included species.

SPECIES LIST

DELPHACIDAE

Delphacinae

Alohini

Afrosydne gen.n.

Head with eyes narrower than pronotum and scarcely more than half as wide as maximum width of body. Vertex slightly longer than broad, anteriorly curving downward into frons, submedian carinae continuing separately on to frons, occipital surface of head markedly exposed; frons twice as long as broad, in anterior view about 1.5 times apparent length of clypeus, lateral margins very shallowly convex, subparallel in distal half, median carina forked between eyes; frontoclypeal suture rather distinctly impressed; rostrum relatively long, apical segment slightly shorter than subapical, ocelli absent; antennae stout, cylindrical, surpassing frontoclypeal suture, apical segment not quite twice as long as basal segment. Pronotum strongly tricarinate, lateral carinae of disc attaining hind margin, lateral fields strongly declivous laterad; mesonotum strongly tricarinate. Brachypterous tegmina quadrate with venation much reduced, distinct. Post-tibiae laterally bispinose, with spur moderately long, narrow, acute, with about eight stout teeth. Basal metatarsal segment longer than remaining two segments combined. Pygofer moderately long, dorsal margin not excavate, ventral margin distinctly excavate. Ovipositor without a pregenital plate at base.

Type species, *Afrosydne lupias* sp.n.

The form of the post-tibial spur serves to place this genus in the *Alohini*, of which *Hapalomelus*, a genus of slenderlybuilt species with elongated legs and antennae is just possibly an African representative. In bodily shape the type species is not unlike *Ilburnia ignobilis* B. White (from St. Helena), but *A. lupias* is much smaller, and differs in antennal proportions and entirely in the arrangement and number of sensoria on the second antennal segment as well as in venation of the brachypterous tegmina.

To some extent it also resembles a *Tarophagus* or *Calligypona* s.str. It differs

from *T. proserpina* in its less slender form, and relatively shorter metatarsus, as well as in the proportions of the basal antennal segment, and from *C. reyi* in the position of the fork on the median frontal carina, the carination of the pronotum, and the shape and venation of the brachypterous tegmina, and from both in the structure of the post-tibial spur.

The gender of the generic name is feminine.

Afrosydne lupius sp.n.

Vertex shorter medially than broad (1:1.1), obtusely rounding into frons, a little narrower at apex than at base, lateral margins angulately concave, apical margin transverse with submedian carinae strongly prominent, Y-shaped carina distinct, submedian carinae not uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (2:1), and than median length (nearly 2.2:1), posterior surface of head much exposed; frons in middle line longer than wide at widest part (2.2:1), widest at two thirds from base, lateral margins shallowly concave between eyes, thence almost parallel, median carina forked at level of middle of eyes; clypeus at base a little wider than frons at apex, frontoclypeal suture distinctly impressed, postclypeal disc as long as broad at base, in profile rather strongly convex, anteclypeus in profile almost straight; entire clypeus in profile moderately convex; rostrum reaching to postrochanters; antennae reaching to middle of clypeus, cylindrical, basal segment longer than broad (1.5:1), second segment longer than first (about 1.5:1); ocelli absent. Pronotum with disc as long in middle line as broad at anterior margin, and broader at basal margin than at anterior margin (1.5:1), lateral carinae straight, attaining hind margin. All carinae of pronotum and mesonotum strongly developed. Post-tibial spur narrow, acute, with 7-8 stout teeth.

Rather dark reddish brown, polished; frons, genae, antennae, carinae of thorax, rostrum, legs, abdomen narrowly in mid-dorsal line, at lateral margins, and in an incomplete intermediate row of sublinear spots, yellowish brown. A broadly triangular spot on posterior margin of brachypterous tegmina, pale stramineous.

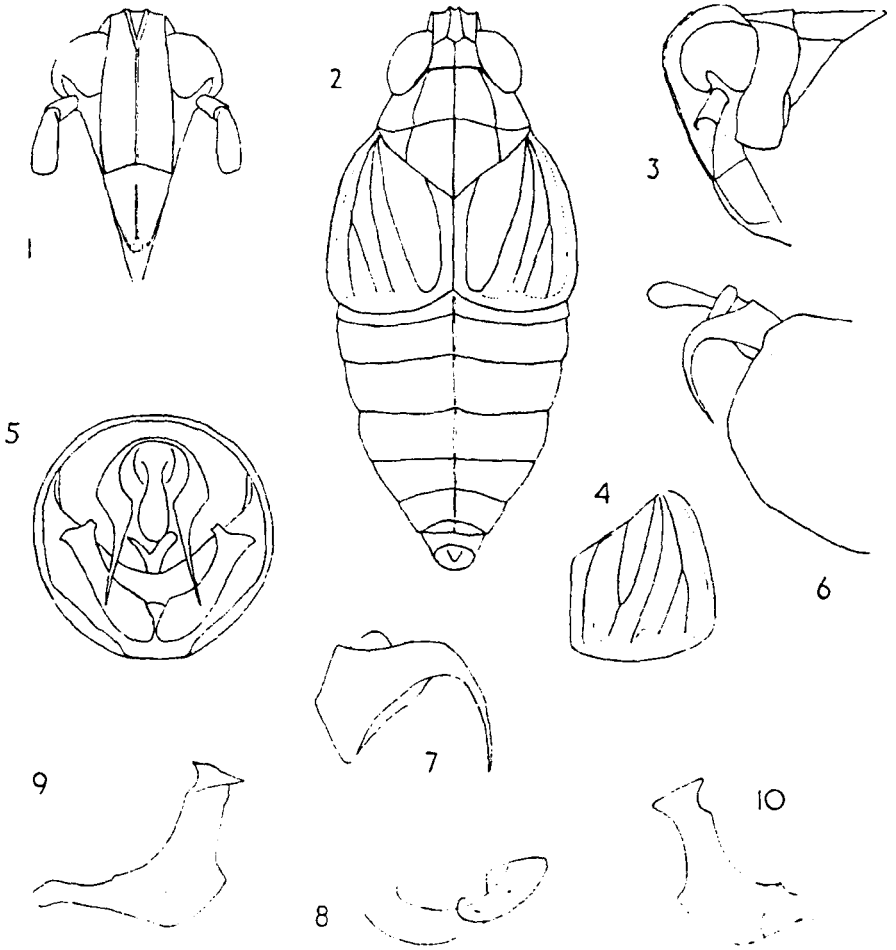
Anal segment of male rather large, moderately long, lateroapical angles moderately far apart, each produced ventrad in a long curved spinose process. Pygofer rather long, posterior opening as long as broad, dorsolateral angles not distinct, not at all produced, diaphragm with dorsal margin shallowly concave, devoid of ornamentation, ventral margin of pygofer excavate, medioventral process absent. Aedeagus moderately long, tubular, U-shaped, laterally compressed, curved upward distad, expanded in a subrectangulate lobe apically, with its dorsal margin a little produced to right. Genital styles simple, rather short, rather strongly divergent, each narrowing distad, and slightly widening just before apex, apical margin truncate, inner apical angle distinctly produced, acute.

Male (brachypterous): length, 2.9 mm.

Female (brachypterous): length, 2.5 mm.

Holotype male, Mt. Cameroon, Onyanga, 8,100 ft., 20. 1. 1932. M. Steele. B. M. 1934-240 in British Museum (Nat. Hist.)

Paratype 1 ♀, same data.



Figs. 1—10. *Afrosydne lupias* gen. et sp.n. — 1. Frons and clypeus. — 2. dorsal surface. — 3. head and thorax, lateral view. — 4. tegmen. — 5. male genitalia. — 6. anal segment and pygofer. — 7. anal segment, lateral view. — 8. aedeagus. — 9. genital style, inner aspect. — 10. genital style, outer aspect. — Orig.

Tropidocephalini

Eurysa FIEBER

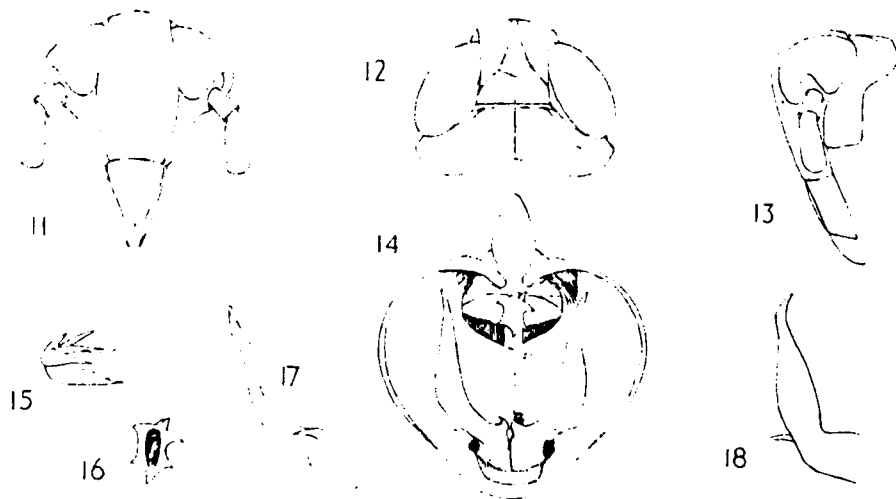
Eurysa FIEBER 1866, Verh. Zool. Bot. Ges. Wien 16, p. 520. Logotype, *Eurysa lineata* PERRIS 1897, Ann. Soc. Linn. Lyon 4, p. 171.

Eurya glylippus sp.n.

Vertex about as long medially as broad at base, subacutely rounding into frons, slightly wider at apex than at base, lateral margins almost straight, apical margin convex with submedian carinae not prominent, Y-shaped carina moderately distinct, submedian carinae uniting at apex of vertex but obscure at point of union, basal compartment of vertex wider at hind margin than greatest length (2:1), and than median length (2.5:1); frons in middle line longer than wide at widest part (1.5:1), widest at middle, lateral margins shallowly convex, median carina simple, clypeus at base a little wider than frons at apex, postclypeal disc slightly longer than broad at base, in profile straight, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum about as long as clypeus, slightly surpassing mesotrochanters; antennae a little surpassing frontoclypeal suture, basal segment longer than broad (1.5:1), second segment longer than first (1.5:1); ocelli small, distinct, blemmata absent or obscure. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae concave, not nearly attaining hind margin. Total length of mesonotum greater than that of scutellum (about 2.5:1). Post-tibial spur without teeth.

Light yellowish brown; pronotum, mesonotum, pleura, post-coxae, abdomen and male genitalia excluding genital styles, dark fuscous. Tegmina milky-hyaline, veins stramineous in corium, infusate in membrane, commissural margin of clavus fuscous; a fuscous suffusion in membrane between node and apex of tegmen. Wings milky-hyaline, veins dilute fuscous.

Anal segment of male short, collar-like, lateroapical angles not evident, distal margin produced ventrally on each side of aedeagus in a short membranous lobe. Pygofer long, tubular; posterior opening about as long as broad, dorsolateral angles strongly produced mesad in a



Figs. 11—18. *Eurya glylippus* sp.n. — 11. Frons and clypeus. — 12. vertex and pronotum. — 13. head and pronotum, lateral view. — 14. male genitalia. — 15. apex of aedeagus, right side. — 16. apex of aedeagus, posterior view. — 17. genital style, inner aspect. — 18. genital style, outer aspect. — Orig.

narrow lobe that almost meets its counterpart; diaphragm large, deep dorsoventrally, dorsal margin tranverse and slightly produced caudad at midde; medioventral process absent. Aedeagus moderately long, porrect caudad, two stout spinose processes on right near apex, one short stout spine ventrally, and two longer spinose processes on left near apex, all directed cephalad, orifice terminal. Genital styles long, apposed and directed caudad at base then curved dorsocaudad and separating, a small spinose process, directed caudad, arising on dorsal margin of each at their point of divergence; ascending portion of each style laterally compressed, tapering from its middle to apex, where it is slightly bent laterad.

Male: length, 2.7 mm., tegmen, 3.6 mm.

Holotype male, Abyssinia: Djem-Djem Forest, over 8,000 ft., from grassy open spaces, 22. IX. 1926, Dr. H. Scott, in B.M. (N.H.).

This species is distinguishable by the structure of the male genitalia, and particularly by the finger-like, incurved dorsolateral lobes of the pygofer.

Delphacini

Asiracina MELICHAR

Asiracina MELICHAR 1912, Wiss. Ergebn. Zweit. Dtsch. Zent. Afr. Expedit. p. 132. Orthotype.
Asiracina punctovenosa MELICHAR 1912, *ibid.* p. 133.

Asiracina badia (Muir) comb.n.

Phyllodinus badius Muir 1920, Bull. Ent. Res. 10, p. 144.

Two females, Sudan: Equatoria, Yambio, 17—25. IV. 1963, LINNAVUORI.

Thriambus FENNAH

Thriambus FENNAH 1964, Trans. Roy. Ent. Soc. Lond. 116, p. 144. Orthotype, *Dicranotropis stramineus* Muir, 1929, Ann. Mag. Nat. Hist. 4, p. 200.

Thriambus nicias (Fennah)

Dicranotropis nicias FENNAH 1958, Bull. de l'I.F.A.N. 20 A, p. 477.

Three males and three females, Sudan: Equatoria, Lotti forest, 14—17. III. 1963, LINNAVUORI.

Thriambus vegetatus (Melichar)

Peregrinus vegetatus MELICHAR 1912, Wiss. Ergebn. Zweit. Dtsch. Zent. Afr. Expedit. p. 133.
One male and one female, Sudan: Equatoria, Lotti Forest, 14—17. III. 1963, LINNAVUORI.

Thriambus obscurellus (Lallemand) comb.n.

Dicranotropis obscurella LALLEMAND 1925, Arkiv. Zool. 18, p. 5.

Vertex shorter medially than broad at base (1:1.2); evenly rounding into frons, a little narrower at apex than at base, lateral margins almost straight, apical margin truncate with submedian carinae not prominent, Y-shaped carina very distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (2.8:1), and than median length (3.2:1); frons in middle line longer than wide at widest part (2:1), widest at two fifths from base, lateral margins concave between eyes, then straight, median carina forked at level of ocelli; clypeus at base a very little wider than frons at apex, postclypeal

disc as long as broad at base, in profile very shallowly convex, almost straight, anteclypeus in profile distinctly convex; entire clypeus in profile moderately convex; rostrum reaching to post-coxae; antennae slightly surpassing frontoclypeal suture, basal segment longer than maximum apical width (1.5:1), second segment longer than first (1.5:1); ocelli distinct, blemmata present. Pronotum with disc shorter in middle line than broad at anterior margin (1: nearly 1.2), lateral carinae weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.3:1); lateral carinae of disc distinctly diverging basad, scutellum acute at tip. Post-tibial spur with about 45 teeth.

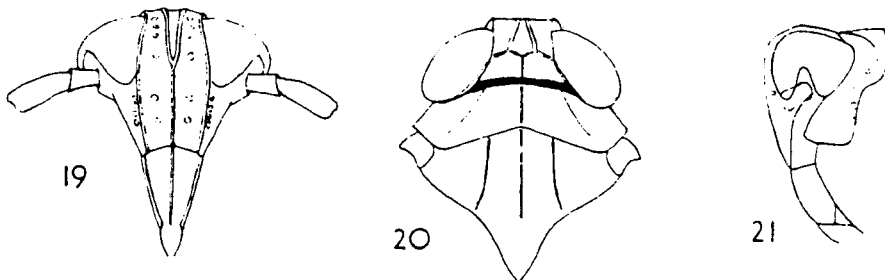
Dark reddish brown; head, except anterior part of genae (apart from three pustules) and sides of clypeus, disc of pronotum except for four pustules, lateral carinae of mesonotum and tegulae, ochraceous; pustules on frons, genae, and pronotum, antennae, legs except post-femora below and post-tibiae between margins, stramineous or pallid ochraceous. Tegmina brownish-hyaline, darker in a broad diffuse band from distal half of costal cell to near apex of clavus, and in membrane, a large triangular spot just distad of apex of costal cell, a small round spot in Cu_1 at level of claval apex, and a spot in first apical cell of M, hyaline. Veins in corium slightly darker than ground colour, in membrane, concolorous. Wings hyaline, with veins fuscous.

Female: length, 3.8 mm., tegmen, 4.7 mm.

The type (and only specimen) in the Naturhistoriska Riksmuseet bears the labels: Sudan, Nilen, Pr. W. Exp. GYLD, 29 Aug., Typus. *obscurus* LALLEM. type.n.sp. 156.68, Riksmuseet Stockholm.

The frons bears about nine pairs of distinct round pustules, each gena, four, and there are five or six near or at the hind margin of the pronotum on each side. The width between the lateral mesonotal carinae at their junction with the margin is distinctly greater than the width between them at the hind margin of the pronotum (about 1.5:1); the mesoscutellum is dark reddish brown, and pointed, not bluntly rounded, at its tip. In the tegmina, there is a very dark linear mark at the commissural margin near its junction with the common claval vein, apart from this, the entire commissural margin of the clavus is brown, concolorous with the remainder of the clavus.

These features, together with the bodily proportions given, serve to distinguish this species.



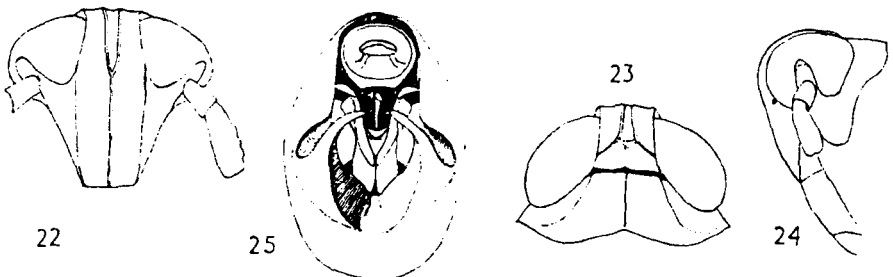
Figs. 19—21. *Thriambus obscurus* (Lallemand). — 19. Frons and clypeus. — 20. head and thorax, dorsal view. — 21. head and pronotum, lateral view. — Orig.

Thriambus helias sp.n.

Vertex as long medially as broad at base, broadly and evenly rounding into frons, a little narrower at apex than at base, lateral margins straight or feebly concave, apical margin truncate with submedian carinae slightly prominent, Y-shaped carina moderately distinct, submedian carinae passing separately on to frons, basal compartment of vertex wider at hind margin than greatest length (2.5:1), and than median length (2.5:1); frons in middle line longer than wide at widest part (2:1), widest at two fifths from base, lateral margins concave in basal two fifths, thence almost straight, median carina forked at level of lower margin of eyes; clypeus at base not wider than frons at apex, postclypeal disc slightly longer than broad at base, in profile almost straight, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum reaching to post-coxae; antennae slightly surpassing frontoclypeal suture, basal segment longer than broad (1.5:1), second segment longer than first (2.1); ocelli small but distinct. Pronotum with disc slightly longer in middle line than broad at anterior margin (nearly 1.5:1), lateral carinae shallowly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.5:1). Post-tibial spur with about 36 teeth.

Fuscous; basal segment of antennae in part, second segment entirely, pustules on pronotum behind eyes, lateral carinae of pronotum, carinae of mesonotum, all tibiae at apex, basal and second segment of post-tarsi distally, and post-tibial spur, stramineous. Tegmina hyaline, a suffusion over clavus, and posterior half of corium, extending over membrane to apex of tegmen, a rather narrow suffusion overlying vein R in membrane, fuscous. Wings faintly infusate, with fuscous veins. Anal segment of male very short, narrowly ring-like, apical margin very narrow, lateroapical angles not produced. Pygofer short dorsally, longer ventrally, posterior opening longer dorsoventrally than wide, dorsolateral angles little produced, inflected, a pair of stout processes on lower half of lateral margin, each directed dorsad and curving mesad, tapering, rounded at apex; diaphragm with dorsal margin near middle of posterior opening, rather strongly produced caudad in a lip medially; medioventral process represented by two minute pustules. Aedeagus moderately long, basal portion straight, directed caudad, distal portion (flagellum) reflected cephalad, a slender spinose process on left near base of flagellum, directed cephalad, flagellum widening distally. Genital styles long, angulately bent dorsad near base, subcylindrical, in posterior view weakly diverging distad and tapering, each abruptly angulately bent laterad near apex.

Male: length (estimated), 3.5 mm., tegmen, 4.0 mm.



Figs. 22—25. *Thriambus helias* sp.n. — 22. Frons. — 23. vertex and pronotum, dorsal view. — 24. head and pronotum, lateral view. — Orig.

Holotype male, Sudan: Equatoria, Yambio, 17—25. IV. 1963, LINNAVUORI, in coll. Linnavuori.

This species is distinguishable from all others by the shape of the posteroventral margins of the pygofer.

Thriambus iapis sp.n.

Vertex shorter medially than broad at base (1:1.6), rather obtusely rounding into frons, narrower at apex than at base, lateral margins concave, apical margin truncate with submedian carinae a little prominent, Y-shaped carina distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (2.7:1), and than median length (3.2:1); frons in middle line longer than wide at widest part (2:1), widest at two fifths from base, lateral margins concave between eyes, then straight, median carina forked at or slightly below level of lower margin of eyes; clypeus at base a little wider than frons at apex, postclypeal disc as long as broad at base, in profile moderately convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum reaching post-coxae; antennae surpassing frontoclypeal suture, basal segment longer than maximum width at apex (2:1), second segment longer than first (1.8:1); ocelli small, blemmata present. Pronotum with disc longer in middle line than broad at anterior margin (1.3:1), lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (nearly 2.8:1). Post-tibial spur with about 35 teeth.

Fuscous; basal segment of antennae except distally, carinae and margins of vertex, pronotum and mesonotum, four pustules on pronotum behind each eye, protibiae, mesotibiae, post-tibiae distally, spur, basal metatarsal segment distally and second and third segments, abdomen dorsally at base and apex, and sternites at posterior margin, and distal margin of pygofer, sordid stramineous or ochraceous. Tegmina hyaline, a suffusion overlying Sc + R to Cu₁ basally, an elongate spot between common claval vein and commissural margin, a crescentic band from r-m veinlet to margin at anal angle thence to apex of tegmen, and a narrow suffusion overlying first apical vein beyond stigma, and veins of corium and clavus, fuscous. Wings hyaline, veins fuscous.

Anal segment of male long, lateroapical angles apposed in middle line, each produced ventrad in a broad sinuate lobe, acute apically, that extends much below dorsal margin of diaphragm of pygofer. Pygofer almost as long dorsally as ventrally, posterior opening much longer than broad, dorsolateral angles not produced, lateral margins, in side view, angulately concave in dorsal third, diaphragm with middle portion of dorsal margin transverse, narrowly cleft at middle, and with a ridge extending from apex of cleft to lower margin; lateral margins in lower third each produced dorsad in a small acutely-pointed lobe; medioventral process quadrate, shallowly scoop-like, about as long as broad. Aedeagus moderately long, tubular, rather compressed laterally, with a curved spinose process on dorsal margin before apex, recurved cephalad, and a spinose process at apex, porrect caudad. Genital styles very small, strongly diverging, each stout and subcylindrical in ascending portion, abruptly constricted near apex and terminating in a small flat ovate lobe. Ovipositor with first valvifers each with inner margin basally produced caudad in an acute process.

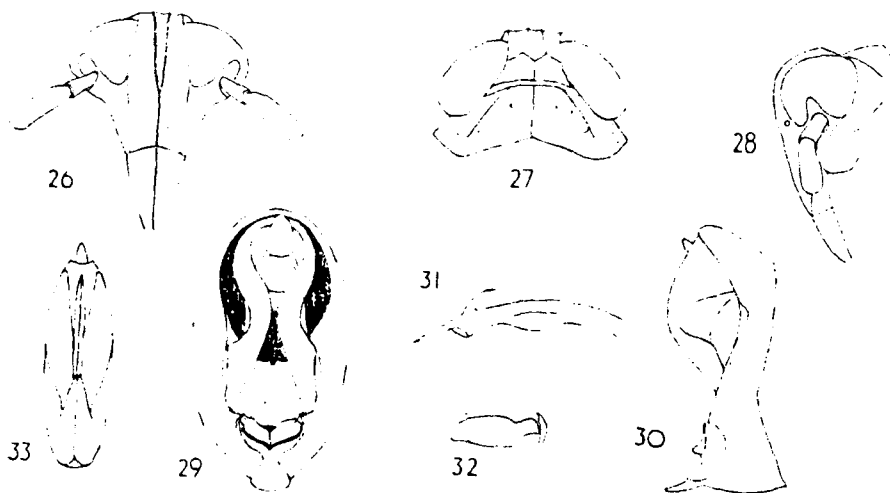
Male: length, 3.6 mm., tegmen, 3.6 mm.

Female: length, 4.6 mm., tegmen, 4.8 mm.

Holotype male, Sudan: Equatoria, Yambio, 17—25. IV. 1963, LINNAVUORI, in coll. Linnavuori.

Paratype, one female, same data.

This species is distinguishable in the male by the diminutive genital styles and in the female by the acutely produced mesal margins of the first valvifers of the ovipositor near their base.



Figs. 26—33. *Thriambus iapis* sp.n. — 26. Frons and clypeus. — 27. vertex and pronotum. — 28. head and pronotum, lateral view. — 29. male genitalia, posterior view. — 30. male genitalia, lateral view. — 31. aedeagus. — 32. genital style. — 33. female genitalia, posterior view. — Orig.

Thriambus acca sp.n.

Vertex shorter medially than broad at base (1:1.2), obtusely rounding into frons, narrower at apex than at base, lateral margins shallowly concave, apical margin truncate with submedian carinae moderately prominent, Y-shaped carina distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (1.0:1), and than median length (2.4:1); frons in middle line longer than wide at widest part (nearly 2.0:1), widest at two-fifths from base, lateral margins concave between eyes, then straight, median carina forking near level of lower margin of eyes; clypeus at base not wider than frons at apex, postclypeal disc longer than broad at base, in profile almost straight, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum slightly surpassing post-coxae; antennae surpassing frontoclypeal suture, basal segment longer than broad (about 1.7:1), second segment longer than first (2:1); ocelli small. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae straight or weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (about 2.5:1). Post-tibial spur with about thirty-five teeth.

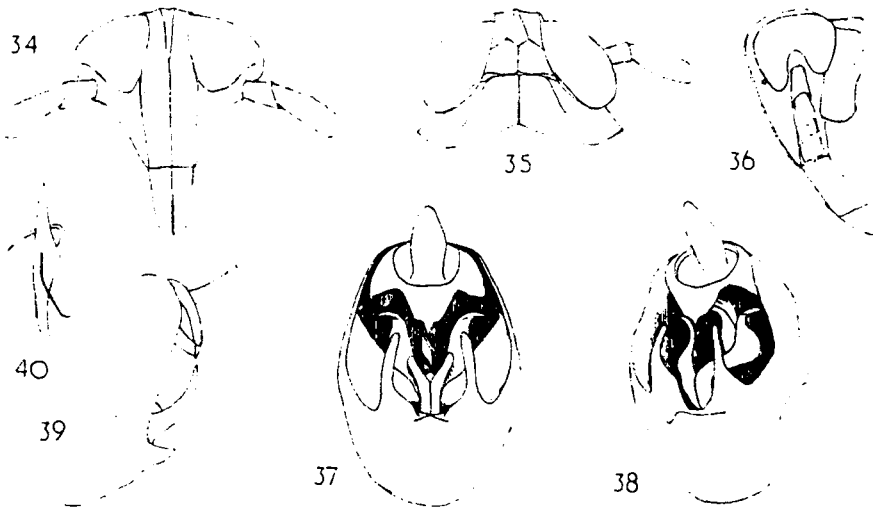
Dilute fuscous; antennal segments, except near their point of junction, carinae of vertex, pronotum and mesonotum, six pairs of spots on frons, two spots on each gena below ocelli, rostrum, three spots on pronotum behind each eye, margins of pleurites, protibiae except for a subapical ring, longitudinal stripes on post-femora and post-tibiae, spur and post-tarsi, abdomen dorsally in middle line and at sides, pygofer dorsally and anal segment, pallid stramineous. Antennal segments at their junction, and a spot on pronotum behind each eye, dark fuscous. Tegmina hyaline, a suffusion basally between M and Cu₁, first claval cell, a linear mark at junction of common claval vein with apical margin, dilute fuscous; all veins of membrane, dark fuscous. Wings hyaline, veins pale basally, fuscous distally. Anal segment of male

short, ring-like, lateroapical angles widely separated, not produced, apical margin broadly produced caudad, and further produced at its middle in a small triangular process. Pygofer moderately long, posterior opening rather longer than broad, dorsolateral angles not produced, shallowly convex; diaphragm with dorsal margin transverse, a vertical carina along middle line; a pair of long tapering processes arising on inner edge of ventrolateral margins, directed dorsocaudad; medioventral process short, bluntly triangular. Aedeagus rather long, strongly laterally compressed, a moderately long slender spinose process arising near ventral margin at middle, directed ventrally and to right, a shorter spinose process arising from a membranous lobe on right dorsally, near apex, directed above aedeagus to left. Genital styles long, apposed at base, moderately diverging dorsad, each bent cephalad and widening to middle then narrowing and curved laterad at apex.

Male: length, 2.8 mm., tegmen, 3.8 mm.

Holotype male, Sudan: Equatoria, Yambio, 17--25. IV. 1963, LINNAVUORI, in coll. Linnavuori.

This species is most readily distinguishable by the shape of the apical margin of the male anal segment, though the shapes of the remaining elements of the genitalia, in combination, also suffice for identification.



Figs. 34--40. *Thriambus acca* sp.n. -- 34. Frons and clypeus. -- 35. vertex and pronotum. -- 36. head and pronotum, lateral view. -- 37. male genitalia, posterior view. -- 38. the same, posterolateral view. -- 39. the same, lateral view. -- 40. aedeagus, ventral view of apical portion. -- Orig.

Thriambus paniscus sp.n.

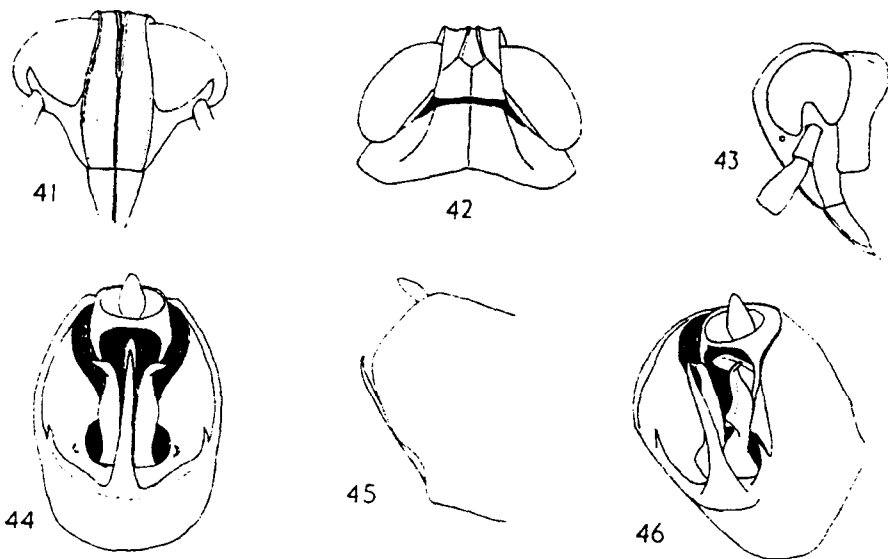
Vertex longer medially than broad at base (nearly 1.2:1), obtusely rounding into frons, narrower at apex than at base, lateral margins straight, apical margin truncate with submedian carinae rather prominent, Y-shaped carina distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (1.4:1);

and than median length (2.3:1), frons in middle line longer than wide at widest part (1.5:1), widest at middle, lateral margins shallowly convex, median carina forked at level of lower margin of eyes; clypeus at base not wider than frons at apex, postclypeal disc about as long as broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum reaching to post-coxae; antennae distinctly surpassing frontoclypeal suture, basal segment longer than broad (2:1), second segment longer than first (1.5:1); ocelli small, distinct; blemmata obscure. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae straight or weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (nearly 2.4:1). Post-tibial spur with about 37 teeth.

Light yellowish brown; frons, clypeus and abdomen ventrally, reddish brown; antennae, mesocoxae, mesopleura, and a light suffusion on all legs, fuscous. Tegmina hyaline, suffused yellowish brown; veins in corium darker yellowish brown, veins of membrane fuscous, with dilute fuscous suffusion spreading into membrane. Wings milky-hyaline, with fuscous veins.

Anal segment of male short, ring-like, lateroapical angles widely separated, each produced ventrad in a curved spinose process. Pygofer long, posterior opening longer than broad, dorso-lateral angles broadly produced caudad in a convex lobe; diaphragm with dorsal margin concave, membranous; ventral margin deeply and broadly excavate, with a small acute process, directed caudad, on each side; medioventral process extremely long, slender, spiniform. Aedeagus moderately long, tubular, porrect caudad then reflected cephalad, a small spinose process on left at apex. Genital styles moderately long, moderately narrow, directed dorsocaudad, a convex lobe on ventral surface at middle, tapering apically and curved laterad.

Male: length, 2.8 mm., tegmen, 3.4 mm.



Figs. 41—46. *Thriambus paniscus* sp.n. — 41. Frons and clypeus. — 42. vertex and pronotum. — 43. head and pronotum, lateral view. — 44. male genitalia, posterior view. — 45. the same, lateral view. — 46. the same, posterolateral view. — Orig.

Holotype male, Sudan: Equatoria, Loka Forest, 8—10. IV. 1963, LINNAVUORI, in coll. Linnavuori.

This species is readily distinguishable by the extraordinary length of the medioventral process of the pygofer. The pygofer is unusually long dorsally in comparison with other members of the genus.

Cemus FENNAH

Cemus FENNAH 1964, Trans. Roy. Ent. Soc. Lond. 116, p. 147. Orthotype, *Cemus leviculus FENNAH* 1964, *ibid.* p. 147.

Cemus viator sp.n.

Vertex shorter medially than broad at base (1:1.4), subrectangulately rounding into frons, distinctly narrower at apex than at base, lateral margins shallowly concave, apical margin truncate with submedian carinae a little prominent, Y-shaped carina distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (2.4:1), and than median length (3.3:1); frons in middle line longer than wide at widest part (2.1:1), widest at two fifths from base, lateral margins concave between eyes, thence straight and slightly converging, median carina forked at level of lower margin of eyes, clypeus at base not wider than frons at apex, postclypeal disc about as long as broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum reaching post-coxae; antennae slightly surpassing frontoclypeal suture, basal segment longer than broad (1.4:1), second segment longer than first (2.3:1); ocelli small, distinct. Pronotum with disc shorter in middle line than broad at anterior margin (1.1:1), lateral carinae weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.3:1). Post-tibial spur with about 30 teeth.

Fuscous; carina of head, and median carinae of pronotum and mesonotum, antennae, except at apex of first segment, tibiae of fore and middle legs, except for two transverse bands on each, post-tibiae in distal half, including spur, basal metatarsal segment distally, and second segment, stramineous; posterior margin of pronotum rather broadly sordid white, lateral carinae and lateral angles of mesonotum, and anal style, pale yellow. Tegmina hyaline, a suffusion over basal quarter, an elongate spot between common claval vein and commissural margin, a crescentic band from node to apex of clavus and thence to apex of tegmen, and a suffusion overlying distal branches of Sc, R and M, dark fuscous. Wings hyaline, veins pale. Anal segment of male short, collar-like, lateroapical angles widely separated, each produced laterad then ventrocephalad in an acute triangular process. Pygofer short dorsally, long and strongly convex ventrally, posterior opening longer dorsoventrally than wide, dorsolateral angles not produced, depressed to form a shallow transverse sulcus, diaphragm membranous with dorsal margin broadly concave, a little produced caudad at middle; ventral margin of pygofer deeply and subrectangulately excavate medially; medioventral process absent. Aedeagus rather short, tubular, directed caudad, three spinose processes distally, two arising on left in apical half, curving below aedeagus and rather close against it, and one of them, or both, ascending on right, the third arising at apex, directed ventro-caudad. Genital styles moderately long, moderately diverging, slightly curved cephalad and weakly tapering distad, abruptly narrowing before apex, and curving laterad.

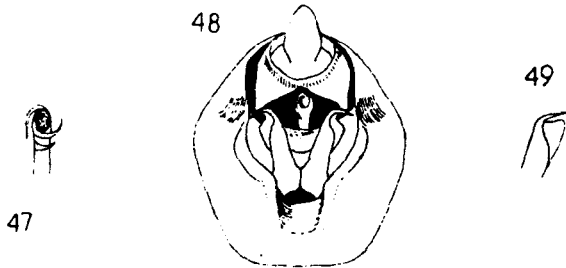
Male: length, 2.9 mm., tegmen, 3.5 mm.

Female: length, 3.3 mm., tegmen, 4.9 mm.

Holotype male, Sudan: Equatoria, Lotti forest, 14—17. III. 1963, LINNAVUORI, in coll. Linnavuori.

Paratypes, 1 ♂ 2 ♀, same data.

The coloration of species in this genus is rather uniform, but a feature which is of assistance in identifying members of the present species is the pale hue of the entire distal half of the post-tibiae.



Figs. 47—49. *Cemus viator* sp.n. — 47. Apex of aedeagus, posteroventral view. — 48. male genitalia. — 49. apex of genital style, lateral view. — Orig.

Cemus hipponax sp.n.

Vertex shorter medially than broad at base (1:1.5), broadly subrectangulately rounding into frons, a little narrower at apex than at base, lateral margins concave, apical margin transverse with submedian carinae slightly prominent, Y-shaped carina distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (3.2:1), and than median length (about 4.5:1); frons in middle line longer than wide at widest part (2:1), widest at two fifths from base, lateral margins concave between eyes, thence straight, slightly convergent, median carina forked at level of lower margin of eyes; clypeus at base only very little wider than frons at apex, postclypeal disc as long as broad at base, in profile markedly convex, anteclypeus in profile almost straight; entire clypeus in profile moderately convex; rostrum reaching post-coxae; antennae slightly surpassing frontoclypeal suture, basal segment longer than broad (1.5:1), second segment longer than first (2:1); ocelli small, distinct; blemmata moderately distinct. Pronotum with disc shorter in middle line than broad at anterior margin (1:1.5), lateral carinae weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.5:1). Post-tibial spur with about 30 teeth.

Dark fuscous; about six pairs of small pustules on frons, greater part of antennae, vertex, lateral carinae and lateral angles of mesonotum, protibiae and mesotibiae except basally, post-tibiae at apex, basal metatarsal segment at base and apex and second and third segments, light brownish yellow; posterior margin of pronotum outside median disc, and anal style, almost white. Tegmina hyaline, a suffusion in basal sixth. veins R, M and Cu_1 in corium, a crescentic band from node to margin just distad of claval apex, then recurving to apex of tegmen, a suffusion overlying apical portions of Sc, R and M, common claval vein and an elongate spot between common claval vein and sutural margin, dark fuscous. Wings hyaline, with veins dark fuscous.

Brachypterous form in both sexes with mesonotum and posterior half of pronotum laterally, stramineous or almost white; tegmina piceous.

Anal segment of male short, ring-like, lateroapical angles widely separated, each produced ventrad in a minute spinose process. Pygofer short dorsally, longer ventrally, posterior opening as broad as long, dorsolateral angles strongly produced caudad; diaphragm with dorsal margin W-shaped, medially with two strongly diverging flattened blade-like processes each deflexed apically; ventral margin rectangulately produced on each side of middle line, with margin excavate between them; medioventral process triangular. Aedeagus moderately long, dorsoventrally compressed and rounded apically, with two spinose processes apically, one straight, directed dorsad, the other curved to left and ventrad.

Genital styles long, diverging from base, tapering distad to apical third, then expanding and foliaceous distally, curving laterad at apex.

Male: length, 2.8 mm., tegmen, 3.7 mm.

Female (brachypterous): length, 3.4 mm.

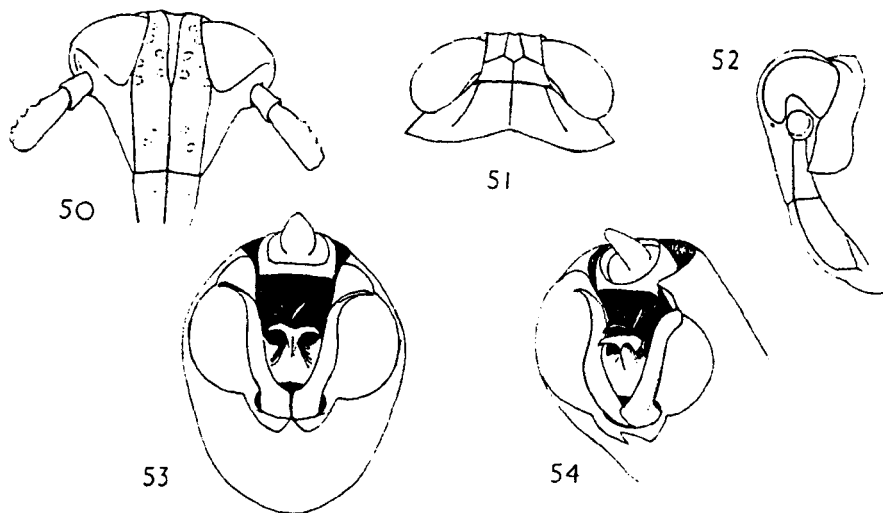
Holotype male, Sudan: Equatoria, Lotti forest, 14—17. III. 63, LINNAVUORI, in coll. Linnavuori.

Paratypes two males (brachypterous) and three females, same data.

This species can be separated from *C. viator* in the macropterous form by the infuscation of the longitudinal veins in the corium: in *C. viator* they are concolorous with the hyaline ground just basad of the dark band overlying the transverse line. The ornamentation of the diaphragm of the pygofer in *C. hipponax* is unique in the genus.

Numata MATSUMURA

Numata MATSUMURA 1935, Ins. Matsumurana 9, p. 139. Orthotype, *Stenocranus sacchari* MATSUMURA.



Figs. 50—54. *Cemus hipponax* sp.n. — 50. Frons. — 51. head and pronotum. — 52. head, lateral view. — 53. male genitalia, posterior view. — 54. the same, posterolateral view. — Orig.

Numata sacchari (MATSUMURA)

Stenoecranus sacchari MATSUMURA 1910, Die Schädlichen und nützlichen Insekten von Zuckerrohr Formosas, p. 16.

Four males and three females, Sudan: Equatoria, Lotti Forest, 14–17. III. 1963; Yambio, 17–25. IV. 1963; Yei-Iwatoka Road, 12–13. IV. 1963, LINNAVUORI.

Numata parmenio sp.n.

Vertex longer medially than broad at base (about 1.1:1), subacutely rounding into frons, narrower at apex than at base, lateral margins straight, apical margin truncate with submedian carinae moderately prominent, Y-shaped carina distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (1.8:1), and than median length (1.8:1); frons in middle line longer than wide at widest part (2.2:1), widest at two fifths from base, lateral margins concave between eyes, thence almost straight, frons at apex, postclypeal disc a little longer than broad at base, in profile almost straight, median carina forked at level of lower margin of eyes; clypeus at base scarcely wider than anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum attaining mesotrochanters; antennae not extending as far as frontoclypeal suture, basal segment longer than broad (1.8:1), second segment longer than first (1.7:1); ocelli present. Pronotum with disc longer in middle line than broad at anterior margin (1.1:1), lateral carinae straight, almost attaining hind margin. Total length of mesonotum greater than that of scutellum (3:1). Post-tibial spur with about 35 minute teeth.

Stramineous; vertex laterally, pronotal disc and mesonotal disc except in middle, orange yellow; middle line of vertex, pronotum and mesonotum, spot at hind margin of pronotum behind eyes, lateral fields of mesonotum, and sutural margin of tegmina white or pallid stramineous. Tegmina hyaline, with light yellowish suffusion, R and anterior branch of M at margin, and a dilute suffusion overlying cells of Cu in membrane, fuscous. Wings hyaline, veins concolorous except sometimes M which may be reddish brown. Anal segment of male moderately long, broadly tubular, lateroapical angles moderately widely separated, not produced. Pygofer short dorsally, long ventrally, posterior opening rather small, almost divided into two by inflected dorsolateral angles, which touch aedeagus in middle line; diaphragm transversely short, moderately deep vertically at middle, with dorsal margin deeply incised medially; medioventral process absent. Aedeagus long, laterally compressed, directed caudad, in side view acute apically; a narrow flagellum overlying aedeagus to its base, and curved slightly to right at its tip, which is acuminate.

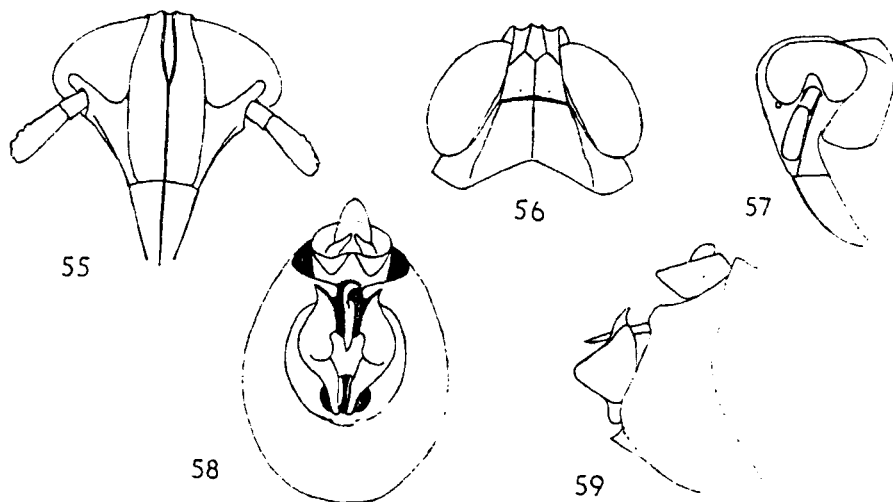
Genital styles moderately long, directed dorsocaudad, moderately divergent, dorsal margin concave, ventral margin produced mesocaudad at middle in a subrectangulate lobe; apical margin more strongly sclerotised than remainder of style, strongly oblique, with lower (mesal) angle rectangulate or oblique, and upper (lateral) angle acute.

Male: length, 2.8 mm., tegmen, 3.7 mm.

Female: length, 3.8 mm., tegmen, 4.8 mm.

Holotype male. Sudan: Upper Nile near Malakal, 5–20. I. 63, LINNAVUORI, in coll. Linnavuori.

This species amply differs from *N. sacchari* in the less elongate form of the genital styles in their distal half, and in other characters the two species do not appear to be very close.



Figs. 55—59. *Numata parmenio* sp.n. — 55. Frons and clypeus. — 56. vertex and pronotum. — 57. head and pronotum, lateral view. — 58. male genitalia, posterior view. — 59. male genitalia, lateral view. — Orig.

Malaxodes FENNAH

Malaxodes FENNAH 1967, Bull. Ent. Res. 57, p. 353. Orthotype, *Malaxodes farinosus* FENNAH.

Malaxodes farinosus FENNAH

FENNAH 1967, Bull. Ent. Res. 57, p. 355.

One male, Sudan: Equatoria, Kateri-Gilo, 18. III. 63, LINNAVUORI.

This genus was originally placed in the Tropidocephalini on account of the structure of the spur. The degree of variability in the denticulation of the spur that has since been observed in the generic complex around *Phacalastor*, while not reaching as far as the condition in *Malaxodes*, has suggested that the Tropidocephaline form has been acquired as a result of parallel evolution, and that this genus is both Delphacine and a member of this complex.

Nycheuma FENNAH

Nycheuma FENNAH 1964; Trans. Roy. Ent. Soc. Lond. 116, p. 145.

Nycheuma sectator (FENNAH) comb.n.

Dicranotropis sectator FENNAH 1963, Ann. Mag. Nat. Hist. 13, p. 698.

One male, Sudan: Blue Nile, Umm Bancin, 14. XI. 62, LINNAVUORI.

This species was described from a male from the Cameroons.

Nycheuma menius sp.n.

Vertex a little shorter submedially than broad at base (1:1.1), subrectangulately rounding into frons, a little narrower at apex than at base, lateral margins straight or shallowly concave, apical margin transverse, with submedian carinae a very little prominent, Y-shaped carina distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (2.2:1); and than median length (nearly 2.6:1), frons in middle line longer than wide at widest part (2:1), widest at middle, lateral margins shallowly convex, median carina forked at level of lower margin of eyes; clypeus at base very little wider than frons at apex, postclypeal disc as long as broad at base, in profile straight, abruptly incurved at apex to anteclypeus; anteclypeus in profile shallowly concave; entire clypeus in profile shallowly concave; rostrum attaining post-coxae; antennae surpassing frontoclypeal suture, basal segment longer than maximum apical width (1.7:1), second segment longer than first (2.2:1); ocelli small, distinct. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.6:1). Post-tibial spur with about 25 teeth.

Fuscous; median carina of vertex, and pronotum and all carinae of mesonotum, posterior angle of mesoscutellum, tibiae at margins, post-tibial spur, basal metatarsal segment distally, and following two segments, abdomen dorsally at base, and ventrally in middle, dull yellowish brown. Tegmina hyaline, uniformly suffused dull yellowish brown or fuscous, veins, except Sc + R near base and posterior claval vein, concolorous; Sc + R basally, posterior claval vein and commissural margin to apex of clavus, light brownish yellow. Wings hyaline, with veins fuscous.

Anal segment of male short, collar-like, lateroapical angles very widely separated, each produced laterocephalad in a triangular lobe that distally bends ventromesad and tapers to a spine that reaches dorsal margin of diaphragm. Pygofer moderately short dorsally, longer ventrally, posterior opening broader than long, dorsolateral angles not produced; diaphragm with dorsal margin unpigmented; a small laterally compressed lobe in middle line directed caudad; ventral margin of pygofer shallowly excavate medially, medioventral process absent. Aedeagus long, laterally compressed, reflected cephalad at apex in a long flagellum, a spinose process directed cephalad on left, flagellum tapering distad and acute at apex, two small darkly pigmented processes, one apparently spinose, on dorsal margin. Genital styles moderately long, inner margins apposed at base and slightly produced ventrocaudad, styles directed dorsad then twisted dorsocaudad and finally laterad.

Male: length, 2.8 mm., tegmen (estimated). 2.8 mm.

Holotype male, Sudan: Bahr el Ghazal, nr. Wau, 19. II. 1963, LINNAVUORI, in coll. Linnavuori.

This species is distinguishable from others of the genus by the form of the anal segment and of the genital styles.

Numatodes FENNAH

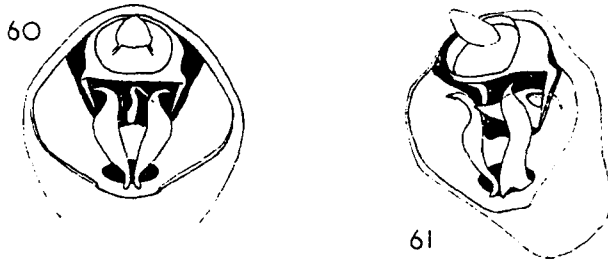
Numatodes FENNAH 1964, Trans. Roy. Ent. Soc. Lond. 116, p. 146. Orthotype, *Numatodes antricauda* FENNAH.

Numatodes antricauda FENNAH

FENNAH 1964, Trans. Roy. Ent. Soc. Lond. 116, p. 146.

One male, Sudan: Equatoria, Juba, 27. II. — 2. III. 1963, LINNAVUORI.

This species was hitherto known only from Mauritius.



Figs. 60—61. *Nycheuma menius* sp.n. — 60. Male genitalia, posterior view. — 61. the same, postero-lateral view. — Orig.

Euidella PUTON

Euidella PUTON 1886, Cat. Hemipt. Faun. Pal. 3, p. 72. Logotype, *Delphax basilinea* GERMAR 1821, Mag. Ent. 4, p. 105.

Euidella horvathi (LALLEMAND) comb.n.

Delphax horvathi LALLEMAND 1925, Arkiv. Zool. 18, p. 6.

Vertex as long medially as broad at base, subrectangulately rounding into frons, slightly narrower at apex than at base, lateral margins straight or nearly so, apical margin truncate with submedian carinae moderately prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (2:1); and than median length (2.5:1), frons in middle line longer than wide at widest part (2:1), widest at level of ocelli, lateral margins shallowly concave between eyes, then straight. median carina simple; clypeus at base distinctly wider than frons at apex, postclypeal disc slightly longer than broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum reaching to post-coxae; antennae scarcely attaining frontoclypeal suture, basal segment longer than broad (2:1), second segment longer than first (1.5:1); ocelli small; blemmata obscure. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.4:1). Post-tibial spur with about 45 teeth.

Pale brownish yellow; metapleura, abdominal tergites towards sides, and sternites in middle, and anal segment, fuscous; vertex, disc of pronotum and disc of mesonotum medially, dorsal surface of pygofer and of anal segment, pale stramineous, intercarinal areas suffused yellow. Tegmina yellowish hyaline, commissural margin of clavus pale stramineous, almost white; veins concolorous in corium except Cu_1 which is fuscous, veins in membrane and apical cell $M_2 + 4$, fuscous. Wings milky hyaline, veins brown.

Anal segment of male rather short, collar-like, lateroapical angles rather close to each other, each produced ventrocephalad in a short spinose process. Pygofer moderately long, posterior opening about as long as broad, dorsolateral angles each moderately produced caudad in an obtusely angulate lobe, diaphragm with dorsal margin shallowly angulately emarginate, a little produced caudad at middle like the lip of a jug; lateral margins in profile oblique, medioventral process about twice as broad at base as long, rounded with apical margin slightly excavate medially. Aedeagus long, narrowly tubular, shallowly decurved, at apex reflected

cephalad in a long flagellum which reaches to base of aedeagus, where it is produced ventrolaterad on left in a short lobe, and laterad on right in a long sinuate whip-like filamentous process, broadly recurved cephalad. Genital styles not very long, strongly diverging from base, widest at one third from base, outer margins convex in basal two thirds, inner margins straight, each style tapering and slightly bent laterad in apical third.

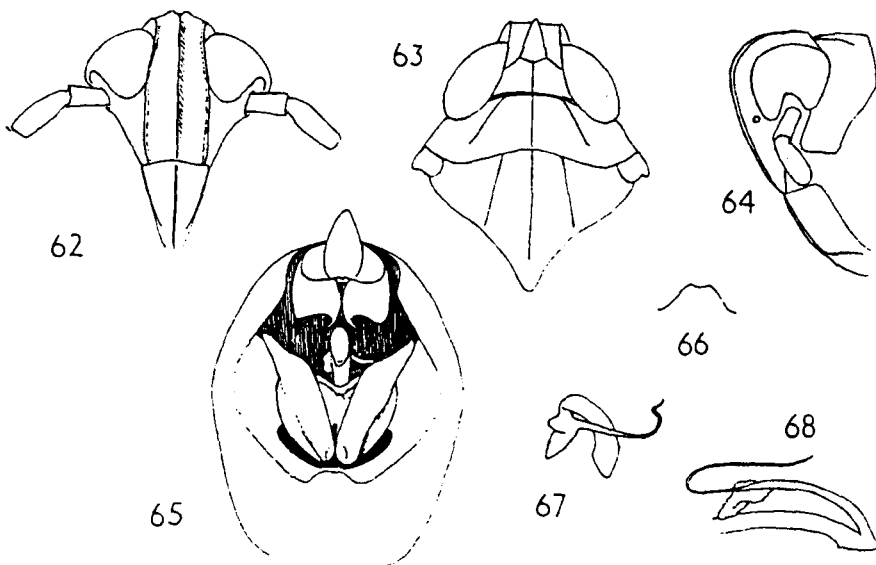
Male: length, 3.1 mm., tegmen, 3.9 mm.

Female: length, 3.6 mm., tegmen, 4.2 mm.

Five males, ten females and one mutilated specimen, and a female of another species make up the type series. I now designate as the lectotype a male bearing the labels "Sudan, Nilen, Pr. W. Exp. Gylde 29 Aug. Typus, *Delphax horvathi* LALLEM., type n.sp. 13968 Riksmuseum Stockholm."

Paratypes, four males (labelled with the numbers 141, 144, 152, 153), nine females (140, 143, 145, 146, 147, 148, 149, 150, 155), and one mutilated specimen (142).

This species is allied to *Delphacodes idmon* FENNAH, but differs markedly in the form of the medioventral process of the pygofer, and in the infuscation of Cu₁ in the tegmina.



Figs. 62—68. *Euidella horvathi* (Lallemand). — 62. Frons and clypeus. — 63. head and thorax. — 64. head and pronotum, lateral view. — 65. male genitalia. — 66. medioventral process of pygofer. — 67. apical portion of aedeagus, ventrolateral view, flagellum at middle shown in transparency. — 68. aedeagus, left side. — Orig.

Euidopsis RIBAUT

Euidopsis RIBAUT 1948, *Comm. Biol. Soc. Scient. Fenn.* 10: 8, p. 18. Orthotype, *Euidopsis truncata* Ribaut 1948, *ibid.*, p. 18.

This genus was erected on the basis of a single female specimen, and its distinguishing characters are to be found in the proportions of the vertex, frons and antennae, the deep ventral emargination of the eyes and the bodily coloration.

Euidopsis palaemon sp.n.

Vertex shorter medially than broad at base (1:1.1), subacutely rounding into frons, a little narrower at apex than at base, lateral margins slightly concave, apical margin truncate with submedian carinae scarcely prominent, Y-shaped carina feeble, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (2:1); and than median length (2.3:1), frons in middle line longer than wide at widest part (1.9:1), widest at two fifths from base, lateral margins concave between eyes, thence straight, median carina forked near level of ocelli; clypeus at base a little wider than frons at apex, postclypeal disc about as long as broad at base, in profile almost straight, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum attaining post-coxae; antennae reaching almost to apex of postclypeus, basal segment twice as long as its maximum width at apex, second segment longer than first (2:1); ocelli distinct. Pronotum with disc shorter in middle line than broad at anterior margin (1:1.3), lateral carinae weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.3:1). Post-tibial spur with about 30 teeth.

Fuscous; about eight pairs of small spots on frons, carinae and margins of head, thorax and legs, and abdominal sternites narrowly at hind margin, stramineous; three pustules on pronotum behind each eye, median carina and margins of vertex, and carinae of pronotum and mesonotum, white, intercarinal areas yellow. Tegmina hyaline, a band from base to apex, overlying cells between M and posterior claval vein, and of equal width throughout, fuscous, commissural margin white. Wings dilute fuscous, with fuscous veins.

Anal segment of male rather short, lateroapical angles widely separated, each produced ventromesad in a narrow flattened process that curves laterad apically. Pygofer rather short dorsally, longer ventrally, posterior opening longer than broad, dorsolateral angles only slightly produced caudad, diaphragm with dorsal margin subangulately concave, medially strongly produced caudad in a broad, hollowed, almost scoop-like process with flaring and irregularly convolute margins directed dorsolaterad; ventrolateral margins of pygofer a little angulately produced; medioventral process a simple lobe, slightly longer than broad at its base. Aedeagus relatively large, laterally compressed, extending caudad then reflected basad in a large flagellum, which comprises a membranous rather elongate leaf-shaped lobe and a sclerotised taeniate lobe that tapers distally to a spinose process and recurves caudad. Genital styles moderately long, broad and laterally compressed at base, slightly diverging distad, widening to apical three quarters, then abruptly narrowing to a pointed apex.

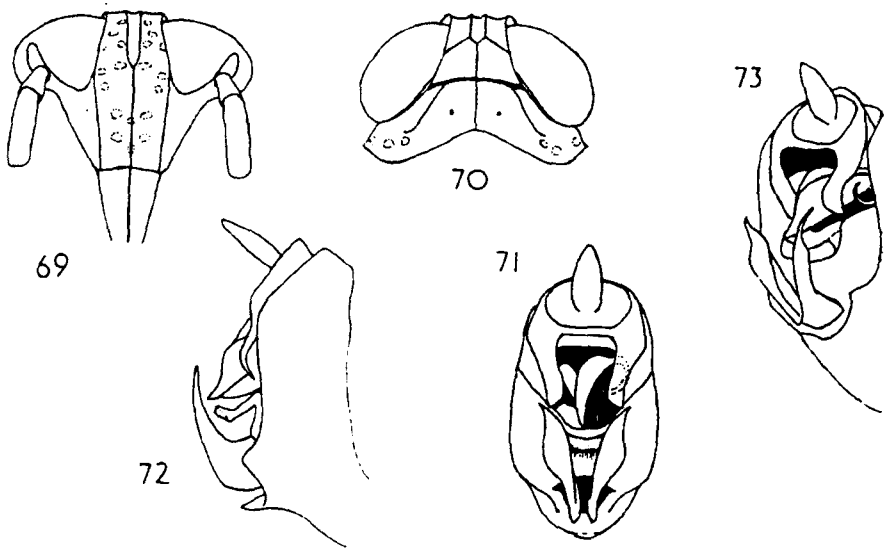
Male: length, 3.3 mm., tegmen, 4.1 mm.

Holotype male, Sudan: Equatoria, Loka Forest, 8—10. IV. 1963, LINNAVUORI, in coll. Linnavuori.

This species, like the typical species, resembles *Perkinsiella dorsata* (Mel.) in general shape and coloration. *E. palaemon* differs from *E. truncata*, of which the male has not been described, in the proportions of the antennae.

Aneuides gen.n.

Vertex about as long as broad, apical margin distinctly convex, Y-shaped carina distinct, submedian carinae uniting at apex of vertex or at extreme base of frons, basal compartment of vertex almost twice as wide at hind margin as its greatest



Figs. 69—73. *Euidopsis palaemon* sp.n. — 69. Frons and clypeus. — 70. vertex and pronotum. — 71. male genitalia, posterior view. — 72. the same, lateral view. — 73. the same, posterolateral view. — Orig.

length; apex of head in profile subrectangulate; frons almost twice as long as broad, widest just distad of middle, lateral margins distinctly convex, median carina forked at base; antennae attaining fronto-clypeal suture, basal segment distinctly longer than broad, second segment longer than first (approximately 1.5: 1); ocelli distinct. Pronotum with median disc approximately as long in middle as broad at anterior margin, lateral carinae straight, but not attaining posterior margin. Total length of mesonotum greater than that of scutellum (3: 1); post-tibial spur with more than 30 teeth.

Anal segment of male short. Pygofer short dorsally, long ventrally, lateral margins in profile strongly sinuate, diaphragm moderately deep, a medioventral process present (paired in type species). Aedeagus rather long, reflected cephalad in a flagellum. Genital styles rather short, simple.

Type species, *Aneuides ilaira* sp.n.

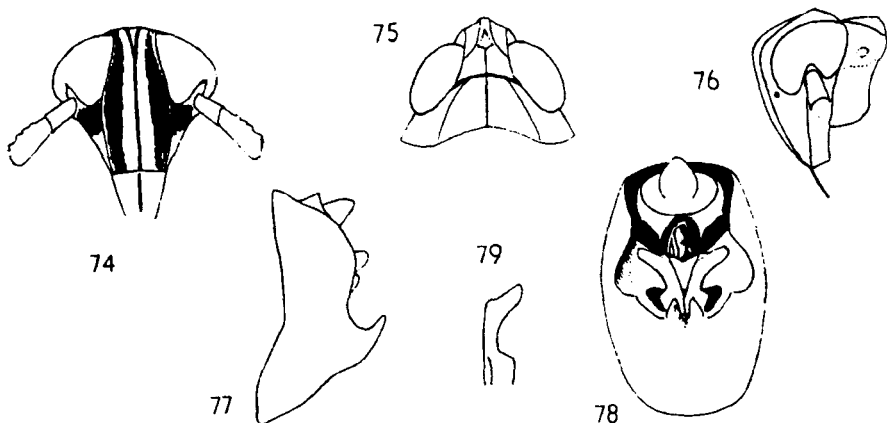
This genus shares features with *Thriambus* and *Euidella*, but on the whole seems nearer to the latter. It is set apart from the former by the shape of the head and pronotum, rather than by their gross proportions, and from the latter by the structure of the genitalia. It differs appreciably from species of both in bodily coloration, and the type is a much smaller insect than the European *Euidella speciosa*.

Aneides ilaira sp.n.

Vertex as long medially as broad at base, in profile subrectangulately meeting frons, narrower at apex than at base, lateral margins shallowly concave, apical margin shallowly convex with submedian carinae distinctly prominent, Y-shaped carina distinct, submedian carinae uniting at extreme base of frons, basal compartment of vertex wider at hind margin than greatest length (1.9:1); and than median length (2.2:1), frons in middle line longer than wide at widest part (nearly 1.9:1), widest at one third from apex, lateral margins convex, median carina forked at base, clypeus at base slightly wider than frons at apex, postclypeal disc slightly shorter than broad at base, in profile very shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum apparently reaching post-trochanters; antennae reaching to frontoclypeal suture, basal segment longer than broad (1.1:1); second segment longer than first (1.1:1) ocelli small, distinct. Pronotum with disc slightly longer in middle line than broad at anterior margin (1.1:1), lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (3:1). Post-tibial spur with about 35 teeth.

Stramineous; frons sublaterally, a triangular suffusion on gena, mesopleura, abdomen except dorsally in middle, interruptedly at sides and anteriorly on ventrites, pygofer except on dorsal margin, and genitalia, fuscous; a narrow band overlying median carina of frons, middle line of vertex, pronotum and mesonotum, and scutellum, white. Tegmina hyaline, a narrow spot between common claval vein and commissural margin near their point of junction, fuscous. Veins concolorous in corium, fuscous in membrane.

Anal segment of male short, ring-like, slightly depressed, lateroapical angles moderately widely separated, each produced ventrocephalad in a short acute process. Pygofer very short dorsally, long ventrally, posterior opening longer than broad, dorsolateral angles shallowly rounded, moderately produced and inflected mesocaudad, diaphragm with dorsal margin obtusely angulately concave, slightly produced caudad at middle in a lip; ventrolateral margins excavate: medioventral process represented by a pair of acute processes directed caudad,



Figs. 74—79. *Aneides ilaira* gen. et sp.n. — 74 Frons. — 75. vertex and pronotum. — 76. head and pronotum, lateral view. — 77. male genitalia, left side. — 78. the same, posterior view. — 79. genital style, lateral view. — Orig.

each about twice as long as broad at base. Aedeagus rather long, laterally compressed, distally reflected cephalad in a long flagellum. Genital styles moderately long, apposed at base, moderately diverging dorsocaudad, each with inner (mesal) margin straight, outer margin concave, and dilated and bent laterad in apical third, inner apical angle obtuse, outer rounded.

Male: length, 2.1 mm., tegmen, 2.7 mm.

Female: length, 2.9 mm., tegmen, 3.4 mm.

Holotype male, Sudan: Equatoria, Juba, 27. II.—2. III. 1963, LINNAVUORI, in coll. Linnavuori.

Paratype, one female, same data.

Micreuides gen.n.

Vertex a little longer medially than broad at base, subrectangulately or obtusely rounding into frons, apical margin truncate, with submedian carinae a little prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex or at base of frons, basal compartment of vertex wider at hind margin than median length (about 1.5:1), frons in middle line longer than wide at widest part (about 2.5:1), widest at apex, lateral margins feebly convex, median carina forked at base; postclypeal disc as long as broad at base, in profile shallowly convex, rostrum reaching approximately to post-coxae; antennae cylindrical, moderately surpassing frontoclypeal suture, basal segment longer than broad, second segment longer than first (about 1.5:1); ocelli distinct. Pronotum with disc approximately as long in middle line as broad at anterior margin, lateral carinae straight, not quite attaining hind margin. Post-tibial spur relatively large, with about 40 teeth.

Anal segment of male short, lateroapical angles widely separated. Pygofer short dorsally, long ventrally, with a medioventral process. Aedeagus reflected basad in a long flagellum. Genital styles short, simple.

Type species, *Micreuides verres* sp.n.

This genus is distinguishable by the shape of the head in combination with the structure of the male genitalia. The bodily size of the type species is comparatively small. Superficially, it most nearly resembles an *Aneuides*, but differs in the shape of the frons and in genitalic structure.

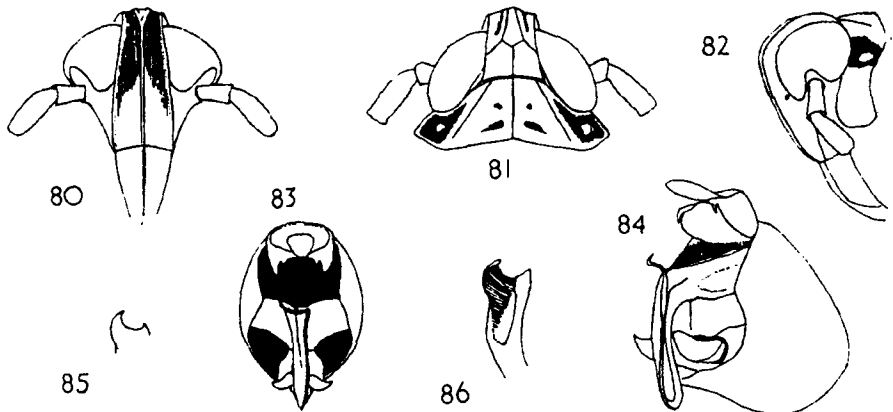
Micreuides verres sp.n.

Vertex longer medially than broad at base (1.5:1), subrectangulately or a little obtusely rounding into frons, slightly narrower at apex than at base, lateral margins straight, apical margin truncate with submedian carinae moderately prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex or at base of frons, basal compartment of vertex wider at hind margin than greatest length (about 1.5:1), and than median length (1.5:1); frons in middle line longer than wide at widest part (2.5:1), widest at apex, lateral margins

almost straight, median carina forked at extreme base; clypeus at base only very little wider than frons at apex, postclypeal disc as long as broad at base, in profile shallowly convex, anteclypeus in profile almost straight; entire clypeus in profile shallowly convex; rostrum reaching to post-coxae; antennae moderately surpassing frontoclypeal suture, basal segment longer than broad (1.6:1), second segment longer than first (1.7:1); ocelli distinct. Pronotum with disc longer in middle line than broad at anterior margin (1.1:1), lateral carinae straight, not quite attaining hind margin. Total length of mesonotum greater than that of scutellum (2.8:1). Post-tibial spur almost as long as basal segment of metatarsus, with about 40 teeth.

Stramineous; intercarinal areas of frons basally, and sometimes a submarginal suffusion distally, sides of head before eyes, a spot in each compartment of pronotal disc, a suffusion, interrupted by a pustule, on each side behind eyes, mesopleura, a lateral stripe on postfemora, spots at lateral margins of abdomen, and pygofer, fuscous; median compartments of mesonotal disc yellow or light orange brown, lateral fields of mesonotum, tegulae and irregular markings on abdomen, dilute fuscous. Tegmina stramineous-hyaline, a linear mark on commissural margin near its junction with common claval vein, reddish brown; veins concolorous in corium, fuscous in membrane. Wings hyaline, veins concolorous except near apex, where they are tinged with brown.

Anal segment of male short, ring-like, apical margin very narrow, lateroapical angles widely separated, each produced ventrocephalad in a small spinose process. Pygofer short dorsally, long ventrally, posterior opening slightly longer than broad, dorsolateral angles shallowly rounded, a little produced, slightly inflected, diaphragm with dorsal margin shallowly concave, finely carinate vertically at middle, medioventral process longer than broad at base, deeply cleft medially at apex. Aedeagus long, narrowly tubular, at apex reflected basad in a long flagellum, which terminates on left in a small membranous lobe, and on right in two spinose processes, one directed ventrad, the other curved above flagellum to left. Genital styles short and broad, only slightly diverging, each with outer margin shallowly sinuate, outer



Figs. 80—86. *Micreuides verres* gen. et sp.n. — 80. Frons and clypeus. — 81. vertex and pronotum. — 82. head and pronotum, lateral view. — 83. male genitalia with aedeagus fully everted, posterior view. — 84. the same, posterolateral view. — 85. apex of genital style, posterodorsal view. — 86. genital style, dorsolateral view. — Orig.

surface hollowed out, apical margin rather deeply concave, inner and outer apical angles acute.

Male: length, 3.0 mm., tegmen, 3.6 mm.

Female: length, 3.6 mm., tegmen, 4.0 mm.

Holotype male, Sudan: Equatoria, Nimule, 11—13. III. 1963, LINNAVUORI, in coll. Linnavuori.

Paratypes, one male and five females, Sudan: Equatoria, Juba-Terakeka, 2—6. III. 1963, LINNAVUORI.

This species is distinguished by the coloration of the frons and the exceptionally long post-tibial spur, as well as by structural details of the male genitalia.

Euidastor gen.n.

Vertex as long as broad, or nearly so, subacutely rounding into frons, distinctly narrower at apex than at base, lateral margins shallowly concave, apical margin truncate, with submedian carinae moderately prominent, Y-shaped carina more or less distinct, submedian carinae uniting at apex of vertex or at base of frons, basal compartment wider at hind margin than long in middle (about 2.5:1); frons in middle line longer than wide at widest part (fully 2.5:1), widest at apex, lateral margins straight or slightly undulate, median carina simple or forked between eyes; clypeus at base a little wider than frons at apex, postclypeal disc longer than broad at base, more or less weakly convex in profile, rostrum at least attaining post-coxae. Antennae reaching about to middle of postclypeus, second segment fully twice as long as first; ocelli distinct. Post-tibial spur with 30—35 teeth.

Anal segment of male with lateroapical angles widely separated, each strongly produced ventrad in a long lobe or process. Pygofer with lateral margins in side view shallowly excavate.

Type species, *Euidastor milonius* sp.n.

This genus is close to *Euidopsis* but is distinguishable by the more elongate frons, which is widest apically as compared with at two-fifths from base.

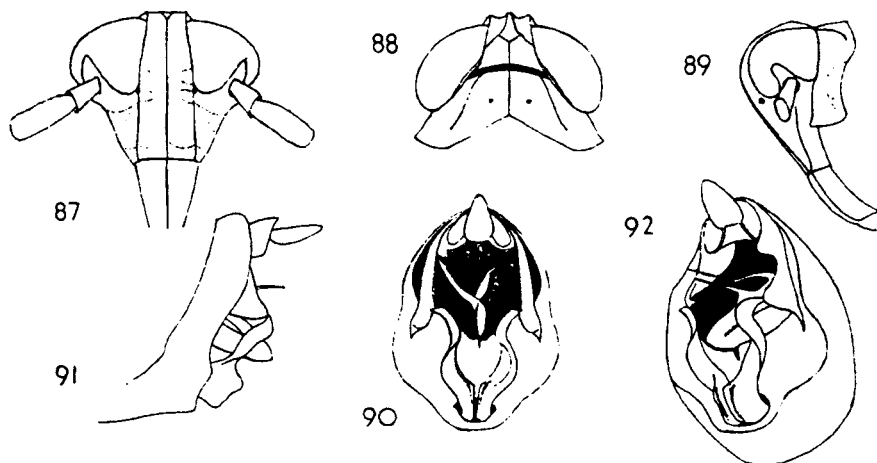
Euidastor milonius sp.n.

Vertex shorter medially than broad at base (1:1.25), subacutely rounding into frons, distinctly narrower at apex than at base, lateral margins concave, apical margin truncate with submedian carinae moderately prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.5:1); and than median length (2.5:1), frons in middle line longer than wide at widest part (2.5:1), widest at apex, lateral margins straight or weakly undulate, median carina simple, clypeus at base only very slightly wider than frons at apex, postclypeal disc longer than broad at base, in profile shallowly convex, anteclypeus in profile very feebly convex; entire clypeus in profile moderately convex; rostrum reaching to post-trochanters; antennae reaching about to middle of postclypeus, basal segment longer than maximum width at apex (1.5:1), second segment

longer than first (2.1:1); ocelli distinct. Pronotum with disc shorter in middle line than broad at anterior margin (nearly 1:1.5), lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.5:1). Post-tibial spur with about 30 teeth.

Light stramineous; a suffusion across frons near base and apex, interrupted by a few pale spots and bounded distally by pale apical margin, a triangular submarginal suffusion on gena, pronotum behind eyes except for three linear marks on hind margin of ventrolateral lobes, lateral fields of mesonotum, tegulae, mesopleura and metacoxae, dilute fuscous; median carina and lateral margins of vertex, median and lateral carinae of pronotal disc and of mesonotum, white; a triangular spot in genae, sides of head above eyes, and intercarinal areas of vertex, pronotum and mesonotum, orange yellow. Abdominal tergites except narrowly at hind margin, and sternites rather narrowly anteriorly, and ventral surface of pygofer in anterior half, dark reddish brown. Tegmina hyaline, a band overlying cells between M and commissural margin, and extending to apex, and branches of Sc, R, and M at margin, fuscous; veins concolorous. Wings hyaline with fuscous veins.

Anal segment of male moderately long, apical margin breached, lateroapical angles widely separated, each produced ventrad in a broad saddle-flap-like lobe and with a small spine at inner distal angle. Pygofer moderately long, posterior opening longer dorsoventrally than broad; dorsolateral angles slightly produced caudad in a shallowly rounded lobe, diaphragm with dorsal margin membranous, shallowly concave, strongly produced caudad at middle in a compressed trough-like process minutely bispinose apically; ventral margin of pygofer moderately excavate medially; medioventral process absent. Aedeagus long, strongly compressed laterally, and reflected cephalad in a long flagellum; flagellum with a small spinose process on right ventral margin distally, directed ventrolaterad; two large recurved processes at apex of flagellum, reflected cephalad, that on left thin, ribbon-like, that on right narrowly cylindrical, sinuate, denticulate along mesal margin, acuminate apically. Genital styles moderately long, strongly laterally compressed at base, bent dorsad and moderately diverging, strongly twisted in apical third and directed dorsolaterad, tapering to apex.



Figs. 87—92. *Euidastor milonius* gen. et sp.n. — 87. Frons. — 88. vertex and pronotum. — 89. head and pronotum, lateral view. — 90. male genitalia, posterior view. — 91. the same, lateral view. — 92. the same, posterolateral view. — Orig.

Male: length, 2.6 mm., tegmen, 3.8 mm.

Holotype male, Sudan: Equatoria, Aloma plateau, Yei-Iwatoka road, 12—13. IV. 1963, LINNAVUORI, in coll. Linnavuori.

This species is readily distinguishable by the shape of the male anal segment, aedeagus, and genital styles.

Euidastor pansa sp.n.

Vertex as long medially as broad at base, subacutely rounding into frons, narrower at apex than at base, lateral margins shallowly concave, apical margin truncate with submedian carinae moderately prominent, Y-shaped carina rather weak, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (1.6:1), and than median length (2.4:1); frons in middle line longer than wide at widest part (2.8:1), widest at apex, lateral margins straight, median carina forked at level of middle of eyes; clypeus at base slightly wider than frons at apex, postclypeal disc slightly longer than broad at base, in profile distinctly convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum attaining post-coxae; antennae reaching middle of post-clypeus, basal segment longer than its maximum apical width (1.7:1), second segment longer than first (2:1); ocelli distinct; blemmata absent or obscure. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae weakly sinuate, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.8:1). Post-tibial spur with about 35 teeth.

Stramineous; median carina of vertex, and median and lateral discal carinae of pronotum and mesonotum, white; disc of frons, except for about six pairs of spots, postclypeus and genae towards margins, a suffusion on pronotum outside disc, along hind margin of lateral fields and ventrolateral lobes, except for a spot behind eye and three linear marks at margin, lateral fields of mesonotum, and mesopleura, dilute fuscous; first segment of antennae apically and second segment basally, dark fuscous. Tegmina hyaline, a broad linear suffusion from base to apex, in posterior half of tegmen, dilute yellowish-brown in corium, fuscous in membrane; Sc, R and M overlain with fuscous at margin; costal margin to node and commissural margin to apex of clavus, white. Wings hyaline, very slightly infusate, veins fuscous.

Anal segment of male short, lateroapical angles very widely separated, each produced ventrad in a long tapering process curved cephalad distally. Pygofer rather short dorsally, longer ventrally, posterior opening slightly longer than broad, dorsolateral angles each moderately produced caudad in a convex lobe; diaphragm with dorsal margin deeply concave, strongly produced caudad at middle in a trough-like process; ventral margin of pygofer shallowly excavate at middle, medioventral process absent. Aedeagus rather long, laterally compressed, reflected cephalad at apex in a long flagellum that expands distally and emits three slender spinose processes that curve caudad above flagellum. Genital styles moderately long, moderately diverging, shallowly sinuate, of subequal width throughout, blunt and slightly bent laterad at apex.

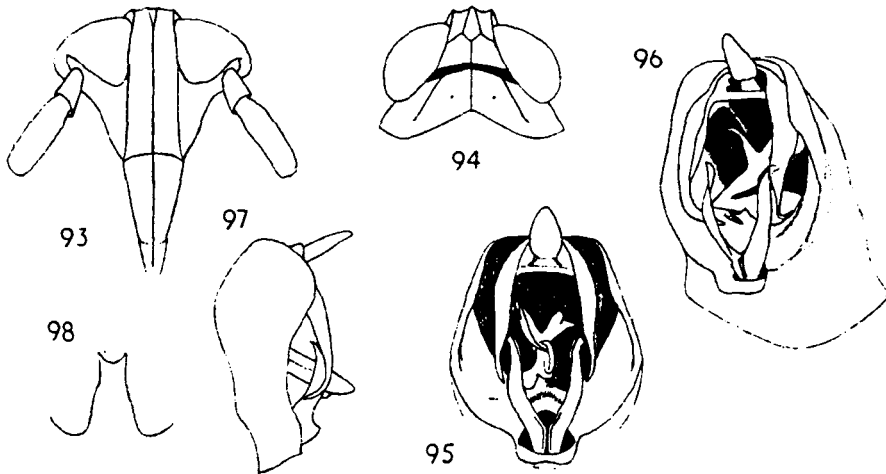
Male: length, 3.8 mm., tegmen, 4.6 mm.

Holotype male. Sudan: Equatoria, Lotti Forest, 14—17. III. 1963. LINNAVUORI, in coll. Linnavuori.

Perkinsiella KIRKALDY

Perkinsiella KIRKALDY 1903, Entomologist 36, p. 179. Orthotype, *Perkinsiella saccharicida* KIRKALDY 1903, *ibid.* p. 179.

Araeopides RIBAUT 1948, Comm. Biol. Soc. Scient. Fenn. 10, p. 13. Orthotype, *Araeopides picta* RIBAUT 1948, *ibid.* p. 13.



Figs. 93—98. *Euidastor pansa* sp.n. — 93. Frons and clypeus. — 94. vertex and pronotum. — 95. male genitalia, posterior view. — 96. male genitalia, posterolateral view. — 97. male genitalia, lateral view. — 98. median process on dorsal margin of diaphragm, ventral view. — Orig.

Perkinsiella dorsata (MELICHAR) comb.n.

Delphax dorsata MELICHAR 1905, Wien. Ent. Zeit. 24, p. 285.

One male, Abyssinia: Mt. Zuquála, about 9,000 ft., 21—25. X. 1926, Dr. H. Scott.

Perkinsiella picta (RIBAULT) comb.n. and *P. insignis* Distant are very close to this species, and the former may prove to be synonymous.

Peregrinus KIRKALDY

Peregrinus KIRKALDY 1904, Entomologist 36, p. 175. Orthotype, *Delphax maidis* ASHMEAD 1890, Psyche 5, p. 323.

Hagamiella FENNAH 1958: 488. Orthotype, *Hagamiella iocasta* FENNAH syn.n.

Peregrinus iocasta (FENNAH) comb.n.

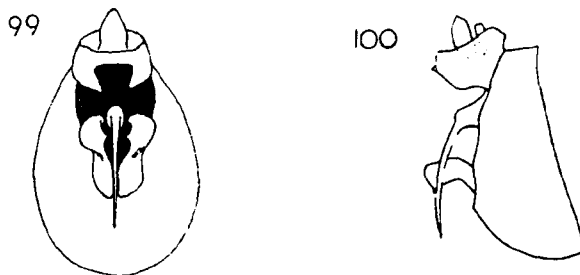
Hagamiella iocasta FENNAH 1958, Bull. de l'I.F.A.N. 20 A, p. 489.

The genus *Hagamiella* was based on female material. It has since become possible to examine the male genitalia, and these clearly show that *iocasta*, notwithstanding the unusual conformation of the head, must be referred to *Peregrinus*.

One male, Uganda: Kawanda, 26—27. III. 1958, mercury vapour light trap, P. E. S. WHALLEY.

Hapalomelus STÅL

Hapalomelus STÅL 1853, Öf. Sv. Vetensk. Akad. Förh. 10, p. 265. Haplotype, *Hapalomelus flavipes* STÅL 1855, ibid. 11, p. 93.



Figs. 99—100. *Peregrinus iocasta* (Fennah). — 99. Male genitalia, with aedeagus everted, posterior view. — 100. the same, lateral view. — Orig.

Hapalomelus ruandanus FENNAH

FENNAH 1955, Ann. Mus. Congo Tervuren Zool. 10, p. 431.

One male and three females, Sudan: Lotti forest, 14—17. III. 1963; Imatong Mts. near Gilo, 18—24. III. 1963, LINNAVUORI.

Hapalomelus onytes sp.n.

Vertex as long medially as broad at base, broadly rounding into frons, narrower at apex than at base, lateral margins straight, apical margin shallowly convex with submedian carinae not prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (2.2:1), and than median length (2.2:1); frons in middle line longer than wide at widest part (2.3:1), widest at apex. lateral margins feebly sinuate, median carina simple, clypeus at base not wider than frons at apex, postclypeal disc as long as broad at base, in profile distinctly convex, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum reaching post-coxae; antennae apparently long, basal segment cylindrical, longer than broad (more than 2:1), ocelli distinct, blemmata present. Pronotum with disc longer in middle line than broad at anterior margin (1.2:1), lateral carinae weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (4.6:1). Post-tibial spur with about 20 teeth.

Dark fuscous; genae distally, antennae except for a longitudinal stripe, pronotum postero-laterally, rostrum except at apex, femora, post-tibiae except laterally in basal third, stramineous; male genitalia reddish brown. Tegmina hyaline, a suffusion across base, a curved band from costal margin near base to sutural margin at middle of clavus then recurving to node, fuscous; membrane dark fuscous, a few marginal cells hyaline. Wings hyaline, lightly suffused with brown, veins fuscous.

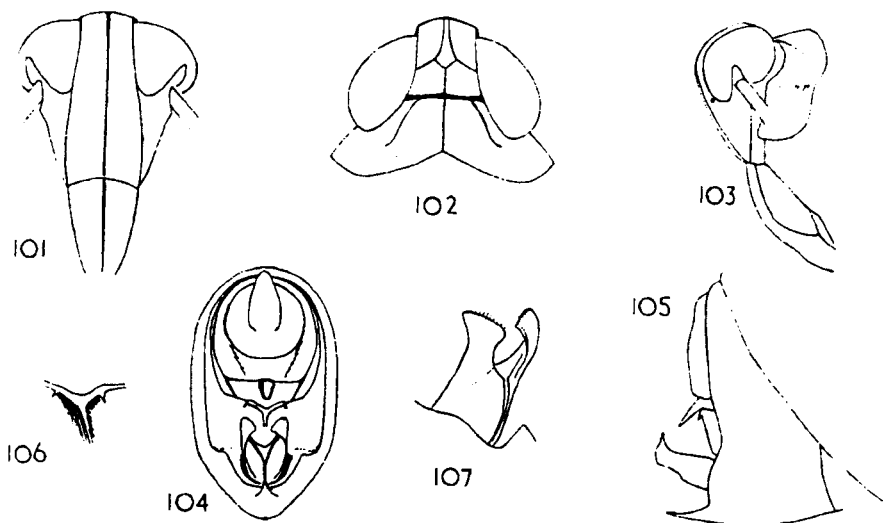
Anal segment of male short, ring-like, lateroapical angles widely separated, each produced ventrad in a very short spinose process. Pygofer very short dorsally, long ventrally, posterior opening about twice as long as broad, dorsolateral angles not at all produced; diaphragm with dorsal margin transverse, shallowly cleft at middle, with a pair of short spinose processes, directed caudad, arising at outer edges of cleft; lateral margin of pygofer sinuate in lower half; medioventral process rather large, triangular, acute apically. Aedeagus moderately long,

tubular, directed caudad, in side view very obliquely truncate apically. Genital styles relatively short, straight, directed dorsocaudad, broad and parallelsided in basal two thirds, with ventral surface hollowed longitudinally, narrowed in distal third but slightly expanded at apex in a rounded lobe which is inflected mesad.

Male: length, 2.1 mm., tegmen, (estimated) 3.8 mm.

Holotype male, Sudan: Equatoria, Yambio, 17—25. IV. 1963, LINNAVUORI, in coll. Linnavuori.

Part of the apical portion of the tegmina is missing in the type, and the antennae are represented only by an incomplete basal segment. It may reasonably be inferred from other species that the latter extends almost to the level of the apex of the clypeus.



Figs. 101—107. *Hapalomelus onytes* sp.n. — 101. Frons and clypeus. — 102. vertex and pronotum. — 103. head and pronotum, lateral view. — 104. male genitalia, posterior view. — 105. the same, lateral view. — 106. median portion of dorsal margin of diaphragm. — 107. genital styles, lateroventral view. — Orig.

Neogadora gen.n.

Vertex shorter than broad, apical margin truncate, lateral margins shallowly concave, basal compartment shorter than width at basal margin (about 1:2), posterior surface of head very little exposed, Y-shaped carina rather weak, sublateral carinae continuing separately on to frons; frons longer than broad (about 2.5:1), lateral margins shallowly concave between eyes, then straight, median carina forked near level of lower margin of eyes, rather weak towards base; post-clypeus basally a little wider than frons at apex, disc longer than

broad at base, rostrum almost attaining post-trochanters, ocelli small, blemmata present; antennae reaching almost to apex of clypeus, basal segment longer than broad (approximately 3:1), second segment longer than first (about 1.5:1). Pronotum medially about as long as vertex in dorsal view, tricarinate, moderately strongly inclined lateroventrad behind eyes, anterior margin between lateral carinae slightly broader than length of median carina, lateral carinae not reaching hind margin; mesonotum tricarinate; post-tibial spur with about 35 teeth, basal metatarsal segment very slightly longer than remaining two combined. Tegmina with Sc + R fork basad of Cu_1 fork, which itself is slightly basad of junction of common claval vein and commissural margin, stigma relatively large, less than twice as long as broad, a rather long R + M stalk present, Cu_2 extending into membrane; postcubital cell subequal to, or slightly longer than, common claval vein. Pygofer with posterior opening longer than broad, ventrolateral margin produced caudad on each side in a process.

Type species, *Neogadora nitens* sp.n.

In MUIR's key (1915: 296) the type species keys to *Dicranotropis* on the proportions of the dorsal surface of the head, and comes close to *Euidella*, from which it differs markedly in antennal structure.

Neogadora nitens sp.n.

Vertex shorter medially than broad at base (1:1.1), broadly subacutely rounding into frons, narrower at apex than at base, lateral margins shallowly concave, apical margin truncate with submedian carinae not at all prominent, Y-shaped carina weak, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (2.1:1); and than median length (2.7:1), frons in middle line longer than wide at widest part (2.5:1), widest at two fifths from base, lateral margins shallowly concave between eyes, then straight, median carina forked at level of lower margin of eyes, clypeus at base a little wider than frons at apex, postclypeal disc longer than broad at base, in profile shallowly convex, anteclypeus in profile rather strongly convex; entire clypeus in profile moderately convex; rostrum slightly surpassing post-coxae; antennae reaching almost to apex of clypeus, basal segment longer than its maximum apical width (2.7:1), second segment longer than first (nearly 1.5:1); ocelli small, blemmata present. Pronotum with disc slightly shorter in middle line than broad at anterior margin (about 1:1.1), lateral carinae weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (not quite 2.5:1). Post-tibial spur with about 35 teeth.

Dark fuscous or dark castaneous; a broad band dorsally from base of frons to tip of meso-scutellum, rostrum, tibiae, tarsi, and anal style of male, stramineous. Tegmina dark castaneous, almost piceous in membrane, a semicircular area on anterior margin at node, a triangular area in apical cell adjoining and a smaller ovate area at margin in cell $M_3 + 4$, hyaline; veins fuscous. Wings hyaline, with veins fuscous.

Anal segment of male short, ring-like, lateroapical angles not clearly defined, not produced, apical margin shallowly convex, thin. Pygofer very short dorsally, long ventrally, posterior opening longer than broad, dorsolateral angles obtuse, not produced, diaphragm narrow at

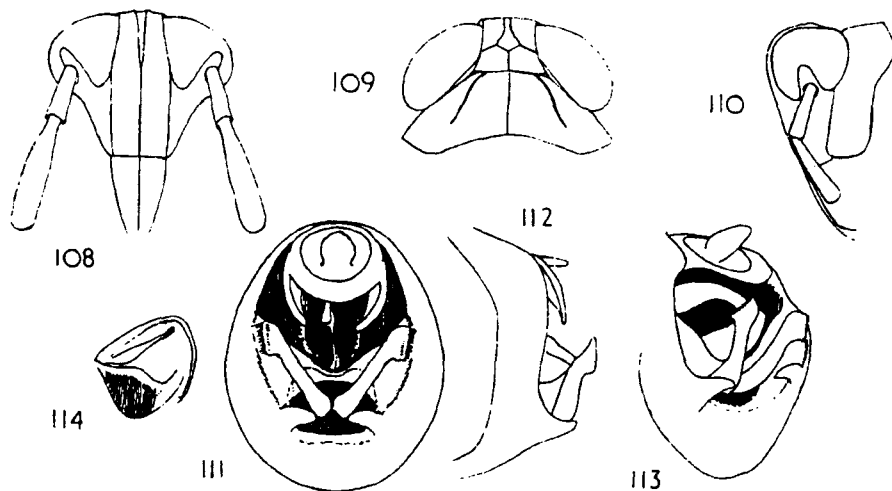
middle with dorsal margin concave, a little projecting caudad, not at all thickened; ventro-lateral margins of pygofer each produced caudad in a stout subconical process, acute and curved mesad at its apex; medioventral process absent. Aedeagus long, tubular, laterally compressed, and sinuate, apically reflected dorsad in a stout flagellum that terminates in a decurved spinose process. Genital styles rather long, moderately diverging dorsolaterad, each parallel-sided to apical third, where it becomes strongly dilated; apical margin very shallowly concave and bearing about twelve setae in a row.

Male: length, 2.9 mm., tegmen, 4.6 mm.

Holotype male, Sudan: Equatoria, Maridi-Ibba, 16. IV. 63, LINNAVUORI, in coll. LINNAVUORI.

Paratypes, one male, same data; one male, Equatoria: Opari-Magwe, 13. III. 63, LINNAVUORI.

This species is distinguishable by the shape of the male anal segment and of the genital styles.



Figs. 108—114. *Neogadora nitens* gen. et sp.n. — 108. Frons and clypeus. — 109. vertex and pronotum. — 110. head and pronotum, lateral view. — 111. male genitalia, posterior view. — 112. the same, lateral view. — 113. the same, posterolateral view from left (semi-diagrammatic). — 114. aedeagus, posterolateral view from right. — Orig.

Curtometopum MUIR

Curtometopum MUIR 1926, Ann. Mag. nat. Hist. (9) 17, p. 25. Orthotype, *Curtometopum turneri* MUIR.

Curtometopum turneri MUIR

MUIR 1926, Ann. Mag. nat. Hist. (9) 17, p. 26. Two females, Sudan: Darfur, Safaha-Abu Matariq, 30. IV.—2. V. 1963; Kordofan, Lake Keilak, 8—11. II. 1963.

Rhinolettix STÅL

Rhinolettix STÅL 1853, Öfv. Sv. Vetensk. Akad. Förh. 10, p. 265. Haplotype, *Rhinolettix fuscipennis* STÅL 1855, Öfv. Sv. Vetensk. Akad. Förh. 12, p. 93.

Rhinolettix sp.

One stylotised male, Sudan: Equatoria, Yei-Iwatoka road, Aloma plateau, 12—13. IV. 63.

Embolophora STÅL

Embolophora STÅL 1855, Öfv. Sv. Vetensk. Akad. Förh. 12, p. 92. Haplotype, *Embolophora monoceros* STÅL.

Embolophora monoceros STÅL

STÅL 1855, Öfv. Sv. Vetensk. Akad. Förh. 12, p. 92.

One female, Sudan: W. Darfur, Jebel Marra, Kallikitting, 4,450 ft., 2. VI. 1932, M. STEELE.

Corbulo FENNAH

Corbulo FENNAH 1965, Bull. Brit. Mus. 17, p. 48. Orthotype, *Corbulo dodona* FENNAH.

Corbulo dodona FENNAH

FENNAH 1965, Bull. Brit. Mus. 17, p. 48.

Four males and one female. Sudan: Equatoria, Yambio, 17—25. IV. 1963; Blue Nile, Singa-Damazin.

Nilaparvata DISTANT

DISTANT 1906, The Fauna of Brit. India 3, p. 473. Orthotype, *Delphax lugens* STÅL 1854 Öfv. Sv. Vetensk. Akad. Förh. 11, p. 246.

Nilaparvata nigratarsis MUIR

MUIR 1926, Ann. Mag. nat. Hist. (9) 17, p. 30

Four males, Abyssinia: Serpents Lake, Wouramboulchi, about 9,000 ft., 5. X. 1926, J. OMER COOPER.

Nilaparvata camilla sp.n.

Vertex longer medially than broad at base (1.1:1), a little obtusely rounding into frons, narrower at apex than at base, lateral margins straight, apical margin truncate with submedian carinae moderately prominent, Y-shaped carina weak, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (nearly 1.5:1); and than median length (1.5:1), frons in middle line longer than wide at widest part (2.5:1), widest at two thirds from base, lateral margins shallowly convex, median carina simple; clypeus at base not wider than frons at apex, postclypeal disc distinctly longer than broad at base, in profile very shallowly convex, almost straight, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum reaching to post-coxae; antennae surpassing frontoclypeal suture, basal segment longer than broad (2.5:1), second segment longer than first (1.4:1); ocelli distinct, blemmata present. Pronotum with disc longer in middle line than broad at anterior margin (1.5:1), lateral carinae straight or weakly concave, not attaining

hind margin. Total length of mesonotum greater than that of scutellum (2.4:1). Post-tibial spur with about 25 teeth.

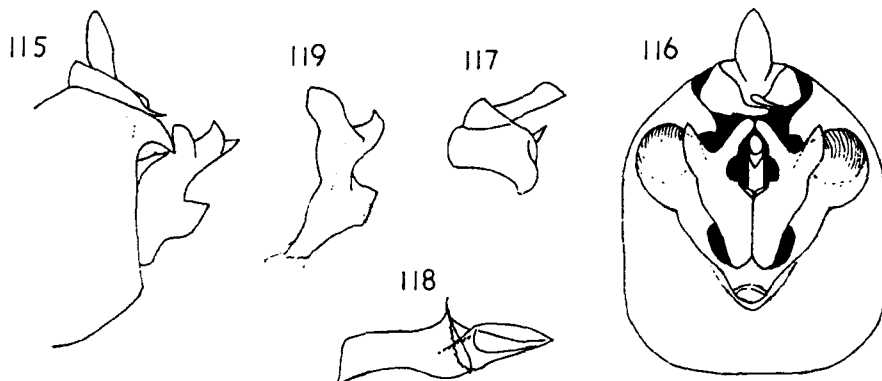
Yellowish-brown; frons, anterior portion of genae, antennae, clypeus except laterally, ventrolateral lobes of pronotum, a suffusion on mesopleura, abdomen and male genitalia fuscous or dark reddish brown; disc of pronotum and mesoscutellum light stramineous. Tegmina hyaline, with faint yellowish suffusion, a linear suffusion on commissural margin at its junction with common claval vein, fuscous; veins concolorous in corium, fuscous in membrane. Wings hyaline, veins concolorous basally, fuscous distally.

Anal segment of male rather short, ring-like, lateroapical angles moderately far apart, each produced mesad in a stout strongly curved spinose process, that overlaps its counterpart in middle. Pygofer moderately long, posterior opening about as long as broad, dorsolateral angles strongly produced, inflected and slightly decurved, each truncate distally; diaphragm narrow with dorsal margin shallowly concave, broadly notched at middle; ventral margin angulately excavate, medioventral process absent. Aedeagus long, tubular, slightly sinuate, directed caudad, a stout decurved rather flattened lobe dorsally on right near middle, decurved, apically acuminate; orifice dorsal at apex, three minute teeth on ventral surface below orifice. Genital styles large and broad, meeting in middle line at one third from base, inner margin of each concave, and with a short subspinose process, directed mesad, at middle, outer (lateral) margins very shallowly convex, apical angles each strongly produced, the inner dorsomesad, the outer dorsolaterad, both bluntly rounded distally.

Male: length, 3.5 mm., tegmen, 4.0 mm.

Holotype male, Sudan: Equatoria, Yambio, 17—25. IV. 1963, LINNAVUORI in coll. Linnavuori.

The species is nearest to *N. maeander* FENNAH, but differs in the absence of a pale dorsal stripe, in the different proportions of the head, and in the shape of the pygofer.



Figs. 115—119. *Nilaparvata camilla* sp.n. — 115. male genitalia, lateral view. — 116. the same, posterior view. — 117. anal segment of male, lateral view. — 118. aedeagus. — 119. genital style, lateral view, inner aspect. — Orig.

Afrokalpa gen.n.

Robustly built species. Vertex a little longer medially than broad at base (1.1—1.2:1), subrectangulately rounding into frons, about as wide at apex as at base, lateral margins straight, Y-shaped carina weak, submedian carinae uniting on base of frons, basal compartment of vertex wider at hind margin than greatest length (1.6—1.7:1) and than median length (about 1.6:1); frons in middle line longer than wide at widest part (2.0—2.4:1); widest distad of middle, lateral margins shallowly convex, median carina forked near base; postclypeal disc at least as long as broad at base, in profile almost straight or shallowly convex, anteclypeus more strongly convex; rostrum just reaching to post-coxae; antennae reaching frontoclypeal suture, basal segment longer than broad (1.2—1.6:1), second segment longer than first (1.7—2.3:1), ocelli present. Pronotum with disc longer in middle line than broad at anterior margin (1.1—1.3:1), lateral carinae not attaining hind margin. Total length of mesonotum (in macropterous forms) greater than that of scutellum (1.3:1). Post-tibiae, from base to insertion of tarsi, distinctly longer than metatarsi (about 1.3:1), spur rather short and stout, with 20—24 teeth.

Anal segment of male short, lateroapical angles moderately widely separated, each produced ventrad in a spinose process. Pygofer moderately long, posterior opening about as long as broad, diaphragm with dorsal margin concave. Aedeagus relatively short, tubular, laterally compressed, with a row of teeth on upper and lower margins distally. Genital styles stout, with apical angles more or less produced and a blunt subspinose process directed laterocaudad, a little before apex.

Type species, *Afrokalpa triquetra* sp.n.

Members of this genus quite strongly resemble those of *Nilaparvata*. The latter is usually distinguishable from all Delphacids by the presence of lateral spines on the basal metatarsal segment, but this character is not invariably present. If this character is ignored, *Afrokalpa* differs from *Nilaparvata* in its species being larger and bulkier, in having a relatively shorter rostrum, a relatively longer post-tibia (that in *Nilaparvata* is little, if any, longer than the metatarsus) and a relatively shorter and distinctly less foliaceous spur. The pygofer and particularly the genital styles are broadly similar to those in *Nilaparvata*, but the structure of the aedeagus is wholly different from any of the diverse aedeagal forms so far known in *Nilaparvata*.

Afrokalpa triquetra sp.n.

Vertex longer submedially than broad at base (1.2:1), subrectangulately rounding into frons, as broad at apex as at base, lateral margins straight, apical margin truncate with sub-

median carinae moderately prominent, Y-shaped carina feeble, submedian carinae uniting at base of frons, basal compartment of vertex wider at hind margin than greatest length (1.5:1); and than median length (1.5:1), frons in middle line longer than wide at widest part (2:1), widest at about two fifths from base, lateral margins shallowly convex, median carina forked at base, clypeus at base a little wider than frons at apex, postclypeal disc longer than broad at base, in profile almost straight, anteclypeus in profile moderately convex; entire clypeus in profile shallowly convex; rostrum reaching to post-coxae; antennae slightly surpassing frontoclypeal suture, basal segment longer than broad (1.5:1), second segment longer than first (about 1.7:1); ocelli distinct. Pronotum with disc longer in middle line than broad at anterior margin (1.5:1), lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (1.5:1). Post-tibial spur with about 20 teeth.

Fuscous; antennae, margins and carinae of head, thorax, legs and abdomen, light ochraceous. Tegmina milky hyaline, a fuscous spot between claval vein and commissural margin; veins concolorous in corium, lightly infuscate in membrane.

Anal segment of male short, collar-like, lateroapical angles moderately widely separated, each produced ventrad in a short spinose process. Pygofer moderately long, posterior opening as broad as long, dorsolateral angles and lateral margins moderately produced caudad, diaphragm with dorsal margin concave, diaphragm vertically convex in middle line; medioventral process absent. Aedeagus short, tubular, laterally compressed, directed caudad, with about six strong spines in a row dorsally in distal half, and about eleven spines bordering apical margin and ventral margin distally, and extending towards base on right side, orifice on left at apex. Genital styles moderately long, stout, inner margin basally produced in a stout and rather narrow lobe; both margins concave, style widening distally and with apical angles moderately produced dorsad, apical margin concave, a blunt spinose process a little before apex, directed laterad.

Male: length, 3.5 mm., tegmen, 4.1 mm.

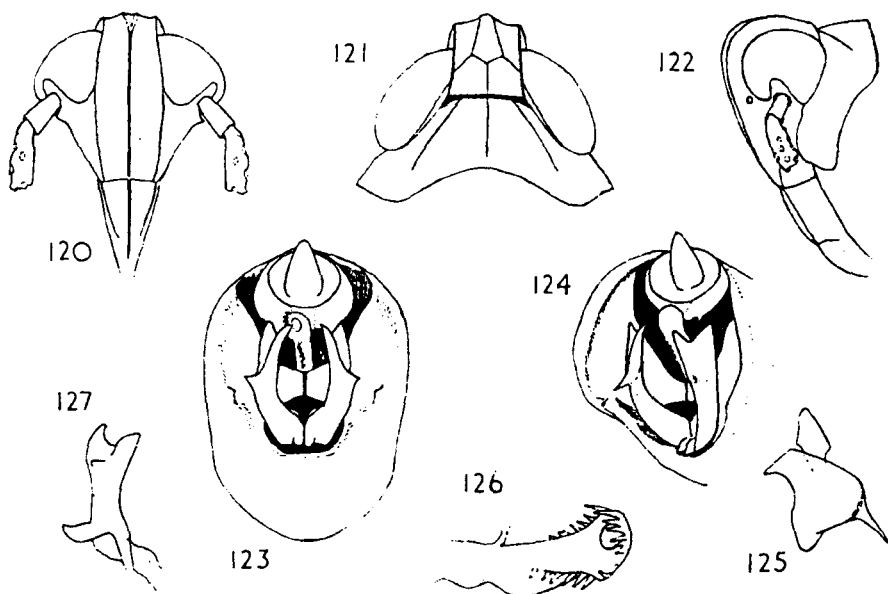
Holotype male, Abyssinia: Hawash River, west of Mount Zaquála circa 6,000 ft., 28. XI. 1926, J. OMER COOPER, in B.M. (N.H.).

This species is distinguishable by the proportions of the head and the shape of the male genitalia.

Afrokalpa perilla sp.n.

Vertex longer medially than broad at base (about 1.1:1), subrectangulately rounding into frons, about as wide at apex as at base, lateral margins straight, apical margin shallowly convex, with submedian carinae not prominent, Y-shaped carina weak, submedian carinae not uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.7:1); and than median length (1.5:1), frons in middle line longer than wide at widest part (2.4:1), widest at three-quarters from base, lateral margins shallowly convex, median carina forked basally at level of middle of eyes; clypeus at base not wider than frons at apex, postclypeal disc as long as broad at base, in profile shallowly convex, anteclypeus in profile rather strongly convex; entire clypeus in profile moderately convex; rostrum just attaining post-coxae; antennae just attaining frontoclypeal suture, basal segment slightly longer than broad (1.1:1), second segment longer than first (2.2:1); ocelli obscure. Pronotum with disc slightly longer in middle line than broad at anterior margin (1.1:1), lateral carinae sinuate, not attaining hind margin. Post-tibial spur with 21—24 teeth. Brachypterous tegmen with apical margin almost truncate.

Fuscous; rostrum, carinae of head, posterior compartment of vertex, median disc and posterior half of pronotum, mesonotum, pleural sclerites at margin, fore and middle legs, distal half of post-tibiae, post-tarsi, abdomen dorsally in middle line and at apex, stramineous or



Figs. 120—127. *Afrokalpa triquetra* gen. et sp.n. — 120. Frons and clypeus. — 121. vertex and pronotum. — 122. head and pronotum, lateral view. — 123. male genitalia, posterior view. — 124. the same, posterolateral view. — 125. anal segment of male, lateral view. — 126. aedeagus, left side. — 127. genital style, lateral view. — Orig.

pale brownish yellow. Brachypterous tegmina hyaline, more or less strongly suffused fuscous, but invariably dark at base of costal cell and at apex of common claval vein; apical margin broadly pallid.

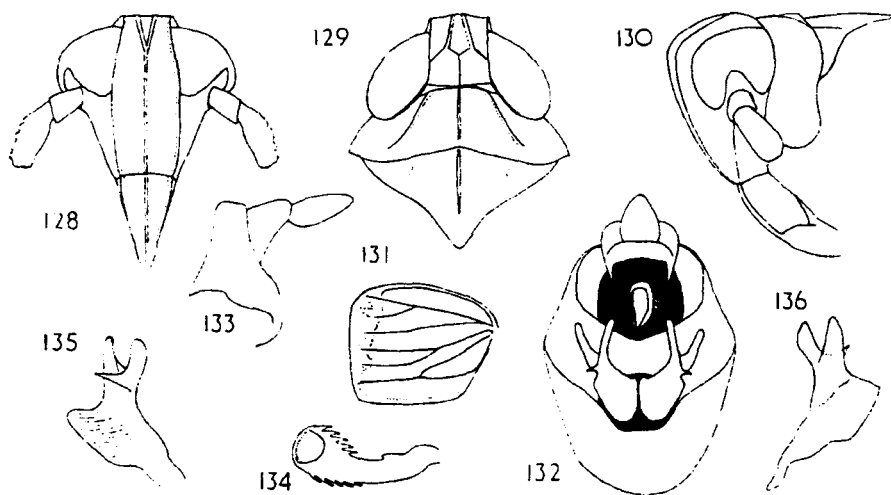
Female darker than male, with posterior compartment of vertex and intercarinal areas of pronotum and mesonotum dark fuscous.

Anal segment of male short, collar-like, lateroapical angles rather far apart, each produced ventrad in a stout curved spinose process. Pygofer moderately long, posterior opening about as long as broad, dorsolateral angles not produced, diaphragm with dorsal margin shallowly angulately excavate; medioventral process absent. Aedeagus rather short, strongly laterally compressed, widening distally, a row of about five stout teeth on dorsal margin, about nine minute teeth on apical margin and about five stout teeth on ventral margin, orifice terminal, slightly to right. Genital styles short, stout, each produced at base in a broad thick lobe, inner and outer margins shallowly convex at middle, apical angles each strongly produced in a finger-like lobe, a spinose process, shorter than either of these lobes, at one third from apex, directed laterocaudad.

Male (brachypterous): length, 2.5 mm.

Female: length, 3.0 mm.

Holotype male, Abyssinia: Mt. Chillalo, forest circa 9,000 ft., 14. XI. 1926, Dr. H. Scott in B.M. (N.H.).



Figs. 128—136. *Afrokalpa perilla* sp.n. — 128. Frons and clypeus. — 129. head and thorax. — 130. head and pronotum, lateral view. — 131. tegmen. — 132. male genitalia. — 133. anal segment of male, lateral view. — 134. aedeagus. — 135. genital style, lateral view, outer aspect. — 136. genital style, lateral view, inner aspect. — Orig.

Paratypes 1 male, 1 female, Abyssinia: Addis Abbaba, 8,000 ft., under boulders 29. IX. 1926, Wachacha Ravine near Addis Abbaba, about 8,000 ft., 9. IX. 1926, Dr. H. SCOTT.

This species is distinguishable by the proportions of the head and the shape of the male genitalia. It is near to *A. triquetra* but is readily separable by the longer fork of the median frontal carina and the more strongly produced apical angles of the genital styles.

Toya DISTANT

Toya DISTANT 1906, The Fauna of Brit. India 3, p. 472. Orthotype, *Toya attenuata* DISTANT 1906, *ibid.* p. 472.

Toya thomasseti (MUIR)

Delphacodes thomasseti MUIR 1925, Trans. Ent. Soc. London 1924, p. 466.
One male, Sudan: Equatoria, Yambio, 17—25. IV. 1963, LINNAVUORI.

Toya demophoon FENNAH

FENNAH 1963, Ann. Mag. Nat. Hist. 13, p. 694.
One male, Abyssinia: Mt. Zuguála, circa 9,000 ft., sweeping rushes in lake, 22. X. 1926, J. OMER COOPER.

The type of this species is from the Cameroons.

Toya complexa (Muir) comb.n.

Delphacodes complexa Muir 1929, Ann. Mag. Nat. Hist. 4, p. 215.

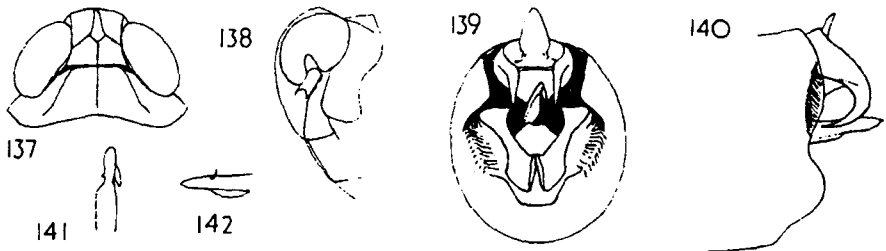
One male, Abyssinia: Serpent Lake, Wouramboulchi, circa 9,000 ft., 5. X. 1926, J. OMER COOPER. This generic assignment is provisional. This species was described from South Africa, and I have seen a male from Uganda (Kawanda, IV. 1958, P. E. S. WHALLEY).

Toya menedemus sp.n.

Vertex shorter medially than broad at base (1 : about 1.5), broadly and evenly rounding into frons, as wide at apex as at base, lateral margins shallowly concave, apical margin slightly convex with submedian carinae not prominent, Y-shaped carina distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (2:1); and than median length (2.5:1), frons in middle line longer than wide at widest part (2:1), widest at two fifths from base, lateral margins concave between eyes, then straight, median carina simple, forked at extreme base; clypeus at base not or very little wider than frons at apex, postclypeal disc about as long as broad at base, in profile almost straight, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum reaching to post-coxae; antennae surpassing frontoclypeal suture, basal segment longer than maximum width at apex (2:1), second segment longer than first (1.5:1); ocelli small, obscure. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae straight or weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.5:1). Post-tibial spur with about 22 teeth.

Dark fuscous; antennae, clypeus, rostrum, tip of scutellum and legs stramineous; pronotum, except anteriorly, and tegulae, white. Tegmina hyaline, veins concolorous in corium, dilute fuscous in membrane; apical margin dilute fuscous. Wings hyaline, veins concolorous.

Anal segment of male short, in dorsal view horse-shoe like, lateroapical angles widely separated, each produced ventrad in a spinose process. Pygofer short dorsally, long ventrally, posterior opening about as long as broad, dorsolateral angles obtuse, inflected mesad; diaphragm with dorsal margin rather broadly produced dorsocaudad at middle in a rounded lobe; ventral margin almost semicircularly excavate medially; medioventral process absent. Aedeagus moderately long, shallowly curved upward distad, lower surface flattened, margins of flattened surface finely carinate, that of left side slightly produced ventrad near its apex; a small tooth on left side subapically, and a short curved spinose process on right directed laterocephalad at same level; orifice ventral at apex, and a small tooth on right near its margin. Genital



Figs. 137—142. *Toya menedemus* sp.n. — 137. vertex and pronotum. — 138. head and pronotum, lateral view. — 139. male genitalia, posterior view. — 140. the same, lateral view. — 141. apical portion of aedeagus, ventral view. — 142. the same, right side. — Orig.

styles moderately long, apposed medially in basal third, inner margin and lateral margin of each concave, inner apical angle acute, outer apical angle deeply convex.

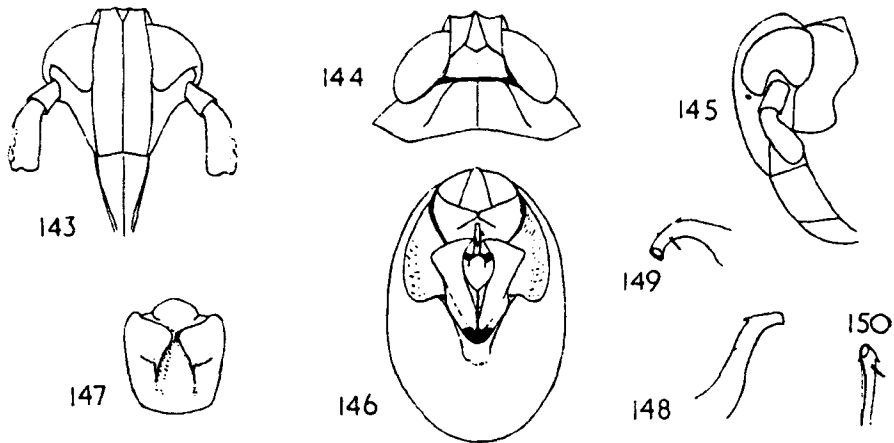
Male: length, 2.4 mm., tegmen, 2.8 mm.

Holotype male, Sudan: Equatoria, Lotti Forest, 14—17. III. 1963, LINNAVUORI, in coll. Linnavuori.

This species is distinguishable by the obtusely rounding profile of the apex of the vertex, the white pronotum and tegulae, and the form of each element of the male genitalia. The colour of the pronotum is as found in *Delphacodes turneri* MUIR, but elsewhere there is little agreement.

Toya camenu sp.n.

Vertex as long medially as broad at base, evenly rounding into frons, a little narrower at apex than at base, lateral margins shallowly concave, apical margin truncate with submedian carinae distinctly prominent, Y-shaped carina moderately distinct, submedian carinae uniting at apex of vertex or at extreme base of frons, basal compartment of vertex wider at hind margin than greatest length (2.2:1); and than median length (2.8:1), frons in middle line longer than wide at widest part (2.2:1), widest at one third from base, lateral margins sinuate. median carina simple, or shortly forked at base; clypeus at base only very little wider than frons at apex, postclypeal disc slightly longer than broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum long, reaching to post-trochanters; antennae reaching to level of middle of clypeus, basal segment longer than maximum apical width (2.0:1), second segment longer than first (1.4:1); ocelli small, distinct. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.8:1). Post-tibial spur with about 22 teeth.



Figs. 143—150. *Toya camenu* sp.n. — 143. Frons and clypeus. — 144. vertex and pronotum. — 145. head and pronotum. — 146. male genitalia. — 147. anal segment of male, ventral view. — 148. aedeagus, left side. — 149. apical portion of aedeagus, right side. — 150. apical portion of aedeagus, ventral view. — Orig.

Yellowish-brown or dilute fuscous; carinae and margins of head and thorax, and sometimes legs, lighter; tip of scutellum, ivory white, abdomen dark fuscous. Tegmina hyaline, more or less uniformly suffused yellowish brown, veins of corium concolorous, veins of membrane, fuscous. Wings hyaline, slightly infusate, veins fuscous.

Anal segment of male moderately long, lateroapical angles broadly triangular, each produced mesad but not quite meeting, the ventral margin of each produced ventrocephalad in a weak slender spinose process. Pygofer moderately long, posterior opening longer dorso-ventrally than broad, dorsolateral angles not produced, little projecting caudad of diaphragm, with dorsal margin concave, slightly more deeply so near middle, but transverse or even slightly convex at middle, where entire median surface is shallowly convex; ventral margin of pygofer acutely excavate, margins of excavation carinate; medioventral process absent. Aedeagus moderately long, sinuate; narrowing distad, slightly compressed laterally, directed caudad, and a little deflexed in distal two fifths, a short spinose process on right near apex directed laterocephalad. Genital styles rather short, stout, flat posteriorly, weakly diverging dorsad, inner margins concave, outer margins sinuate, inner apical angle acute, outer apical angle deeply rounded, apical margin truncate.

Male: length, 1.9 mm., tegmen, 2.5 mm.

Holotype male, Sudan: Equatoria, Lalyo-Juba, 26—27. II. 1963, LINNAVUORI, in coll. Linnavuori.

This species is distinguished by the relatively uniform yellowish brown coloration, with only the tip of the mesoscutellum white, and by bodily proportions.

Toya canidia sp.n.

Vertex shorter submedially than broad at base (1:1.1), subrectangulately rounding into frons, narrower at apex than at base, lateral margins concave, apical margin truncate with submedian carinae markedly prominent, Y-shaped carina moderately distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.4:1); and than median length (2.0:1), frons in middle line longer than wide at widest part (2.2:1), widest at two thirds from base, lateral margins shallowly convex, median carina simple; clypeus at base not wider than frons at apex, postclypeal disc slightly longer than broad at base, in profile very shallowly convex, almost straight, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum attaining post-coxae; antennae reaching to frontoclypeal suture, basal segment longer than broad (1.5:1), second segment longer than first (about 2:1); ocelli distinct, blemmata present. Pronotum with disc longer in middle line than broad at anterior margin (nearly 1.2:1), lateral carinae straight or weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.7:1). Post-tibial spur with about 20 teeth.

Stramineous; intercarinal areas of frons and clypeus, distal margin of first antennal segment and anterior part of genae, abdomen ventrally and dorsally except at base, and male genitalia, dark fuscous or dark reddish brown; second antennal segment, a suffusion on pleura, a short stripe on postfemora and a small spot at base of post-tibiae, lighter fuscous. Tegmina hyaline, lightly suffused with yellow on corium, and with very dilute fuscous in posterior half of membrane, veins yellowish or concolorous in corium, fuscous in membrane. Wings hyaline, veins slightly infusate.

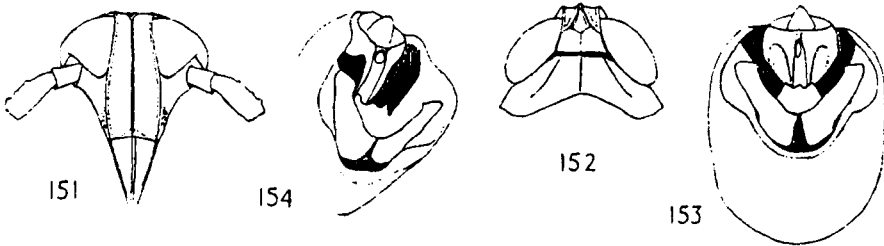
Anal segment of male short, subtubular, lateroapical angles close to middle line, each produced ventrad in a straight spinose process. Pygofer moderately long, dorsally excavate, posterior opening rather broader than long, dorsolateral angles in side view shallowly rounded,

only slightly produced, diaphragm narrow with dorsal margin elevated at middle in a broad polished subquadrate lobe, with a small eminence at middle and one at each end, ventral margin of pygofer deeply excavate, medioventral process absent. Aedeagus short, tubular, slightly laterally compressed, ascending distad, orifice on left at apex, four or more teeth on right side near middle, and a row of teeth on left. Genital styles moderately long, strongly diverging laterodorsad, inner margin slightly concave, outer margin straight, apical margin obliquely truncate, outer apical angle deeply rounded, inner apical angle almost rectangulate.

Male: length, 2.3 mm., tegmen, 3.2 mm.

Holotype male, Sudan: Equatoria, 30 km. north of Terakeka, 4—5. III. 1963, LINNAVUORI, in coll. Linnavuori.

The proportions of the head, and the shape of the genital styles and of the dorsal margin of the diaphragm, in combination, distinguish this from other species of *Toya*.

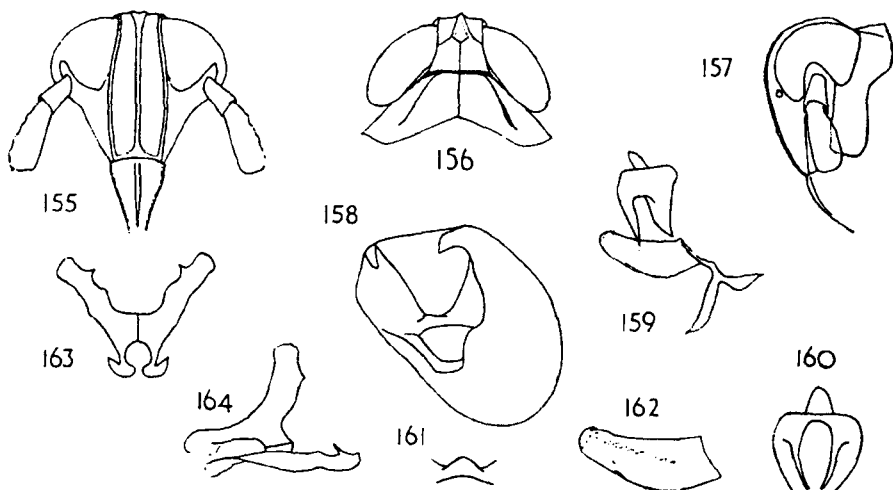


Figs. 151—154. *Toya canidia* sp.n. — 151. Frons and clypeus. — 152. vertex and pronotum. — 153. male genitalia, posterior view. — 154. the same, posterolateral view. — Orig.

Toya mandonius sp.n.

Vertex as long medially as broad at base, smoothly rounding into frons, a little narrower at apex than at base, lateral margins almost straight, apical margin truncate with submedian carinae distinctly prominent, Y-shaped carina feeble, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.9:1); and than median length (2:1), frons in middle line longer than wide at widest part (2.3:1), widest at middle, lateral margins concave between eyes, then shallowly convex, median carina simple; clypeus at base not wider than frons at apex, postclypeal disc longer than broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum reaching to post-coxae; antennae surpassing frontoclypeal suture, basal segment longer than maximum apical width (1.3:1), second segment longer than first (nearly 2:1); ocelli distinct, biemmata present. Pronotum with disc longer in middle line than broad at anterior margin (nearly 1.2:1), lateral carinae straight or weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (nearly 2.6:1). Post-tibial spur with about 23 teeth.

Stramineous; intercarinal areas of frons, anterior portion of genae, antennal segments where they meet, abdomen and male genitalia, dark fuscous; clypeus and parts of pleura and of post-coxae, lighter fuscous, compartments of mesonotal disc, yellow. Tegmina hyaline, veins in corium concolorous, in membrane, fuscous. Wings hyaline, veins pale basally, brown distally.



Figs. 155—164. *Toya mandonius* sp.n. — 155. Frons and clypeus. — 156. vertex and pronotum. — 157. head and pronotum, lateral view. — 158. pygofer, ventrolateral view. — 159. anal segment of male and aedeagus, right side. — 160. anal segment of male, posterior view. — 161. median portion of dorsal margin of diaphragm. — 162. aedeagus, right side. — 163. genital styles, posteroventral view. — 164. the same, laterodorsal view. — Orig.

Anal segment of male short, ring-like, lateroapical angles moderately far apart, each produced ventrad in a stout spinose process. Pygofer moderately long, posterior opening slightly broader than long, dorsolateral angles strongly produced, narrowing abruptly distad and inflected mesoventrad, diaphragm medially narrow, with dorsal margin transverse, produced caudad at middle in a shallowly convex horizontal lobe; medioventral process absent. Aedeagus rather short, strongly laterally compressed, dorsal margin shallowly sinuate, ventral margin convex, armed with a row of about twelve minute teeth, ascending distally, a row of about four teeth above dorsal margin of orifice, a row of about eight teeth along middle of left side. Genital styles moderately long, apposed in basal quarter, strongly diverging in distal three quarters, lateral margins in posterior view shallowly concave, inner margins strongly sinuate and armed with a short stout tooth before apex, apical margin rounded-truncate.

Male: length, 2.7 mm., tegmen, 3.6 mm.

Holotype male, Sudan: Equatoria, Nimule, 11—13. III. 63, LINNAVUORI, in coll. LINNAVUORI.

The genitalia of this species in some degree resemble those of *Delphacodes bridwelli* MUIR. *D. nigeriensis* MUIR and *D. ceresensis* MUIR. They differ from all these in the shape of the genital styles, and from the first two in the shape of the middle part of the diaphragm.

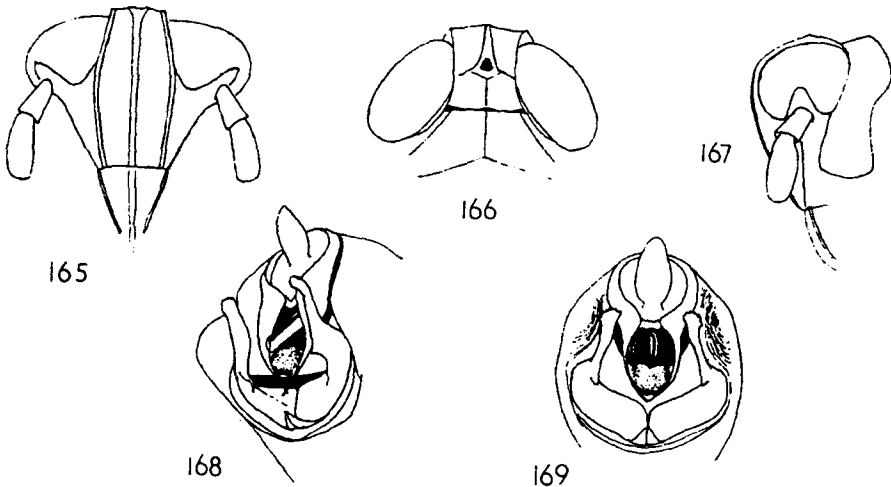
Toya mastanabal sp.n.

Vertex longer medially than broad at base (1.1:1), subrectangulately rounding into frons, as wide at apex as at base, lateral margins slightly concave, apical margin truncate with median carina scarcely prominent, Y-shaped carina distinct, submedian carinae uniting before apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.7:1);

and than median length (2:1), frons in middle line longer than wide at widest part (2:1), widest at two fifths from base, lateral margins concave in basal two fifths, thence straight and slightly convergent, median carina simple; clypeus at base not wider than frons at apex, post-clypeal disc not quite as long as broad at base, in profile slightly convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum reaching to post-coxae; antennae slightly surpassing frontoclypeal suture, basal segment longer than broad (1.5:1), second segment longer than first (1.5:1); ocelli distinct, blemmata obscure. Pronotum with disc shorter in middle line than broad at anterior margin (1.3:1), lateral carinae straight, not nearly attaining hind margin. Post-tibial spur with about 24 teeth.

Dark fuscous; carinae and margins of head, pronotum and legs, basal two segments of tarsi, and tegulae, stramineous or ivory; a suffusion on each segment of antennae, genae below antennae and a round spot in each posterior compartment of vertex, tawny yellow. Tegmina milky-hyaline, a dark fuscous spot between common claval vein and commissural margin, veins in corium except Cu_1 near transverse line, light stramineous, those in membrane, fuscous; anterior transverse veinlet concolorous with ground. Wings milky-hyaline, veins pale basally slightly infuscate towards apex.

Anal segment of male rather large, short and ring-like, lateroapical angles rather widely separated, each produced mesoventrad in a long curved spinose process that meets its counterpart in the middle line; margin produced ventrad in a long flat lobe just basad of each spine. Pygofer short dorsally, long ventrally, posterior opening a little longer than broad, dorsolateral angles distinctly produced caudad in a large subacutely convex lobe, diaphragm with dorsal margin concave; median portion of diaphragm rather narrow, produced caudad at middle in a subglobose minutely shagreen eminence; medioventral process absent. Aedeagus moderately long, rather slender, laterally compressed, deeply longitudinally hollowed out dorsally. Genital styles long, stout and strongly diverging in their basal half, and produced caudad on their



Figs. 165—169. *Toya mastanabal* sp.n. — 165. Frons and clypeus. — 166. vertex. — 167. head and pronotum, side view. — 168. male genitalia, posterolateral view. — 169. the same, posterior view. — Orig.

lower margins where they meet to form a triangular median lobe; each process twisted near middle and bifurcating, one limb short, acute, directed mesocaudad, the other long, narrow, extending vertically and slightly widening at apex, which is rounded.

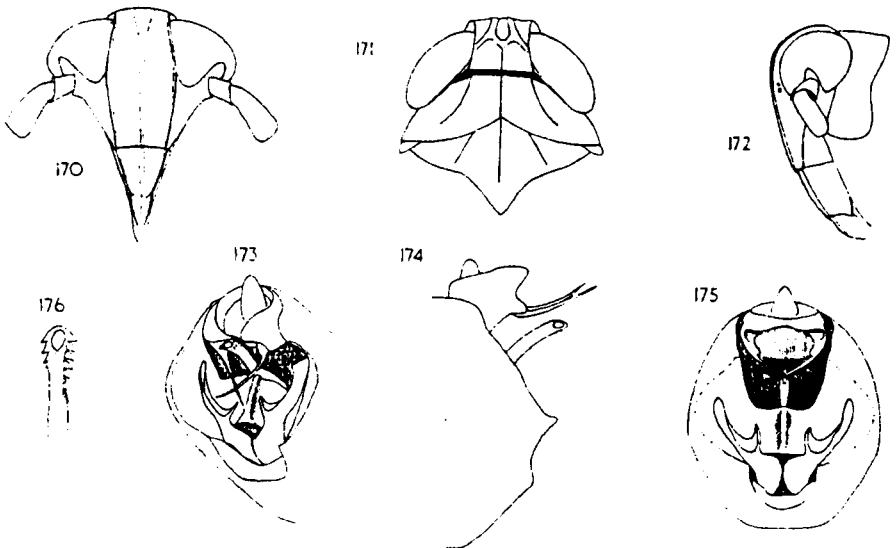
Male: length, 2.6 mm., tegmen, 3.6 mm.

Holotype male, Abyssinia: between Addis Allen and Djem-Djem, 7,000 to 8,000 ft., swept in grass field, 20. IX. 1926, J. OMER COOPER, in B.M. (N.H.).

This species is distinguishable by the form of the male genitalia.

Toya mamurra sp.n.

Vertex shorter medially than broad at base (about 1:1.1), subrectangulately rounding into frons, as wide at apex as at base, lateral margins straight, apical margin truncate with submedian carinae very little prominent, Y-shaped carina distinct, submedian carinae uniting at base of frons, basal compartment of vertex wider at hind margin than greatest length (2.1:1); and than median length (2.6:1), frons in middle line longer than wide at widest part (about 1.8:1), widest at two fifths from base, lateral margins convex, median carina forked at base, clypeus at base only very slightly wider than frons at apex, postclypeal disc as long as broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum reaching to post-coxae; antennae slightly surpassing frontoclypeal suture, basal segment longer than broad (1.7:1), second segment longer than first (1.7:1); ocelli small, distinct, blemmata present. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae weakly concave, not attaining hind margin. Brachypterous tegmina quadrate, longer than broad (1.3:1), apical margin truncateconvex. Post-tibial spur with about 21 teeth.



Figs. 170—176. *Toya mamurra* sp.n. — 170. Frons and clypeus. — 171. vertex and pronotum. — 172. head and pronotum. — 173. male genitalia, posterolateral view. — 174. the same, lateral view. — 175. the same, posterior view. — 176. apical portion of aedeagus, ventral view. — Orig.

Stramineous; intercarinal areas of frons and clypeus, a suffusion on pro- and mesocoxae, metapleura, tarsi at apex, abdomen ventrally except at posterior margins of ventrites, and dorsally sublaterally, and genitalia, fuscous. Tegmina yellowish hyaline, veins concolorous.

Anal segment of male short, ring-like, lateroapical angles rather widely separated, each produced laterocephalad then mesoventrocaudad in a spinose process which crosses its counterpart in middle line. Pygofer short dorsally, longer ventrally, posterior opening about as long as broad, excavate medially dorsally and ventrally, dorsolateral angles not produced, shortly inflected mesad; diaphragm with dorsal margin almost horizontal in its middle portion, rather deep dorsoventrally, medially carinate vertically in middle line; medioventral process absent. Aedeagus rather long and narrow, subequal in width throughout, obliquely laterally compressed near apex, and with about five small stout teeth on upper and lower margins a little basad of apex, orifice on left apically, facing slightly ventrolaterad. Genital styles moderately long, stout basally, unequally bifurcate distally, with outer limb about three times as long as inner, the inner acute apically, the outer rounded truncate.

Male (brachypterous) length, 2.3 mm., tegmen, 1.5 mm.

Holotype male, Abyssinia: Mt. Chillálo, Digalla, ca. 9,500 ft., 26. XI. 1926, Dr. H. SCOTT, in B.M. (N.H.).

Paratype male, Abyssinia: Mt. Chillálo, ca. 9,000 ft., forest, 14. II. 1926 Dr. H. SCOTT.

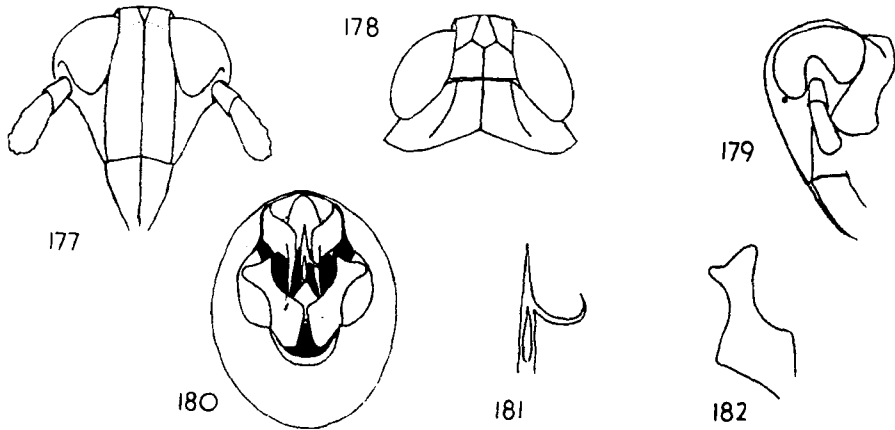
This species is close to *T. mastanabal* but differs in the shape of the armature of the diaphragm and of the genital styles.

Toya narcissus sp.n.

Vertex as long medially as broad at base, broadly subrectangulately rounding into frons, as wide at apex as at base, lateral margins straight, apical margin very shallowly convex, with submedian carinae not at all prominent, Y-shaped carina moderately distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.8:1); and than median length (2.1:1), frons in middle line longer than wide at widest part (2:1), widest at middle, lateral margins shallowly convex, median carina simple, clypeus at base distinctly wider than frons at apex, postclypeal disc slightly shorter than broad at base, in profile very shallowly convex, anteclypeus in profile almost straight; entire clypeus in profile rather strongly convex; rostrum reaching to post-trochanters; antennae not quite attaining frontoclypeal suture, basal segment longer than maximum apical width (1.3:1), second segment longer than first (nearly 2.3:1); ocelli small, blemmata absent or obscure. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae weakly concave, not attaining hind margin. Post-tibial spur with about 20 teeth.

Golden yellow; a spot on metapleura, abdominal sternites anterolaterally, pygofer and genital styles, dark fuscous or dark castaneous.

Anal segment of male short, collar-like, lateroapical angles rather narrowly separated, each strongly produced ventrad in a slender spinose process. Pygofer short and excavate dorsally, longer ventrally, posterior opening longer dorsoventrally than broad; dorsolateral angles not produced; diaphragm with dorsal margin W-shaped, a little produced caudad at middle; ventral margin of pygofer excavate medially, edges of excavation obtusely angulate; medioventral process absent. Aedeagus not very long, laterally compressed, rather broad basally, narrowing and ascending distad, acuminate apically, a moderately long curved spinose process arising on right near apex directed ventrolaterad then curving dorsolaterad; orifice on lower surface subapically. Genital styles moderately long, broad basally, rather strongly diverging dorsolaterad, outer (lateral) margins concave, inner (mesal) margin obtusely angulate at basal



Figs. 177—182. *Toya narcissus* sp.n. — 177. Frons and clypeus. — 178. vertex and pronotum. — 179. head and pronotum. — 180. male genitalia, posterior view. — 181. apical portion of aedeagus, posteroventral view. — 182. genital style, lateral view. — Orig.

two fifths, thence concave, each style widening at apex, apical margin truncate, outer angle more acute than inner angle.

Male (brachypterous): length, 1.7 mm.,

Holotype male Sudan: Equatoria, Kateri-Gilo, 18. III. 1963. LINNAVUORI, in coll. Linnavuori.

This species is distinguishable by the structure of the male genitalia, and particularly by the shape of the aedeagus and of the armature of the diaphragm.

Stolbax gen.n.

Head transverse, vertex narrow in relation to width of eyes. Vertex about as long medially as broad at base, subrectangulately rounding into frons, a little narrower at apex than at base, apical margin truncate with submedian carinae moderately prominent, Y-shaped carina more or less distinct, submedian carinae uniting at base of frons, basal compartment of vertex wider at hind margin than median length (about 2:1), frons in middle line longer than wide at widest part (about 2.5:1), widest at level of lower margin of eyes, lateral margins concave between eyes, thence straight, convergent, median carina forked at base, postclypeal disc slightly shorter than broad at base, rostrum reaching to post-trochanters; antennae moderately surpassing frontoclypeal suture, basal segment longer than broad (about 2:1), second segment longer than first (about 1.5:1); ocelli small. Pronotum with disc slightly longer in middle line than broad

at anterior margin, lateral carinae straight or weakly concave, not attaining hind margin. Post-tibial spur with about 25 teeth.

Anal segment of male short, lateral angles moderately far apart, each produced ventrad in a process. Pygofer short dorsally, long ventrally, posterior opening about as long as broad, dorsolateral angles produced, medioventral process present. Aedeagus long, tubular.

Type species, *Stolbax callisto* sp.n.

The distinctive features of this genus are the relatively small vertex and shallowly convex outline of the anterior margin of the head as seen from above, the proportions and shape of the frons, and the wide posterior opening of the pygofer.

Stolbax callisto sp.n.

Vertex a little shorter submedially than broad at base (1:1.2), broadly rectangularly rounding into frons, a little narrower at apex than at base, lateral margins straight, apical margin truncate with submedian carinae moderately prominent, Y-shaped carina moderately distinct, submedian carinae not uniting on vertex, basal compartment of vertex wider at hind margin than greatest length (1.3:1); and than median length (2:1), frons in middle line longer than wide at widest part (nearly 2.5:1), widest at about two fifths from base, lateral margins concave between eyes, then straight, median carina forked at base, clypeus at base a little wider than frons at apex, postclypeal disc slightly shorter than broad at base, in profile moderately convex, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum reaching to post-trochanters; antennae slightly surpassing frontoclypeal suture, basal segment longer than broad (2:1), second segment longer than first (1.3:1); ocelli small. Pronotum with disc longer in middle line than broad at anterior margin (1.2:1), lateral carinae straight or weakly concave, not attaining hind margin. Post-tibial spur with about 25 teeth.

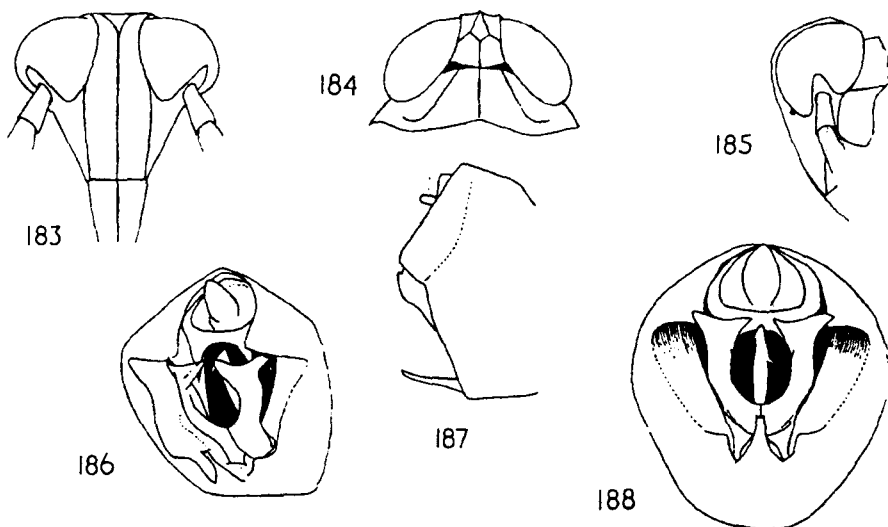
Stramineous; mesonotum, abdomen, except dorsally at base and at apex, and at lateral margins, pygofer, except dorsally, fuscous. Tegmina brownish-hyaline.

Anal segment of male short, ring-like, lateroapical angles moderately widely separated, each produced ventrad in a stout spinose process. Pygofer short dorsally, long ventrally, posterior opening about as long as broad, dorsolateral angles almost rectangular, inflected mesad; diaphragm with dorsal margin membranous, near level of base of genital styles; ventrolateral margins of pygofer slightly produced on each side of middle in a subangulate lobe; medioventral process more than twice as long as broad at base, tapering distad and cleft at apex. Aedeagus long, tubular, slightly upcurved distally, a spinose process ventrolaterally on right, directed ventrocephalad, a slightly curved spinose process subapically on left, directed ventrad, apex acute. Genital styles rather long, apposed at base, strongly diverging from base then recurving mesad distally, each with inner margin concave, outer margin convex, widening distally and with apical angles produced, the inner, mesad, the outer, laterad.

Male (brachypterous): length, 2.0 mm., tegmen, 1.4 mm.

Holotype male, Sudan: Equatoria, Lotti forest, 14—17. III. 1963, LINNAVUORI, in coll. Linnavuori.

This species is distinguished by the proportions of the head and structural details of the male genitalia.



Figs. 183—188. *Stolbax callisto* gen. et sp.n. — 183. Frons. — 184. vertex and pronotum. — 185. head and pronotum, lateral view. — 186. male genitalia, posterolateral view. — 187. the same, lateral view. — 188. the same, posterior view. — Orig.

Sogatodes FENNAH

Sogatodes FENNAH 1963, Ann. Mag. Nat. Hist. 13, p. 71. Orthotype, *Sogatodes molinus* FENNAH 1963, *ibid.* p. 72.

Sogatodes cubanus (CRAWFORD)

Dicranotropis cubanus CRAWFORD 1914, Proc. Un. Stat. Nat. Mus. 46, p. 594. *Chloriona (Sogatella) panda* FENNAH 1958, Bull. de l' I. F.A.N. 20 A, p. 491.

Two females, Sudan: Bahr el Ghazal, Wau, 19. II. 1963, LINNAVUORI.

Sogatella FENNAH

Sogatella FENNAH 1956, Proc. Calif. Acad. of Sc. 28, p. 471. Orthotype, *Delphax furcifera* HORVATH 1899, Term. Füzetek 22, p. 372.

Sogatella nigeriensis (MUIR)

Megamelus furcifer nigeriensis MUIR 1920, Bull. Ent. Res. 10, p. 143.

One male, Abyssinia: Mt. Zaquala, about 9,000 ft., 22. X. 1926, J. OMER COOPER.

Sogatella timaea sp.n.

Vertex longer medially than broad at base (1.7:1), in profile subacutely meeting frons, a little narrower at apex than at base, lateral margins straight, apical margin truncate with submedian carinae slightly prominent, Y-shaped carina weak, submedian carinae uniting at

apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.1:1), and than median length (1.4:1), frons in middle line longer than wide at widest part (nearly 2.1:1), widest at one quarter from base, lateral margins concave between eyes, thence convex, median carina simple, clypeus at base very little wider than frons at apex, postclypeal disc about as long as broad at base, in profile straight, anteclypeus in profile shallowly convex; entire clypeus in profile very shallowly convex; rostrum reaching to mesotrochanters; antennae a little surpassing frontoclypeal suture, basal segment longer than maximum width at apex (1.2:1), second segment longer than first (2.3:1), ocelli distinct. Pronotum with disc longer in middle line than broad at anterior margin (1.3:1), lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.3:1). Post-tibial spur with 20—25 teeth.

Stramineous; frons, except median carina, genae and sides of head above eyes, pronotum behind eyes except for a few white spots, mesopleura, abdominal tergites except near margins, and sternites anteriorly, fuscous; a band from apex of head to tip of mesoscutellum, white; lateral fields of mesonotum and tegulae light brownish yellow. Tegmina yellowish hyaline, a suffusion around anal angle from nodal line to apex of tegmen, and a linear mark at junction of common claval vein and hind margin, fuscous; commissural margin from humeral angle to fuscous spot, white; veins concolorous. Wings hyaline, veins mostly fuscous.

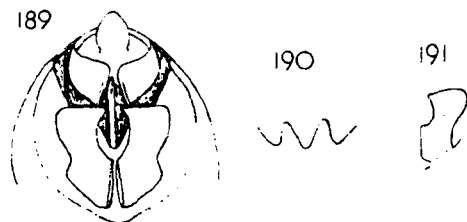
Anal segment of male rather short, tubular, lateroapical angles rather close to each other, each produced ventrad in a slender spinose process. Pygofer moderately long, posterior opening as long as broad, dorsolateral angles not produced, lateral margins in side view straight, almost vertical; diaphragm with dorsal margin elevated on each side of middle line in a subtriangular lobe; medioventral process absent. Aedeagus rather short, tubular, laterally compressed, acute at apex, a row of about six teeth dorsally along right side; orifice on left at apex. Genital styles short and broad, only a little diverging, their inner margins apposed in basal third, then concave; outer margins concave in basal half, convex in distal half, apex truncate.

Male: length, 2.4 mm., tegmen, 3.1 mm.

Female: length, 3.3 mm., tegmen, 3.7 mm.

Holotype male. Sudan: Equatoria, Terakeka, 2—6. III. 1963, LINNAVUORI, in coll. Linnavuori.

This species is distinguished by the shape of the dorsal margin of the diaphragm and that of het genital styles. The former recalls the condition found in *Toya modesta* (Distant).



Figs. 189—191. *Sugatella timaea* sp.n. — 189. Male genitalia, posterior view. — 190. median portion of dorsal margin of diaphragm. — 191. genital style, lateral view. — Orig.

Matutinus DISTANT

Matutinus DISTANT 1917, Trans. Linn. Soc. Zool. 17, p. 278. Haplotype, *Matutinus opulentus*: DISTANT 1917, ibid. p. 278.

Matutinus ligea sp.n.

Vertex longer medially than broad (1.3:1), subacutely rounding into frons, narrower at apex than at base, lateral margins straight, apical margin angulate, with submedian carinae prominent, Y-shaped carina weak, submedian carinae uniting at basal fifth of frons, basal compartment of vertex wider at hind margin than greatest length (nearly 1.3:1); and than median length (1.3:1), frons in middle line longer than wide at widest part (3:1), widest at about four fifths from base, lateral margins almost straight in basal three quarters, shallowly convex in apical quarter, median carina forked at a fifth from base, clypeus at base not wider than frons at apex, postclypeal disc slightly longer than broad at base, in profile straight, anteclypeus in profile strongly convex; entire clypeus in profile moderately convex; rostrum surpassing mesotrochanters but not quite reaching post-coxae; antennae extending as far as frontoclypeal suture, basal segment longer than broad (1.3:1), second segment longer than first (1.3:1); ocelli minute. Pronotum with disc longer in middle line than broad at anterior margin (about 1.3:1), lateral carinae straight, almost attaining hind margin. Total length of mesonotum greater than that of scutellum (2.4:1). Post-tibial spur with about 20 irregular teeth.

Light ochraceous; genae, clypeus, pronotum in posterior half of disc and behind eyes, procoxae, mesocoxae and mesopleura, mesonotum, except medially, on disc just inside lateral carinae, and on scutellum, and abdomen, dark fuscous.

Tegmina brownish-hyaline, a semicircular area in anterior half of membrane almost milky-hyaline, remainder of membrane a little darker than corium, a dark fuscous spot at junction of common claval vein and commissural margin.

Anal segment of male short dorsally, longer ventrally, lateroapical angles moderately close together, each produced ventrad in a rather long sinuate spinose process. Pygofer moderately long, posterior opening about as broad as long, dorsolateral angles distinctly produced caudad, diaphragm with dorsal margin abruptly produced dorsad at middle in a narrow lobe deeply rounded apically, and folded inwards at its sides; ventral surface of pygofer strongly convex both axially and transversely, medioventral process absent. Aedeagus rather long, narrow, tubular, ascending distad, in distal half with about six small teeth on lower margin and about six on upper margin, orifice terminal, oblique. Genital styles moderately long, sinuate, narrowing in apical quarter, a small lobe on inner margin one quarter from apex, apical margin short, straight, oblique.

Male: length, 2.2 mm., tegmen, 2.3 mm.

Holotype male, Sudan: W. Darfur, Jebel Marra, Dimbliti, 7,600 ft. 27. V. 1932. M. S. STEELE, in B.M. (NH.).

This species is a member of the *fuscipennis* (MUIR) group, in which the genital styles are long, flattened and narrowly fusiform in outline and are normally directed dorsad. *M. fuscipennis* itself is apparently confined to tropical South America. MUIR (1929:207) has figured the genitalia of an African species that he ascribed to *fuscipennis*, though apparently as an afterthought, as among the specimens from Natal and Ceres, Cape Province, in the British Museum is a male labelled by him »*Chloriona africana* MUIR». This species is distinct, being well separable by the shape of the armature of the diaphragm, and I now validate MUIR's name by adoption in the new name *Matutinus africanus* FENNAH, for *Chloriona fuscipennis* MUIR, 1929 and I designate his labelled specimen as the holotype. It bears, in addition to the name labels with the following data. »Cape Province, Ceres, Feb. 1925» »S. Africa, R. E. TURNER, Brit. Mus. 1925—116.»

M. ligea may be separated from the other species of this group as follows.

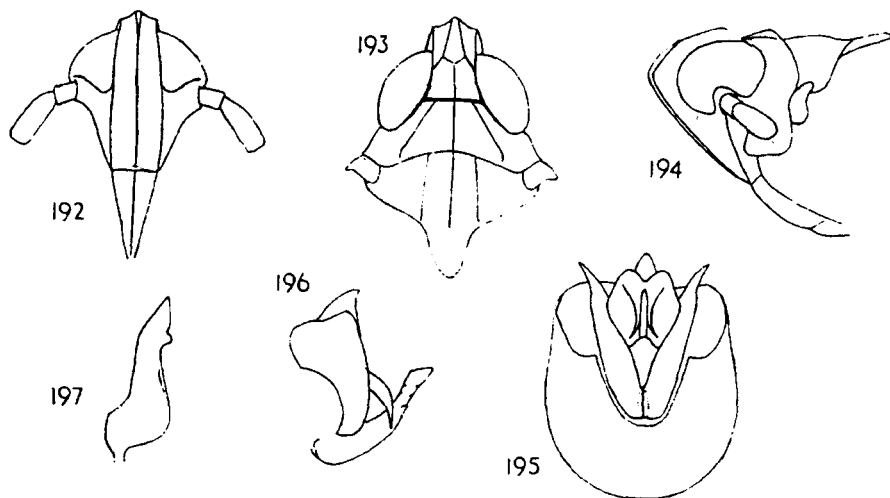
1. Tegmina hyaline, a marginal spot in clavus and a more or less broad suffusion in posterior half of membrane, fuscous 2
Tegmina almost entirely dark brownish hyaline, pallid only on commissural margin 3
2. Lateral margins and median carina of frons and clypeus ivory white; genital styles of male rather broad, strongly narrowed in distal third..... *africanus* FENNAH
Lateral margins and carinae of frons not ivory white; genital styles of male not broad, lateral margins more or less equidistant throughout..... *pomona* FENNAH
3. Apex of head in profile angulately bent through 90 degrees; postclypeus at base wider than frons at apex *ligea* FENNAH
Apex of head in profile almost angulately bent through more than 90 degrees; postclypeus at base not wider than frons at apex..... *fuscipennis* MUIR

Sardia MELICHAR

Sardia MELICHAR 1903, Homopt.-Fauna von Ceylon p. 96. Haplotype. *Sardia rostrata* MELICHAR 1903, *ibid.* p. 225.

Sardia vindex sp.n.

Vertex longer medially than broad at base (nearly 1.:1), acutely and narrowly angulately rounding into frons, a little narrower at apex than at base, lateral margins subparallel, slightly convergent beyond eyes, apical margin convex, submedian carinae distinctly prominent, Y-shaped carina with only anterior arms distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1s:1); and than

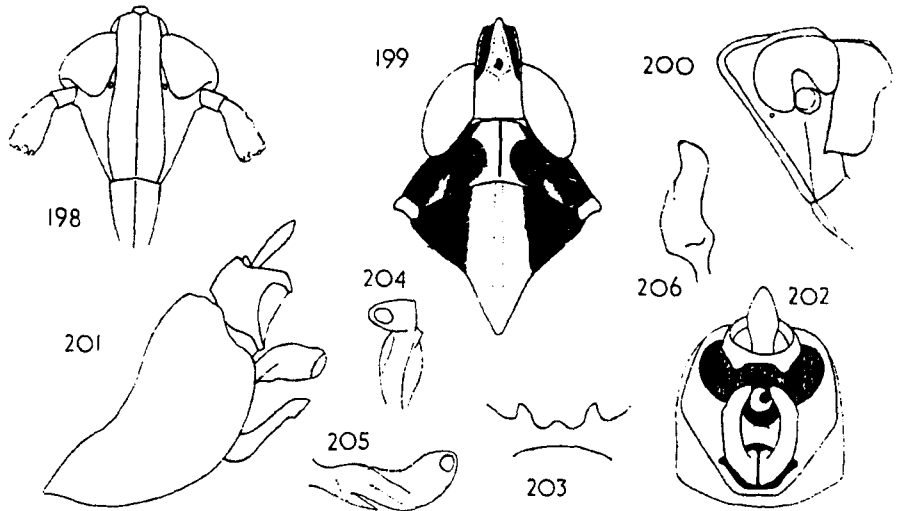


Figs. 192—197. *Matutinus ligea* sp.n. — 192. Frons and clypeus. — 193. head and thorax. — 194. the same, lateral view. — 195. male genitalia. — 196. anal segment and aedeagus, left side. — 197. genital style, lateral view. — Orig.

median length (1.5:1), frons in middle line longer than wide at widest part (3.2:1), widest at five sixths from base, lateral margins almost straight, weakly convex in distal third, median carina simple; clypeus at base a little wider than frons at apex, postclypeal disc at least as long as broad at base, in profile shallowly convex, anteclypeus in profile rather strongly convex and entire clypeus in profile moderately so; rostrum reaching to mesotrochanters; antennae not attaining frontoclypeal suture, basal segment longer than broad (about 1.4:1), second segment longer than first (2:1); ocelli small but distinct. Pronotum with disc longer in middle line than broad at anterior margin (1.5:1), lateral carinae straight or weakly sinuate, not quite attaining hind margin. Total length of mesonotum greater than that of scutellum (2.2:1). Post-tibial spur with about twenty teeth.

Dark fuscous; carinae of vertex and a stripe from vertex to mesoscutellum ivory white, with yellow suffusion on mesonotum; antennae, rostrum, legs and male anal segment sordid white or faintly infuscate. Tegmina hyaline, fuscous; commissural margin from scutellum to dark sublinear spot at union of common claval vein and margin, ivory white; apical margin and membrane submarginally near stigma, dilute yellowish brown. Wings rather infuscate, veins dark.

Anal segment of male moderately long, lateroapical angles moderately far apart, each produced ventrocaudad in a shallowly rounded lobe. Pygofer moderately long, posterior opening about as long as broad, dorsolateral angles only slightly produced caudad, obtusely rounded, diaphragm with dorsal margin broadly trilobate at middle, the lateral lobes each triangular, acute apically, median lobe distinctly smaller than lateral, shallowly rounded; medioventral process absent. Aedeagus relatively short and stout, laterally compressed, abruptly twisted to left in apical quarter, broadly rounded apically with orifice on right subapically.



Figs. 198—206. *Sardia vindex* sp.n. — 198. Frons and clypeus. — 199. head and thorax. — 200. head and pronotum, lateral view. — 201. male genitalia, left side. — 202. the same, posterior view. — 203. median portion of dorsal margin of diaphragm. — 204. aedeagus, posteroventral view. — 205. the same, left side. — 206. genital style, lateral view. — Orig.

Genital styles rather short, directed dorsad then mesad, each in posterior view with inner margin shallowly concave, outer margin shallowly convex, slightly narrowing in apical quarter and deeply rounded at apex.

Male: length, 2.8 mm., tegmen, 3.5 mm.

Female: length, 3.0 mm., tegmen, 3.8 mm.

Holotype male, Sudan: Equatoria, Lalyo-Juba, 26—27. II. 1963. LINNAVUORI, in coll. Linnavuori.

Paratypes, one male and three females, same data.

This species has a relatively shorter vertex and a broader frons than *S. rostrata*, and the coloration and structure of the genitalia are substantially different. The coloration is not unlike that of *Sardia melichari* (KIRK.), but the two species are otherwise very different. The latter species is not a *Sardia* but a *Matutinus*, and is now transferred to this genus, to be known in the new combination *Matutinus melichari* (KIRKALDY) comb.n.

Clydonagma gen.n.

Vertex longer medially than broad at base, obtusely rounding into frons, almost as wide at apex as at base, lateral margins straight, apical margin convex, with submedian carinae prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex about two thirds of basal width, frons longer than broad (about 1.5:1), with lateral margins shallowly convex, median carina simple; postclypeus approximately as long as broad at base; rostrum reaching to postcoxae, antennae reaching to about middle of clypeus, basal segment distinctly longer than broad, second segment longer than first (about 1.5:1). Pronotum with lateral carinae straight, almost or actually reaching hind margin. Post-tibial spur thick, with an apical tooth and about 13 obscure teeth on margin. Basal metatarsal segment slightly explanate. Coelopterous tegmina with Sc + R forking at about level of union of claval veins, Cu₁ fork more distad. Pygofer with posterior opening relatively large, about as broad as long, in lateral view with margin strongly oblique.

Type species, *Clydonagma molo* sp.n.

In MUIR's key (1915) the type species runs to *Megamelus* and *Gelastodelphax* and in FENNAH (1965: 5) to *Sogatodes*, but differs from all three in the structure of the post-tibial spur and of the basal metatarsal segment, as well as in that of the male genitalia. It differs also from *Tarophagus* in the same characters. The gender of the generic name is neuter.

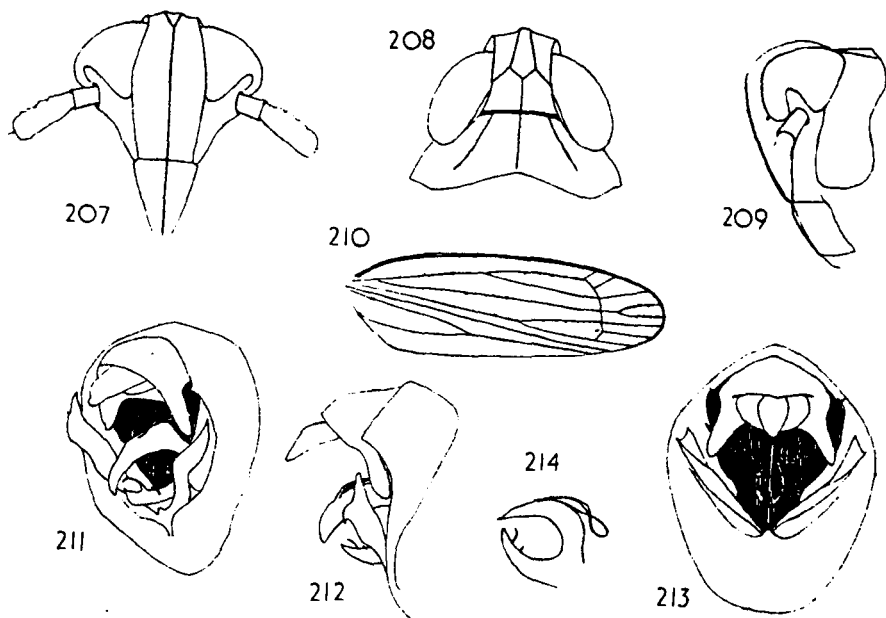
Clydonagma molo sp.n.

Vertex longer medially than broad at base (nearly 1.5:1), obtusely rounding into frons, only a little narrower at apex than at base, lateral margins straight, apical margin shallowly convex, with submedian carinae slightly prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest

length (1.5:1); and than median length (2:1), frons in middle line longer than wide at widest part (about 1.5:1), widest at two fifths from base, lateral margins markedly convex, median carina simple, clypeus at base distinctly wider than frons at apex, postclypeal disc slightly longer than broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum reaching to postcoxae; antennae reaching about to middle of anteclypeus, basal segment twice as long as broad, second segment longer than first (1.7:1); ocelli small, obscure; blemmata minute. Pronotum with disc slightly longer in middle line than broad at anterior margin (1.3:1), lateral carinae straight, attaining hind margin. Post-tibial spur thick with a single distinct apical tooth, and about 12 small teeth that are only minutely tipped with fuscous. Basal metatarsal segment broad, a little explanate, scarcely longer in dorsal mid line than remaining two segments combined.

Fuscous; frons in distal two-thirds, antennae, vertex, pronotum and mesonotum medially, and legs, light brownish yellow or sordid stramineous, abdominal ventrites posteriorly, orange red; aedeagus polished castaneous. Tegmina subhyaline, fuscous, veins slightly darker, cells of M distad of transverse line blackish fuscous. Wings reduced, soiled white.

Anal segment of male large, longer dorsally than ventrally, lateroapical angles widely separated, each produced lateroventrad in a stout finger-like process bearing a small spine laterally. Pygofer rather short, posterior opening large, about as long as broad, dorsolateral angles acute, very slightly produced caudad, lateral margins sinuate, oblique, diaphragm



Figs. 207—214. *Clydonagma molo* gen. et sp.n. — 207. Frons and clypeus. — 208. vertex and pronotum. — 209. head and pronotum, lateral view. — 210. tegmen. — 211. male genitalia, posterolateral view. — 212. the same, lateral view. — 213. the same, posterior view. — 214. distal portion of aedeagus, ventrolateral view from right (slightly diagrammatic). — Orig.

obsolete medially, narrowly developed along inner edge of posterior opening, medioventral process present only as a small eminence. Aedeagus large, divided in distal half into an upper and a lower limb, each strongly compressed laterally; a long slender whip-like process arising dorsally on upper limb near apex, directed basad then recurving caudad; two very unequal spinose processes arising dorsally on lower limb, both directed dorsocaudad. Genital styles long, almost straight, narrow basally, gradually widening distad, rather twisted in apical third, with apical margin oblique and bearing two small denticles.

Male (coelopterous): length, 3.2 mm., tegmen, 3.0 mm.

Holotype male, Abyssinia: Djem-Djem Forest, 8,000—9,000 ft., damp shady places, 21—22. IX. 1926, Dr. H. Scott, in B.M. (N.H.).

Eripison gen.n.

Vertex longer medially than broad at basal margin, acutely rounding into frons, about as wide at apex as at base, lateral margins straight or nearly so, apical margin convex, polished, with submedian carinae weak, not at all prominent, Y-shaped carina more or less weak, submedian carinae uniting at or before apex of vertex, basal compartment of vertex long (two-thirds or more of basal width), frons twice as long as broad, or rather longer, widest at middle, with lateral margins shallowly convex, median carina simple, postclypeal disc about as long as broad at base, white along basal margin; antennae moderately long reaching approximately to middle of clypeus, with a percurrent black stripe, basal segment longer than broad, second segment at least twice as long as first. Pronotum with lateral carinae straight, not attaining hind margin. Post-tibial spur rather narrow, with about 13 teeth in an uneven row. Tegmina relatively narrow, Sc + R forked near nodal line, Cu₁ forked a little basad of junction of common claval vein with commissural margin, post-cubital cell about as long as common claval vein, all veins in membrane unbranched between transverse (nodal) line and apical margin, except sometimes for a very short R + M stalk. Type species, *Kelisia snelli* MUIR, 1925, Trans. Ent. Soc. London 1924, p. 467.

This genus at present includes two species, the type and a new species described below. It appears to be allied to *Oaristes*, but the head is smooth apically and the submedian carinae are not at all prominent in dorsal view, the antennae are much shorter, and the lateral margins of the frons are almost parallel for most of their length. The genitalia are very different in the two genera.

Eripison illex sp.n.

Vertex slightly longer medially than broad at base (1.1:1), acutely rounding into frons, as wide at apex as at base, lateral margins straight, apical margin convex with submedian carinae not prominent, Y-shaped carina weak, submedian carinae uniting before apex of vertex, basal compartment of vertex wider at hind margin than greatest length (about 1:1.6); and than median

length (1:1.5), frons in middle line longer than wide at widest part (2:1), widest at middle, lateral margins shallowly convex, median carina simple; clypeus at base a little wider than frons at apex, postclypeal disc about as long as broad at base, in profile straight, anteclypeus in profile strongly convex; entire clypeus in profile moderately convex; rostrum reaching to mesotrochanters; antennae reaching to middle of clypeus, basal segment longer than broad (2:1), second segment longer than first (2.1:1); ocelli distinct, blemmata absent. Pronotum with disc almost as long in middle line as broad at anterior margin, lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (about 2.3:1). Post-tibial spur with 13—14 teeth in a staggered row.

Stramineous; clypeus except at base, frons except at base, genae, mesonotum except at tip of scutellum, orange-yellow; clypeus basally, white, frons basally suffused fuscous; a stripe along both segments of antennae, and a minute linear mark on genae just below insertion of antennae, diaphragm of pygofer and genital styles basally, dark fuscous.

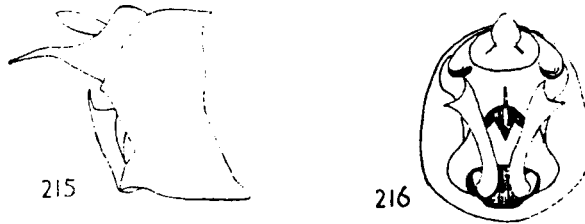
Anal segment of male short, ring-like, lateroapical angles widely separated, each strongly produced caudad in a stout spinose process, a pair of stout spinose processes laterobasally, directed ventrad, posterior opening about as long as broad, dorsolateral angles rectangulate, moderately produced caudad, lateral margins in side view strongly oblique, each acutely incised in lower half; diaphragm with dorsal margin strongly produced caudad at middle and laterally compressed to form a deep trough; ventral margin of pygofer strongly excavate medially, medioventral process absent. Aedeagus rather long, with two slender limbs, both directed caudad, the upper longer than the lower and terminating in a short filament. Genital styles rather long, close together in basal half, moderately diverging in distal half, each moderately broad, gradually widening distad, inner and outer apical angles acute, apical margin concave.

Male: length, 3.0 mm., tegmen, 3.3 mm.

Holotype male, British Cameroons: Vogel Peak Area, Adamawa; Ganglani alt. c. 1700 ft., 21. XI. 1957, F. N. HEPPER, No. 2686 B.M. 1958—349, in B.M. (N.H.)

Paratype, 1 female. Sudan: Bahr el Ghazal, nr. Wau, 19. II. 63, LINNAVUORI.

This species differs from *Fripison snelli* (Muir) in having a relatively shorter frons and post-clypeus, and a less pointed head in dorsal view; in the male genitalia the most conspicuous difference is the greater length of the upper pair of processes of the anal segment. It is possible that *Liburnia antennata* JACOBI (1910:112) belongs to this genus, and, if so, *antennata* can be separated from *illex* by its anal style being infusate, not stramineous.



Figs. 215—216. *Eripison illex* gen. et sp.n. — 215. Male genitalia, lateral view. — 216. the same, posterior view. — Orig.

Triloris gen.n.

Vertex longer in middle than broad at basal margin, sublateral carinae meeting at apex of vertex, basal compartment longer than their combined width at base, frons longer than broad (1.6 to 1.8:1), in profile meeting vertex acutely, lateral margins shallowly convex, antennae reaching to middle of clypeus, basal segment about as long as broad apically, sometimes triangular, laterally compressed, second segment about twice as long as first. Pronotum with lateral carinae reaching hind margin. Tegmina with Sc + R forking near nodal line and distad of Cu₁ fork, Cu₁ fork about level with union of common claval vein and commissural margin, a moderately long R + M stalk, Cu₁ with both branches united in a single stem just distad of nodal line, clavus with post-cubital cell much shorter than common claval vein. Post-tibial spur with 15—22 teeth.

Type species, *Triloris alcanor* sp.n.

This genus includes three species, described as new below, and separable as follows.

- | | |
|---|----------------------|
| 1. Frons with two transverse black bars | 2 |
| Frons with a small round dilute brown spot in each half at middle..... | <i>alcanor</i> sp.n. |
| 2. Basal segment of antennae with an oblique stripe, second segment with two oblique stripes..... | <i>antea</i> sp.n. |
| Both segments of antennae anteriorly dark fuscous except on lower margin.. | <i>ajax</i> sp.n. |

Triloris alcanor sp.n.

Vertex longer medially than broad at base (nearly 1.5:1), acutely rounding into frons, slightly narrower at apex than at base, lateral margins straight, a little diverging basad, apical margin convex with submedian carinae not prominent, Y-shaped carina distinct, submedian carinae uniting at base of frons, basal compartment of vertex shorter at hind margin than greatest length (1:1.2); and than median length (1: less than 1.1), frons in middle line longer than wide at widest part (1.8:1), widest at middle, lateral margins convex, median carina forked at base: clypeus at base a little wider than frons at apex, postclypeal disc about as long as broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum apparently reaching to mesotrochanters; antennae slightly surpassing frontoclypeal suture, basal segment as long as broad, cylindrical, obliquely truncate apically, second segment longer than first (about 2.4:1); ocelli absent. Pronotum with disc longer in middle line than broad at anterior margin (about 1.8:1), lateral carinae straight, attaining hind margin. Total length of mesonotum in brachypterous form only little longer than that of pronotum. Brachypterous tegmina reaching to fifth abdominal tergite; apical margin convex, apical and anal angles subequally rounded. Post-tibial spur with about 15 teeth.

Greenish-stramineous; a diffuse round spot on each side of middle line of frons; a stripe along each antenna, two transverse bands on protibiae, basal two segments of protarsi, a transverse band across middle of mesotibiae and traces of a corresponding band on post-tibiae, a band across basal segment of post-tarsi, and a short oblique mark laterally on abdominal tergites, yellowish-brown or light fuscous; anal style white. Pygofer and genital styles basally,

piceous. Tegmina hyaline, a band along basal margin yellowish brown, sometimes a large spot near middle near anterior margin, and apical margin, dark fuscous, the infusate area sometimes present only as two narrow transverse bands, rather widely separated.

Anal segment of male short, ring like, lateroapical angles closely approximated, each produced ventrad in a spinose process, apical margin divided medially. Pygofer moderately long, posterior opening longer dorsoventrally than broad, dorsolateral angles moderately strongly produced caudad; diaphragm rather long dorsoventrally, with dorsal margin deeply cleft medially; ventral margin of pygofer with a pair of moderately long, stout processes, bluntly pointed at apex. Aedeagus moderately long, exposed portion tapering distad, strongly laterally compressed, dorsal margin a little thickened. Genital styles relatively long, directed dorso-caudad, tapering from base to apex, which is bluntly rounded; a small pointed eminence at base of inner margin of each style.

Male (brachypterous): length, 2.7 mm.

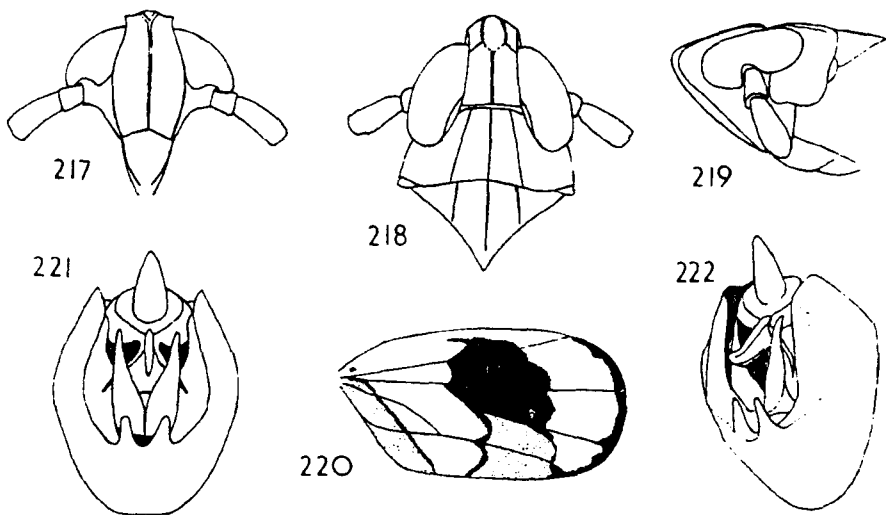
Female (brachypterous): length, 3.8 mm.

Holotype male, Sudan: Kordofan, Umm Shuheita, Jebel Shivai, 6-7. II. 1963, LINNAVUORI, in coll. Linnavuori.

Allotype female, same data.

Triloris antea sp.n.

Vertex longer medially than broad at base (nearly 1.5:1), in profile acutely angulately meeting frons, distinctly narrower at apex than at base, lateral margins very shallowly concave, almost straight, apical margin slightly angulately convex with submedian carinae not projecting, Y-shaped carina distinct, submedian carinae meeting apical margin of vertex separately.



Figs. 217-222. *Triloris alcanor* gen. et sp.n. — 217. Frons and clypeus. — 218. head and thorax. — 219. the same, lateral view. — 220. tegmen. — 221. male genitalia, posterior view. — 222. the same, posterolateral view. — Orig.

basal compartment of vertex about as broad at hind margin as median length, frons in middle line longer than wide at widest part (1.8:1), widest just below level of ocelli, lateral margins shallowly convex, median carina simple; clypeus at base a little wider than frons at apex, postclypeal disc longer than broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum surpassing mesotrochanters; antennae reaching almost to apex of postclypeus, basal segment longer than broad (1.5:1), laterally compressed, expanding distad, second segment longer than first (2:1); ocelli distinct. Pronotum with disc as long in middle line as broad at anterior margin, twice as wide between bases of lateral carinae as at anterior margin, lateral carinae weakly sinuate, attaining hind margin. Total length of mesonotum greater than that of scutellum (about 2.7:1). Post-tibial spur with about 22 teeth. Basal metatarsal segment as long as remaining two combined.

Pale green, fading to stramineous; a narrow transverse band across frons basally, a narrow band across frons and genae just below level of antennae, a suffusion across postclypeus, an oblique stripe on first antennal segment, and two oblique stripes on second, rostrum apically, a transverse band on procoxae, a spot on all femora distally, two transverse bands on protibiae and mesotibiae, basal two segments of protarsi and mesotarsi, a transverse band on basal segment of metatarsi, apical segment of all tarsi distally, dark fuscous or piceous. Tegmina hyaline, with three translucent yellowish oblique bands narrowly bordered with light brown, one lying along humeral margin, one, the broadest, extending from costa in basal third to commissural margin in distal half of clavus, and one, less distinct, overlying nodal line; a suffusion overlying apical branch of R and an arcuate fascia from Cu_1 at nodal line to anterior branch of M at apical margin, dilute fuscous; veins pale, but with sparse dark granules in corium near nodal line, in Cu_1 and in clavus. Wings hyaline, veins concolorous.

Ovipositor with first valvifers each produced ventrad at base in a shallow lobe with its margin sinuate. Anal segment of female longer than broad (about 2.4:1).

Female: length, 4.6 mm., tegmen, 4.8 mm.

Holotype female, Sudan: Bahr el Ghazal, Wau, 19. II. 63, LINNAVUORI, in coll. LINNAVUORI.

This species is most readily distinguishable by the shape of the basal antennal segment, which is like that found in *Perkinsiella*, and by the oblique stripes on both segments of the antennae.

Triloris ajax sp.n.

Vertex longer medially than broad at base (nearly 1.2:1), in profile subacutely rounding into frons, distinctly narrower at apex than at base, lateral margins shallowly concave, apical margin transverse, with submedian carinae a little prominent, Y-shaped carina with only median stem distinct, submedian carinae meeting apical margin of vertex separately, basal compartment of vertex broader at hind margin than median length (about 1.6:1); frons in middle line longer than wide at widest part (1.5:1), widest near middle, lateral margins convex, median carina simple, clypeus at base a little wider than frons at apex, postclypeal disc longer than broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum slightly surpassing mesotrochanters; antennae reaching almost to apex of clypeus, basal segment longer than broad (1.1:1) cylindrical, a little expanding distad, second segment longer than first (2:1); ocelli distinct. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae weakly sinuate, attaining hind margin. Total length of mesonotum greater than that of scutellum (2.5:1). Post-tibial spur with about 13 teeth. Basal metatarsal segment slightly longer than remaining two combined.

Pale green; a rather broad band, interrupted medially, across frons basally, a moderately

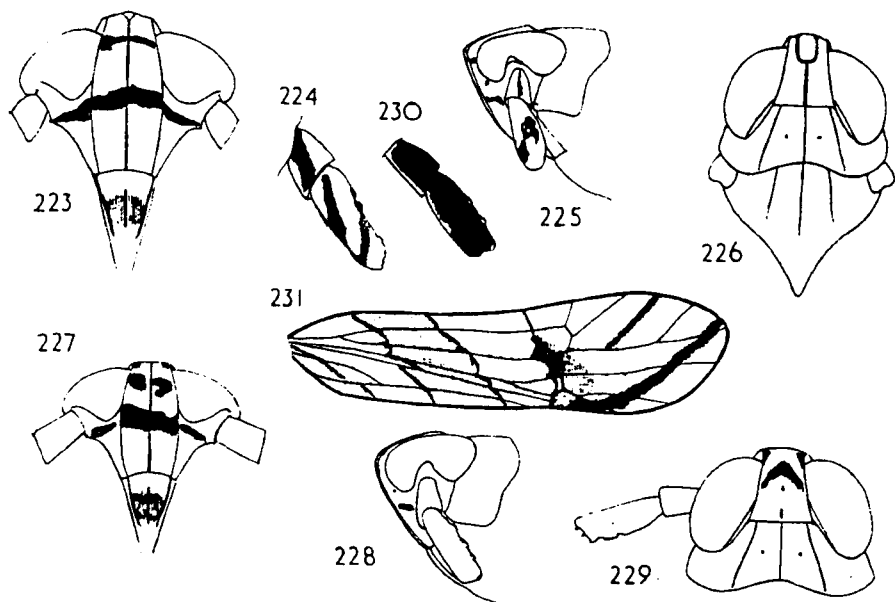
broad band across frons and genae just below level of antennae, a suffusion across postclypeus, anterior surface of basal antennal segment, except on lower margin, second segment, except on lower margin in basal half, a transverse band on procoxae, a spot on all femora distally, two transverse bands on protibiae and mesotibiae, basal two segments of protarsi and mesotarsi, a transverse band on basal segment of metatarsi, and apical segment of all tarsi distally, dark fuscous or piceous. Tegmina hyaline, with three pale translucent yellowish oblique bands narrowly bordered with light brown, one lying along humeral margin, one extending from costa in basal third to commissural margin in distal half of clavus, and one, less distinct, overlying nodal line; a suffusion overlying apical branch of R and an arcuate fascia from Cu_1 at nodal line to anterior branch of M at apical margin, dilute fuscous; veins pale but with sparse dark granules in corium near nodal line, in Cu_1 and in clavus. Wings hyaline, veins concolorous.

Ovipositor with first valvifers each produced ventrad at base in a shallow almost subquadrate lobe. Anal segment of female longer than broad (about 2.4:1).

Female: length, 4.6 mm.; tegmen, 4.8 mm.

Holotype, female, Uganda: Kawanda, near Kampala, in mercury vapour light trap. 6. X. 57, P. E. S. and E. M. WHALLEY in B. M. (N.H.). 4196.

This species is distinguishable by the shape and coloration of the basal antennal segment. It is close to *T. antea*, but differs not only in antennal characters, but also in the profile of the head, which is narrowly rounded at the junction of the vertex and the frons, whereas in *T. antea* it is angulate.



Figs. 223—231. *Triloris antea* sp.n. — 223. Frons and clypeus. — 224. antenna. — 225. head and pronotum, lateral view. — 226. head and thorax. *Triloris ajax* sp.n. — 227. Frons and clypeus. — 228. head and pronotum, lateral view. — 229. vertex and pronotum. — 230. antenna. — 231. tegmen. — Orig.

Sembrax gen.n.

Vertex longer than broad (about 1.5:1), apical margin shallowly convex, lateral margins straight, basal compartment shorter than width at basal margin (about 1:1.4), posterior surface of head a little exposed, Y-shaped carina rather weak, sublateral carinae uniting at apex of vertex; frons longer than broad (about 1.5:1), lateral margins distinctly and evenly arcuate, post-clypeus basally not wider than frons at apex, longer than broad at base, rostrum reaching to post-coxae, ocelli small, blemmata present, antennae reaching to level of middle of postclypeus, basal segment longer than broad (about 1.5:1), second segment rather more than twice as long as first. Pronotum medially shorter than head in dorsal view, tricarinate, moderately strongly inclined lateroventrad behind eyes, anterior margin between lateral carinae shorter than basal margin between these carinae (about 1:3), and shorter than median carina (about 1:1.5); mesonotum tricarinate, lateral carinae obsolete in basal half; post-tibial spur with 12—17 teeth, basal metatarsal segment longer than remaining two combined. Tegmina with Sc + R fork about level with junction of common claval vein and commissural margin, Cu₁ fork a little basal of Sc + R fork, stigma short, a short R + M stalk, Cu₁ two-branched in membrane, Cu₂ not extending into membrane, postcubital cell longer than common claval vein. Pygofer with posterior opening about as long as broad, ventrolateral margin produced caudad on each side in a shallowly convex lobe, ventral margin excavate, medioventral process absent.

Type species, *Sembrax demades* sp.n.

The type species runs to *Haplodelphax* in MUIR's key (1915: 296), but differs in the more sharply angulate apex of the head as seen in profile, and in the relatively greater length of the second antennal segment. In the present writer's key to Australian genera (1965: 4) this species runs to *Sogatella*, and in general build resembles a member of this genus or of *Sogatodes*. The proportions of the basal segment of the antennae and the relative length of the rostrum, and the relative position of the forks of Sc + R and Cu₁ in *Sembrax* differ from those of the corresponding structures in these two genera.

Sembrax demades sp.n.

Vertex longer medially than broad at base (about 1.4:1), subrectangulately rounding into frons, narrower at apex than at base, lateral margins straight or feebly sinuate, apical margin convex with submedian carinae not prominent, Y-shaped carina weakly present, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.4:1); and than median length (1.7:1), frons in middle line longer than wide at widest part (1.9:1), widest at middle, lateral margins convex, median carina simple, clypeus at base not wider than frons at apex, postclypeal disc longer than broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex;

rostrum reaching to post-coxae; antennae reaching to level of middle of clypeus, basal segment longer than broad (1.6:1), second segment longer than first (2.2:1); ocelli distinct, blemmata present. Pronotum with disc longer in middle line than broad at anterior margin (1.8:1), lateral carinae straight or weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (2.5:1). Post-tibial spur with about 17 teeth.

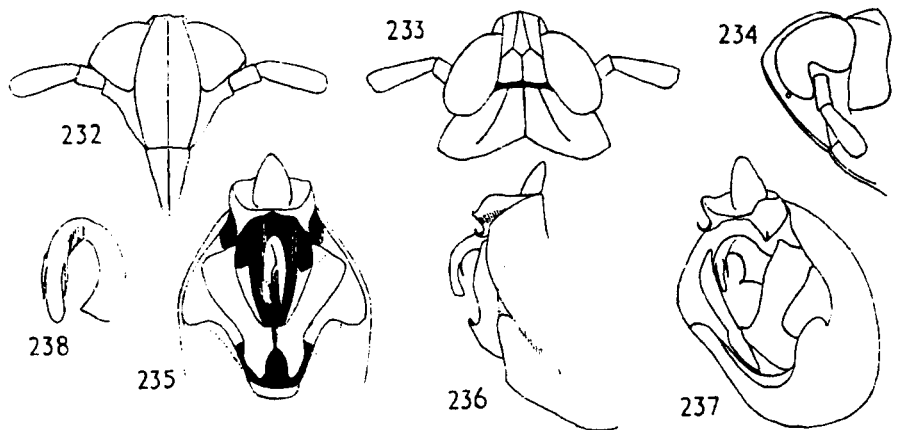
Brownish yellow; frons and antennae a little darker. Tegmina milky hyaline, veins concolorous or pale yellow. Wings hyaline, veins concolorous basally, pale brown distally.

Anal segment of male short, collar-like, apical margin narrow, lateroapical angles wide apart, each produced lateroventrad in a small slender curved spinose process. Pygofer moderately long, deeply excavate dorsally, posterior opening about as long as broad, dorsolateral angles shallowly rounded in lateral view, not produced; diaphragm with dorsal margin V-shaped, very narrow at middle; ventrolateral margins each produced in a broadly rounded lobe, ventral margin shallowly excavate, medioventral process absent. Aedeagus rather long, dilated laterally in basal half, and with a vertical lobe, acute distally; apical half of aedeagus tubular, deflexed, with a short spinose process, directed ventrocaudad, on each side a little before apex. Genital styles long, angulately bent laterodorsad in basal third, with inner basal angles apposed and a little produced caudad, styles moderately diverging distad, each widening distad with mesal and lateral margins shallowly sinuate, apical margin truncate with inner apical angle a little produced and curved cephalad.

Male: length, 2.6 mm., tegmen, 3.2 mm.

Holotype male, Sudan: Equatoria, Loka Forest. 8—10. IV. 1963, LINNAVUORI, in coll. Linnavuori.

This species is distinguished by the proportions of the head, by coloration and by structural details of the male genitalia. Of the latter, the extreme fineness of the spinose processes of the male anal segment, and the deep V-shape of the dorsal margin of the diaphragm are apparently unique among African Delphacidae.



Figs. 232—238. *Sembrax demades* gen. et sp.n. — 232. Frons and clypeus. — 233. vertex and pronotum. — 234. head and pronotum, lateral view. — 235. male genitalia, posterior view. — 236. the same, lateral view. — 237. the same, posterolateral view. — 238. aedeagus, posterolateral view from right. — Orig.

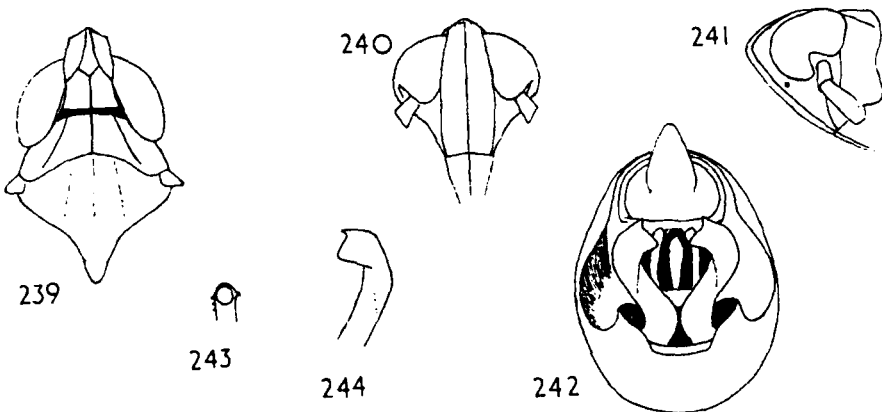
Sembrax ismenias sp.n.

Vertex longer medially than broad (1.6:1), in profile acutely meeting frons, a little narrower at apex than at base, lateral margins slightly sinuate, apical margin angulately convex with median carina only slightly prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (nearly 1.3:1); and than median length (1.4:1), frons in middle line longer than wide at widest part (2.5:1), widest at middle, lateral margins shallowly convex, median carina simple; clypeus at base scarcely wider than frons at apex, postclypeal disc slightly longer than broad at base, in profile almost straight, anteclypeus in profile shallowly convex; entire clypeus in profile shallowly convex; rostrum scarcely attaining post-coxae, antennae surpassing frontoclypeal suture, basal segment longer than broad (1.4:1), second segment longer than first (2.6:1); ocelli small, blemmata obscure. Pronotum with disc longer in middle line than broad at anterior margin (1.2:1), lateral carinae straight or feebly sinuate, attaining hind margin. Total length of mesonotum greater than that of scutellum (2.4:1). Post-tibial spur with about 16 teeth.

Fuscous; vertex, and pronotum and mesonotum except at side, and hind legs, light brownish yellow. Tegmina hyaline; veins in corium concolorous, veins in membrane fuscous. Wings hyaline, veins concolorous basally, dilute fuscous apically.

Anal segment of male short, ring-like, apical margin membranous, lateroapical angles moderately close to each other, each produced ventrad in a long stout spinose process. Pygofer moderately long, posterior opening about as long as broad, dorsolateral angles obtusely rounded, very little produced; diaphragm with dorsal margin shallowly concave, ventrolateral margins broadly excavate; ventral margin also broadly excavate, medioventral process absent. Aedeagus short, tubular, directed caudad, a tooth on right at apex, and a row of three or four teeth on left upper margin; orifice round, terminal. Genital styles long, apposed at base, rather strongly diverging, each of subequal width throughout, approximately S-shaped, curved mesad distally, inner (lower) apical angle deeply rounded, outer (upper) apical angle narrowly acute.

Male: length, 2.8 mm., tegmen, 3.0 mm.



Figs. 239—244. *Sembrax ismenias* sp.n. — 239. Head and thorax. — 240. frons. — 241. head and pronotum, lateral view. — 242. male genitalia, posterior view. — 243. apex of aedeagus, posteroventral view. — 244. distal half of genital style, posterolateral view, inner aspect. — Orig.

Holotype male, Sudan: Equatoria, Yambio, 17—25. IV. 1963, LINNAVUORI, in coll. Linnavuori.

This species is distinguishable by the form of the vertex, by the bodily coloration, and by the shape of the genital styles.

Orcaenas gen.n.

All carinae of head and thorax fine, strongly elevated. Vertex as long as broad, strongly declivous anteriorly, lateral margins shallowly concave, basal compartment shorter than width at basal margin (about 1:1.5), posterior surface of head exposed, anterior arms of Y-shaped carina distinct, median stem obsolete, sublateral carinae uniting on vertex basad of level of anterior margin of eyes, anterior margin transverse with median carina prominent; frons longer than broad (about 2.0:1) narrowest between eyes thence almost parallel-sided, clypeus basally not or scarcely wider than frons at apex, postclypeus slightly longer than broad at base, rostrum about as long as clypeus, reaching post-coxae, ocelli small, blemmata present; antennae reaching to about middle of postclypeus, cylindrical, basal segment longer than broad (nearly 3:1), second segment longer than first (nearly 1.0:1); pronotum medially longer than head in dorsal view, tricarinate, steeply inclined lateroventrad behind eyes, anterior margin between lateral carinae shorter than basal margin between these carinae (about 1:3), and shorter than median carina (about 1:1.5); mesonotum (coelopterous form) tricarinate, disc shallowly depressed. Post-tibial spur with about 13 teeth, basal metatarsal segment longer than remaining two combined. Tegmina (coelopterous) slightly surpassing abdomen, narrowly rounded distally, Sc + R fork slightly basad of Cu₁ fork, which is distad of union of claval veins, postcubital cell longer than common claval vein. Pygofer with posterior opening longer than broad, dorsal margin deeply angulately excavate, diaphragm moderately broad, medioventral process absent, posterior margin subangulately excavate medially.

Type species, *Orcaenas juterna* sp.n.

In MUIR's key (1915: 296) the type species runs to *Toya*, but it differs from *Toya* in the more exposed posterior surface of the head, and the strongly inclined lateral fields of the pronotum, and it differs from *Delphacodoides* in the same characters. From *Liburniella*, which it resembles in the short submedian carinae of the vertex, it differs in the form of the post-tibial spur.

The gender of the generic name is masculine.

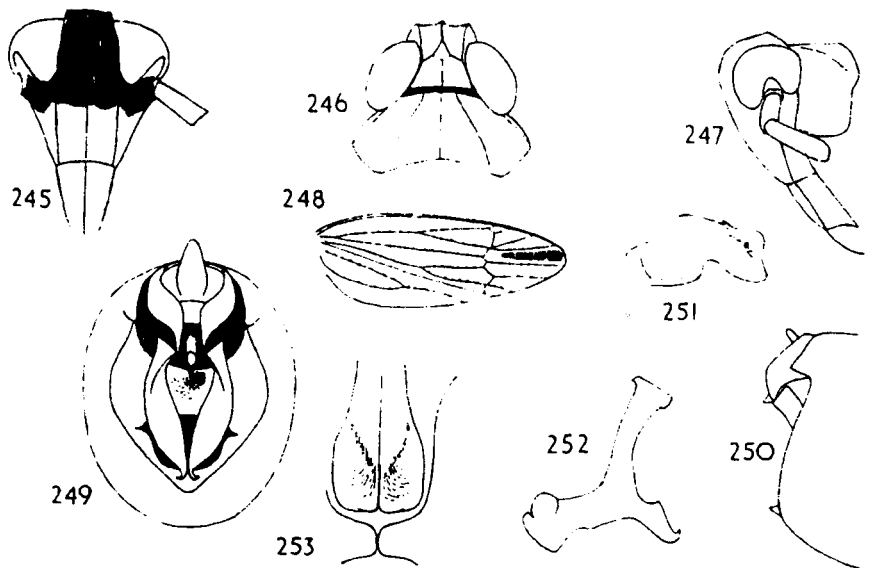
Delphacodoides junio FENNAH (1958: 205) is now transferred to this genus as *Orcaenas junio* (FENNAH) comb.n. It differs from the type species in the shape of the dorsolateral angles of the pygofer, and of the basal portion of the genital styles and in the shape of the aedeagus.

Orcaenas juterna sp.n.

Vertex about as long medially as broad at base, broadly obtusely rounding into frons, a little narrower at apex than at base, lateral margins concave, apical margin truncate with median carina narrowly prominent, Y-shaped carina feeble, submedian carinae uniting before apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.5:1); and than median length (2:1), frons in middle line longer than wide at widest part (nearly 2.5:1), widest at apex, lateral margins slightly concave between eyes then straight, median carina simple; clypeus at base rather wider than frons at apex, postclypeal disc as long as broad at base, in profile shallowly convex, anteclypeus in profile shallowly convex; entire clypeus in profile moderately convex; rostrum attaining post-coxae; antennae extending almost to apex of postclypeus, basal segment longer than broad (2.3:1), second segment longer than first (1.5:1), flagellum of third segment as long as head and thorax combined; ocelli minute, blemmata distinct. Pronotum with disc much longer in middle line than broad at anterior margin (1.7:1), lateral carinae rather strongly elevated, straight, not attaining hind margin. Post-tibial spur with ten to twelve teeth.

Piceous; frons and genae in distal half, clypeus, rostrum, legs, and anal segment, stramineous; second antennal segment reddish-brown; third valvulae of ovipositor dull yellowish brown. Tegmina (coelopterous) hyaline, infusate, darker in middle apical cell.

Anal segment of male short, ring-like, lateroapical angles moderately separated, each produced ventrad in a stout process, apically acuminate. Pygofer moderately long, dorsally



Figs. 245—253. *Orcaenas juterna* gen. et sp.n. — 245. Frons and clypeus. — 246. vertex and pronotum. — 247. head and pronotum, lateral view. — 248. tegmen. — 249. male genitalia, posterior view. — 250. the same, lateral view. — 251. aedeagus, left side. — 252. genital style, lateral view. — 253. base of ovipositor. — Orig.

excavate, posterior opening longer than broad, dorsolateral angles each produced caudad in a small triangular lobe, and margin excavate immediately below; diaphragm with dorsal margin deeply convex, slightly notched, median line convex caudad; ventral margin of pygofer shallowly excavate medially; medioventral process absent. Aedeagus moderately long, curved, laterally compressed, obliquely truncate apically, orifice round, dorsally a little before apex. Genital styles simple, moderately long, each produced caudad at base in a tapering process curved laterad at apex, moderately diverging dorsad, each widest a little before middle then slightly narrowing and twisted, then expanding to apex, apical margin truncate.

Male: length, 2.7 mm., tegmen (brachypterous) 2.8 mm.

Female: length, 2.9 mm., tegmen (brachypterous) 2.4 mm.

Holotype male, Sudan: Equatoria, Imatong Mts., near Gilo, 18—24. III. 1963, LINNAVUORI, in coll. Linnavuori.

This species is most readily recognisable by its strongly contrasting dorsal and ventral coloration. The length of the antennal flagellum is noteworthy, and may prove to be diagnostic.

Strophalinx gen.n.

Vertex about as long medially as broad at base, or a little shorter than broad, in profile rather broadly rounding into frons, slightly narrower at apex than at base, lateral margins almost straight or shallowly concave, apical margin weakly convex, submedian carinae feeble distally, not prominent, Y-shaped carina distinct, coarse, submedian carinae obscurely uniting at apex of vertex or at base of frons, basal compartment of vertex wider at hind margin than greatest length (about 2:1); and than median length (about 2.5:1), frons in middle line longer than wide at widest part (about 1.5:1), widest near middle, lateral margins convex, median carina simple, antennae slightly surpassing frontoclypeal suture, basal segment longer than broad (about 1.5:1), second segment about twice as long as first. Pronotum with disc about as long in middle line as broad at anterior margin, lateral carinae straight or weakly sinuate, not attaining hind margin. Total length of mesonotum greater than that of scutellum (about 3:1). Post-tibial spur with about 30 teeth.

Anal segment of male short, with lateroapical angles only moderately separated, each produced in a small process. Pygofer short dorsally, long ventrally, posterior opening about as broad as long, dorsolateral angles shallowly convex, diaphragm distinctly broad with dorsal margin shallowly concave, medioventral process triangular. Aedeagus short, porrect caudad, furnished apically with processes. Genital styles relatively short.

Type species, *Strophalinx echo* sp.n.

In MUIR's key (1915) the type species runs to *Liburnia* (= *Delphacodes* sensu olim), but cannot be referred to any of the genera into which this concept has since been subdivided. In the writer's key to *Delphacidae* of Australia and New Zealand it runs to couplet 9, and differs from *Terthron* and *Toya*, the two genera

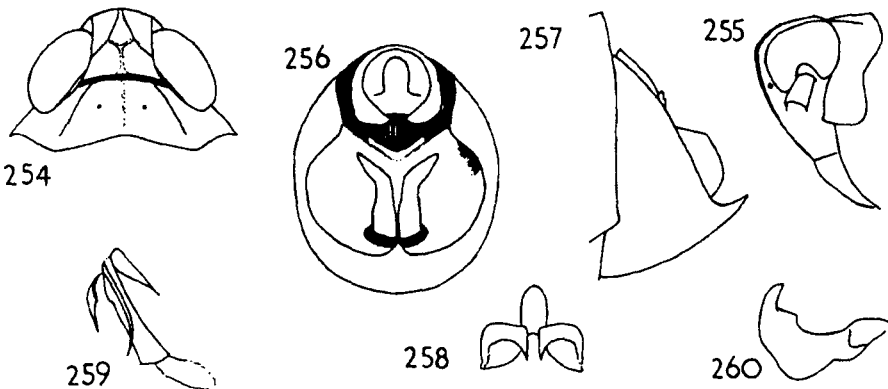
there included, very markedly in the general structure of the male genitalia and also in the relatively coarse carination of the head.

Strophalinx echo sp.n.

Vertex a little shorter medially than broad at base (1:1.1), rather broadly rounding into frons, a little narrower at apex than at base, lateral margins shallowly concave, apical margin shallowly convex with submedian carinae not prominent, Y-shaped carina distinct, submedian carinae uniting at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (2:1); and than median length (2.5:1), frons in middle line longer than wide at widest part (about 1.5:1), widest near middle, lateral margins distinctly convex, median carina simple; antennae a little surpassing frontoclypeal suture, basal segment longer than broad (1.6:1), second segment longer than first (2:1); ocelli small. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae straight, not attaining hind margin. Total length of mesonotum greater than that of scutellum (3:1). Post-tibial spur with about 30 teeth.

Light orange brown; pygofer ventrally dull yellow, laterally dark castaneous. Tegmina hyaline, a dilute brown spot at junction of common claval vein with margin, veins concolorous in corium, faintly infuscate in membrane. Wings hyaline, with veins concolorous.

Anal segment of male short, ring-like, lateroapical angles not widely separated, each produced ventrocephalad in a minute spinose process. Pygofer short, posterior opening about as broad as, long dorsolateral angles rounded, inflected mesad; diaphragm broad, with dorsal margin very shallowly concave, broadly produced caudad in a short lip; medioventral process triangular, slightly longer than broad at base. Aedeagus short, laterally compressed, with a shallowly curved spinose process arising on right near apex, directed cephalad and slightly upward at tip, two smaller subequal processes arising at apex, directed to left and cephalad. Genital styles relatively short and stout, rectangulately bent dorsad at middle, in posterior



Figs. 254—260. *Strophalinx echo* gen. et sp.n. — 254. vertex and pronotum. — 255. head and pronotum, lateral view. — 256. male genitalia, posterior view. — 257. the same, lateral view. — 258. anal segment of male, posteroventral view. — 259. aedeagus, right side. — 260. genital style, lateral view. — Orig.

view only slightly diverging as far as apical quarter, then bent dorsolaterad and tapering to acute tip.

Male: length, 1.8 mm., tegmen, 2.3 mm.

Holotype male, Sudan: Equatoria, Terakeka, 2—6. III. 1963, LINNAVUORI, in coll. Linnavuori.

Isogaetis gen.n.

Head with eyes broader than pronotum. Vertex as long medially as broad at base, subangulately rounding into frons, about as wide at apex as at base, lateral margins almost straight, apical margin slightly convex, Y-shaped carina moderately distinct, submedian carinae uniting near or at base of frons, basal compartment of vertex wider at hind margin than greatest length (about 1.4:1); and than median length (about 1.4:1), frons in middle line about twice as long as wide at widest part, transversely weakly convex, widest at about level of ocelli, lateral margins concave between eyes, thence shallowly convex, median carina simple or forked near base; postclypeal disc shorter than broad at base; entire clypeus in profile moderately convex; rostrum reaching to mesotrochanters; antennae attaining or surpassing frontoclypeal suture, basal segment about as long as broad, second segment longer than first (about 3:1); ocelli small, distinct. Pronotum with disc slightly longer in middle line than broad at anterior margin, lateral carinae straight or weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (about 3:1). Post-tibial spur with about 26 teeth.

Anal segment of male short, broad, lateroapical angles widely separated, each produced ventrad in a stout process. Pygofer moderately long, posterior opening approximately as long as broad, dorsolateral angles rounded, only feebly produced; diaphragm with dorsal margin concave, submembranous; ventrolateral margins of pygofer excavate; medioventral process broad, shallow. Aedeagus tubular, slender.

Type species, *Isogaetis thymoma* sp.n.

In the writers key (FENNAH 1965) the type species runs to *Smicrotadelphax*, but if the relative width of the head is ignored, to *Toya*. From both it differs profoundly in the structure of the male genitalia, and from *Toya* also in the relatively broader vertex and the transverse convexity of the frontal disc.

The gender of the generic name is feminine.

Isogaetis thymoma sp.n.

Vertex as long submedially as broad at base, subrectangulately rounding into frons, about as wide at apex as at base, lateral margins almost straight, apical margin slightly convex, with submedian carinae a little prominent, Y-shaped carina moderately distinct, submedian carinae not uniting at apex of vertex, basal compartment of vertex wider at hind margin than

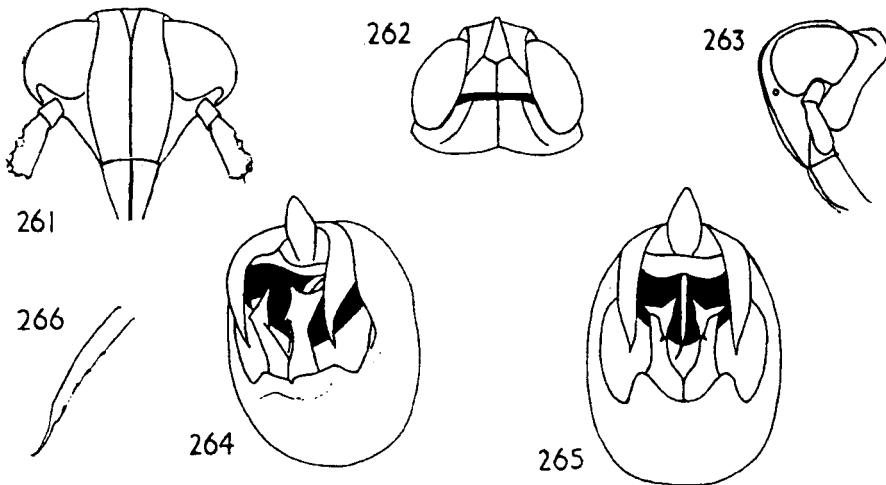
greatest length (1.5:1); and than median length (1.5:1), frons in middle line longer than wide at widest part (2:1), widest at level of ocelli, lateral margins concave between eyes, then shallowly convex, median carina forked near base; clypeus at base a little wider than frons at apex, postclypeal disc shorter than broad at base, in profile very shallowly convex, anteclypeus in profile strongly angulately convex; entire clypeus in profile moderately convex; rostrum reaching to mesotrochanters; antennae surpassing frontoclypeal suture, basal segment as long as broad, second segment longer than first (about 3:1); ocelli distinct, blemmata present. Pronotum with disc longer in middle line than broad at anterior margin (1.2:1), lateral carinae weakly concave, not attaining hind margin. Total length of mesonotum greater than that of scutellum (3:1). Post-tibial spur with about 26 teeth.

Stramineous; head, pronotum and mesonotum yellow; abdomen dorsally dilute fuscous.

Anal segment of male short, apical margin membranous, excavate, lateroapical angles widely separated, each produced ventrad in a long stout spinose process. Pygofer moderately long, posterior opening longer than broad, dorsolateral angles shallowly convex, only slightly produced caudad; diaphragm with dorsal margin concave, more or less membranous; ventrolateral margins of pygofer excavate; medioventral process developed as a broad shallow lobe weakly angulately excavate at middle. Aedeagus rather long, tubular, slender, sinuately decurved distad, tapering to a slender filament, about six minute short slender spinose processes on right near apex. Genital styles rather short, moderately diverging dorsad, each with mesal and lateral margins concave, and widening distally, a short acute process, directed caudad, on mesal margin one third from apex, apical margin concave, inner apical angle narrowly acute, outer apical angle deeply rounded.

Male: length, 3.0 mm., tegmen, 3.4 mm.

Female: length, 3.5 mm., tegmen, 3.9 mm.



Figs. 261—266. *Isogaetis thynoma* gen. et sp.n. — 261. Frons. — 262. vertex and pronotum. — 263. head and pronotum, lateral view. — 264. male genitalia, posterolateral view. — 265. the aedeagus, posterior view. — 266. apical portion of aedeagus. — Orig.

Holotype male, Sudan: Equatoria, Yambio, 17—25. IV. 1963, LINNAVUORI, in coll. Linnavuori.

Paratype, one female, same data.

This species is distinguishable by the proportions of the head, bodily coloration, and structural details of the male genitalia.

REFERENCES

- FENNAH, R. G., 1958: Fulgoroidea from West Africa. — Bull. de l'I.F.A.N. 20 Ser. A, p. 460—538.
- , — 1963: New Delphacidae (Homoptera, Fulgoroidea) from South America and West Africa. — Ann. Mag. Nat. Hist. 13, p. 689—700.
- , — 1964: Delphacidae from Madagascar and the Mascarene Islands (Homoptera, Fulgoroidea). — Trans. Roy. Ent. Soc. Lond. 116, p. 131—150.
- , — 1965: Delphacidae from Australia and New Zealand (Homoptera, Fulgoroidea). — Bull. Brit. Mus. (Nat. Hist.) 17, p. 1—59.
- , — 1967: A new genus and species of Delphacidae (Homoptera, Fulgoroidea) infesting molasses grass in Kenya. — Bull. Ent. Res. 57, p. 353—356.
- METCALF, Z. P., 1944: A bibliography of the Homoptera Auchenorrhyncha I—II. — 886 + 186 pp.
- RIBAUT, H., 1948: On the insect fauna of Cyprus. Results of the expedition in 1939 by Harald. Håkan and P. H. Lindberg. — Comment. Biol. Soc. Scient. Fenn. 10.—8—14 pp.

ACKNOWLEDGEMENTS

The writer's warmest thanks are tendered to Dr. Linnavuori for the privilege of studying his informative collection, and to Mr. J. P. Doncaster, Keeper of the Department of Entomology in the British Museum (Natural History) for the use of the accessions in his charge.

Map of the study area of Finnish zoological expeditions.

Collecting localities for Delphacidae from the Sudan.

| | | | | | |
|------------------|----|---------------|----|----------------|----|
| Abu Matariq ... | 45 | Lalyo | 70 | Safahi | 46 |
| Gilo | 79 | Loka | 68 | Singa | 22 |
| Iwatoka | 67 | Lotti | 77 | Terakeka | 71 |
| Jebel Shivai ... | 37 | Magwe | 75 | Umm Bancin ... | 23 |
| Juba | 72 | Malakal | 84 | Wau | 52 |
| Katire | 78 | Nimule | 74 | Yambio | 62 |
| Keilak Lake ... | 41 | Opari | 73 | Yei | 66 |

