

XXXIII. HOMOPTERA FULGOROIDEA

by R. G. FENNAH (1).

This report deals with Fulgoroid *Homoptera* collected during the expeditions of the Institut Français d'Afrique Noire to the National Park of Niokolo-Koba, Sénégal. The material (191 specimens) represented 9 families, 20 genera and at least 26 species, and of these 6 are considered to be new, and are described below. The types of all species described as new below are in the collection of the Museum National d'Histoire Naturelle (Paris), except where otherwise stated.

The writer's thanks are tendered to the authorities of the Institut, and especially to M. R. ROY, for the privilege of studying this material.

Family CIXIIDAE SPINOLA.

Genus *Andes* STÅL.

STÅL, 1866, *Hemiptera Africana*, 4 : 166. — Logotype, *Andes undulatus* STÅL, 1870, *Öfvers. Vetensk. Akad. Förh. Stockh.*, 27 : 747.

Andes sp.

2 ♀♀, Badi, Sénégal, Feb. 1956. The tegminal markings, except for an ovate spot within the primary fork of Cu 1, and a small spot just distad of the claval apex, which are piceous, are obscured by a general infuscation.

Genus *Oliarus* STÅL.

STÅL, 1862, *Berl. ent. Z.*, 6 : 306. — Logotype, *Cixius walkeri* STÅL, 1859.

Oliarus nemea FENNAH.

FENNAH, 1958, *Bull. IFAN*, 20 A : 468.

5 ♂♂ 1 ♀, Badi, Sénégal, May 18, 1958 ; Apr. 26, 10-12 hr.

Oliarus pythaulus, sp. n. (fig. 1).

Vertex in middle line as long as, or slightly longer than broad at apex of posterior emargination (scarcely 1.1 : 1), width at this level less than width of an eye in same line, lateral mar-

(1) Commonwealth Institute of Entomology, British Museum (N. H.).
Niokolo-Koba.

gins elevated, feebly concave, only very slightly converging distad, anterior margin transverse, posterior margin rectangulately excavate, disc hollowed out, ecarinate medially, transverse carina deeply convex, uniting with lateral margins two-fifths of their length from apex, and joined at middle to anterior margin by a pair of short parallel carinae; frons moderately narrow at base, strongly expanding to level of antennae then incurved to suture, median carina prominent, forked at base, median ocellus distinct, a small oval fenestra submarginally on each side at level of antennae; clypeus with lateral margins continuing line of lateral margins of frons. Pronotum narrow, lateral carinae of disc narrowly but distinctly separated from hind margin behind eyes, lateral marginal carinae between eyes and tegulae present, rather indistinct, a short oblique carina extending dorsomesad from lower margin of ventrolateral pronotal lobe. Posttibiae laterally trispinose, apically with six teeth, one of which is

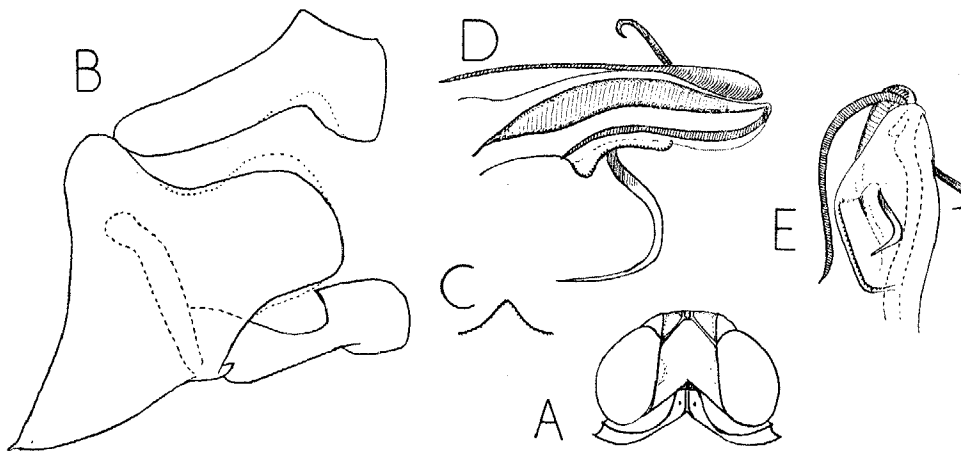


FIG. 1. — *Oliarus pythales*, sp. n. : A, head and pronotum; B, anal segment, pygofer and left genital style, side view; C, medioventral process of pygofer; D, aedeagus, left side; E, aedeagus, ventral view (freehand sketch only).

longer than the others, basal metatarsal segment with seven teeth apically, second metatarsal with seven. Tegminal veins with pustules rather closely set.

Fuscous; disc of frons, except laterodistally, clypeus, carinae of vertex and a spot on each side, pronotum, except for a suffusion on ventrolateral lobes, femora at apex, tibiae and posttarsi, light testaceous; frons lateroapically and genae, except immediately below eyes, ochraceous, mesonotal carinae and disc between lateral and intermediate carinae ferruginous. Tegmina hyaline, stigma testaceous, interiorly bordered fuscous, veins stramineous, fuscous distally, beset throughout with minute brown setigerous pustules, transverse veinlets of subapical line narrowly overlain with fuscous suffusion, commissural margin fuscous, with a pallid interruption near apex of clavus. Wings hyaline, with fuscous veins.

Anal segment of male large, tectiform, with left lower margin shallowly convex in basal two-thirds, rounded-rectangulately excavate three-fifths from base and subacutely produced ventrad near apex; right lower margin similar, but more roundly excavate at distal three-fifths, and then produced ventrad in a more rounded lobe. Pygofer moderately long, asymmetrical, but not strongly so, left posterior margin produced caudad in a rounded-quadrate lobe,

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right margin produced slightly more caudad in a rather larger and more rounded lobe ; medio-ventral process rather broadly triangular, feebly transversely striate. Aedeagus tubular, slightly sinuate, lateral margins subfoliately produced laterally near apex to form a pair of decurved flanges, a long sinuate spinose process arising ventrally at middle, directed ventrad then curved cephalad, a rather long spinose process arising at apex on right directed dorso-cephalad and curved mesad at apex, three long processes arising at apex, directed cephalad above aedeagus, that on right longest, slender, gradually tapering distad to acuminate apex, curved through about 100 degrees in its middle third ; the second apical process not quite as long as the first, foliate, expanded to distal quarter then sinuately tapering to acuminate apex ; the third apical process rather shorter than the second, taeniate, sinuate, acuminate at apex. Genital styles symmetrical or nearly so ; in profile as figured.

Anal segment of female broad, shallowly tectiform. Ovipositor as long as posttibia, porrect, second and third valvulae more than twice as long as first.

Male : length, 4.5 mm sket. ; tegmen, 5.2 mm. *Female* : length, 5.0 mm ; tegmen, 5.2 mm.

Holotype male, 25 ♂♂ 12 ♀♀ and 3 mutilated specimens, Badi, Sénégal, April 26, 1958, 10-12 hr. Sol. ; Sol Wolou, 8-10 hr. This species differs from *O. nemea* FENNAH, which it broadly resembles, in the shape of the vertex (though this seems a little variable), and from this and other species in the shape of the anal segment, pygofer, aedeagus and genital styles.

***Oliarus hyperides*, sp. n. (fig. 2).**

Vertex in middle line longer than broad at apex of posterior emargination (1.1 : 1), width at this level equal to width of eye in same line, lateral margins elevated, feebly concave, only very slightly converging distad, anterior margin transverse, posterior margin obtusely angulately excavate, disc hollowed out, feebly carinate medially in basal half, transverse carina deeply convex, uniting with lateral margins at middle or nearly so, and joined distally to anterior margin by a pair of very short parallel carinae, frons moderately narrow at base, strongly expanding to level of antennae then incurved to suture, median carina prominent, forked in basal third, median ocellus distinct, a small oval fenestra submarginally on each side at level of antennae, clypeus with lateral margins continuing line of lateral margins of frons. Pronotum narrow, lateral carinae of disc narrowly but distinctly separated from hind margin behind eyes, lateral marginal carinae rather weakly present between eyes and tegulae, a short oblique ridge extending dorsomesad from lower margin of ventrolateral pronotal lobe. Posttibiae laterally trispinose, apically with six teeth, one of which is longer than the others, basal metatarsal segment with seven teeth apically, second metatarsal with seven.

Dark fuscous ; disc of frons, except laterodistally, clypeus, except sometimes for darker oblique stripes, carinae of vertex and a spot on each side, carinae of pronotum, tegulae, femora apically and tibiae except for a ring near base, and posttarsi testaceous to sordid ochraceous, frons lateroapically and genae, except immediately below eyes, ochraceous, mesonotal carinae ferruginous. Tegmina hyaline, stigma pallid in basal two-fifths, fuscous in distal two-fifths, veins stramineous, infuscate close to apical margin, beset throughout with minute fuscous pustules, transverse veinlets of subapical line narrowly overlain with fuscous suffusion, commissural margin pale, mostly fuscous in clavus with a pallid interruption near middle. Wings hyaline with veins concolorous basally, dilute fuscous distally.

Anal segment of male large, tectiform with left lower margin broadly convex in its basal

half, deeply angulately excavate before apex, which is deflexed; right lower margin strongly convex ventrad in basal two-thirds, deeply excavate before apex. Pygofer moderately long, asymmetrical, with left margin strongly produced caudad in a broad rounded-quadrate lobe, right side even more produced caudad in a rather narrow lobe which curves upward distad, medioventral process acutely triangular, coarsely transversely striate. Aedeagus tubular, sinuate, a long sinuate spinose process arising ventrally at middle, directed ventrad and curved cephalad towards apex, a long slender spinose process arising on right three-quarters from base of aedeagus directed cephalad in its basal quarter, then curved dorsad, two long spi-

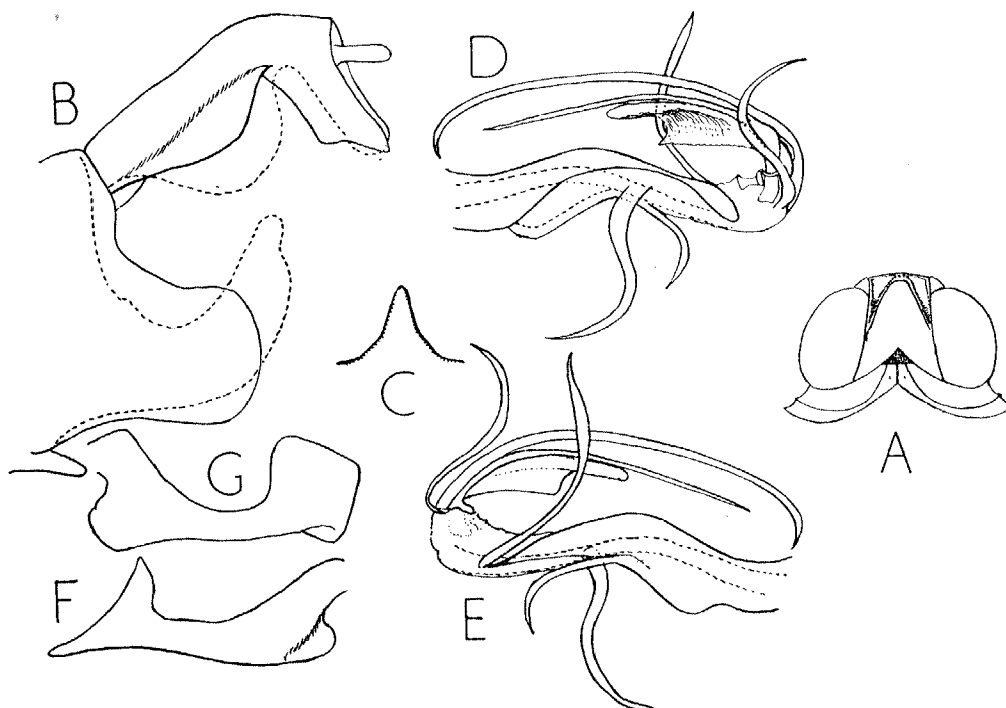


FIG. 2. — *Oliarus hyperides*, sp. n. : A, head and pronotum; B, anal segment, and pygofer, side view; C, medioventral process of pygofer; D, aedeagus, left side; E, aedeagus, right side; F, right genital style, side view; G, left genital style, side view.

nose processes arising on right at apex, one directed dorsad, then curved cephalad above aedeagus and reaching to its basal quarter, the other sigmoid, directed dorsocaudad in its apical quarter, a long taeniata process arising at apex, curved to left, then cephalad, and finally incurved mesad, this process with outer margins thickened and the median portion thin and hyaline, flagellum about half as long as aedeagus, membranous, with dorsal margin much surpassing lower. Genital styles distally asymmetrical, the apical lobe of the left style rounded-quadrate in profile, that of right style rather narrowly triangular in profile, as figured.

Male : length, 5.0 mm ; tegmen, 5.6 mm.

Holotype male, Badi, Sénégal. This species, a member of the *O. orithyia* complex, is well distinguished from all others by the shape of the anal segment, pygofer, aedeagus and genital styles, as well as by the proportions of the vertex and slight details of coloration.

Oliarus sp.

1 ♀, Badi, Sénégal, Sol. Apr. 25-26, 10-12 hr.

This has a rather narrow vertex and an ovipositor as long as a postfemur, with the first valvulae extremely short.

Family DELPHACIDAE LEACH.

Genus **Amblycotis** STÅL.

STÅL, 1853, *Öfvers. Vetensk. Akad. Förh. Stockh.*, **10** : 265. — Haplotype, *Amblycotis laticeps* STÅL.

Amblycotis horvathi (MUIR), comb. n.

Bostaera horvalhi MUIR, 1934, *Ann. Mag. nat. Hist.* (10) **14** : 576.

7 ♀♀, Badi, Sénégal, Mar.-Apr. 1957 ; Sol. Apr. 26, 1958, 4-5 hr.

Genus **Rhinodelphax** MUIR.

MUIR, 1934, *Ann. Mag. nat. Hist.* (10) **14** : 577. — Orthotype, *Rhinodelphax hargreavesi* MUIR.

Rhinodelphax hargreavesi MUIR.

MUIR, 1934, *loc. cit.* : 578.

4 ♂♂, 8 ♀♀ and 2 mutilated specimens, Badi, Sénégal, Sol. Wolou, Aug. 15-Sept. 25, 1955, Feb. 16, 1956, Mar.-Apr. 1957.

Genus **Hagamiella** FENNAH.

FENNAH, 1958, *Bull. IFAN*, **20**, A (2) : 488. — Orthotype, *Hagamiella iocasta* FENNAH.

FENNAH, 1958, *loc. cit.* : 489.

2 ♀♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955.

Genus **Nilaparvata** DISTANT.

DISTANT, 1906, *Fauna of British India*, **3** : 473. — Orthotype, *Delphax lugens* STÅL, 1854, *Öfvers. Vetensk. Akad. Förh. Stockh.*, **11** : 246.

Nilaparvata maeander FENNAH.

FENNAH, 1958, *Bull. IFAN*, **20**, A (2) : 476.

3 ♂♂, Badi, Sénégal, Aug. 15-Sept. 25, 1955.

Nilaparvata muiri CALDWELL.

CALDWELL, 1950, *J. Agric. Univ. P. Rico*, **34** : 193.

Legs moderately slender, posttibiae laterally with two spines, apically with five teeth, posttibial spur thin, foliaceous, with about 20 teeth, basal metatarsal segment with 2-3 teeth laterally and 7 at apex, second segment with three teeth.

Anal segment of male short, apical margin submembranous, deeply excavate, latero-apical angles each produced ventrad in a moderately long, stout spinose process slightly curved at apex. Pygofer ring-like, moderately long, lateral margins oblique, weakly convex, latero-dorsal angles obtusely rounded, little produced, a small setiferous lobe, extending caudad, on each side lateroventrally; no medioventral process; posterior opening broadly rounded, diaphragm broad, its dorsal margin sinuately transverse, produced caudad at middle and compressed into a ridge, like the lip of a jug. Aedeagus long, tubular, porrect caudad, acuminate apically, orifice long, situated ventrally at apex; a shallowly curved spinose process, almost as long as aedeagus and acuminate apically, arising below aedeagus at base, and lying below it for three-quarters of its length then curving upward past its left side. Genital styles short, stout, distally bifurcate with the outer limb approximately twice as long as the inner.

1 ♂ and 1 ♀ Badi, Sénégal, Wolou, Apr. 27, 1958, 4-5 hr, Air; Mar.-Apr. This species has hitherto been recorded only in Puerto Rico.

Genus *Leptodelphax* HAUPT.

HAUPT, 1927, Homopt. Palestine, 1 : 10. — Orthotype, *Leptodelphax cyclops* HAUPT., *loc. cit.*, 1 : 10.

Leptodelphax dymas, sp. n. (fig. 3).

Vertex in middle line longer than broad at base (1.25 : 1), scarcely surpassing anterior margin of eyes, rounding into frons; basal margin truncate, lateral margins feebly concave,

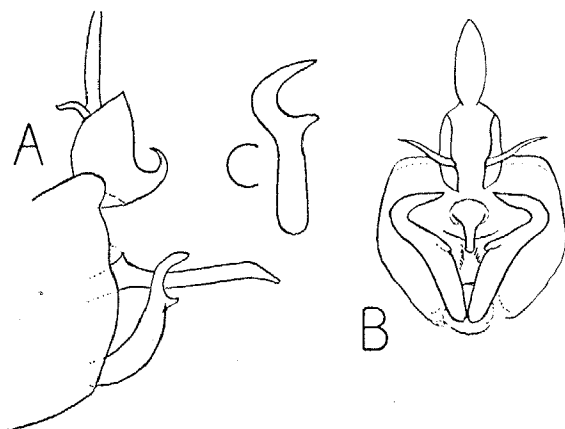


FIG. 3. — *Leptodelphax dymas*, sp. n. : A, anal segment, pygofer, aedeagus, and left genital style, side view; B, male genitalia, posterior view; C, left genital style, posterolateral view.

almost parallel, apical margin of head transverse; disc shallowly impressed, Y-shaped carina feeble, sublateral carinae fine and indistinct meeting in basal two-fifths of frons; frons longer than broad (2.15 : 1) constricted between eyes, lateral margins parallel for most of length,

slightly incurved to frontoclypeal suture, median carina bifurcate in basal two-fifths, otherwise simple; clypeus tricarinate, relatively small. Antennae not reaching as far as frontoclypeal suture with basal segment about as long as broad, second segment about 2.5 times as long as first. Rostrum surpassing mesocoxae. Pronotum as long as vertex, tricarinate, lateral carinae of disc following hind margin of eyes, not attaining hind margin. Mesonotum broader than long, disc feebly tricarinate, with lateral carinae weakly sinuate, almost parallel throughout. Tegmina elongate, apical margin deeply rounded. Legs slender, posttibiae laterally with two spines, apically with five, basal metatarsal segment with six, second metatarsal with four, posttibial spur thin, papery, with 18-20 minute even teeth.

Stramineous, basal two-thirds of clypeal disc, and median carina of frons at apex, piceous.

Anal segment of male moderately long, cylindrical, deep laterally, membranous ventrally lateroapical angles rather narrowly separated, each produced caudad and laterad in a curved spinose process. Pygofer rather long with posterior opening cordate, anal emargination very shallow and obtusely angulate, laterodorsal angles only very feebly produced, if at all, lateral margins only slightly oblique, almost straight, each with about 20 long setae, ventral margin shallowly excavate, devoid of a medioventral process; diaphragm submembranous, its dorsal margin shallowly angulately excavate. Aedeagus long, narrowly tubular, feebly sinuate, orifice terminal, a small triangular lobe on left near apex, and a longer shallow horizontal ledge on right near middle. Genital styles long, stout, each with almost parallel sides in its basal three-fifths, then abruptly curved laterad and recurved mesad in its distal two-fifths, subacute at apex.

Male: length, 2.7 mm; tegmen, 3.2 mm.

Holotype male, Badi, Sénégal, Aug. 15-Sept. 25, 1955. This species differs from *L. cyclops*, which was described from Palestine, in the piceous apex of the median carina of the frons and in details of genital structure.

Genus *Chloriona* FIEBER.

Subgenus *Sogatella* FENNAH.

FENNAH, 1956, *Proc. Calif. Acad. Sci.* (4), 28: 471. — Orthotype, *Delphax furcifera* HORVÁTH, 1899, *Term. Fuzetek.*: 372.

Chloriona (*Sogatella*) *Furcifera* (HORVATH)

subsp. *nigeriensis* (MUIR).

Megamelus furcifer var. *nigeriensis* MUIR, 1919, *Bull. ent. Res.*, 10: 143.

2 ♂♂, Wassadou, Aug. 12, 1955, IFAN.

Chloriona (*Sogatella*) *paludum* (KIRK.).

Kelisia paludum KIRKALDY, 1910, *Fauna Hawaiiensis*, Suppl.: 579.

1 ♂ 1 ♀, Wassadou, Sénégal, Aug. 12, 1955.

Genus *Dicranotropis* FIEBER.

FIEBER, 1866, *Verh. zool.-bot. Ges. Wien*, 16 : 521. — Logotype, *Delphax hamata* BOHEMAN, 1847, *Handl. Vetensk. Akad. Stockh.* : 45.

Dicranotropis endymion FENNAH.

FENNAH, 1958, *Bull. IFAN*, 20, A (2) : 481.

1 ♂, Badi, Sénégal, Mar.-Apr. 1957.

Dicranotropis alope, sp. n. (fig. 4).

Vertex longer in middle line than broad across base (1.3 : 1), posterior margin transverse ; lateral margins weakly converging distad, apical margin transverse, slightly projecting at middle, disc shallowly depressed, Y-shaped carina distinct, sublateral carinae continuing separately on to frons ; frons longer than broad (about 2.8 : 1), lateral margins straight, weakly diverging from base to apex, median carina distinct, narrowly forked at level of middle of eyes, clypeus tricarinate, moderately long, antennae terete, reaching to frontoclypeal suture, with basal segment, in anterior view, not quite twice as broad as long, second segment about

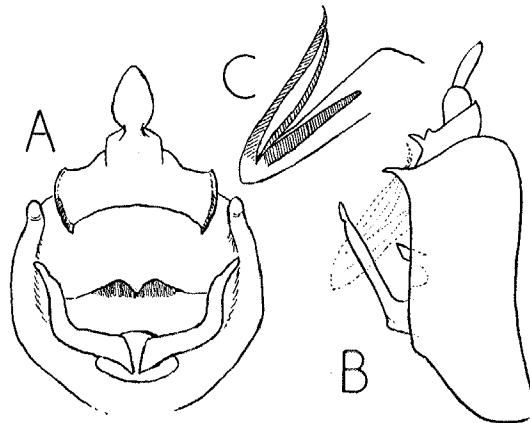


FIG. 4. — *Dicranotropis alope*, sp. n. : A, anal segment, pygofer and genital styles, posterior view ; B, anal segment, pygofer, and right genital style, right side, position of aedeagus shown in broken line ; C, aedeagus, right side.

twice as long as first. Pronotum in middle line shorter than vertex, tricarinate, lateral carinae curved to follow hind margin of eyes, not attaining hind margin, a row of three callused spots between eye and tegula ; mesonotum broader than long, tricarinate, with median carina finely percurrent to apex of scutellum and lateral carinae of disc straight, almost parallel. Tegmina long, deeply rounded at apex. Legs relatively slender, posttibiae with two spines laterally, and five apically, posttibial spur thin, papery, with about 40 minute teeth. Posttarsus as long as post-femur, or nearly so, basal segment with seven teeth apically, second segment with four teeth.

Fuscous, a narrow band along frontoclypeal suture, about two pairs of marginal and two pairs of discal spots on frons, a transverse stripe across genae bordering lower margin of eye, three short carinae behind each eye, a spot below tegula and a line across pleurites, median carina of vertex and all discal carinae of pronotum and mesonotum, ivory-white; clypeus, basal antennal segment anteriorly, and second segment except basally, testaceous; disc of vertex, pronotum and mesonotum tinged orange. Legs dilute testaceous with pro- and mesotibiae pallid at apex. Tegmina hyaline, suffused fuscous throughout between M and commissural margin, the margin itself narrowly white; veins testaceous, fuscous in membrane, with a spot diffusing into cells near margin. Wings hyaline with dilute fuscous veins.

Anal segment of male extremely short, much broader than long, apical margin convex, lying above anal style, ventral surface membranous, lateroapical angles widely separated, each very shortly produced ventrocaudad in a curved spine. Pygofer with anal emargination very broad and shallow, almost transverse between dorsolateral angles, the latter each strongly produced caudad in a triangulate lobe, decurved at its apex, lateral margins of pygofer straight, oblique, ventral margin distinctly excavate, devoid of processes; diaphragm of approximately equal height from side to side, strongly produced caudad at middle in a pair of elongate-triangular lobes, divergent distally, which form a V-shaped trough. Aedeagus long, with a flagellum extending above it from apex almost to base, a long ensiform process, distally sinuate, arising on left at base of flagellum, directed cephalad, a rather shorter and stouter ensiform process arising at base of flagellum on right, directed laterocephalad. Genital styles long and narrow, retangulately bent laterodorsad near base, curved dorsad at middle and tapering distally.

Male: length, 3.0 mm; tegmen, 4.0 mm.

Holotype male, Badi, Sénégal, Aug. 15-Sept. 25, 1955. This species is distinguished by the structure of the male genitalia.

Dicranotropis spp.

1 ♂ (damaged) and 1 ♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955; Mar.-Apr., 1957.

Genus *Delphacodes* FIEBER.

FIEBER, 1866, *Verh. zool.-bot. Ges. Wien*, **16**: 524. — Logotype *Delphax mulsanti* FIEBER, 1866, *loc. cit.*: 526.

Delphacodes actaeon FENNAH.

FENNAH, 1958, *Bull. IFAN*, **20**, A (2): 486.

1 ♂, Badi, Sénégal, Feb. 1956. This species, which resembles a *Pissonotus* apart from the laterally curving pronotal carinae, will ultimately be transferred to another genus.

Family MEENOPLIDAE MUIR.

Genus *Nisia* MELICHAR.

MELICHAR, 1903, *Homopteren-Fauna von Ceylon*: 53. — Haplotype, *Meenoplus atrovenosus* LETHIERRY.

Nisia atrovenosa (LETH.).

Meenoplus atrovenosus LETHIERRY, 1888, *Ann. Mus. Genova* (2), 6 : 466.

1 ♂ 1 ♀, Badi, Sénégal, Mar.-Apr. 1957 ; Aug. 15-Sept. 25, 1955.

Family DERBIDAE SPINOLA.

Genus **Malenia** HAUPT.

HAUPT, 1924, *Mem. Soc. ent. Italiana*, 3 : 233. — Logotype, *Lamenia bosnica* HORVÁTH, 1907, *Ann. Mus. nat. Hungarici*, 5 : 322.

This genus differs from *Cedusa* FOWLER in the position of the Sc + R fork and Cu 1 fork in relation to the union of the claval veins, and also in the transversely oblique carina across the gena between the subantennal process and the lateral carina of the frons being not longer than half the basal width of the process, and, indeed, frequently confluent with the process as a broad flange. In *Cedusa* this structure is developed as a carina quite distinct from the subantennal process, and as long as the basal width of the process. From *Eocenchrea* it is separated by the absence of a median frontal carina, and usually by the discal area of the pronotum being smooth or obscurely carinate, as opposed to distinctly tricarinate. These two genera, however, are best recognised by the proportionate size of the pregenital sternite of the female, that in *Eocenchrea* being much larger.

All the African species so far referred to *Cedusa* belong in *Malenia*.

Malenia sp.

1 ♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955.

Family DICTYOPHARIDAE SPINOLA.

Genus **Raphiophora** SCHAUM.

SCHAUM, 1851, *Arch. Nat.*, 17 : 268. — Haplotype, *Raphiophora vitrea* SCHAUM.

Raphiophora vitrea (SCHAUM).

(*Nematophora*) *vitrea* SCHAUM, 1850, *Allg. Encycl. Ersch. u. Grub.*, 51 : 67.

1 ♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955.

Raphiophora zephyrus GERSTAECKER.

Simotettix zephyrus GERSTAECKER, 1895, *Mitth. Naturw. Ver. Greifswald*, 27 : 14.

1 ♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955.

Genus **Philotheria** MELICHAR.

MELICHAR, 1912, *Abh. zool. bot. Ges. Wien.*, 7 (1) : 92. — Orthotype, *Dictyophara senegalensis* SPINOLA, 1839, *Ann. Soc. ent. Fr.*, 8 : 295.

Examination of *Putala rostrata* MEL. and *Putala maculata* DIST. from Ceylon and India respectively has shown that this genus, though close to *Philotheria*, is distinct. The pattern of the male genitalia is different in the two genera: superficially they can be separated without difficulty by the presence of a short but distinct oblique carina in *Philotheria*, extending from the lower margin of the eye ventrad across the lateral lobe of the pronotum, and not nearly attaining the margin: no such carina is present in *Putala*. The two parallel lateral marginal carinae on each side of the pronotum between the eye and the tegula are present in both genera. In *Philotheria* the posterior margin of the pronotum is less obtusely angled near the tegula than in *Putala*.

MELICHAR (1912, *op. cit.*: 35) referred *Dictyophara discalis* WALKER to *Raphiophora*: the type of WALKER'S species is, however, a *Philotheria*.

***Philotheria damon* FENNAH.**

FENNAH, 1957, *Ann. Mus. Congo Tervuren*, 59: 60.

1 ♂ 4 ♀♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955. Wassadou, Sénégal, Aug. 2, 1955.

***Philotheria ceryx*, sp. n. (fig. 5).**

Vertex about 2.3 times as long in middle line as broad at base with lateral margins converging a little before eyes, thence almost parallel to apex, cephalic process extending before eyes for approximately the length of an eye, in profile vertex horizontal, meeting frons at an

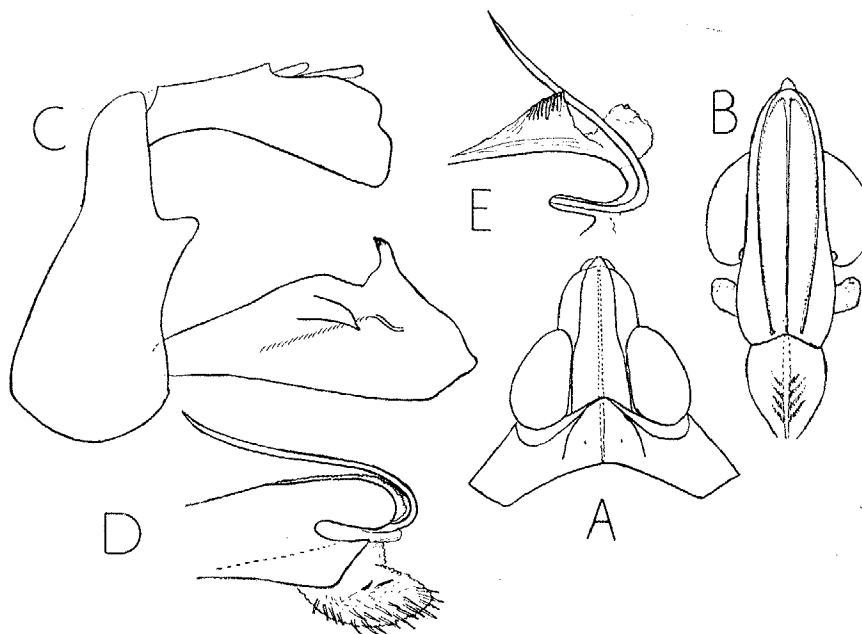


FIG. 5. — *Philotheria ceryx*, sp. n.: A, head and pronotum; B, frons and clypeus; C, anal segment, pygofer and left genital style; D, aedeagus, left side, with left ventroapical sac extended, dorsal sacs inflated; E, upper half of aedeagus, left side, showing one of the paired dorsal sacs inflated.

angle of 46 degrees. Oblique carina on lateral pronotal lobes very short, subequal to length of antenna.

Testaceous; a few oblique stripes on clypeus, a few small spots on carinae at base of frons, and legs, except along margins, dark fuscous; two submedian vittae on frons orange-yellow. Tegmina hyaline, veins of corium and stigma testaceous, veins of membrane fuscous, costa testaceous narrowly margined internally with fuscous, commissural margin testaceous narrowly margined externally with fuscous; stigma 3-celled, fuscous.

Anal segment of male and genitalia bilaterally symmetrical. Anal segment in profile of moderate length, lower lateral margin shallowly concave to ventrolateral angle, which is rounded-rectangulately produced, thence distinctly sinuate to apex. Pygofer with posterior lateral margin abruptly produced caudad near middle in a subacute rounded-triangular lobe. Aedeagus with phallobase tubular, rather stout, dorsal and ventral margins in side view diverging caudad in basal two-thirds, obliquely truncate apically and deeply cleft, distal portion of aedeagus membranous, with a pair of small unarmed dorsal lobes and a pair of larger subtriangular ventral lobes each armed with about twenty rather adpressed spinose processes. Phallic appendages paired, moderately slender, emerging at apex of aedeagus and directed dorsocephalad above it for half its length, each process acuminate and weakly curved upward at apex. Genital styles in profile expanding distad, dorsal margin excavate before dorso-apical spine, which is short, stout, and directed dorsad, apical margin sinuately convex, subacutely meeting ventral margin, which is shallowly sinuate, a stout spinose process laterally near middle, directed ventrocaudad, acute at apex, and a sinuate callus just distad of this.

Male: length, 7.2 mm; tegmen, 8.0 mm. Female: length, 8.1 mm.; tegmen, 9.0 mm.

Holotype male, 6 ♂♂ and 3 ♀♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955; Wassadou, Aug. 12, 1955. Holotype from Badi. This species is nearest to *P. celo* FENNAH, but differs in the slightly longer vertex, in the much shorter oblique carina on the lateral pronotal lobe, and in the detailed shape of almost every element of the male genitalia. The phallic processes of the aedeagus appear to be fragile and are possibly sometimes broken during copulation: it proved necessary to make several dissections before an undamaged pair was found.

Philotheria sp.

1 ♀, Badi, Sénégal, Mar.-Apr., 1957. IFAN. This species is near *Philotheria discalis* WALKER comb. nov., but differs in having the frons in profile from the frontoclypeal suture to the apex of the cephalic process straight, not concave.

Genus Paradictya MELICHAR.

MELICHAR, 1912, *Abh. zool.-bot. Ges. Wien*, 7 (1): 152. — Orthotype, *Paradictya bicoronata* MELICHAR, 1912, *loc. cit.*: 152.

Paradictya sp.

2 ♀♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955. These belong to a species with regular tegminal venation, and in the form of the head agree with *P. currax* FENNAH, but in the absence of males their identity must remain doubtful.

Genus *Afronersia* FENNAH.

FENNAH, 1957, *Ann. Mus. Congo Tervuren*, **59** : 65. — Orthotype, *Afronersia dionaea* FENNAH, 1957, *op. cit.* : 66.

Afronersia juba FENNAH.

FENNAH, 1957, *op. cit.* : 78.

2 ♂♂ 10 ♀♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955.

Family TROPIDUCHIDAE STÅL.

Genus *Numicia* STÅL.

STÅL, 1866, *Hemiptera Africana*, **4** : 189. — Logotype, *Numicia herbida* STÅL, 1866, *op. cit.* : 190.

Numicia albicans (WALKER).

Cixius albicans WALKER, 1858, *List Homopt. Ins., Addenda*, 1858 : 323.

18 ♂♂ 10 ♀♀ and 1 mutilated specimen, Badi, Sénégal, Aug. 15-Sept. 25, 1955.

This species was referred to *Tropiduchus* by MELICHAR (*Monogr. Tropiduchidae* 1914 : 43) but WALKER's type is a *Numicia*. The present combination, as *N. albicans* Wlk., was first employed in a comparative note (FENNAH, *Bull. IFAN*, **20**, A : 528).

Numicia ghesquierei LALLEMAND.

LALLEMAND, 1938, *Bull. Mus. Hist. nat. Belg.*, **14** (58) : 2.

1 mutilated male, Badi, Sénégal, Aug. 15-Sept. 25, 1955, is tentatively assigned to this species.

Family ISSIDAE SPINOLA.

Genus *Durium* STÅL.

STÅL, 1861, *Öfv. Vet. Akad. Förh. Stockh.*, **18** : 209. — Logotype, *Durium punctipes* SIGNORET, *Ann. Soc. ent. Fr.*, (3) **8** : 202.

Durium senegalense SIGNORET.

Acrometopum senegalense SIGNORET, 1861, *Ann. Soc. ent. Fr.*, (4) **1** : 58.

2 ♂♂, Badi, Sénégal, Aug. 15-Sept. 25, 1955.

Family FLATIDAE SPINOLA.

Genus *Anatraxis* FENNAH.

FENNAH, 1957, *Ann. Mus. Congo Tervuren*, **59** : 177. — Orthotype, *Atraxis impura* STÅL.

Anatraxis impura (STÅL).

Anatraxis impura STÅL, 1866, Hemiptera Africana, 4 : 251.

1 ♀, Badi, Sénégal, Mar.-Apr., 1957, IFAN.

Genus Afroseliza, novum.

Head with eyes slightly narrower than pronotum. Vertex short, much broader than long, scarcely overlapped by pronotum, lateral margins short, converging distad, anterior margin broadly angulately convex, a shallowly sinuate seam across middle, almost touching anterior margin of pronotum medially, disc broadly depressed distad of this seam. Frons in middle line a little longer than broad, rather narrower at apex than at base, basal margin shallowly angulately excavate, lateral margins convex, most widely separated just below level of antennae, slightly produced anterolaterad, disc convex, median carina strongly present on basal three-quarters, obsolete in apical quarter, rostrum moderately long, reaching to post-trochanters, subapical segment longer than apical, ocelli distinct, antennae with second segment short, cylindrical, apically truncate. Pronotum longer in middle line than vertex, anterior margin broadly convex, almost transverse at middle, ventrolateral lobes deeply rounded at apex, posterior margin shallowly excavate, disc medially carinate and coarsely rugulose-pustulate, a bluntly conical eminence behind each eye; mesonotum broader than long, strongly decurved near anterior margin, ecarinate except for an indication of a median carina anteriorly, posttibiae with one spine laterally, eight at apex, basal metatarsal segment with eight teeth apically. Tegmina 2.3 times as long as broad, distinctly widening distally, costal margin strongly curved in basal quarter, thence almost straight, not sinuate at node, apical and anal angles broadly rounded, apical margin distinctly oblique, only weakly convex, costal membrane equal in width to costal cell, vein Sc + R prominent, two distinct lines of transverse veinlets, the basal of these sometimes less regular than the distal, apical areoles each about three times as long as broad, subapical areoles scarcely twice as long as broad, nodal line very irregular, indistinct, transverse veinlets present distally in corium, and about five present in clavus. Wings about as long as tegmina.

Type species, *Afroseliza cithaeron*, sp. n.

Afroseliza cithaeron, sp. n. (fig. 6).

Anterior margin of vertex obtusely angulately convex.

Testaceous-stramineous, frons basally and submarginally in basal half, clypeus except medially, a spot before ocelli, lateral margins of head above eyes, vertex in middle, depressions on pronotum and most of lateral lobes, a sprinkling on mesonotal disc, diffuse stripes along femora and tibiae, and anal style, fuscous. Lateral fields of mesonotum castaneous-piceous. Tegmina pallid ochraceous sprinkled with dilute fuscous, about seven small spots between Sc + R and anterior margin, two spots in corium near basal fork of M, and two spots near nodal line in M, and a few marks on posterior claval vein, fuscous-piceous, membrane, except sometimes in second row of subapical cells, suffused fuscous, veins concolorous. Wings slightly infumed, venation basally concolorous, distally fuscous.

Anal segment of male moderately long, in dorsal view spatulate, with apical margin trun-

cate, in profile broadly wedgelike, with lower margin deeply excavate near base, straight in distal half, anal style situated at middle, not nearly attaining apical margin. Pygofer with dorsolateral angles each strongly produced in a rounded lobe, lateral margins feebly convex and setigerous in upper half, weakly concave in lower half. Aedeagus stout, shallowly U-shaped, a pair of lobes dorsally near base, each about four times as long as wide, flattened on upper surface; an unpaired median spiniform plate ventrally, extending caudad for three-quarters of length of aedeagus, acute at tip; a pair of stout processes ventrolaterally at apex directed ventrad, then extending cephalad below aedeagus almost to its base, each laterally

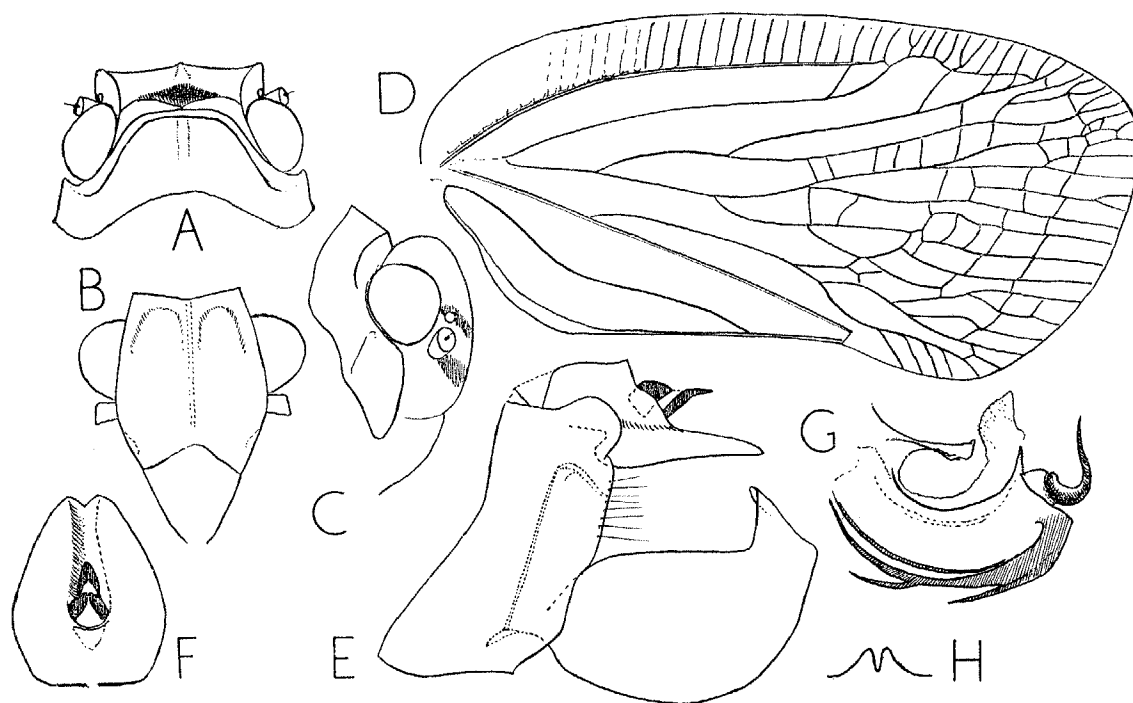


FIG. 6. — *Afroseliza cithaeron*, gen. et sp. n. : A, head and pronotum ; B, frons and clypeus ; C, head in profile ; D, tegmen ; E, anal segment, pygofer and left genital style ; F, anal segment of female, dorsal view ; G, aedeagus, left side ; H, posterior margin of female pregenital sternite.

compressed near base and acuminate distally, and bearing a moderately long spinose process one-quarter from base and a shorter spinose process at middle, both directed cephalad; phallic appendages emerging at apex, directed dorsad and tapering to acuminate apex. Genital styles broad, dorsal margin weakly convex in basal three-quarters, then abruptly curved dorsad to apical process, ventral margin broadly convex, apical margin sinuate, apical process comprising a rather thin acute lobe with its inner margin produced mesad.

Anal segment of female moderately large, shallowly tectiform; in dorsal view broadly subovate, narrowly incised at apex, anal style at middle. Pregenital sternite short, produced caudad at middle in a pair of subtriangular processes. Ovipositor with third valvulae relatively large and stout, each armed on distal margin with fifteen teeth, arranged in two alternating rows near the upper end and in a single row at lower end.

Male : length, 5.1 mm ; tegmen, 6.6 mm. *Female* : length, 6.0 mm ; tegmen, 8.0 mm.

Holotype male and 6 ♀♀, Ibadan, Nigeria, 1954, *H. Brown*, B. M. 1955-37 (holotype); Sept. 16, 1953, B. M. 1953-628, on *Clerodendron*. 2 ♀♀, Badi, Sénégal, Sol. Apr. 26, 1958, 4-5 hr are assigned to this species. They agree in all morphological characters and markings but the general hue is fuscous. Holotype in British Museum (Natural History).

This genus runs in SYNAVE's key (Expl. Parc Nat. Upemba) 32 (2) : 22, 1955) to (37), but fulfils neither condition. It is apparently most nearly related to *Exomella* FENNAH but differs in the structure of the vertex and frons, the shape of the tegmina, and in the general plan of the male genitalia. From *Juba* it is separable by the relatively much broader basal costal area of the tegmina, as well as by the shape of the head, from *Seliza* by the shape of the head and of the female genitalia, and from *Perinetella* by the shape of the head, the relatively shorter antennae and the number of posttibial spines.

Family LOPHOPIDAE STÅL.

Genus *Elasmoscelis* SPINOLA.

SPINOLA, 1839, *Ann. Soc. ent. Fr.*, 8 : 388. — Haplotype, *Elasmoscelis cimicoides* SPIN., 1839, *op. cit.* : 391.

Elasmoscelis trimaculata Wlk.

WALKER, 1851, *List. Hom. Ins. Brit. Mus.*, 2 : 403.

1 ♀, Badi, Sénégal, Aug. 15-Sept. 25, 1955.