

Hemiptera of the Sudan, with remarks on some species of the adjacent countries 2.

Homoptera auchenorrhyncha: Cicadidae, Cercopidae, Machaerotidae, Membracidae and Fulgoroidea.

(Zoological contribution from the Finnish expeditions to the Sudan no. 33)

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Abstract

Notes are given on the taxonomy, habitats and distribution of the leafhoppers, collected by the author in 1961—1963 in the Sudan and the adjacent countries. The following new taxa are described: Cicadidae: *Cicadatra erkowitensis* sp.n. Cercopidae: *Literna intermedia ares* ssp.n., *L. adonis* sp.n., *Sepulchris callosa pluto* ssp.n., *S. atalanta* sp.n., *Patriziana janus* sp.n., *Pseudomachhaerota saturnus* sp.n., *Clovialteri* sp.n., *C. bari* sp.n., *C. rubescens* sp.n., *C. malmul* sp.n., *Cordia peragrans iambe* ssp.n., *C. peragrans ianeira* ssp.n., *C. peragrans ianassa* ssp.n., *C. iphis* sp.n., *C. ianthe* sp.n. Machaerotidae: *Pectinophyes lotuko* sp.n., *P. jur* sp.n. Membracidae: *Leptocentrus indigoferae* sp.n., *Acanthophyes mimus* sp.n. Fulgoridae: *Benamatapa hecate* sp.n. Dictyopharidae: *Paranagnia lyco* sp.n., *Philotheria eurydice* sp.n., *P. natalensis affinis* ssp.n., *P. antigone* sp.n., *P. circe* sp.n. Cixiidae: *Andes aulonias* sp.n., *A. erys* sp.n., *A. hyleorias* sp.n., *Oliarus moestus choaspes* ssp.n., *O. moestus iphis* ssp.n., *O. minyrias* sp.n., *O. troas* sp.n., *O. gezira* sp.n., *O. lacon* sp.n., *O. sterope* sp.n., *O. sterope ulysses* ssp.n., *O. doris* sp.n., *O. ndeleensis cleon* ssp.n., *O. medanicus* sp.n., *O. pseudofrontalis* sp.n., *O. frontalis fuligo* ssp.n., *O. azrak* sp.n., *O. pleone* sp.n., *O. iasis* sp.n., *O. scylla* sp.n., *O. camilla* sp.n., *Myndus cupido* sp.n., *M. nymphias* sp.n., *Bashgultala maculipennis* sp.n. Delphacidae: *Tropidocephala umbrina* sp.n., *T. montana* sp.n., *T. aurantiaca* sp.n., *Eurysa imatonga* sp.n., *E. bidentata* sp.n., *E. atramentaria* sp.n., *Amblycotis alpinus* sp.n., *Nycheuma idas nilotica* ssp.n., *Oaristes phragmitis* sp.n., *O. impictus* sp.n., *Sogatella paraloophon* sp.n., *S. yei* sp.n. Achilidae: *Akotropis fulgens* sp.n. Meenoplidae: *Kermesia calypso* sp.n., *Eponisia pallida* sp.n., *Anigrus lobulifer* sp.n., *A. amaryllis* sp.n., *A. ochreatus* sp.n., *Meenoplus satyrus* sp.n., *M. suavis* sp.n., *M. ianthe* sp.n., *M. adonis* sp.n., *M. kassiphone* sp.n., *M. nausikaa* sp.n. Derbidae: *Malenia cydippe* sp.n., Lophopidae: *Elasmocelis impala* sp.n., *E. damon* sp.n., *E. spinifer* sp.n. Tropiduchidae: *Tropiduchus marpsias* sp.n., *Numicia orphana* sp.n., *N. talassio* sp.n., *N. gorgo* sp.n., *N. doleib* sp.n., *Ommatissus tumidulus* sp.n., *O. alpinus* sp.n., *Tryptimorpha canopus* sp.n. Nogodiniidae: *Philyella elba* sp.n., *P. ailet* sp.n. Issidae: *Caliscelis berenice* sp.n., *Myrmessus hellicosus* gen. et sp.n., *Issopulex chloe* sp.n., *I. nasutus* sp.n., *Gwurra aphrodite* gen. et sp.n., *G. astarte* sp.n., *G. pappo* sp.n., *Durium scylax* sp.n., *Trienopa dionaea* sp.n., *Adenissus brachypterus* gen. et sp.n. Tettigoniidae: *Hilda minerva* sp.n., *H. ceres* sp.n., *H. diana* sp.n., *H. aurora* sp.n., *H. juno* sp.n. Ricaniidae: *Privesa pusilla* sp.n. Flatidae: *Paranotus deiopieia* sp.n., *Cryptoflata paphia* sp.n., *C. hera* sp.n., *Phantia stremis* sp.n., *P. coniceps* sp.n., *Caesonia danae* sp. n., *Afrophantia iphigeneia* sp.n., *Hameishara* gen. n., *Derisa pugionata* sp.n., *Juba barchanorum* sp.n., *Ulundia deidamia* sp.n., *Stenocyarda salsolae* sp.n., *Stenocyarda dhalaiica* sp.n.

Introduction

The present paper is a continuation of previous survey (LINNAVUORI 1971)

of the Hemiptera fauna of the Sudan, based on the collections made on my

field trips in 1961—1963 to the Sudan, Eritrea, Ethiopia, Somalia and South Yemen. For details of these excursions the reader is referred to the preface of the first part of this survey and to the map of the collecting localities.

The African leafhopper fauna of *Cercopidae*, *Machaerotidae*, *Membracidae* and the *Fulgoroidea* has been ably treated by CAPENER, FENNAH, LALLEMAND, MAA and SYNAVE (see references). Although numerous publications have been devoted to the fauna of the Guinean subregion and of South and East Africa, little attention has been paid to N.E. Africa. The only major contribution relating to this area is FENNAH's article on the *Delphacidae* of the Sudan, based on my material from that country. The numerous new species described in that article as well as in the present paper suffice to show that the fauna of this part of Africa is much richer than reports have so far suggested. Undoubtedly many other new species still await discovery, especially in the Equatorial Province.

The types of the new species are located in my private collection, unless otherwise indicated. Some duplicates are deposited in the Zoological Museum of Helsinki University and in the British Museum.

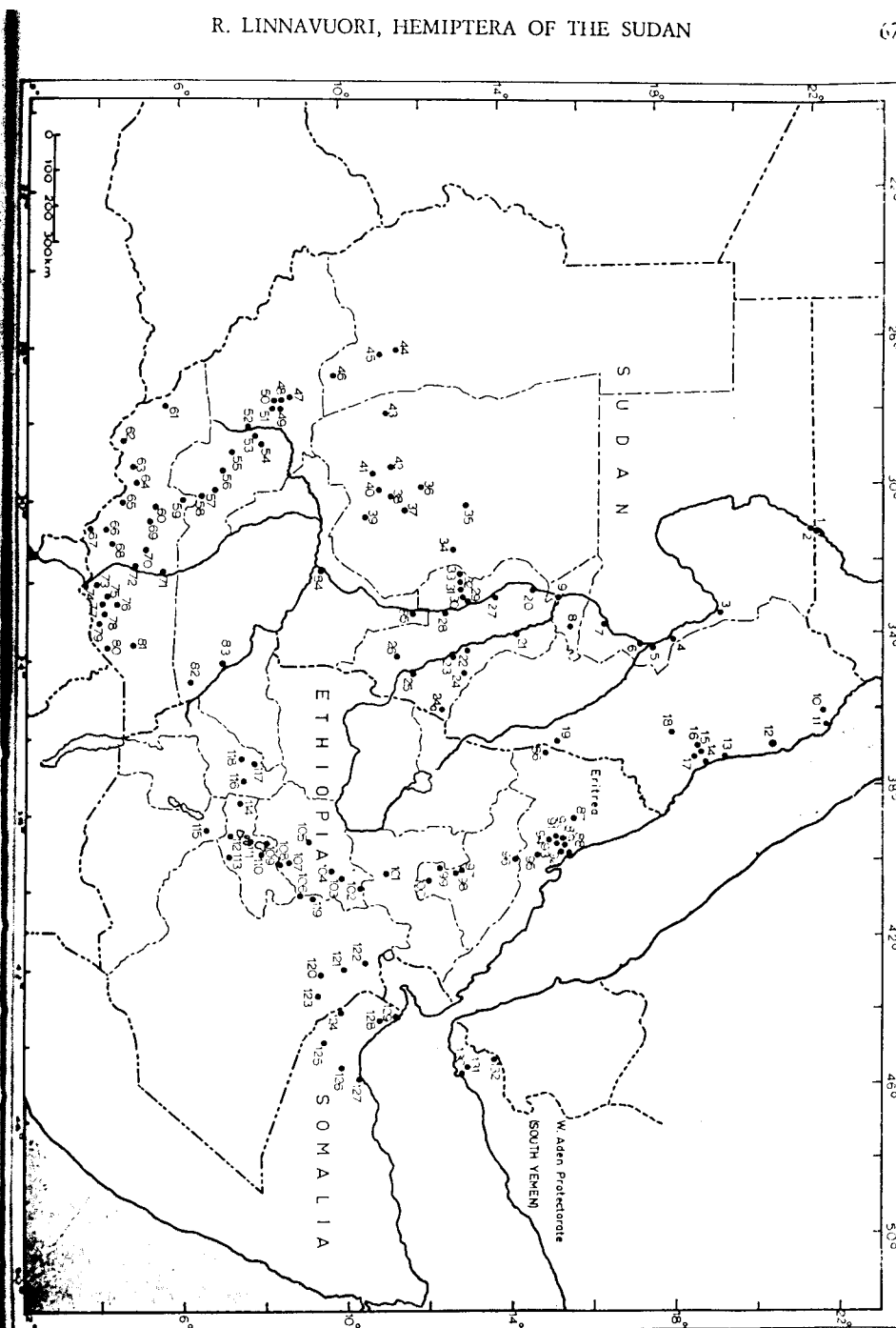
List of the collecting localities shown in Map 1. In the text the collecting localities are indicated by numbers: 6 = Ed Damer, 61—52 = Tambura-Wau (the specimen found on the way from Tambura to Wau), 73—75 = Opari-Magwe, etc.

THE SUDAN

Northern Province

- | | | |
|---|------------|------------------------------------|
| 1 | Debeira | 6—13. X. 1962 |
| 2 | Wadi Halfa | 14—17. X. 1962 |
| 3 | Abu Hamed | 18—20. X. 1962 |
| 4 | Abidiya | 18—20. X. 1962 |
| 5 | Atbara | 27—30. X. 1962 |
| 6 | Ed Damer | 5—10. VII. 1961,
27—30. X. 1962 |

- | | | |
|-----|--------------------------------|-------------------------------------|
| 7 | Shendi | 2—5. XI. 1962 |
| 8 | Khartoum | |
| 9 | Wad Hassuna | 5—6. XI. 1962 |
| | Khartoum | 30. VI—3. VII. 1961,
7. XI. 1962 |
| | Kassala | |
| 10 | Jebel Elba | 10—14. XII. 1962 |
| 11 | Mersa Halaib | 10—14. XII. 1962 |
| 12 | Mohammed Qol | 15. XII. 1962 |
| 13 | Port Sudan | 15. XII. 1962 |
| 14 | Suakin | 5. XII. 1962 |
| 15 | Abend Pass | 5. XII. 1962 |
| 16 | Sinkat | 15. XII. 1962 |
| 17 | Erkowit | 5—10. VII. 1961,
4. XII. 1962 |
| 18 | Haiya | 1—3. XII. 1962 |
| 19 | Kassala | 29—30. XI. 1962 |
| | Blue Nile | |
| 20 | El Geteina | 11. V. 1963 |
| 21 | Wad Medani | 11—14. XI. 1962 |
| 22 | Singa | 15—17. XI. 1962 |
| 23 | Umm Banein | 14. XI. 1962 |
| 24 | Abu Hashim | 23—24. XI. 1962 |
| 24a | Galegu | 23—24. XI. 1962 |
| 25 | Ed Damazin | 15—17. XI. 1962 |
| 26 | Ingessana Mts.
(Tabi Hills) | 17—22. XI. 1962 |
| 27 | Wad es Zaki | 10. V. 1963 |
| 28 | El Jebelein | 2. I. 1963 |
| 29 | Kosti | 22. I. 1963 |
| 30 | Wusa'a | 23—24. I. 1963 |
| 31 | Umm Koweika | 23—24. I. 1963 |
| 32 | Selima | 24. I. 1963 |
| 33 | Tendelti | 25. I. 1963 |
| | Kordofan | |
| 34 | Umm Ruwaba | 25—28. I. 1963 |
| 35 | El Obeid | 29. I. 1963 |
| 36 | Dilling | 30. I. — 1. II. 1963 |
| 37 | Jebel Shivai | 6—7. II. 1963 |
| 38 | Umm Shuheita | 6—7. II. 1963 |
| 39 | Talodi | 12—13. II. 1963 |
| 40 | Kadugli | 2—14. II. 1963 |
| 41 | Keilak Lake | 8—11. II. 1963 |
| 42 | El Lagowa | 14. II. 1963 |
| 43 | Babanusa | 15. II. 1963 |
| | Darfur | |
| 44 | Ed Daein | 3—7. V. 1963 |
| 45 | Abu Matarig | 2. V. 1963 |
| 46 | Safaha | 30. IV. 1963 |
| | Bahr el Ghazal | |
| 47 | Aweil | 19. II. 1963 |
| 48 | Wararair | 18. II. 1963 |
| 49 | Godatair | 18. II. 1963 |
| 50 | Khor Kyom | 18. II. and 28. II. 1963 |
| 51 | Pongo R. | 19—20. II. and |
| 52 | Wau | 27. IV. 1963 |
| 53 | Gwurra | 21. II. 1963 |
| 54 | Maleit Lake | 21. II. 1963 |
| 55 | Tonj | 22. II. 1963 |



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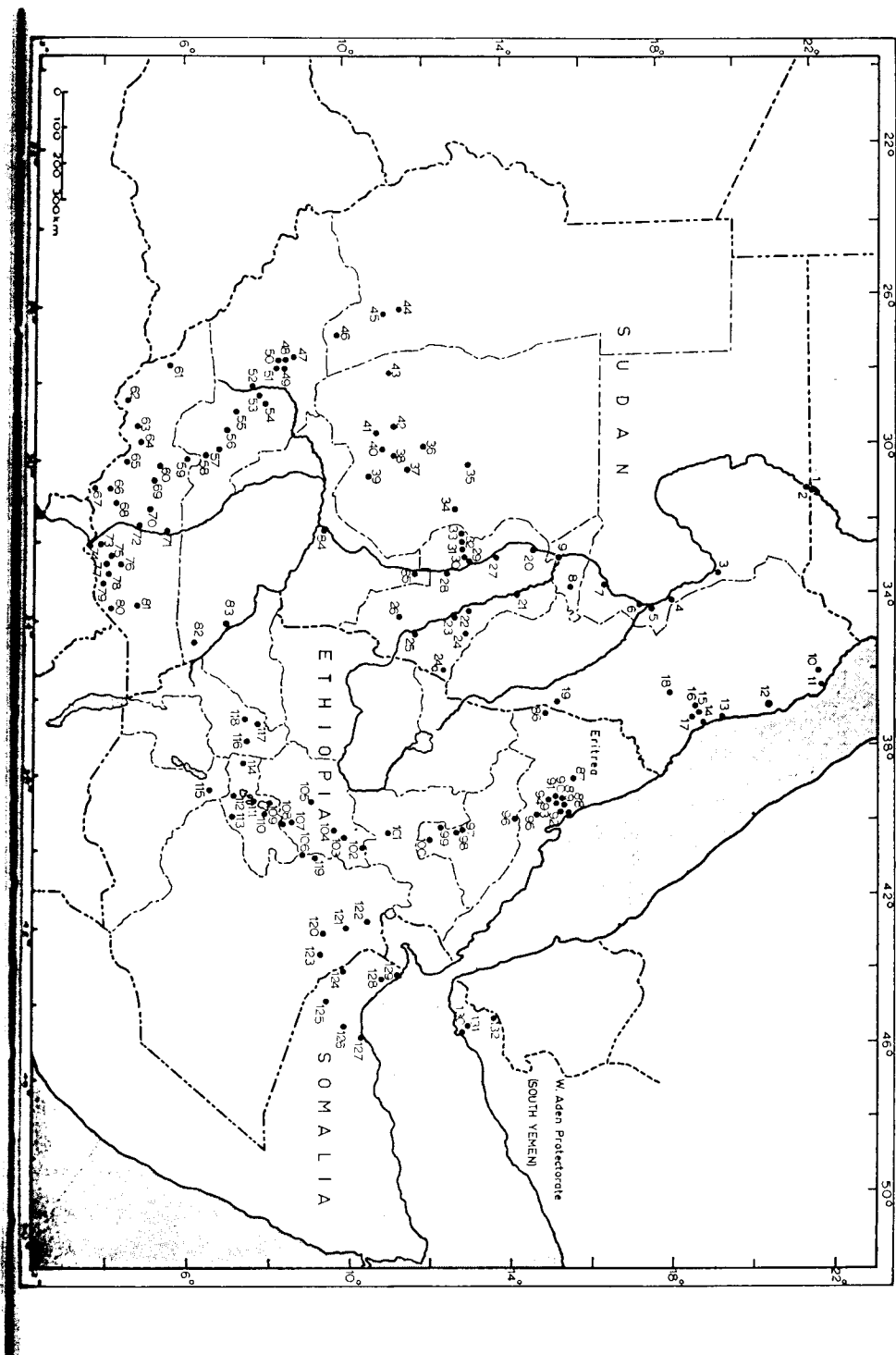
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IN THE SUDAN

Northern Province

- 1 Debeira 6—13. X. 1962
- 2 Wadi Halfa 14—17. X. 1962
- 3 Abu Hamed 18—20. X. 1962
- 4 Abidiya 18—20. X. 1962
- 5 Atbara 27—30. X. 1962
- 6 Ed Damer 5—10. VII. 1961, 27—30. X. 1962

- 7 Shendi 2—5. XI. 1962
- 8 Khartoum
- 9 Wad Hassuna 5—6. XI. 1962
- 10 Khartoum 30. VI—3. VII. 1961, 7. XI. 1962
- 11 Kassala
- 12 Jebel Elba 10—14. XII. 1962
- 13 Mersa Halaib 10—14. XII. 1962
- 14 Mohammed Qol 15. XII. 1962
- 15 Port Sudan 15. XII. 1962
- 16 Suakin 5. XII. 1962
- 17 Abend Pass 5. XII. 1962
- 18 Sinkat 15. XII. 1962
- 19 Erkowit 5—10. VII. 1961, 4. XII. 1962
- 20 Haiya 1—3. XII. 1962
- 21 Kassala 29—30. XI. 1962
- 22 Blue Nile
- 23 El Geteina 11. V. 1963
- 24 Wad Medani 11—14. XI. 1962
- 25 Singa 15—17. XI. 1962
- 26 Umm Banein 14. XI. 1962
- 27 Abu Hashim 23—24. XI. 1962
- 28a Galegu 23—24. XI. 1962
- 29 Ed Damazin 15—17. XI. 1962
- 30 Ingessana Mts. (Tabi Hills) 17—22. XI. 1962
- 31 Wad es Zaki 10. V. 1963
- 32 El Jebelain 2. I. 1963
- 33 Kosti 22. I. 1963
- 34 Wusa'a 23—24. I. 1963
- 35 Umm Koweika 23—24. I. 1963
- 36 Selima 24. I. 1963
- 37 Tendelti 25. I. 1963
- 38 Kordofan
- 39 Umm Ruwaba 25—28. I. 1963
- 40 El Obeid 29. I. 1963
- 41 Dilling 30. I. — 1. II. 1963
- 42 Jebel Shivai 6—7. II. 1963
- 43 Umm Shuheita 6—7. II. 1963
- 44 Talodi 12—13. II. 1963
- 45 Kadugli 2—14. II. 1963
- 46 Keilak Lake 8—11. II. 1963
- 47 El Lagowa 14. II. 1963
- 48 Babanusa 15. II. 1963
- 49 Darfur
- 50 Ed Daein 3—7. V. 1963
- 51 Abu Matarig 2. V. 1963
- 52 Safaha 30. IV. 1963
- 53 Bahr el Ghazal
- 54 Aweil 19. II. 1963
- 55 Wararair 18. II. 1963
- 56 Godatair 19. II. 1963
- 57 Khor Kyom 18. II. 1963
- 58 Pongo R. 18. II. and 28. II. 1963
- 59 Wau 19—20. II. and
- 60 27. IV. 1963
- 61 Gwurra 21. II. 1963
- 62 Maleit Lake 21. II. 1963
- 63 Tonj 22. II. 1963



56	Gel R.	22. II. 1963
57	Rumbek	22. II. 1963
58	M'Boloko	23. II. 1963
	Equatoria	
59	Mwolo	23. II. 1963
60	Mundri	24. II. 1963
61	Tambura	25—26. IV. 1963
62	Yambio	18—25. IV. 1963
63	Ibba	16. IV. 1963
64	Maridi	15. IV. 1963
65	Senambio	14—15. IV. 1963
66	Yei	12—13. IV. 1963
67	Iwatoka	12—13. IV. 1963
68	Loka forest	8—10. IV. 1963
69	Lirek	25—26. II. 1963
70	Lalyo	25—26. II. 1963
71	Terakeka	2—6. III. 1963
72	Juba	27. II.—2. III. 1963
73	Opari	13. III. 1963
74	Nimule	10—13. III. 1963
75	Magwe	13. III. and 31. III. 1963
76	Torit	24—25. III. 1963
77	Lotti forest	14—17. III and 28—31. III. 1963
78	Kateri (Katire)	18. III. 1963
79	Gilo	18—24. III. 1963
80	Nagichot	26. III. 1963
81	Kapoeta	26. III. 1963
	Upper Nile	
82	Boma	26—27. III. 1963
83	Pochalla	13. I. 1963
84	Malakal	5—20. I. 1963
85	Renk	2—4. I. 1963

ETHIOPIA

	Eritrea	
86	Tessenei	22. V. 1963
87	Keren	23—24. V. 1963
88	Massawa	27—30. V. 1963
89	Ailet	25—26. V. 1963
90	Ghinda	25—26. V. 1963
91	Asmara	23—24. V. 1963
92	Dogali	25—26. V. 1963
93	Embatcalla	25—26. V. 1963
94	Decamere	25—26. V. 1963

95	Addi Caieh (Adi Kaie)	31. V. 1963
	Ethiopia	
96	Adigrat	31. V. 1963
97	Amba Alagi	1. VI. 1963
98	Mai Chew (Mai Chio)	1. VI. 1963
99	Alamata	1. VI. 1963
100	Raia Plain	1. VI. 1963
101	Dessie	2. VI. 1963
102	Karakore	2. VI. 1963
103	Mussolini Pass	3. VI. 1963
104	Debra Berhan	3. VI. 1963
105	Sululta	11. VI. 1963
106	Awash	6—9. VI. 1963
107	Nazareth (Adama)	20—21. VI. 1963
108	Koka Dam	6—9. VI. 1963
109	Zwai Lake	6—9. VI. 1963
110	Asella	21. V. 1963
111	Langanno Lake	6—9. VI. 1963
112	Shashamanni (Wondo cloud forest)	6—9. VI. 1963
113	Agheresalam	12—17. VI. 1963
114	Omo Valley	6—9. VI. 1963
115	Wondo	12—17. VI. 1963
116	Maigudo Mt.	12—17. VI. 1963
117	Agaro	12—17. VI. 1963
118	Bellela forest	12—17. VI. 1963
119	Machi	6—9. VI. 1963
120	Harrar	22. VI. 1963
121	Faramaia Lake	22. VI. 1963
122	Dira Dawa	22. VI. 1963
123	Jiggiga	22—23. VI. 1963

SOMALIA

124	Borama	29. VI. 1963
125	Hargeisa	23—28. VI. 1963
126	Daragodleh	23—28. VI. 1963
127	Berbera	25—27. VI. 1963
128	Silil	29. VI. 1963
129	Zeila	30. VI. 1963

SOUTH YEMEN

130	Sheikh Othman	9—15. VII. 1963
131	Lahej	9—15. VII. 1963
132	Dhala	9—15. VII. 1963

List of species

CICADINAE

Cicadinae

PLATYPLEURA A.-S.

P. clara A.-S. — Nubia (Stål 1866:23), 21, Umm Barona, 3 exx, 1 larva. On *Acacia*. Larva

in sand among roots. W. Africa, Zaire, E. Africa, Arabia.

P. truncaticeps Sgn. — 40, 1 ex.; near 42, 1 ex. On *Combretum bartmannianum*. Previously known from E. Africa.

P. plagiata Karsch — 17, 1 ex. Cameroon, Arabia.

P. rutherfordi Dist. — 77, 4 exx. At lamp.

W. Africa (Nigeria, Cameroon etc.), Zaire, Angola, E. Africa.
P. divisa (Gm.) — 64—65, 1 ex.; 62, 1 ex. At lamp. S. and E. Africa, Ethiopia.
P. melanaria Dist. — 59—60, 1 ex. On trees in a burned forest. Zaire, E. Africa.

IOBA Dist.

I. veligera (Jac.) — 81—82, 1 ex. At lamp. E. Africa.

MUNZA Dist.

M. sudanensis Dist. — Equatoria: Benemana River, Meredi, 1 ex, type, British Museum. Endemic.

UGADA Dist.

U. limbata (F.) — 62, several exx. At lamp. W. Africa, Zaire, Angola.
U. grandicollis (Gm.) — 77, 1 ex. At lamp. W. Africa, Zaire, Angola, Kenya.

Tibicinae

CICADATRA Klt.

C. erkowitensis sp.n.

Length 23 mm. Like *C. longipennis* Schum. (Israel) (Colouring, elytra long and narrow, 3 × as long as broad, 3rd and 4th apical cells about 4 × as long as broad etc.), but much smaller and more gracile. Pronotum 2.3 × as broad as long (about 2.6 × in *longipennis*).



FIG. 1. *Cicadatra erkowitensis* sp.n.: a pygophore from side; b valve; c—d apex of penis. — *C. longipennis* Schum.: e the falcate appendage of penis.

The long falcate appendage of penis (Fig. 1 c—d) not strongly S-shaped as in *longipennis* (Fig. 1 e), the other denticulation also different. Other genitalia as in Fig. 1 a—b. Redescription of *longipennis* in LINNAVUORI 1962:34—36.

Kassala: Erkowit, 1 ♂, holotype, 5—10. VIII. 1961.

TRISMARCHA Karsch

T. ferruginosa Karsch — 63—62, 1 ex.; 62, 2 exx.; 66—64, many exx. At lamp. W. Africa (Cameroon, Gabon, Togo, Guinea etc.), Zaire, Angola, E. Africa.

PANKA Dist.

P. umbrosa Dist. — 66—67, 1 ♀ probably of this species. At lamp. Zaire.

LACETAS Karsch

L. annulicornis Karsch — 74, 2 exx.; 66—64, 3 exx. At lamp. Zaire.

CERCOPIDAE

Cercopinae

Revised by LALLEMAND 1949 and LALLEMAND & SYNAVE 1961, and the genus *Locris* St. revised by SYNAVE 1957b:115—129.

LITERNA St.

L. intermedia Hgl. ssp. *ares* sp.n.

Length 7.5 mm. Uniformly dark yellow-brown. Elytra totally dark yellow-brown, with a transverse band of grey hairs just caudad of tip of scutellum.

General structure and genitalia (Figs. 2 c—d and 3 a) as in the nominate form.

Differs greatly in colouring from the nominative form (W. Africa, Zaire). The male genitalia are very similar to those of *L. baglundii* Schm. but the present species is much smaller and more robust. The elytra are shorter than in the nominate form, about twice as long as broad (2.3—2.5 × in *intermedia*), the pronotum is somewhat broader and its colouring dissimilar. The genitalia differ

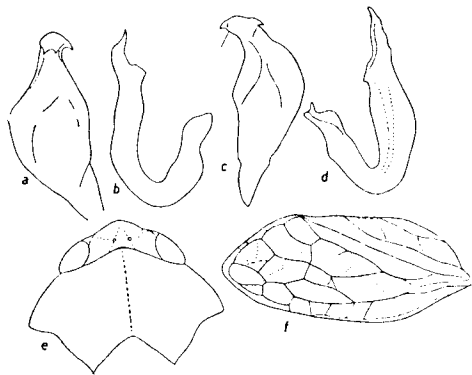


FIG. 2. *Literna limbata* Schm.: a stylus; b penis from side. — *L. intermedia* Hgl. ssp. *ares* ssp.n.: c and d same. — *Pseudomachaerotha saturnus* sp.n.: e head and pronotum; f elytra.

from those of *L. limbata* Schm. (Fig. 2 a—b).

Equatoria: Yei- Iwatoka, 1 ♂, type, 12—13. IV. 1963.

Material studied, *L. intermedia* Hgl.: 1 ♂, Cameroon, 5 km. S of Muëli, 6. XI. 1958, Knorr (det. Synave), *L. baglundi* Schm.: Cameroon, Muëli, some exx., 1. XII. 1958, Knorr (det. Synave) and *L. limbata* Schm.: Cameroon, Malende, 2 exx., 12. XII. 1957, Knorr (det. Synave). All this material in my collection.

L. adonis sp.n.

Length 7 mm. Dark yellow-brown. Elytra brown, costal margin narrowly and apical margin along the marginal vein more broadly rosy, apical veins

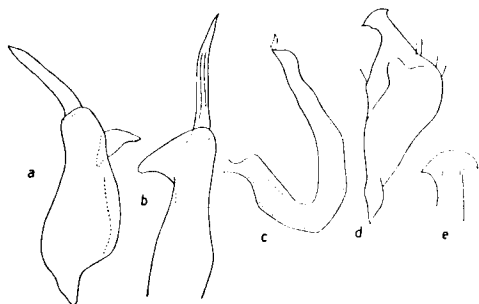


FIG. 3. *Literna intermedia* Hgl. ssp. *ares* ssp.n.: a genital plate. — *L. adonis* n.sp.: b same; c penis; d—e stylus.

also tinged with the same colour. Flying wings brown. Legs yellow-brown.

Of the *intermedia* group. Elongate. General structure as in *intermedia*. Median depression of frons extending to upper margin of head, provided with a few faint transverse ridges. Vertex with a distinct median carina. Elytra 2.3—2.6 × as long as broad. Male genitalia as in Fig. 3 b—c.

Equatoria: Yei- Iwatoka, 1 ♂, type and 1 ♀ paratype, 12—13. IV. 1963.

LOCRIS St.

L. rubra (F.) — 26, 1 ex.; 41, numerous exx.; 74, 1 ex. All the Sudanese specimens are uniformly red. On grasses in wet shore meadows. W. Africa, Zaire, Sudan, Ethiopia.

L. rubens (Er.) — 51, 1 ex. W. Africa, Zaire. *L. erythromela* (Wk.) f. *intermedia* Scht. — 64—63, 3 exx. W. Africa, Zaire, Uganda.

L. maculata (F.) — Many exx. from 68 and 66—67. On swampy meadows. W. Africa, Zaire.

L. godinai Lall. — 62, 1 ex. Zaire, Uganda.

L. katangensis Dist. — 77, 2 exx. Zaire (Katanga), Rhodesia.

L. bequaerti Lall. — 66—64, 1 ex, W. Africa, Zaire, Uganda.

L. pullata St. — Many exx. from 68, 64—63 and 62. On swampy meadows. W. Africa, Zaire.

MACHADOA Lall. & Syn.

M. invenusta (Jac.) — 26, 4 exx.; near 25, 1 ex.; 68, 1 ex.; 74, 4 exx.; 66—64, 1 ex. On moist meadows. W. Africa, Zaire, Sudan.

Aphrophorinae

SEPULLIA St.

A difficult genus in need of revision. The Sudanese species of the *Sepullia* group can be distinguished as follows:

- 1 (2) A broad species. Head very short, 0.31 × as long as median length of pronotum, the last-named about 1.75 × as broad as long medially, sparsely and very fine punctate. Colouring very variable *Sepullia murray* (Sgn.)
- 2 (1) Narrower species. Head considerably longer. Pronotum coarsely punctate 3

- 3 (6) Punctures of elytra, especially in clavus, very close to each other, brown, forming contrasting clearly visible lines, spaces between these lines distinctly elevated 4

- 4 (5) Elytra with a well-developed, often dark, impunctate round subapical callosity. Head distinctly and densely punctate. Pronotum and scutellum coarsely punctate 4

- 5 (4) Subapical callosity of elytra faint, punctate. Head very faintly punctate. Also puncturing of pronotum and of scutellum distinctly finer *Patriziana janus* sp.n.

- 6 (3) Puncturing of elytra sparser, distance between punctures in the rows at least 0.5 × as long as the diameter of a puncture, spaces between rows flat 7

- 7 (8) Subapical callosity of elytra large, globose, impunctate and shiny. Elytra otherwise opaque and finely punctate *Sepullia callosa pluto* sp.n.

- 8 (7) Subapical callosity of elytra small or absent, with a few punctures. Elytra shiny, coarsely punctate 9
- 9 10) Head ± sharply triangular. Pronotum flattish, sparsely punctate *Abbalomba typica* Dist.

- 10 (9) Head blunt. Pronotum convex, densely punctate *Sepullia atalanta* sp.n.

S. murrayi (Sgn.)

An easily distinguished species. Very variable in colouring. In most Sudanese specimens the vertex and the pronotum are greenish and the scutellum and the elytra reddish brown, the last-named with ± distinct whitish markings.

24—24 a, 2 exx.; near 25, 1 ex.; 22—25, 1 ex.; 36—40, 1 ex.; 40, many exx.; 41, 1 ex; 38—

37, several exx.; 74, 1 ex.; 30 km N of 71, many exx. On various trees such as *Combretum bartmannianum* and *Tamarindus indicus*. W. Africa, Zaire, Ethiopia, E. Africa (Uganda, Ruanda).

S. atalanta sp.n.

Length 4—4.5 mm. Shiny. Whitish ochraceous with a ± contrasted dark pattern. Puncturing mainly concolorous or slightly darker. Face shiny black. Tylus with black sides and a brown median stripe. Pronotum with a transverse black spot behind eyes, in dark specimens also a large curvate transverse black discal spot on either side, disk also with small brown spots. Scutellum medially brown, base black, apex pale. Elytra opaquely shiny, with two blackish irregular transverse bands, one basal, one median, in dark specimens branch extending from median band through clavus to inner end of basal band; apex also ± darkened; the pale areas with some small dark spots; puncturing mainly concolorous; apical veins partly dark. Under surface mainly blackish. Legs yellow-brown, heavily marked with black.

Robust. Anterior margin of head roundedly rectangular in outline. Post-clypeus flattish, only very obsoletely punctate. Supra-antennal triangles and vertex rather densely minutely punctate. Vertex 0.43 × as long as median length of pronotum, 0.67 × as broad as long. Distance between ocelli as long as distance between an ocellus and eye. Pronotum 1.71 × as broad as long at middle, median carina very faint, anterior margin more sharply produced than in the other species, disk densely and distinctly punctate. Scutellum densely punctate. Elytra densely and rather coarsely punctate, apex roundish; subapical callosity of corium small but distinct, apical callosity of clavus very small. Male genitalia in Fig. 4 d—f.

Of the species described by LALLEMAND (1920, 1930, 1935), *S. callosa* Lall. (Somalia) and *S. bukamensis* Lall.

(Zaire) are of equal size (length 4 mm). The former differs from *S. atalanta* in the large black subapical callosity of the elytra, the latter in the uniformly reddish brown upper surface and the dense and fine puncturing. The other species, *S. johanna*e Lall. (Zaire) and *S. sanki-siensis* Lall. (Zaire), are bigger, length 5 mm, and differently coloured.

Equatoria: Opari-Magwe, 1 ♂, type and 1 ♀ paratype, 13. III. 1963; 66—64, 1 ♂ paratype.

S. callosa Lall. ssp. *pluto* ssp.n.

Length 4 mm. Opaquely shiny. Yellowish brown. Postclypeus with a few dark brown lateral arcs. Antennal pits darkened. Elytra opaque, pale, yellowish brown, with two irregular whitish transverse bands, one at apex of scutellum, broad, interrupted by transverse oblique band of the ground colour extending from corium to scutellar margin of clavus, one at apex of clavus, broadening laterad and including a remarkably large, impunctate, round, brown, subapical callosity, partly embrowned veins and a small round brown callosity just at tip of clavus; apical margin with a whitish spot; puncturing concolorous or only slightly darker; veins concolorous save in the apical fascia. Under surface and legs yellow-brown, femora with a reddish tinge.

Robust, 2.2 × as long as broad. Anterior margin of head rounded bluntly angular in outline. Postclypeus flattish, in apical margin of head obsoletely punctate, ventrally nearly impunctate. Supra-antennal triangles distinctly punctate. Vertex 0.38 × as long as median length of pronotum, 1.73 × as broad as long at basal angles of eyes, only minutely punctate. Distance between ocelli shorter than distance between an ocellus and eye. Pronotum 1.7 × as broad as long at middle, finely and concolorously punctate, with a distinct median carina anteriorly. Scutellum faintly concolorous punctate. Elytra

about 2.16 × as long as broad, finely and mainly concolorously punctate, surface not elevated between puncture rows. Apex of elytra obliquely and roundedly truncate.

The nominate form *S. callosa callosa* Lall. (Somalia) is darker: frons with two longitudinal lines on upper part and a transverse band between eyes black; puncturing of pronotum and scutellum black; dark pattern on elytra blackish brown, subapical callosity black; anterior and middle femora with black longitudinal lines, posterior ones black.

Somalia, Hargeisa, 1 ♀, type, 23—28. VI. 1963.

PATRIZIANA Lall.

Distinguished from *Sepullia* by the puncturing: punctures on pronotum and scutellum arranged in transverse rows, those on elytra in longitudinal or oblique furrows, nearly parallel on clavus. The puncturing in *Sepullia* is generally ± irregular. *S. blenna* St. (South Africa) seems to be an intermediate, however. Since the male genital structure is also similar in both genera, *Patriziana* is apparently congeneric with *Sepullia*.

P. janus sp.n.

Length 4.25 mm. Shiny. Puncturing brown. Face whitish ochraceous. Postclypeus with reddish lateral arcs and median stripe; at antennae a black transverse band joining a longitudinal band on either side of upper part of postclypeus and extending to base of tylus, these stripes together forming a shiny black U-shaped figure, black antennal pits also joined to this figure. Vertex and pronotum brownish olivaceous, basal margin of the latter narrowly whitish. Scutellum pale reddish brown. Elytra mainly whitish, base and an irregular broken transverse band at middle brown, apical veins also embrowned. Under surface reddish brown. Fore and middle legs blackish, with pale longitu-

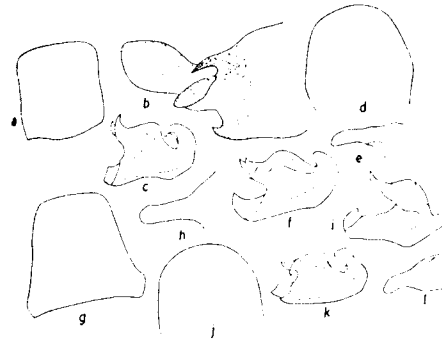


FIG. 4. *Patriziana janus* sp.n.: a valve; b pygophore from side (sclerified areas of apical part stippled); c penis from side. — *Sepullia atalanta* sp.n.: d valve; e middle process of pygophore; f penis from side. — *S. blenna* St.: g—i same. — *Abbalomba typica* Dist.: j—l same.

dinal stripes. Hind femora yellow-brown, apically dark, tibiae blackish, tarsi yellowish brown.

Resembling *Sepullia blenna* St. (S. Africa). Body about 2.3 × as long as broad. Anterior margin of head rather sharply angulate in outline. Postclypeus flattish and impunctate, only the transverse furrows with very small punctures. Supra-antennal triangles only very obsoletely punctate. Vertex 0.45 × as long as median length of pronotum, 0.68 × as broad as long, only very obsoletely punctate. Pronotum 1.35 × as broad as long at middle, with a faint median keel, puncturing rather dense and fine, forming ± distinct rows. Scutellum densely and finely punctate. Elytra 2.26 × as long as broad, apex rounded; punctures, especially in clavus, very close to each other, forming distinct rows, spaces between these rows distinctly elevated as in *blenna*; subapical callosity of corium reduced, punctate, apical callosity of clavus also extremely small. Male genitalia in Fig. 4 a—c, those of *S. blenna* in Fig. 4 g—i.

In *P. somalica* (Lall.) (Somalia) the corium is provided with a distinct apical callosity, the colouring is different and

the elytra are punctate with black. *P. elongata* Lall. (Somalia) is much narrower. In *P. brunnea* (Lall.) (Zaire) the clavus and the apical part of the corium are provided with a shiny black callosity and the colouring is different. The new species differs from *Sepullia blenna* in the much finer puncturing, the more sharply triangular vertex, the longer pronotum and the reduced subapical callosity of the corium.

Equatoria: Kapoeta-Boma, 1 ♂, type, 26—27. III. 1963.

ABBALOMBA Dist.

A. typica Dist.

Length 4.5—5.2 mm. Shiny. Puncturing concolorous. Face pale greenish or yellowish, with a broad black transverse band between eyes. Vertex yellowish brown. Pronotum green or yellowish brown. Scutellum reddish brown. Elytra variegated with ochraceous and reddish brown, pattern not contrasted. Under surface black. Legs yellow-brown, heavily marked with black.

Rather elongate, about 2.4 × as long as broad. Head sharply produced (less strongly in the Imatong population). Face flattish, only very finely punctate. Supra-antennal triangles and vertex distinctly but finely punctate. Vertex 0.56—0.62 × as long as median length of pronotum, 1.1—1.2 × as broad as long, tylus elevated. Pronotum 1.84—1.85 × as broad as long medially, flattish, distinctly but sparsely punctate, distance between punctures often at least as long as the diameter of a puncture; anterior margin roundedly produced, lateral margins long and straight (curvate in *Sepullia*, median carina faint. Scutellum finely punctate. Elytra about 2.2 × as long as broad, apex roundish, densely and rather coarsely punctate throughout, puncturing coarser than on pronotum; subapical callosity of corium faint and punctate, apical callosity of clavus absent. Male genitalia in Fig. 4 j—l.

73—75, 2 exx.; near 79, alpine zone, 2 exx. E. Africa. The genus *Abbalomba* is probably identical with *Sepullia*.

PSEUDOMACHAEROTA Mel.

P. saturnus sp.n.

Fig. 2 e. Length 5.75 mm. Shiny. Head and pronotum yellowish brown, with a reddish tinge. Scutellum rosy. Basal third of elytra dark brown, with base of costal margin reddish; apical two-thirds greyish ochraceous, with a dark brown band along apical margin including a pale spot in 3rd apical cell, then recurving basad and filling apex of clavus and the adjacent corium, colour pattern fairly strongly contrasted; costal margin with small dark spots; veins concolorous, partly reddish. Under surface yellowish brown. Abdomen tinged with red.

Robust and convex, 2.43 × as long as greatest width. Hair covering short, erect. Upper surface uneven, densely punctate and rugose. Head 0.68 × as broad as pronotum, small, declivous. Postclypeus moderately convex, with faint transverse puncture rows on either side, also medially with some scattered punctures. Vertex nearly 0.3 × as long as median length of pronotum, 2.1 × as broad as long; tylus flattish, about 3.2 × as broad as long; ocellar area triangularly raised; supra-antennal triangles small, nearly vertical; puncturing of vertex obsolete. Pronotum nearly twice as broad as long medially, strongly convex in basal two-thirds, sloping ventrad apically; lateral margins strongly diverging caudad; disk densely punctate and rugose, with a faint raised median carina. Scutellum elevated, with a large rhomboidal median depression. Elytra 2.5 × as long as broad, densely and distinctly punctate, veins raised, venation as in Fig. 2 f, apical half of costal margin with extra cross veins. Legs short, hind tibiae with one strong lateral spine.

The genus has previously been known from Madagascar and South Africa. It was originally described as a member of Machaerotidae by MELICHAR (1915), but recently transferred to Ceropidae by MAA (1963:8). The new species is recognized by such features as the colouring and the elytral venation.

Equatoria: Juba, 1 ♂, type, 27. II—2. III. 1963.

POOPHILUS St.

Revised by SYNAVE 1957 b:85—91.

P. costalis (Wk.)

Variable in colouring, size and body form. Especially specimens from the southern forest areas are blackish brown.

Many exx. from 17; 10; 14; 25; 26; 22—25; 85—84; 54; 63—62; 78—79; 68; 77; 64—63; 74; 61—52; 76; 66—67; 66—64 and 62. On grasses in various localities, in swampy meadows, forests, sandy localities, etc. Common in Equatoria and spreading northwards to the provinces of Blue Nile, Upper Nile and Kassala. In the other areas apparently sparse or absent. Africa S of the Sahara, Arabia, Iran.

P. latiusculus (St.) — 78—79, 1 ex.; 77, 1 ex.; 66—67, 1 ex. Zaire, E. and S. Africa.

P. griseus (Schaum) — Many exx. from 26; 85—84; 46—45; 54; 55; 72; 72—74; 74; 30 km N of 71. On grasses mainly in moist localities. W. Africa, Zaire, Ruanda, Arabia.

P. terrenus (Wk.) — Near 79, several exx. 78—79, several exx.; 77, 1 ex. Zaire, E. and S. Africa.

PTYELUS Lep. & Serv.

P. grossus (F.) — 77, 1 ex.; 62, many exx.; 66—64, 1 ex. In rain and gallery forests. W. Africa, Zaire, Ethiopia, S. and E. Africa.

CLOVIA St.

A large and difficult genus, recently revised by SYNAVE (1957 b:93—110).

C. dorsalis Jac.

An enigmatic species known only in the female sex. Probably only a short-headed form of *C. bigoti* (Sgn.).

77, 2 exx. E. Africa.

C. proluxa St. — 68, 1 ex.; 66—67, 1 ex. Zaire, E. and S. Africa.

C. kateri sp.n.

Length 6.5—7.5 mm. Shiny. Colouring very variable. Darkest specimens uniformly black, with blackish brown elytra and dark yellow-brown legs. Pale specimens ochraceous with median parts of face and of under surface of thorax dark brown, base of corium with a dark longitudinal stripe, commissural margin of clavus and upper apical margin of corium narrowly dark and 1st apical cell with a dark spot. Intermediates between these two extremes also exist.

Resembling *C. pseudoproluxa* Lall. in general structure. Penis (Fig. 10 e—f) with two broad, bifurcate apical appendages, the upper branch of these appendages short, claw-like and with two short claw-like apical spines. Stylus in Fig. 10 g.

Measurements: Vertex 0.72—0.79 × as long as broad, 0.85—1.0 × as long as median length of pronotum. The last-named 1.55—2.0 × as broad as long medially.

Upper Nile, Malakal, 1 ♂ (pale), type, 5—20. I. 1963; Sobat, 1 ♀ paratype (pale), 5—20. I. 1963; 78—79, 3 paratypes (dark); 77, 1 paratype (dark). In moist meadows.

C. pseudoproluxa Lall.

Penis as in Fig. 9 b—c, branches of apical appendages long and falcate.

Numerous exx. from 85—84; 54; 55; 68; 30 km N of 71. In both mesic and dry meadows. Zaire, Ruanda.

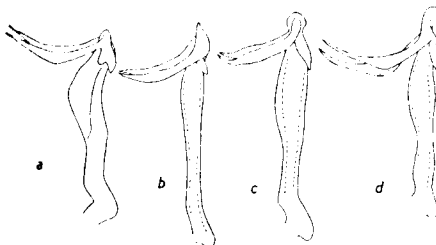


FIG. 5. Penis from side: a *Clovia declivis* Jac. (Sobat), b *C. malmul* sp.n., c *C. rubescens* sp.n., d *C. fusiformis* Lall. & Syn.

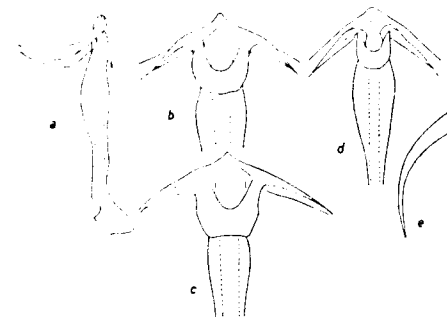


FIG. 6. *Clovia declivis* Jac. (Safaha): a penis from side; b—d apex of same, ventral aspect (b from Malakal, c from Ingessana Mts., d from Sobat); e appendage of same in broad aspect (Sobat).

C. minuta Lall.

Much smaller than the preceding. Apical appendages of penis (Fig. 9 d) shorter and thicker.

30 km N of 71, several exx. (together with the preceding species); 76—81, 1 ex. Zaire, E. Africa.

C. bari sp.n.

Length 6.5 mm. Rather opaque. Dark yellowish brown. Face mainly blackish, sides of postclypeus and upper margin of head usually paler. Vertex, pronotum and scutellum mainly blackish, with faint brownish longitudinal stripes, apical margin of vertex narrowly pale. Clavus and base of corium darker brown, apical part yellowish brown, apex with a dark longitudinal stripe, 1st apical cell with a large callose dark spot. Under surface blackish brown, sides of thorax and of venter pale. Legs dark yellow-brown.

Resembling *C. pseudoproluxa* Lall., but smaller and vertex shorter. Hair covering dense, greyish. Vertex 0.69—0.75 × as long as broad, 0.85—0.89 × as long as median length of pronotum. Pronotum about 1.92 × as broad as long at middle. Penis (Fig. 10 a—c): stem much longer, more slender and straighter than in *pseudoproluxa*, apical

appendages differently shaped. Stylus in Fig. 10 d.

26, 2 ♂ paratypes; Equatoria, Juba- Terakeka, 1 ♂, type, 2—6. III. 1963.

C. masombweana Syn. — 55, 1 ex.; 51, 1 ex.; 72—74, 2 exx.; 68, 1 ex.; 59—60, 1 ex. In moist and swampy meadows. Zaire, E. and S. Africa.

C. centralis Dist. — 72—74, 1 ex.; 78—79, 1 ex.; 68, 1 ex.; 77, several exx. In moist meadows. Zaire, E. and S. Africa.

C. nigroclypeata Lall. & Syn. — 26, 1 ex.; 83, 1 ex.; 72—74, 4 exx.; 70, 2 exx.; 77, several exx.; 74, numerous exx.; 62, 1 ex.; 66—67, 2 exx. In mesic or moist meadows. Zaire.

C. fusiformis Lall. & Syn.

Penis as in Figs. 5 d, 9 a, stem slender, apical appendages very long, falcate.

74, numerous exx. Very common together with the preceding on grasses in a wet shore meadow of the Nile. Zaire.

C. declivis Jac.

A widely distributed species. There are certain differences, especially in the length of the vertex and in the shape of the penis, between different populations. A large material from various parts of the range of *declivis* is needed to elucidate the taxonomic value of this variability. *C. declivis* is distinguished from the related species by the shape of the penis: stem \pm distinctly expanding in upper part in lateral aspect; apical appendages long and gracile, sharply falcate also in broad aspect; plate around gonopore \pm squarish, with ventral margin \pm truncate; apex of penis in ventral

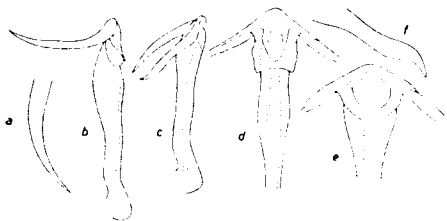


FIG. 7. *Clovia declivis* Jac. (Gore): b penis from side; d apex of same, ventral aspect; a appendage of same, broad aspect. — *C. utukurensis* Syn.: c, e and f same.

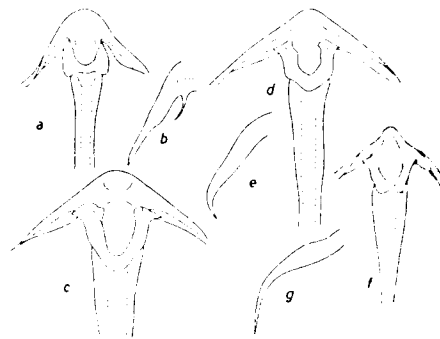


FIG. 8. Apex of penis, ventral aspect and appendage of same in broad aspect: a—b *Clovia malmul* sp.n., c—e *C. rubescens* sp.n., f—g *C. declivis* Jac. (Safaha).

aspect often narrowing to a triangular tip.

The Safaha population:

Vertex remarkably long, 1.12—1.19 \times as long as broad, 1.23—1.24 \times as long as median length of pronotum. Pronotum 1.67 \times as broad as long medially. Penis (Fig. 6 a, 8 f—g) relatively slender; plate around gonopore rather small, bearing a sharp triangular tooth on either side at base.

46—45, 3 exx. On *Phragmites communis*.

The Upper and Blue Nile populations:

Vertex 1.00—1.03 (σ) or 1.05—1.11 (ρ) \times as long as broad, 1.13—1.26 \times as long as median length of pronotum. The last-named 1.7.—1.8. \times as broad as long medially. Penis (Fig. 5 a, 6 b—e) with stem distinctly expanded in upper part in lateral aspect, apex provided with a \pm distinct triangular tip in ventral aspect, plate around the gonopore large.

7—8, 1 ex.; 26, several exx.; 22—25, 2 exx.; 84, 2 exx.; Sobat, 1 ex., 5—20. I. 1963. On moist meadows.

The Gore population:

Vertex more sharply triangular than in the preceding population, 1.03 (σ) or 1.12 (ρ) \times as long as broad, 1.11—1.18 \times as long as median length of pro-

notum. The last-named 1.7—1.8 \times as broad as long medially. Penis (Fig. 7 a—b, d) much as in the preceding population, but apex rounded in ventral aspect.

Ethiopia, W. Gore, 2 exx., Richter & Schäufele.

General range of the species: Zaire, Ethiopia, E. Africa.

C. rubescens sp.n.

Length 6.5—8 mm. Like *C. declivis* Jac., but 1) body narrower, 2) often with fine red irroration, giving the insect a remarkably reddish appearance, in pale specimens ovipositor sheath and dorsum of abdomen \pm red, 1st apical cell usually immaculate or rarely with a small dark dot, 3) upper surface shinier, more distinctly punctate, hair covering sparse, 4) vertex more narrowly triangular, 1.10 (σ) or 1.03—1.15 (ρ) \times as long as broad, 1.13—1.22 \times as long as median length of pronotum, 5) pronotum somewhat narrower, 1.6—1.7 \times as broad as long at middle, 6) elytra apically a little more acute and 7) penis (Fig. 5 c, 8 c—e): stem straighter and slenderer in lateral aspect, its apex in ventral aspect short and broadly rounded, plate around gonopore narrower, \pm roundedly triangular in outline and apical appendages shorter and thicker, their narrow apical part in broad aspect remarkably short.

In a closely related species, *C. utu-*

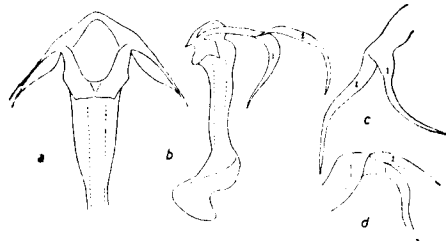


FIG. 9. *Clovia fusiformis* Lall. & Syn.: a apex of penis, ventral aspect. — *C. pseudoprolixa* Lall.: b penis from side; c appendage of same, apical aspect. — *C. minuta* Lall.: d appendage of penis lateral aspect.

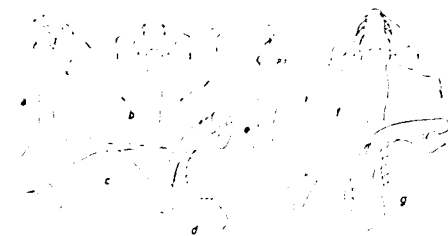


FIG. 10. *Clovia bari* sp.n.: a penis from side; b apex of same, ventral aspect; c appendage of same; d stylus. — *C. kateri* sp.n.: e penis from side; f apex of same, ventral aspect; g stylus.

kurensis Syn., the plate around the gonopore is much shorter and broader (Fig. 7 c, e, f).

Equatoria: near Gilo, 1 ♂, type and several paratypes, 18—24. III. 1963; 77, 3 paratypes. On mountain meadows.

C. malmul sp.n.

Length 7.5—8 mm. Ochraceous. Vertex and pronotum with very faint traces of 4 longitudinal brownish bands. Lateral margins of pronotum narrowly dark. Elytra with a faint longitudinal fuscous band in basal part of corium and a small dark spot in 1st apical cell.

Like *C. declivis* Jac., but vertex shorter, 0.86—0.90 \times as long as broad, 1.0—1.09 \times as long as median length of pronotum. The last-named 1.7—1.8 \times as broad as long at middle. Penis (Fig. 5 b, 8 a—b): stem remarkably gracile and straight in lateral aspect, its apex broadly rounded in ventral aspect, plate around gonopore small and broad, its ventral margin truncate, apical appendages with a thin claw-like basal process.

53, 1 paratype; R. Malmul- Tonj, 1 ♂, type and 2 paratypes, 21—22. II. 1963. In swampy meadows.

CORDIA St.

C. peragrans St.

A polymorphic species with a considerable variability in the length of the vertex and in the structure of the male

genitalia (SYNAVE 1957 b: 83—135). Since the different forms, named only with letters by SYNAVE, also occur together and are nevertheless well distinguished from each other, I regard them as separate subspecies. At any rate the variability does not seem to be merely individual.

C. peragrans peragrans St.

Head relatively broadly rounded, vertex $2.25-2.33 \times$ as broad basally as long, $0.70-0.73 \times$ as long as median length of pronotum. Genital plates (Fig. 11 a): apex relatively long, upcurved, a distinct although rounded subapical lobe present. Stylus (Fig. 11 j): curvate, much broader than in the other forms, subapical tooth far from apex. Penis (Fig. 12 d—e): strongly flattened, lamellose.

Several exx. from 72—74; 70 and 73—75. In dryish meadows.

Other material: S. Africa, N. Transvaal, Louis Trichard, 1 ex., Capener, my collection.

C. peragrans St. ssp. *iambe* ssp.n.

Remarkably robust, length 6—6.5 mm., body $2.5-2.6 \times$ as long as broad (the other forms more slender, body

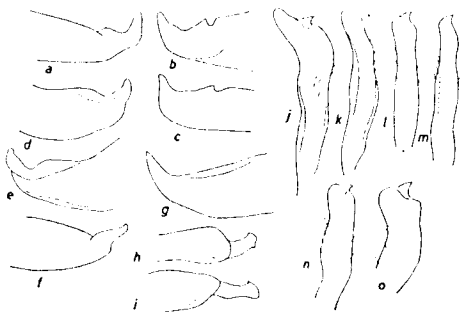


FIG. 11. *Cordia peragrans* St. (Lalyo): a apex of genital plate; j stylus. — *C. peragrans* St. ssp. *iambe* ssp.n.: b, c and k same. — *C. peragrans* St. ssp. *ianeira* ssp.n. (Ibba-Yambio): d, e, l and m same (m Malmul-Tonj). — *C. peragrans* St. ssp. *ianassa* ssp.n. (Yemen): g, n and o same (o from Arusha-Ju). — *C. iphis* sp.n.: f apex of genital plate. — *C. ianthe* sp.n.: h—i same.

about $2.8 \times$ as long as broad). Crown remarkably short and broad, often of nearly uniform length (as in *C. rotundiceps* Lall.), $2.3-2.56 \times$ as broad basally as long, $0.61-0.7 \times$ as long as median length of pronotum. Genital plates (Fig. 11 b—c) much as in the nominate form, but subapical lobe more distinct, \pm sharply triangular. Stylus (Fig. 11 k) slender. Penis long and moderately flattened (Fig. 12 g).

63—62, 5 paratypes; Loka forest, 1 ♂, type, 8—10. IV. 1963; 66—67, 1 paratype. In swamps.

C. peragrans St. ssp. *ianeira* ssp.n.

An intermediate between ssp. *ianassa* and the nominate form. Like the nominate form, but vertex somewhat longer, \pm angularly produced, $2.0-2.17 \times$ as broad basally as long, $0.7-0.74 \times$ as long as median length of pronotum. Genital plates (Fig. 11 d—e, 13 e—f) much as in the nominate form, but subapical lobe more indistinct, rounded. Stylus (Fig. 11 l—m) mainly as in ssp. *ianassa*, but usually, especially in the Lalyo population, considerably slenderer; in the Lake Maleit population (Fig. 13 g) resembling that of the nominate form, but much thinner. Penis (Fig. 12 h—i, 13 h) with apical part tubulose.

R. Malmul-Tonj, 1 ♂, type and many paratypes, 21—22. II. 1963. Many paratypes from 46; 53; 58; 51; 52; 72—74; 70. Mainly in shore meadows.

C. peragrans St. ssp. *ianassa* ssp.n. (= form A of SYNAVE)

Narrower than the other forms. Upper surface often with minute reddish irroration on vertex and thorax, elytral veins often tinged with the same colour. Vertex long, distinctly angularly produced, $1.71-1.80 \times$ as broad basally as long, $0.82-0.87 \times$ as long as pronotum. Genital plates (Fig. 11 g) with a long, shallowly curvate apex, subapical lobe absent. Stylus as in Fig. 11 n, o. Penis (Fig. 12 f) strongly curvate, apical portion tubulose.

East Africa, Arusha-Ju, Katona, 1 ♂, type, XII. 1905, my collection.

Yemen, Wadi Sabir, N. face of Jebel Sabir, many paratypes, 19. XII. 1937, Scott & Britton, British Museum and my collection.

Three females from Equatoria, 78—79, may also belong to this form.

C. iphis sp.n.

Length 5.5 mm. Like *C. peragrans peragrans* St., but somewhat darker. Pronotum and scutellum with a distinct pale median stripe. Crown roundedly angularly produced, $2.0-2.26 \times$ as broad basally as long, $0.73 \times$ as long as median length of pronotum. Genital plates as in Fig. 11 f. Stylus (Fig. 12 a—b) with a large subapical tooth, apex of stylus therefore roughly T-shaped. Penis (Fig. 13 a—b) long, provided with a membranous foot-shaped apical part, stem with a triangular lobe on either side of ventral surface.

Equatoria, near Gilo, alpine zone, 1 ♂, type and many paratypes, 18—24. III. 1963; 78—79, 1 paratype. In mountain meadows.

C. ianthe sp.n.

Length 5.25 mm. Like *C. peragrans* St. ssp. *ianeira* Lv., but smaller. Vertex

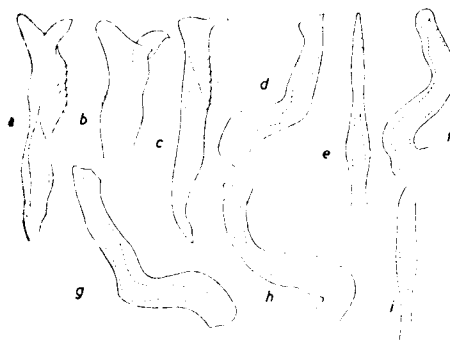


FIG. 12. *Cordia iphis* sp.n.: a—b stylus. — *C. ianthe* sp.n.: c same. — *C. peragrans* St. (Lalyo): d penis, lateral aspect; e same, ventral aspect. — *C. peragrans* St. ssp. *ianassa* ssp.n. (Yemen): f same, lateral aspect. — *C. peragrans* St. ssp. *iambe* ssp.n. (Ibba-Yambio): g same. — *C. peragrans* St. ssp. *ianeira* ssp.n. (Ibba-Yambio): h same; i same, ventral aspect.

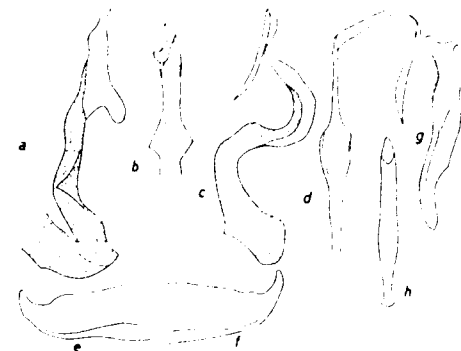


FIG. 13. *Cordia iphis* sp.n.: a penis; lateral aspect; b apical part of same, ventral aspect. — *C. ianthe* sp.n.: c and d same. — *C. peragrans* St. ssp. *ianeira* ssp.n. (Lake Maleit): e—f apex of genital plate; g stylus; h penis, ventral aspect.

twice as broad basally as long, $0.73 \times$ as long as median length of pronotum. Genital plates (Fig. 11 h—i) with a relatively straight and thick apical process (digitate in *peragrans* and *iphis*). Stylus (Fig. 12 c) resembling a bird's head. Penis (Fig. 13 c—d) long and strongly S-shaped, apex with a long flagellate membranous process.

Yemen, 1 ♂, type, my collection.

MACHAEROTIDAE

Recently revised by MAA (1963).

Enderleiniinae

ENDERLEINIA Schm.

E. bispina Schm. — 72, 1 ex.; 74, 1 ex. W. Africa (Togo, Ivory Coast etc.), Uganda.

PECTINARIOPHYES Kk.

P. lotuko sp.n.

Length 7.5 mm. Olivaceous. Sides of frontoclypeus broadly darkened. Vertex and anterior margin of pronotum yellow-brown, disk of pronotum green. Scutellum yellow-brown. Elytra shiny, hyaline, tinged with yellowish, apex

slightly brownish; numerous brown setigerous tubercles present especially in veins, being sparse in cells, fairly dense in costal cell. Under surface yellowish brown. Legs darker.

Elongate. General structure, puncturing and other features as in *P. hyalinipennis* (St.) (= *Hindola fasciata* Lall.), but elytra more distinctly punctate, slightly narrower and more pointed apically. Male genitalia: Sclerified black appendage of pygophore (Fig. 14 e) shorter and considerably expanded apically. Genital plates (Fig. 14 f) narrower. Apophysis of stylus (Fig. 14 g) broader. Penis (Fig. 14 h) more gracile.

Equatoria: Lotti forest, 1 ♂, type, 14—17. III. 1963.

Material of *P. hyalinipennis* (St.) studied from South Africa, N. Transvaal, Letaba Valley and Natal, Umtentweni, several exx., Capener leg., in my collection. Genitalia of *P. hyalinipennis* in Fig. 14 a—d.

P. jur sp.n.

Length 5.5—7 mm. Yellow-brown. Sides of frontoclypeus darkened. Elytra rather coriaceous, tinged with brownish yellow, apex more brownish, base of costal margin darker brown. Femora and tibiae sometimes partly embrowned.

Small and rather robust. Head 0.83—

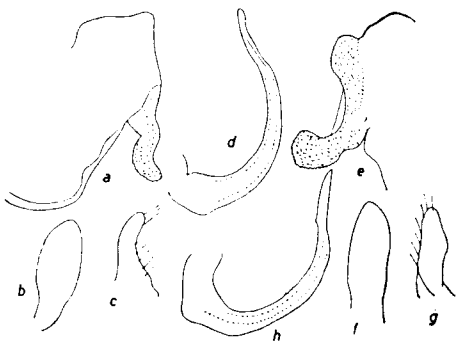


FIG. 14. *Pectinariophyes hyalinipennis* (St.): a side lobe of pygophore; b genital plate; c apophysis of stylus; d penis. — *P. lotuko* sp.n.: e—h same.

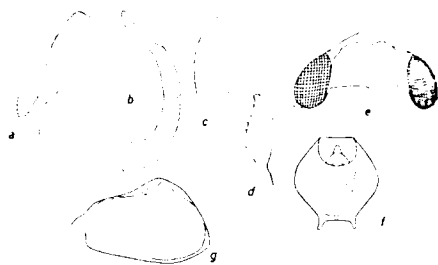


FIG. 15. *Pectinariophyes jur* sp.n.: a side lobe of pygophore, b penis; c genital plate; d apophysis of stylus. — *Benamatapa hecate* sp.n.: e head; f anal tube; g stylus.

0.9 × as broad as pronotum (0.93 × in the preceding species). Frontoclypeus more convex than in the other species. Crown medially distinctly longer than near eyes (of uniform length in the other species), median length 0.27—0.28 × as long as total length of pronotum (0.21 × in *lotuko*), 0.50—0.52 × as long as broad (0.38 × in *lotuko*), supra-antennal triangles broader, not scored. Puncturing of pronotum and scutellum finer and denser. Elytra shorter and broader, coarsely punctate save apically, without dark tubercles. Male genitalia in Fig. 15 a—d. Penis thicker and shorter than in the other species.

39, 1 paratype; Bahr el Ghazal: Wau, 1 ♂, type and several paratypes, 19. II. 1963; 72, 1 paratype.

MEMBRACIDAE

OXYRHACHIS Gm.

O. tricarina Cp. — 79, alpine zone, 1 ex. Endemic.

O. hera Cp.? — 21, 1 ex. On *Acacia*. Probably Eremian, known from W. Africa. I also have it from Eritrea.

O. versicolor Dist. — 9, 1 ex.; 17, 1 ex. Found on *Tamarix* in Israel. Eremian.

XIPHOPOEUS St.

X. phantasma (Sgn.) — 77, 3 exx. W. Africa (Calabar), Central Africa.



FIG. 16. *Leptocentrus indigoferae* sp.n.: a. — *Acanthophyes mimus* sp.n.: b. — *Philotheria circe* sp.n.: c. — *Juba barchanorum* sp.n.: d. — *Stenocyarda salsolae* sp.n.: d. — *Adenissus brachypterus* gen et sp.n.: f.

LEPTOCENTRUS St.

L. indigoferae sp.n.

Figs. 16 a, 17 a. Length ♂ 5.25 mm., ♀ 5.7—6 mm. Blackish, partly with a ferruginous tinge. Elytra hyaline, apex, ± brownish smoky, veins yellowish or dark brown. Genae, sides of thorax and base of scutellum white owing to very white tomentum totally concealing the surface. Femora dark ferruginous, legs otherwise yellowish brown.

Upper surface with a dense and relatively long silvery hair covering. Pronotal horns strongly protruding, in apical view obliquely curved dorsad, in dorsal view recurved apically caudad; distance between the ends of the horns 3.98 mm. (♂) or 3.90—4.35 mm. (♀). Disk of pronotum with a faint longitudinal median carina; posterior process long and sharp, shallowly curved ventrad apically, provided with a sharp median ridge. Scutellum with a U-shaped apical notch. Elytra somewhat longer than abdomen,

veins with two rows of semi-erect silvery setae. 7th sternite (♀) with a broad and deep U-shaped median insinuation.

Yemen, W. of Ta'izz, on road to Mocha, 1 ♂, type and several paratypes, 20. XII. 1937, Scott and Britton, British Museum, paratypes also in my collection. On *Indigofera oblongifolia*.

OTINOTUS Bck.

O. shoanus Dist. — 36—40, 1 ex. Ethiopia.

STALOBELUS Cp.

S. africanus (Dist.) — 62, 2 exx. Zaire, E. Africa.

SPALIRISES Dist.

S. gracilis Cp. — 79, 1 ex.; 77, 2 exx. Endemic.

JACOBIANA Cp.

J. alticornis (Jac.) — 79, 2 exx.; 77, 1 ex. E. Africa, Zaire.

DACONOTUS Cp.

D. patricius Cp. — 79, 1 ex. Endemic.

EUMONOCENTRUS Schm.

E. seydeli Cp.? — 62, 1 ex. Zaire.

MONOCENTRUS Mel.

M. hyalinipennis Schm.? — 68, 1 ex. Cameroon.

M. sp. — 66—67, 1 ex.

ANCHON Bck.

A. proximus (Sgn.) (= *relatum* Dist.) 72—71, 3 exx.; 81—82, 1 ex. W. and E. Africa.

A. honoratus Cp. — 62, 1 ex.; 66—67, 1 ex. Endemic.

ANCHONOBELUS Cp.

A. sp. — 74, 1 ex.

TRICOCEPS Bck.

T. geniculatus (St.) — 74, 2 exx.; 62, 1 ex. W., E. and S. Africa, Zaire.

ACANTHOPHYES St.

A. tassilii Bgv. — 17, 1 ex., 20. IV. 1964, Meinander; 72—71, 3 exx.; 68, 1 ex. On *Acacia*. Probably Eremian, previously known from the Sahara.

A. maculipennis Cp. — 6, 1 ex.; 9, 1 ex. On *Acacia*. Eremian (Air Sud).

A. linnavuorii Cp. — 24—24 a, 1 ex.; 72, 1 ex.; 72—71, 4 exx. On *Tamarindus indicus*. Endemic.

A. mimus sp.n.

Figs. 16 b, 17 b. Length 4.1—4.2 mm. Colouring and hair covering much as in

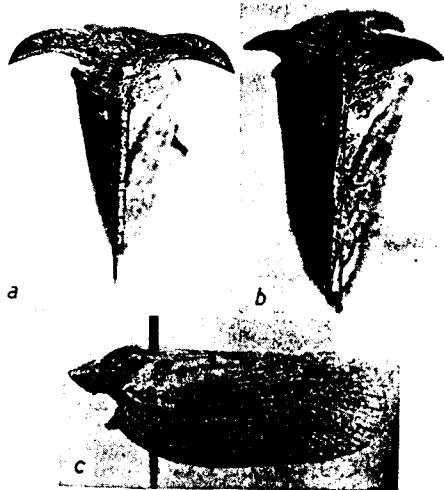


FIG. 17. *Leptocentrus indigoferae* sp.n.: a dorsal view. — *Acanthophyes mimus* sp.n.: b same. — *Flatosaria dbalaica* sp.n.: c.

Leptocentrus indigoferae. Blackish, sometimes tinged with ferruginous. Elytra hyaline, veins yellowish brown or dark brown. Genae, sides of thorax and base of scutellum white owing to very dense white tomentum totally concealing the surface of the body. Femora blackish, legs otherwise ferruginous.

With a dense and relatively long silvery hair covering. Pronotal horns rather strong, in ♂ considerably shorter than in ♀, horizontal in apical view, slightly recurved caudad in dorsal view, distance between apices of the horns 2.55 mm. ♂, 3.0—3.3 mm. ♀. Disk of pronotum with a faint median carina; posterior process slightly longer than abdomen, faintly curved ventrad in profile, with a roundish ventral expansion in the middle and a sharp longitudinal median ridge on the dorsal surface. Apex of scutellum shallowly insinuated. Elytra somewhat longer than abdomen, veins with two rows of semi-erect silvery setae. 7th sternite (♀) deeply and broadly insinuated down to base.

Yemen, Usaifira, near Ta'izz, 1 ♂, type and many paratypes, 13. XII. 1937, Scott and Britton, British Museum, paratypes in my collection. On *Indigofera oblongifolia*.

DISTANTOBELUS Cp.

D. gratus Cp. — 52, 1 ex. Endemic.

BLECCIA Cp.

B. obscurus Cp. — 25, 2 exx. Endemic.

HAMMA Bck.

H. spinosum Cp. — 62, 1 ex. Central Africa.

GARGARA A.—S.

G. escalerai Pel. — 77, 1 ex.; 66—67, 1 ex. Fernando Poo.

G. nyanzai Funkh. — 62, 1 ex. E. Africa.

G. perpolita Dist. — 68, 1 ex. Liberia, Ruanda, E. Africa.

FULGORIDAE

Recently revised by LALLEMAND (1959).

Xosoparinae

OMALOCEPHALA Spin.

O. cincta (F.) — 26, 2 exx.; 22—25, 1 ex.; 23, 1 ex. Equatoria, Mongalla, (FENNAH 1957: 111). W. Africa.

Aphaeninae

BENAMATAPA Dist.

B. hecate sp.n.

Length 8.5 mm. Dark brown. Face yellowish brown, frons with dense dark irroration; clypeus with less dense irroration, with a pale, poorly delimited transverse band in upper part, the band continuing, distinct and well delimited, across sides of thorax. Upper surface of head and thorax mainly dark brown, with minor pale irroration, especially on vertex, at sides of pronotum and at apex of scutellum; median carina of pronotum pale. Elytra remarkably pale, yellowish brown, with only minute and scanty dark spots, the most distinct spots in clavus and along costal margin of corium, veins concolorous. Flying wings basally reddish, medially hyaline, apex dark brown with some larger and smaller dark spots in mediomarginal area. Legs yellowish brown, with ± dense brown irroration. Fore and middle tibiae with a distinct pale ring.

A small species, resembling *B. electa* (Schm.) in general structure. Frons 1.25 × as long (total length) as broad, or as long (median length) as broad. Vertex (Fig. 15 e) roundedly triangular, about 1.4 × as broad as long. Stylus and anal tube as in Fig. 15 f—g.

Resembling *B. electa* (Schm.), but differing in the smaller size, the broader vertex and the dissimilarly shaped anal tube (description of *electa* in LALLEMAND 1959:61—62). *B. schubotzi* (Mel.) is also bigger, the elytra are distinctly marked with black (e.g. with two irregular dark transverse bands) and the genitalia are as in *B. electa*.

Blue Nile: Ingessana Mts., 1 ♂, type, 17—22. XI. 1962. At lamp.

Enchophorinae

DRUENTIA St. (= *Apessoda* Schm.)

D. togoensis (Schm.) — Kordofan, Delami (coll. Wad Medani). W. Africa (Togo).

Zaninae

ZANNA Kk.

Z. orientalis Lall. — LALLEMAND (1959:103) has recorded the following finds: Northern Province: Aboukamed. Equatoria: Lado; Marno; Wadai. The following records of *Z. flammea* (L.) in coll. Wad Medani apparently refer to *orientalis*: Upper Nile: Bor; Adok; No; Nuer; Shambe. I collected a large amount of larvae from 74 that possibly belong to this species. Endemic.

Z. tenebrosa (F.) — Upper Nile: Aburri (coll. Wadi Medani as *Z. natalensis* Dist., a synonym of *tenebrosa*). W. Africa, Congo, E. and S. Africa, Madagascar.

DICTOPHARIDAE

Recently treated by FENNAH (1957) and SYNAVE (1965).

DORYSARTHURUS Pt.

D. alferii Bgv. — 6, several larvae probably

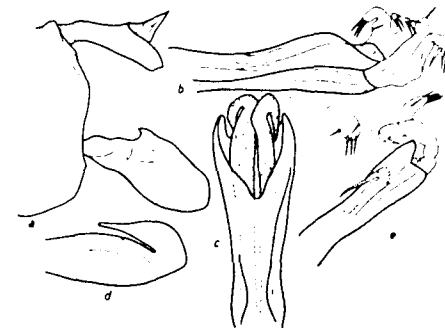


FIG. 18. *Paranagnia tumida* Mel. (Ingessana Mts.): a genital segment from side; b penis from side; c same, dorsal aspect (the membranous apical processes omitted); d phallic appendage; e penis (another specimens) from side.

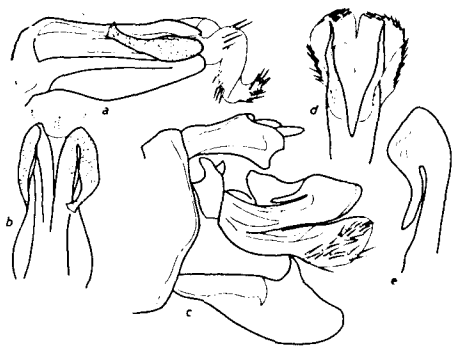


FIG. 19. *Paranagnia lyco* sp.n.: a penis from side; b same, ventral aspect. — *P. aethiopica* Mel. (Borama): c apex of abdomen from side; d penis, dorsal aspect; e phallic appendage.

of this species; 10, 1 larva; 43, 1 ex. Eremian (Egypt).

PARANAGNIA Mel.

P. tumida Mel.

Male genitalia as in Fig. 18 a—e.

Khartoum, type of *tumida*, Mus. Vienna; 26, 3 exx.; 22—25, 2 exx.; 39, 1 ex., Wilson, Mus. Oxford. Sudan. Also recorded from Zaire, but possibly confused with the following species.

P. lyco sp.n.

Like *P. tumida*, but somewhat slenderer, face narrower (frons $2.54 \times$ as long

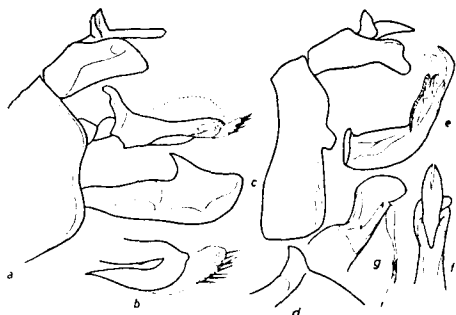


FIG. 20. *Paranagnia afra* St. (Singa-Damazin): a apex of abdomen from side; b phallic appendage and membranous spiniferous apical lobe of penis. — *Hasta usudensis* Mel. (Ingessana Mts.): c pygophore and anal tube from side; d lobe of dorsal margin of stylus; e penis from side; f apex of same, ventral aspect; g phallic appendage.

at the middle as greatest width, $2.17 \times$ in *tumida*), elytra shinier and penis (Fig. 19 a—b) much stouter, with the hooks of the phallic appendages much longer and expanded apically and with more numerous spines in the membranous apical lobes.

Zaire, Elisabethville, 1 ♂, type, Seydel, in my collection.

P. aethiopica Mel.

Male genitalia as in Fig. 19 c—e.

Material studied Somalia, 124, 1 ex. and 125, 1 ex. previously known from S. Ethiopia.

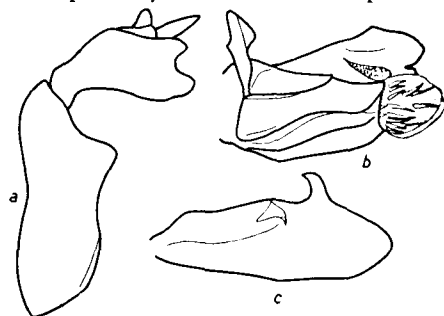


FIG. 21. *Hasta ogadensis* Mel. (Umm Bancin): a pygophore and anal tube from side; b penis; c stylus.

P. afra (St.)

Male genitalia as in Fig. 20 a—b.

26, 5 exx.; 22—25, 4 exx.; 23, 1 ex.; 21, 1 ex.

Other material studied: Senegal, 1 ♀, type of *afra*, coll. Signoret, Mus. Vienna. Known from Senegal, Zaire and Somalia.

HASTA Kk.

H. usudensis Mel.

Male genitalia as in Fig. 20 c—g.

26, many exx.; 30 km N of 71, 1 ex. E. Africa.

H. ogadensis Mel.

Male genitalia as in Fig. 21 a—c.
26, 1 ex.; 23, 3 exx.; 84, 1 ex. E. Africa.

PHILOTHERIA Mel.

I have previously (1962:5—12) drawn attention to difficulties in defining the genera *Dictyophara* Gm. and

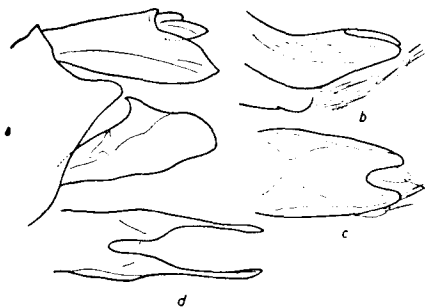


FIG. 22. *Philotheria proxima* (Mel.): a genital segment from side; b penis, lateral aspect; c same, dorsal aspect; d phallic appendage.

Chanithus Klti. SYNAVE (1965:4—26) has recently published a revision of the genus *Philotheria* Mel. including in it *Dictyophara proxima* Mel., a species of the *striata* group. This group differs from typical *Dictyophara* and *Chanithus* in the presence of the red bands on the frons and on the pronotum and in the development of dark pigment, visible at least in the dark longitudinal stripes of the legs and often also in the darkening of the veins of the apical part of the elytra. In view of the treatment of SYNAVE, the other species of the group *striata* Osh. (= *unicolor* Sgn. v. *vittata* Pt.), *proxima* Mel., *insculpta* Wk., *sinica* Wk., *iranica* Lv., *pallida* Don., *graminea* F., *nakanonis* Mats. (a possible synonym of *graminea*) and *avocetta* Osh.) should also be transferred to *Philotheria*. A general revision of *Dictyophara*, *Chanithus* and *Philotheria* is needed to establish whether the differences between them are of real generic value. I have already pointed out (1962) that the shape of the head does not differ sharply between *Dictyophara* and *Chanithus*. This character also varies in *Philotheria*, which contains species with a short and \pm triangular head (e.g. *choraules* Fenn.). The absence of dark pigment in *P. avocetta* should also be noted. *Philotheria* most probably originated in tropical Africa, from where

it radiated into the Oriental region and the Eremian subregion. It seems to be the most primitive group, from which both the *Chanithus* and *Dictyophara* groups have evolved.

P. striata (Osh.) — 6, 1 ex. Eremian (N. Africa—Turkestan).

P. proxima (Mel.)

Male genitalia (Fig. 22) much as in *striata*, but anal tube extending far beyond pygophore in lateral aspect and rather narrowly ovate, much longer than broad in dorsal aspect (in *striata* much broader, slightly shorter than broad). Dorsal apical incisure of penis narrower.

17, several exx., 20. IV. 1964, Meinander. Previously known from Eritrea.

P. lineata (Muir)

Apical prolongation of head in front of eyes $6 \times$ as long as eye.

26, 1 ex. W. Africa (Ivory Coast), Zaire.

P. validirostris (St.)

Apical prolongation of head in front of eyes 4.65 — $4.8 \times$ as long as eye.

25, 1 ex.; 63—62, 1 ex.; 62, 5 exx. Previously known from W. Africa and Tanganyika.

P. nexa Mel.

Apical prolongation of head in front of eyes $3.65 \times$ as long as eye.

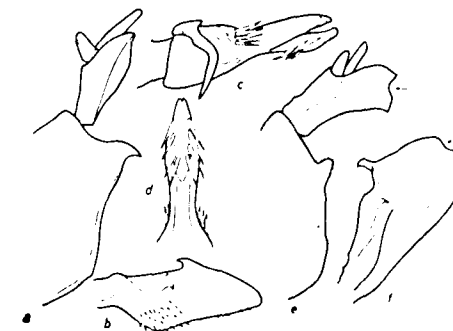


FIG. 23. *Philotheria eurydice* sp.n.: a pygophore and anal tube from side; b stylus; c and d penis. — *P. natalensis* (St.) ssp. *affinis* ssp.n.: e pygophore and anal tube from side; f stylus.

24—24 a, 1 ex. Known from W. Africa. (Ivory Coast), Zaire and Uganda.

P. eurydice sp.n.

Length 12.5—14.5 mm. Orangish brown. Base of vertex with two faint orangish bands and a pale median carina. Frons with two reddish longitudinal bands, keels greenish; apex of head green, with a few black dots, the most distinct of which is just at apex. Pronotum and scutellum orangish, keels white. Elytra hyaline, stigma dark; veins yellowish, partly green, apical veins lark. Legs with dark longitudinal stripes, tibial spines black-tipped.

Resembling *P. talassio* Fenn. Head of the same shape; vertex 6.0—6.4 × as long as broad, nearly straight in profile, median keel faint, medially almost evanescent. Frons slightly concave in profile, keels distinct. Median keel of pronotum distinct, lateral keels of median area marked only by whitish, somewhat allose stripes, side keels distinct, disk with two small round pits. Scutellum with 3 median keels. Venation of elytra as in *talassio*. Hind tibiae with 5 lateral spines. Male genitalia as in Fig. 23 a—d.

Very close to *P. decellei* Syn. (Ivory Coast), but the subapical dorsal spines of the penis grouped in a longitudinal row on either side with 4—6 spines in each, whereas they arise from an irregular transverse row and are less numerous in *decellei* as figured by SYNAVE 1965:16).

51, 1 paratype; Wau, 1 ♂, type and 2 paratypes, 19. II. 1963.

P. panāion Fenn. — 24—24 a, 2 exx.; 21, ex. Previously known from Senegal.

P. apicata Mel. — Many exx. from 24—24 a, 2—25; 23; 84; 85—84; 33—34. Also recorded from 9 (FENNAH 1957:60). E. Africa.

P. natalensis (St.) — Many exx. from 24—24 a, 22—25; 23; 62, Zaire, E. and S. Africa.

P. natalensis (St.) ssp. *affinis* sp.n.

Like the nominate form, but 1) apex of anal tube (Fig. 24 e) insinuated in



FIG. 24. *Philotheria antigone* sp.n.: a pygophore and anal tube from side; b penis; c stylus. — *P. circe* sp.n.: d frons; e pygophore and anal tube from side; f stylus; g penis.

lateral aspect (indicated with an arrow in the figure), 2) apex of stylus (Fig. 24 f) slightly insinuated and 3) the membranous, spiniferous apical lobes of penis close to each other, whereas strongly diverging laterad in the nominate form. The genitalia of the nominate form figured in FENNAH (1957:63).

Equatoria: Kateri-Gilo, 1 ♂, type, 18. III. 1963.

P. antigone sp.n.

Length 10—13 mm. Yellow-brown. Frons with two dilute orangish bands. Sides of head with some small dark spots apically. Elytra hyaline, apex ± embrowned (in dark specimens entire apex brown, but the brown colour often ± discontinuous and also varying in intensity), stigma always dark; veins yellow-brown, apically darker. Venter pale. Femora with fine brown spotting, tibial spines black-tipped.

Shape of head almost as in *P. lineata* (Muir). Vertex nearly parallel-sided, 3.5—4.0 × as long as broad, 3.25 × as long as eye, a faint median keel present. Apical prolongation of head in front of eyes 2.33—2.45 × as long as eye. Frons shallowly concave in profile; the area between the median keels narrowest near clypeus, otherwise of ±

equal breadth. Pronotum with 3 median keels, the lateral ones being somewhat less pronounced. Scutellum with 3 distinct keels. Stigma consisting of 4 or 5 cells. Hind tibiae with 5 lateral spines. Male genitalia as in Fig. 24 a—c. 6th ventrite of ♀ without teeth.

P. transvaaliensis (Dist.) is a closely related species. In it the area delimited by the median keels of the frons narrows distinctly upwards and the 6th ventrite is provided with two triangular lobes (FENNAH 1957:59). It differs from *P. damon* Fenn. in the somewhat longer head and very dissimilar penis.

24—24 a, 3 paratypes; 25, 2 paratypes; 26, several paratypes; Singa-Damazin, 1 ♂, type, 15—17. XI. 1962; 23, 2 paratypes. Also found in Somalia, 125, 1 paratype.

P. circe sp.n.

Fig. 16 c. Length 7 mm. Yellowish brown. Head somewhat paler. Apex of clypeus blackish, an obscure pale band extending across base of clypeus to lower margin of propleurae. Elytra hyaline, apex (= the reticulated area) uniformly blackish brown, the colour limit sharp; stigma, excluding the extreme apex, hyaline; veins of the hyaline area yellow-brown. Flying wings hyaline, apex dark brown. Under surface ± broadly marked with dark brown. Legs yellowish brown, with distinct blackish longitudinal stripes in femora and tibiae, tibial spines black-tipped.

Small and rather robust. Vertex narrowly conical, tapering gradually apicad right from base, 1.38—1.4 × as long as eye and 0.46 × as long as pronotum and scutellum together; lateral margins upturned, median carina evanescent in apical fourth. Frons (Fig. 24 d) considerably expanded at antennae, lateral margins distinctly sinuated, the 3 longitudinal median keels distinct but not sharp. Clypeus with a sharp median keel. Pronotum with a median carina

and a round pit on either side of it, lateral median keels absent, lateral keels behind eyes faint. Keels of scutellum relatively faint. Elytra about 3 × as long as broad, stigma consisting of 3 cells. Hind tibiae with 5 lateral spines. Male genitalia as in Fig. 24 e—h.

Differs greatly from the other species, e.g. in the bicoloured elytra and the short vertex.

Blue Nile: Ingessana Mts., 1 ♂, type and 1 ♀ paratype, 17—22. XI. 1962.

DICTYOPHARA Gm.

D. eremica Lv. — 17, 1 ex., 29. X. 1962, Panielius. Eremian. Previously known from Israel.

AFRONERSIA Fenn.

A. impicta Fenn. (= *junix* Fenn., *comus* Fenn.) — 62, 1 ex. Zaire.

A. discrepans Fenn. (= *proclivis* Fenn., *juba* Fenn.) — 66—67, 1 ex.; 66—64, 1 ex. Zaire.

A. clymene sp.n.

Length 11 mm. Yellowish, probably green in life. Keels of head and of thorax somewhat paler. Elytra hyaline, veins green. Under surface and legs pale greenish, tibial spines black-tipped.

Resembling *A. katangana* Fenn. (FENNAH 1957:83—86) in the sharply triangular vertex. Vertex 2.5 × as long at

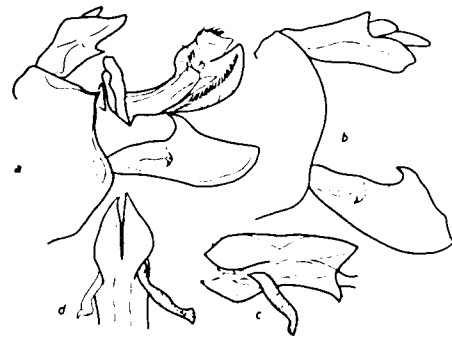


FIG. 25. *Afronersia clymene* sp.n.: a apex of abdomen from side. — *Neodictya arethusa* sp.n.: b genital segment from side; c penis from side; d same, dorsal aspect (the chitinized appendage stippled).

24—24 a, 1 ex. Known from W. Africa. (Ivory Coast), Zaire and Uganda.

P. eurydice sp.n.

Length 12.5—14.5 mm. Orangish brown. Base of vertex with two faint orangish bands and a pale median carina. Frons with two reddish longitudinal bands, keels greenish; apex of head green, with a few black dots, the most distinct of which is just at apex. Pronotum and scutellum orangish, keels white. Elytra hyaline, stigma dark; veins yellowish, partly green, apical veins dark. Legs with dark longitudinal stripes, tibial spines black-tipped.

Resembling *P. talassio* Fenn. Head of the same shape; vertex $6.0-6.4 \times$ as long as broad, nearly straight in profile, median keel faint, medially almost evanescent. Frons slightly concave in profile, keels distinct. Median keel of pronotum distinct, lateral keels of median area marked only by whitish, somewhat callose stripes, side keels distinct, disk with two small round pits. Scutellum with 3 median keels. Venation of elytra as in *talassio*. Hind tibiae with 5 lateral spines. Male genitalia as in Fig. 23 a—d.

Very close to *P. decellei* Syn. (Ivory Coast), but the subapical dorsal spines of the penis grouped in a longitudinal row on either side with 4—6 spines in each, whereas they arise from an irregular transverse row and are less numerous in *decellei* as figured by SYNAVE (1965:16).

51, 1 paratype; Wau, 1 ♂, type and 2 paratypes, 19. II. 1963.

P. pandion Fenn. — 24—24 a, 2 exx.; 21, 1 ex. Previously known from Senegal.

P. apicata Mel. — Many exx. from 24—24 a, 22—25; 23; 84; 85—84; 33—34. Also recorded from 9 (FENNAH 1957:60). E. Africa.

P. natalensis (St.) — Many exx. from 24—24 a; 22—25; 23; 62. Zaire, E. and S. Africa.

P. natalensis (St.) ssp. *affinis* ssp.n.

Like the nominate form, but 1) apex of anal tube (Fig. 24 e) insinuated in

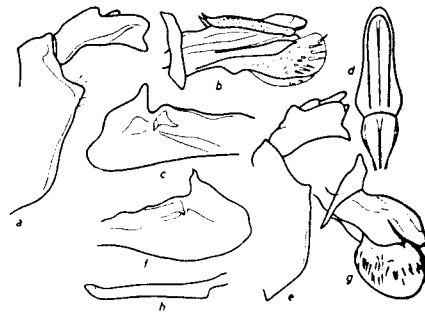


FIG. 24. *Philotberia antigone* sp.n.: a pygophore and anal tube from side; b penis; c stylus. — *P. circe* sp.n.: d frons; e pygophore and anal tube from side; f stylus; g penis.

lateral aspect (indicated with an arrow in the figure), 2) apex of stylus (Fig. 24 f) slightly insinuated and 3) the membranous, spiniferous apical lobes of penis close to each other, whereas strongly diverging laterad in the nominate form. The genitalia of the nominate form figured in FENNAH (1957:63).

Equatoria: Kateri-Gilo, 1 ♂, type, 18. III. 1963.

P. antigone sp.n.

Length 10—13 mm. Yellow-brown. Frons with two dilute orangish bands. Sides of head with some small dark spots apically. Elytra hyaline, apex \pm embrowned (in dark specimens entire apex brown, but the brown colour often \pm discontinuous and also varying in intensity), stigma always dark; veins yellow-brown, apically darker. Venter pale. Femora with fine brown spotting, tibial spines black-tipped.

Shape of head almost as in *P. lineata* (Muir). Vertex nearly parallel-sided, $3.5-4.0 \times$ as long as broad, $3.25 \times$ as long as eye, a faint median keel present. Apical prolongation of head in front of eyes $2.33-2.45 \times$ as long as eye. Frons shallowly concave in profile; the area between the median keels narrowest near clypeus, otherwise of \pm

equal breadth. Pronotum with 3 median keels, the lateral ones being somewhat less pronounced. Scutellum with 3 distinct keels. Stigma consisting of 4 or 5 cells. Hind tibiae with 5 lateral spines. Male genitalia as in Fig. 24 a—c. 6th ventrite of ♀ without teeth.

P. transvaaliensis (Dist.) is a closely related species. In it the area delimited by the median keels of the frons narrows distinctly upwards and the 6th ventrite is provided with two triangular lobes (FENNAH 1957:59). It differs from *P. damon* Fenn. in the somewhat longer head and very dissimilar penis.

24—24 a, 3 paratypes; 25, 2 paratypes; 26, several paratypes; Singa-Damazin, 1 ♂, type, 15—17. XI. 1962; 23, 2 paratypes. Also found in Somalia, 125, 1 paratype.

P. circe sp.n.

Fig. 16 c. Length 7 mm. Yellowish brown. Head somewhat paler. Apex of clypeus blackish, an obscure pale band extending across base of clypeus to lower margin of propleurae. Elytra hyaline, apex (= the reticulated area) uniformly blackish brown, the colour limit sharp; stigma, excluding the extreme apex, hyaline; veins of the hyaline area yellow-brown. Flying wings hyaline, apex dark brown. Under surface \pm broadly marked with dark brown. Legs yellowish brown, with distinct blackish longitudinal stripes in femora and tibiae, tibial spines black-tipped.

Small and rather robust. Vertex narrowly conical, tapering gradually apicad right from base, $1.38-1.4 \times$ as long at middle as broad, $1.15 \times$ as long as eye and $0.46 \times$ as long as pronotum and scutellum together; lateral margins upturned, median carina evanescent in apical fourth. Frons (Fig. 24 d) considerably expanded at antennae, lateral margins distinctly sinuated, the 3 longitudinal median keels distinct but not sharp. Clypeus with a sharp median keel. Pronotum with a median carina

and a round pit on either side of it, lateral median keels absent, lateral keels behind eyes faint. Keels of scutellum relatively faint. Elytra about $3 \times$ as long as broad, stigma consisting of 3 cells. Hind tibiae with 5 lateral spines. Male genitalia as in Fig. 24 e—h.

Differs greatly from the other species, e.g. in the bicoloured elytra and the short vertex.

Blue Nile: Ingessana Mts., 1 ♂, type and 1 ♀ paratype, 17—22. XI. 1962.

DICTYOPHARA Gm.

D. eremica Lv. — 17, 1 ex., 29. X. 1962, Panielius. Eremian. Previously known from Israel.

AFRONERSIA Fenn.

A. impicta Fenn. (= *junix* Fenn., *comus* Fenn.) — 62, 1 ex. Zaire.

A. discrepans Fenn. (= *proclivis* Fenn., *juba* Fenn.) — 66—67, 1 ex.; 66—64, 1 ex. Zaire.

A. clymene sp.n.

Length 11 mm. Yellowish, probably green in life. Keels of head and of thorax somewhat paler. Elytra hyaline, veins green. Under surface and legs pale greenish, tibial spines black-tipped.

Resembling *A. katangana* Fenn. (FENNAH 1957:83—86) in the sharply triangular vertex. Vertex $2.5 \times$ as long at

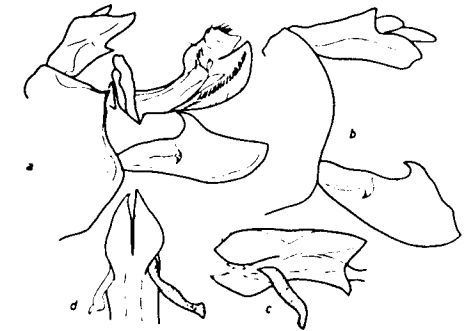


FIG. 25. *Afronersia clymene* sp.n.: a apex of abdomen from side. — *Neodictya arethusa* sp.n.: b genital segment from side; c penis from side; d same, dorsal aspect (the chitinized appendage stippled).

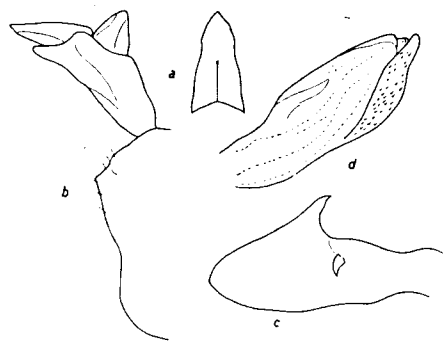


FIG. 26. *Afronersia melichariana* (Metc.): a vertex; b anal tube and pygophore from side; c stylus; d penis.

middle as broad, sharply triangular; lateral margins somewhat upturned, median keel faint, evanescent in apical half. Frons long and narrow, in upper third sharply triangular in outline, otherwise parallel-sided, keels nearly parallel, distinct. Clypeus with a sharp median keel, lateral margins upturned. Pronotum with a median carina and a depression on either side of it, the lateral median keels absent, the lateral carinae well developed, the upper one being the sharpest. Tegulae with a whitish, callose carina. Stigma consisting of 3 cells. Hind tibiae with 4 lateral spines. Male genitalia as in Fig. 25 a.

Near *A. katangana* Fenn., but the vertex shorter, all elytral veins pale and the side lobes of the pygophore with a short, triangular projection.

Blue Nile: Ingessana Mts., 1 ♂, type, 17–22. XI. 1962.

A. melichariana (Metc.)
Male genitalia in Fig. 26 a–d.
22–25, many exx. E. Africa.

NEODICTYA Syn.
N. arethusia sp.n.

Length 9.5–10.5 mm. Greenish yellow. A series of small blackish spots along sublateral frontal carinae in their

basal third and along basal margin of frons. Elytra hyaline, veins green. Tibial spines black-tipped.

Resembling *N. currax* (Fenn.) (FENNAH 1957:86–87). Vertex turbinate, 0.9 × as long at middle as broad, lateral margins very slightly converging distad between eyes, then strongly incurved and uniting smoothly with apical margin without angular junction; disk with two shallow impressions, distinct median carina present in the basal half. Frons much as in *P. currax*, broadening slightly downwards, flat, microsculptured, distinctly carinate. Clypeus with a distinct median carina. Pronotum with only a median carina, the two lateral carinae behind eyes distinct, the carina in the lateral lobes evanescent. Tegulae ecarinate. Stigma with 4 or 5 cells. Hind tibiae with 5 lateral spines. Male genitalia as in Fig. 25 b–d, caudal margins of side lobes of pygophore smoothly rounded, penis with a sclerified and a membranous appendage.

Easily distinguished from *N. currax* by the male genitalia.

Blue Nile: Ingessana Mts., 1 ♂, type and 1 ♀ paratype, 17–22. XI. 1962.

PHAENODICTYON Fenn.

P. ellipticum (Wk.) — 77, 2 exx.; 62, 1 ex. Zaire.



FIG. 27. *Andes aulonias* sp.n. a anal tube and pygophore from side; b stylus; c penis from side; d apical process of same, ventral aspect.

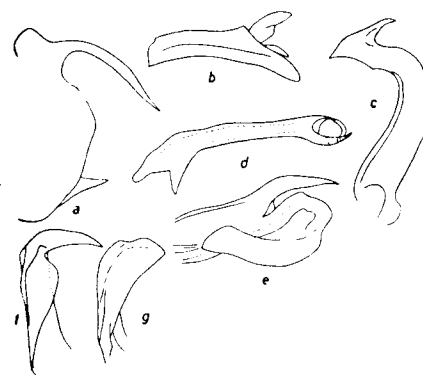


FIG. 28. *Andes dryas* sp.n.: a pygophore; b anal tube; c stylus; d—e penis. — *Oliarus pallens* (F.): f lateral lobe of aedeagal sheath. — *O. sudanicus* Lall.: g same.

PSEUDOPHANELLA Fenn.

P. regina Fenn. — 26, 2 ♀♀ probably of this species. Zaire, E. Africa (Lake Eduard).

P. regina Fenn. ssp. *sollennis* Fenn. — 77, 1 ex.; 74, 1 ex.; 62, 4 exx.; 66–64, 3 exx. Zaire.

CIXIIDAE

Recently revised by SYNAVE (1953 a and b). Many species also described by FENNAH (e.g. 1957).

ANDES Muir

A. aulonias sp.n.

Length 5–6 mm. Yellowish brown. Head dark brown; the upturned sides of frons pale ochraceous, with alternating dark transverse spots; the upturned lateral margins of vertex with a pale roundish spot. Disk of pronotum and of scutellum dark brown. Elytra hyaline, tinged with yellowish; a dark fuscous transverse band extending from basal angle to commissural margin of clavus and nearly totally filling the basal half of clavus, and a dark fuscous Y-shaped transverse band starting from the middle of costal margin and directed to tip of clavus; apex of elytra also mainly dark fuscous with irregular paler areas, the

dark area joined in upper margin to the Y-shaped band; veins mainly pale, densely, minutely and darkly tuberculate. Legs yellow-brown.

General structure as in *A. oldi* Muir, but scutellum considerably shorter. Male genitalia (Fig. 27): Pygophore symmetric, unarmed. Anal tube without processes. Stylus axe-shaped. Penis very stout.

Resembling *A. oldi* Muir, but darker and with dissimilar genitalia.

Equatoria: Loka forest, 1 ♂, type and 1 ♀ paratype, 8–10. IV. 1963.

A. dryas sp.n.

Length ♂ 5.75 mm., ♀ 7.5 mm. Yellowish brown. Head darker, unicoloured. Scutellum medially darker brown. Elytra yellowish brown, with the same dark pattern as in the preceding species, but much fainter; veins densely and darkly tuberculate. Legs yellowish brown.

Resembling the preceding in the body form, but much bigger. Male genitalia characteristic: Pygophore (Fig. 28 a) symmetric, either side lobe with a long, falcate, dorsal appendage directed caudo-ventrad. Anal tube (Fig. 28 b) un-

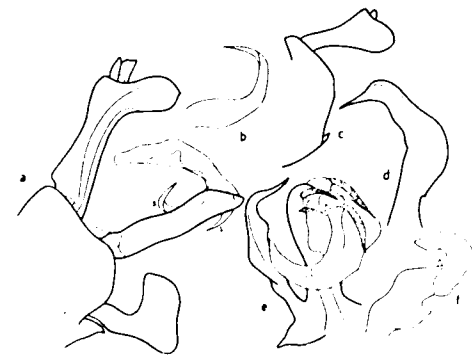


FIG. 29. *Achaemenes hyleorias* sp.n.: a genital segment from side; b appendage No. 2 of penis. — *Oliarus verbeyeni* Syn.: c pygophore and anal tube from side; e penis; d lateral lobe of aedeagal sheath; f stylus.

armed. Stylus with apex strongly re-curved (Fig. 28 c), expanded, bearing two pointed processes. Penis (Fig. 28 d—e) gracile.

Equatoria: Ylei-Iwatoka, 1 ♂, type and 1 ♀, paratype, 12—13. IV. 1963

ACHAEMENES St.

A. basilewskyi Syn. — 77, 1 ex. Previously known from E. Africa.

A. hyleorias sp.n.

Length ♂ 7.5 mm., ♀ 9 mm. Coffee-brown. Elytra hyaline, slightly tinged with yellowish, apical cells with a fuscous triangular apical spot, a few sub-apical roundish fuscous spots also present, stigma dark; veins mainly brownish, in places paler, with minute and somewhat darker tubercles. Tibiae and tarsi yellow-brown.

A large species. Face with a sharp median keel. Frons 1.2 × as long at middle as its greatest width, 1.86 × as long as broad as base of clypeus; base slightly broadening ventrad, then rather strongly expanded at antennae and again tapering towards clypeus, lateral margins upturned. Vertex twice as broad basally as long at middle, anterior margin slightly curvate; apical compartment narrow; basal compartment 2.5 × as broad as long at middle, with lateral margins converging apicad, apical margin straight. Pronotum narrow, basal margin strongly angularly incised medially. Scutellum rather convex, tricarinate, carinae nearly parallel. Hind tibiae laterally unarmed. Male genitalia (Fig. 29 a—b): Anal tube long. Stylus axe-shaped. Penis with two appendages, process No. 1 short and straight, process No. 2, long and strongly curvate.

Equatoria: Yei-Iwatoka, 1 ♂, type and 1 ♀ paratype, 12—13. IV. 1963.

PTOLERIA St.

P. straeleni Syn. — 51, 1 ex.; 52, several exx.; 77, several exx.; 60, 2 exx.; 61—52, 1 ex.; 62, 2 exx.; 66—64, 1 ex. At lamp. Previously known from Zaire.

OLIARUS St.

O. sudanicus Lall.

Oliarus sudanicus LALLEMAND 1925:4.

Oliarus limbifer HESSE 1925:151—152 **senso**
SYNAVE 1953 a:26, syn.n.

A sexually dimorphic species: ♂ usually small and dark, ♀ large and pale. Very close to *O. pallens* (Gm.), but differing in, e.g., the shape of the lateral lobe of the aedeagal sheath (Fig. 28 g).

Many exx. from 7; 2; 9; 24—24 a; 26; 23; 29; 22—25; 23; 21; 84; 30—31; Bahr el Ghazal, R. Malmul, 1 ex., 21—22. II. 1963; 70—72; 74. A common species in mesic biotopes. Often at lamp. Africa S of the Sahara, S. W. Arabia.

O. verheyeni Syn.

Close to the preceding, but easily distinguished, e.g. by the colouring of the elytra and the shape of the lateral lobe of the aedeagal sheath. Male genitalia in Fig. 29 c—f.

63—62, several exx.; 77, numerous exx.; 66—67, 2 exx. In swamps. Previously known from Zaire.

O. moestus St. group

Close to the *sudanicus* group, but differing in the much shorter and broader vertex. The group consist of the following described species and forms: *O. moestus* St., *O. virgultivagus* Hesse, *O. nigripennis* Syn. *O. nyanzae* Fenn., *O. nyanzae gracilior* Fenn., *O. nyanzae inermis* Fenn. and *O. praeneste* Fenn. In the Sudan two further races were found. All the described forms are very similar in the male genitalia, although the length of the aedeagal spines is somewhat variable. The main differences lie in the size, the shape of the vertex and in the colouring. The taxonomic value of these units is still uncertain and can be solved only by studying a large series of specimens from various parts of Africa. In the Sudan no intermediate forms were found, although *virgultivagus*, *choaspes*, and *iphis* were obtained together at Malakal, a fact that could indicate specific differences between them.

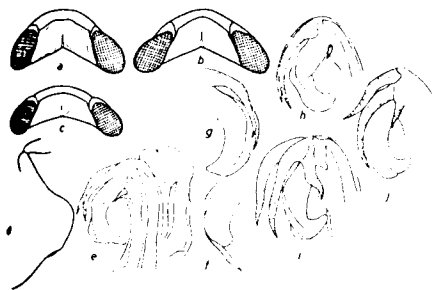


FIG. 30. *Oliarus moestus* St. (Nimule): a head; d pygophore; e penis; g apex of same; f same (Yei-Maridi). — *O. moestus* St. ssp. *virgultivagus* Hesse (Kassala): h penis. — *O. moestus* St. ssp. *choaspes* ssp.n.: b head; i penis. — *O. moestus* St. ssp. *iphis* ssp.n.: c and j same.

O. moestus St.

A small dark form, length 4 mm. General colouring blackish, elytra ± strongly infumed, veins dark. Basal compartment of vertex (Fig. 30 a) 2.0—2.2 × as broad basally as median length. Penis in Fig 30 e—g, spines relatively slender. The short spine No. 3 is not visible in SYNAVE's figures (1953 a: 24), in one specimen apex of penis provided with a short spine (Fig 30 f) as in *O. nyanzae*. *O. nyanzae inermis* Fenn. could possibly be a synonym of *moestus*, although reported to be somewhat larger in the original description FENNAH 1957:35—36), length 3.2 mm., tegmen 4.0 mm.

72—74, 1 ex.; 68, 1 ex.; 64—63, 1 ex.; 74, 1 ex.; 66—64, 2 exx. Recorded from S. and E. Africa and Zaire.

O. moestus St. ssp. *virgultivagus* Hesse

Like the preceding, but bigger, length 5.5 mm, and elytra hyaline, not infumed. In the male from Kassala (the only known male) aedeagal appendages Nos. 1 and 2 are long and slender, and process No. 3 very small (Fig. 30 h).

19, 1 ex.; 84, several exx.; 83, 1 ex. Additional material: S. Africa, E. Transvaal, Karino, 1 ♂, range as in *moestus*.

O. moestus St. ssp. *choaspes* ssp.n.

Length 6.2—8 mm. A dark form resembling *moestus* in the uniformly and usually strongly embrowned elytra, but differing in the much bigger size and in the considerably shorter and broader basal compartment of the vertex (Fig. 30 b) being 2.46—2.76 × as broad basally as long. Aedeagal appendages (Fig. 30 i) Nos. 1 and 2 long and thick, No. 3 also long, and deflected. *O. nigripennis* Syn. (Zaire) is smaller, length 4.5—5.5 mm, and has yellowish setae on the elytra.

Upper Nile: Malakal, 1 ♂, type and many paratypes, 5—20. I. 1963; 74, 1 paratype.

O. moestus St. ssp. *iphis* ssp.n.

Length 5—6 mm. A pale form resembling *virgultivagus* in the entirely hyaline elytra, veins also pale, but distinguished in the remarkably short and broad basal compartment of vertex (Fig. 30 c), which is basally 2.7—3.2 × as broad as long. Penis as in Fig. 30 j, appendage No. 1 rather short, No. 3 relatively long.

21, several paratypes; 84, numerous paratypes; 35—36, 1 paratype; 32, 1 paratype; Tendelti-Umm Ruwaba, 1 ♂, type and several paratypes, 25. I. 1963; 30—31, 1 paratype; 46—45, numerous paratypes; 81—82, numerous paratypes. On *Phragmites*. Common at lamps like the other species of the genus.

O. grossus Lall. — 62, 1 ♀ probably of this species. E. Africa (Ituri).

O. minyarias sp.n.

Length 4.5—5 mm. Dark brown. Lateral margins and median carina of face pale, lower part of lateral margins sometimes more broadly pale in ♂. Margins and carinas of vertex pale. Pronotum pale greyish ochraceous, disk laterally slightly infumed. Carinas of scutellum yellowish brown. Elytra hyaline, slightly tinged with yellow; veins pale, apical cross-veins infuscate, tips of apical veins also slightly so, commissural margin of clavus with a fuscous dash at

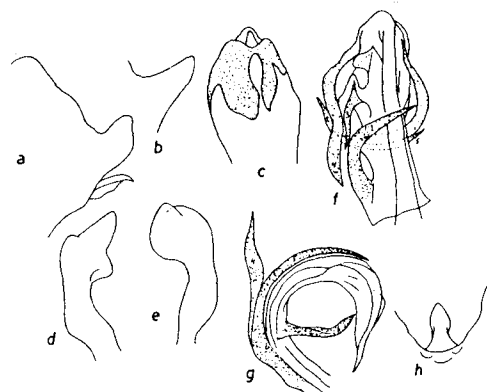


FIG. 31. *Oliarus minyrius* sp.n.: a left, b right side lobe of pygophore; h medio-ventral process of same; c anal tube, ventral aspect; d—e styli; f—g penis.

end of claval vein, veins with sparse dark granulation in apical part, basally only finely concolorously granulate, stigma pale. Legs pale ochraceous, femora darkened.

Small and slender. Face with a distinct median keel, forked in upper end. Frons distinctly broadening ventrad, lateral margins shallowly upturned. Vertex medially slightly longer than broad basally (9:8 or 10:8), shape about the same as in *O. laelaps* Fenn.; basal compartment distinctly concave, parallel-sided in basal two-thirds, conical apically, median keel present in the basal two-thirds; transverse apical keel sharp, antero-lateral compartments rather broad. Pronotum short, basal margin deeply rectangularly insinuated. Scutellum medially somewhat depressed, distinctly keeled. Setae of elytra pale; claval veins uniting before middle of clavus. Hind tibiae trispinose. Male genitalia (Fig. 31): Pygophore nearly symmetrical, although projection of left side lobe somewhat broader. Anal tube with asymmetrical apical lobes on the ventral surface. Styli asymmetrical. Penis as in Fig. 31 f—g, appendages Nos.

1—3 belonging to the aedeagal sheath, Nos. 4—6 to apical part of penis, processes Nos. 4 and 5 with common stem basally. Ovipositor sheath long.

Equatoria: Kapoeta-Boma, 1 ♂, type and 3 paratypes, 26—27. III. 1963.

O. troas sp.n.

Length 4.75 mm. Yellowish brown. Clypeus slightly darker. Basal compartment of vertex, excluding margins, dark brown. Scutellum also dark, keels yellowish brown. Elytra hyaline, unmarked, with a yellowish tinge; veins pale, apical cross-veins infuscate, tubercles concolorous, stigma pale. Legs yellowish brown, femora slightly darker.

Small and gracile. Face with a distinct median keel, forked in upper margin. Frons distinctly expanding ventrad, lateral margins somewhat elevated. Vertex slightly narrower than eye, medially 1.38 × as long as broad basally; basal compartment strongly concave, narrowly conical, about as in *O. ladas* Fenn. but slightly broader, median keel present only basally; apical transverse keel distinct; apical lateral compartments long, narrowly triangular. Pronotum short, basal margin deeply rectangularly incised. Scutellum with the



FIG. 32. *Oliarus troas* sp.n.: a pygophore and anal tube; b medio-ventral process of pygophore; c stylus; d penis, latero-ventral aspect; e same, ventral aspect. — *O. gezira* sp.n.: f stylus; g anal tube and left side lobe of pygophore, ventral aspect; h right side lobe of pygophore; i penis.

sublateral keels not reaching the anterior margin. Elytra elongate, setae pale; claval veins uniting before middle of clavus. Hind tibiae trispinose. Male genitalia: Pygophore and anal tube (Fig. 32 a—b) symmetrical, the latter without apical processes. Styli (Fig. 32 c) symmetrical. Penis as in Fig. 32 d—e, with 3 falcate appendages.

Darfur: Abu Matariq, 1 ♂, type, 30. IV—2. V. 1963.

O. gezira sp.n.

Length 5.5—6 mm. Head and pronotum remarkably pale, yellowish or yellow-brown. Clypeus golden brown. Vertex rarely medially slightly embrowned. Scutellum black, keels pale. Elytra hyaline, unmarked, stigma dark, veins pale, darkly tuberculate. Under surface and legs mainly dark brown or blackish, tarsi pale.

Elongate, resembling *O. troas*. Frons with a distinct median keel, forked dorsally, lateral margins somewhat elevated, only base of clypeus with a distinct keel. Vertex as in *troas*, but longer, 1.62 × as long as broad, 0.8 × as broad as eye. Thorax and elytra also as in *troas*, but setae of the latter black. Hind tibiae trispinose. Male genitalia: Pygophore (Fig. 32 g—h) nearly symmetrical, side lobes short. Anal tube (Fig. 32 g) ovate, flat, with only narrow ventro-apical lobes. Styli (Fig. 32 f) symmetrical. Penis as in Fig. 32 i. Ovipositor sheath short.

Blue Nile: Wad Medani, 1 ♂, type and several paratypes, 26—28. VI. 1961, 72, 3 paratypes; 72—71, 2 paratypes.

O. lacon sp.n.

Length 6.5—8 mm. Yellow-brown. Clypeus with golden tinge. Vertex largely infuscate medially. Scutellum black, carinae golden-brown. Elytra hyaline, unmarked, only stigma and a minute roundish spot in apical cells dark; veins pale, with sparse dark tubercles, apical



FIG. 33. *Oliarus lacon* sp.n.: a left, b right side lobe, c medio-ventral process of pygophore; d stylus; e penis. — *O. sterope* sp.n.: f left side lobe, g medio-ventral process of pygophore; h anal tube; i stylus; j penis. — *O. sterope* Lv. ssp. *ulysses* ssp.n.: k apex of penis.

cross-veins dark. Under surface mainly darker brown. Legs pale.

Relatively robust. Face with a sharp median keel, forked in upper margin. Frons strongly narrowing dorsad, lateral margins somewhat upturned, clypeus flattish. Vertex as in *O. ladas* Fenn., very narrow, 0.73 × as broad as eye, 1.6—1.8 × as long as broad, very strongly concave, score-like; basal compartment sharply triangular, median carina present only basally; apical transverse carina sharp; antero-lateral compartments very long, extending to near middle of eyes, very narrow. Pronotum narrow, with distinct median carina, otherwise carinate only in anterior margin. Sublateral keels of scutellum not reaching anterior margin. Elytra elongate, setae dark, claval veins uniting well before middle of clavus. Hind tibiae trispinose. Male genitalia: Pygophore (Fig. 33 a—c) asymmetrical, the left side lobe provided with a long, falcate apical process. Anal tube long, flat, symmetrical, without processes. Styli (Fig. 33 d) symmetrical. Penis as in Fig. 33 e. Ovipositor sheath short.

Equatoria: Kapoeta-Boma, 1 ♂, type and some paratypes, 26—27. III. 1963.

O. sterope sp.n.

Length 5—5.5 mm. Black. Median keel and lateral margins of frons pale. Vertex black, margins narrowly pale, lateral margins with a larger whitish spot at middle of eyes. Carinae and borders of pronotum pale. Scutellum with keels uniformly black. Tegulae \pm darkened. Elytra hyaline, unmarked, sometimes infumed, stigma dark; veins mainly dark, with minute black tubercles. Legs mainly dark brown, hind tarsi pale.

A very gracile species of the *damasi* group. Frons strongly narrowing upwards, median keel sharp, forked dorsally, lateral margins distinctly upcurved; clypeus depressed, transversely wrinkled, only base clearly carinate. Vertex very narrow, parallel-sided, strongly concave, score-like, only $0.5 \times$ as broad as eye, $2.7\text{--}2.8 \times$ as long as broad; basal compartment apically sharply triangular; apical transverse keel distinct; antero-lateral compartments very narrow, long. Pronotum short, median keel sharp. Keels of scutellum rather fine, the sublateral ones not reaching the anterior margin. Elytra

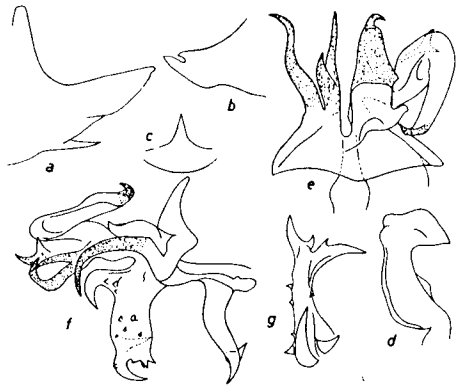


FIG. 34. *Oliarus ndelelensis* Syn. ssp. *cleon* ssp.n.: a left, b right side lobe, c medio-ventral process of pygophore; d stylus; f penis from side; e same, dorsal aspect; g process a in Fig. f, caudal aspect.

narrow, setae dark, claval veins uniting nearly at middle of clavus. Hind tibiae trispinose. Male genitalia: Pygophore (Fig. 33 f—g) symmetrical, side lobes short. Anal tube (Fig. 33 h) broadening apicad, symmetrical. Styli (Fig. 33 i) symmetrical. Penis as in Fig. 33 j. Ovipositor sheath short.

Kassala: Abend Pass, 1 ♂, type and 2 paratypes, 5.XII.1962. Clearly distinguished from *O. damasi* Syn. and *O. ladas* Fenn. by the male genitalia.

O. sterope Lv. ssp. *ulysses* ssp.n.

Like the nominate form, but appendages Nos. 3 and 2 of penis longer and more gracile (Fig. 33 k) and process No. 1 absent.

Equatoria: Kapoeta-Boma, 1 ♂, type and 2 paratypes, 26—27. III. 1963.

O. ndelelensis Syn. ssp. *cleon* ssp.n.

Length 5 mm. Black. Median keel and lateral margins of face narrowly pale. Lateral margins of vertex narrowly pale with a larger pale spot at middle of eyes. Median keel and margins of pronotum pale. Scutellum black, sublateral keels pale. Tegulae brown. Elytra brownish hyaline, slightly infuscate, unmarked, stigma dark; veins pale, with distinct dark tubercles, apical cross-veins dark, claval commissure black, interrupted by two whitish stretches. Legs yellowish brown, femora dark.

Small. Face with sharp median keel, forked in upper margin, relatively narrow. Frons strongly tapering dorsad, lateral margins upcurved, clypeus flattish. Vertex as in *O. gezira* and *troas*, $1.57 \times$ as long as broad, slightly narrower than eye; basal compartment narrowly conical, strongly concave, median carina present only basally; apical transverse carina sharp; antero-lateral compartments long and narrow. Median carina of pronotum strongly elevated, margins also \pm carinate. Scutellum rugose, keels complete. Elytra narrow, setae black, claval veins uniting well



FIG. 35. *Oliarus doris* sp.n.: a left, b right side lobe, c medio-ventral process of pygophore; d—e stylus; f penis.

before middle. Hind tibiae trispinose. Male genitalia: Pygophore (Fig. 34 a—c) asymmetrical, left side lobe sharply triangular, right shorter and apically bifid. Anal tube ovate, without processes. Styli (Fig. 34 d) symmetrical. Penis as in Fig. 34 e—g.

The nominate form (Zaire) differs in the longer vertex and the spinulation of the ventral aedeagal process (SYNAVE 1960:36—38).

Equatoria: Maridi-Ibba, 1 ♂, type, 16. IV. 1963.

O. doris sp.n.

Length 5—6 mm. Like *O. frontalis* Mel., but much smaller and more compact. Darker (like ssp. *fuligo*): Frons black or blackish, keels yellowish, lateral margins with a white spot at middle. Vertex slightly broader. Elytra much shorter (apical cross-veins darkened, stigma dark, apical area sometimes with slight dark shadows). Male genitalia: Pygophore (Fig. 35 a—e) asymmetrical, left side lobe with a slender apical spine, right lobe unarmed; medio-ventral process triangular. Anal tube broad, only slightly asymmetrical, without special processes. Styli (Fig. 35 d—e) asymmetrical. Penis as in Fig. 35 f, ventral margin of the aedeagal sheath with a long, spinose process directed ventrad, dorsal margin with a row of 3 claw-like spi-

nes. Ovipositor sheath shorter than in *frontalis*.

Kassala, Erkowit, 1 ♂, type and several paratypes, 1—10. VII. 1961.

O. pidigalensis Syn.

Male genitalia: Pygophore (Fig. 36 a—c) asymmetrical, left side lobe sharply produced, right broad and bluntly truncate apically, medio-ventral process spear-shaped. Anal tube (Fig. 36 d) with asymmetrical apico-ventral lobes. Styli (Fig. 36 e) symmetrical. Penis as in Fig. 36 f—g.

66—67, 1 ♂. Zaire.

O. kankundensis Syn.

Material probably representing this species, of which only the female sex has so far been known. Male genitalia: Pygophore (Fig. 37 a—c) asymmetrical, left side lobe with a thin apical claw-like process, right triangular and provided with a large tooth above the triangular produced part. Anal tube (Fig. 37 d) with a thin claw-like process apically. Styli (Fig. 37 e) symmetrical. Penis as in Fig. 37 f—g.

66—67, 2 exx.; 66—64, several exx. Previously known from Zaire and French Guinea.



FIG. 36. *Oliarus pidigalensis* Syn.: a left, b right side lobe, c medio-ventral process of pygophore; d anal tube, ventral aspect; e stylus; f penis; g the spinose plate a in Fig. f of the aedeagal sheath.

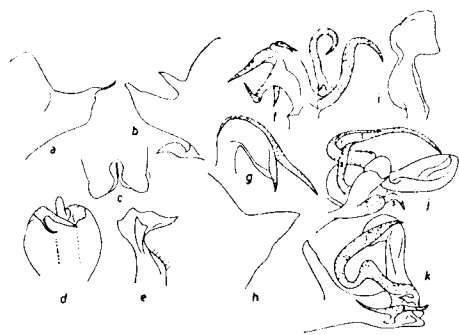


FIG. 37. *Oliarius kankundensis* Syn.: a left, b right side lobe, c medio-ventral process of pygophore; d anal tube, ventral aspect; e stylus; f penis; g apex of same. — *O. medanicus* sp.n.: h left side lobe of pygophore; i stylus; j—k penis.

O. frontalis group

A large group of species similar to each other in general appearance (elongate body, elytra with black setae arising from dark tubercles and with partly darkened veins, etc.), but clearly distinguished by the male genitalia. To this group belong all the following species except the last, *O. camilla*.

O. medanicus sp.n.

Length 5—6.5 mm. Face yellowish brown, usually \pm embrowned, with only margins and median keel pale. Vertex black, keels and margins narrowly pale, lateral margins with a larger whitish spot at middle of eyes. Pronotum dirty greyish with discal infuscation. Scutellum black, keels pale. Elytra hyaline, immaculate, veins pale, apical veins, especially the cross-veins, dark, stigma dark, claval commissure with a dark subapical stretch, tubercles of veins dark. Under surface mainly dark brown. Legs yellowish brown, femora dark.

Elongate. Face with a sharp median keel, forked in its upper end. Frons moderately broadening ventrad, with lateral margins upcurved, clypeus slightly convex. Vertex narrow, somewhat

variable in shape, sometimes even nearly as narrow as in *O. ladas* Fenn., 1.30—1.33 \times as long as broad, somewhat narrower than eye (10:12); basal compartment strongly concave, sharply conical, only basally keeled; apical transverse ridge sharp; antero-lateral compartments long, narrowly triangular. Pronotum very short, median keel sharp, also margins \pm carinate. Carination of scutellum complete. Elytra narrow, setae pale to brown, claval veins united at middle of clavus. Hind femora trispinose. Male genitalia: Pygophore (Fig. 37 h) symmetrical, side lobes sharply triangular; medio-ventral process as in *frontalis*. Anal tube ovate, without apical processes. Styli (Fig. 37 i) symmetrical. Penis as in Fig. 37 j—k. Ovipositor sheath long.

Resembling *O. frontalis* Mel., but vertex narrower and the male genitalia different.

6, 1 paratype; 29, several paratypes; 22—25, several paratypes; 21, several paratypes, 14. X. 1926, Bedford, British Museum, 11—12. XI. 1962; Umm Banein, 1 σ , type and several paratypes, 14. XI. 1962; 84, 1 paratype; 85—84, Geil, 1 paratype.

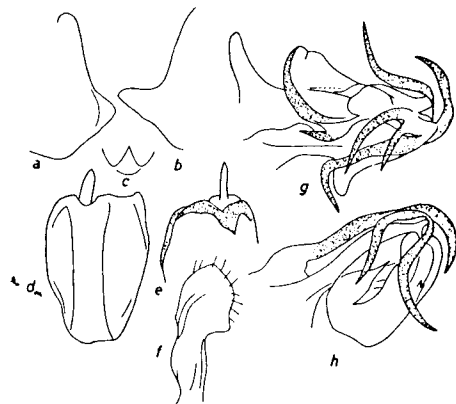


FIG. 38. *Oliarius pseudofrontalis* sp.n.: a left, b right side lobe, c medio-ventral process of pygophore; d anal tube from above; e apex of same, ventral aspect; f stylus; g—h penis.

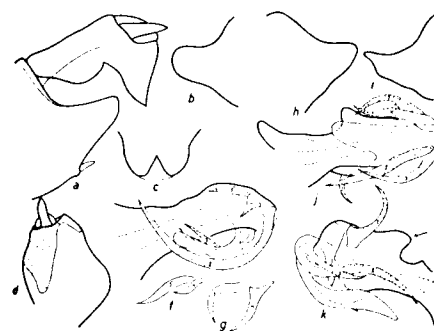


FIG. 39. *Oliarius frontalis* Mel.: a pygophore and anal tube from left; b right side lobe and c medio-ventral process of pygophore; d anal tube, ventral aspect; e penis; f appendages Nos. 4 and 5 of same (Wad Medani); g same (Juba). — *O. azrak* sp.n.: h left, i right side lobe of pygophore; j—k penis (appendages numbered as in Fig. e).

O. pseudofrontalis sp.n.

Length 6.5—7 mm. Like *O. frontalis*. Vertex 1.36 \times as long as broad, as broad as eye, less tapering apicad than in *frontalis*. Stigma only slightly infuscate, setae of elytra long and black. Male genitalia: Pygophore (Fig. 38 a—c) only slightly asymmetrical, left side lobe blunter than right, medio-ventral process sharply triangular. Anal tube (Fig. 38 d—e) with only a narrow apico-ventral process. Styli (Fig. 38 f) symmetrical. Penis as in Fig. 38 g—h.

South Yemen, Jebel Jihaf, Wadi Lejj, 1 σ , type and several paratypes, 28. IX. 1937, Scott & Britton and Yemen, Usaifira, near Ta'izz, 1 paratype, 18. XII. 1937, coll. the same, British Museum, paratypes also in my collection.

O. frontalis Mel.

Described by me previously (LINNAVUORI 1964:340—341). Some additional remarks on the male genitalia: Left side lobe of pygophore sharp, right blunt (Fig. 39 a—c). Anal tube (Fig. 39 d) strongly asymmetrical. Penis as in Fig. 39 e—g, aedeagal sheath without the strongly prominent rounded lobes present in the following species, falcate

appendage No. 2 very long, extending beyond apex of penis. Appendages Nos. 4 and 5 variable in length: No. 4 usually short and No. 5 fairly straight, but in the specimens from Equatoria process No. 4 is long and process No. 5 strongly curve.

Many exx. from 6; 7; 2; 19; 29; 23; 27; 21; 40; 72; 72—71; 72. On *Acacia*. At lamp. E. Africa, Egypt.

O. frontalis Mel. ssp. *fuligo* ssp.n. Length 6—7 mm. Separated from the nominate subspecies as follows:

frontalis fuligo

1. somewhat more robust; elytra shorter and broader.
2. face dark brown, with a contrasting whitish spot at either lower end of lateral margins of frons.
3. apex of elytra broadly dark fuscous, interrupted by a \pm large hyaline transverse area caudad of stigma; a fuscous transverse band at middle, base also infuscate.
4. femora blackish brown, also other parts of legs darker.

frontalis frontalis

1. elongate elytra longer and narrower.
2. frons yellow-brown, the pale spots less pronounced.
3. cells of apex of elytra always hyaline, immaculate; sometimes a fuscous transverse band present at middle or base infuscate (f. *basalis* Mel.).
4. legs yellow-brown.

The male genitalia are similar in both forms, except that appendage No. 1 is longer and recurved basad (apicad in the nominate form) and process No. 2 is longer and thinner in *fuligo*.

24—24 a, 2 paratypes; 26, 1 paratype; Singa-Damazin, 1 σ , type and many paratypes, 15—17. XI. 1962; 23, several paratypes; 21, 1 paratype.

O. azrak sp.n.

Length 5.2–7 mm. Like *frontalis*, but face somewhat narrower and male genitalia different: Left side lobe of pygophore blunt, right sharp (Fig. 39 h–i). Penis (Fig. 39 j–k) with strong, prominent rounded lobes (marked with an arrow in the figure) in the aedeagal sheath, processes Nos. 2 and 3 shorter and appendages Nos. 4 and 5 longer and thicker. Other genitalia as in *frontalis*.

O. garambaensis Syn. (Congo) is a closely related species differing in the spinulation of the penis (SYNAVE 1953a: 28–29).

24–24 a, 1 paratype; 26, several paratypes; 22–25, several paratypes; Wad Medani, 1 ♂, type and many paratypes, 11–12. XI. 1963; 72–71, 1 paratype; 81–82, 2 paratypes.

O. nemea Fenn. — 35, 1 ♀ probably of this species. Known from Mali.

O. hyperides Fenn. — 84, several exx.; 85–84, 2 exx.; 41, 3 exx.; 52, several ex. Senegal.

O. pythaules Fenn. — 51, 1 ex.; 52, several exx.; 72, 4 exx. Senegal.

O. pleone sp.n.

Length 6.5 mm. Like *frontalis*, but vertex slightly broader and with dissimilar genitalia. Pygophore (Fig. 40 a–c) asymmetrical, left side lobe sharp-

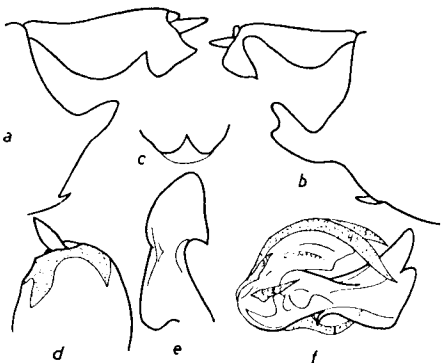


FIG. 40. *Oliarius pleone* sp.n.: a anal tube and pygophore from left; b same from right; c medio-ventral process of pygophore; d anal tube, ventral aspect; e stylus; f penis.

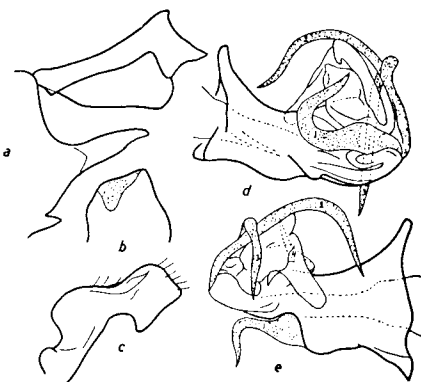


FIG. 41. *Oliarius iasis* sp.n.: a pygophore and anal tube from left; b apex of anal tube, ventral aspect; c stylus; d–e penis.

ly triangular, right shallowly bilobate apically. Anal tube (Fig. 40 d) asymmetrical. Styli (Fig. 40 e) symmetrical. Penis as in Fig. 40 f, appendages Nos. 1–3 belonging to the aedeagal sheath, processes Nos. 4 and 5 long and falcate.

According to the genitalia, closely related to *O. orithyia* Fenn., but the left side lobe of the pygophore has a strongly produced, narrow apical part and the upper apical process of the right side lobe is longer than the lower one. The anal tube is also somewhat different and appendages Nos. 4 and 5 of the penis thicker and longer.

Equatoria: Torit-Kapoeta, 1 ♂, type, 26. III. 1963.

O. iasis sp.n.

Length 7–8 mm. Like *frontalis*, but bigger and more robust. Face, especially frons, darker, the last-named also somewhat broader. Male genitalia: Pygophore (Fig. 41 a–b) symmetrical, side lobes with a very long and narrow apical part, medio-ventral process sharply triangular. Anal tube (Fig. 41 b) asymmetrical. Styli (Fig. 41 c) symmetrical. Penis as in Fig. 41 d–e.

Upper Nile: Malakal, 1 ♂, type and 6 paratypes, 5–20. I. 1963.

cesses. Styli (Fig. 42 c–d) slightly asymmetrical. Penis as in Fig. 42 e–f.

Bahr el Ghazal: Wau, 1 ♂, type, 19. II. 1963. In addition, a female from 64–63 may belong to the species.

O. pattersoni Lall.

Material apparently representing this species. Male genitalia: Pygophore and anal tube left, medio-ventral process of pygophore triangular. Styli (Fig. 43 e–f) asymmetrical. Penis as in Fig. 43 g–h.

84, many exx. Previously known from Ghana.

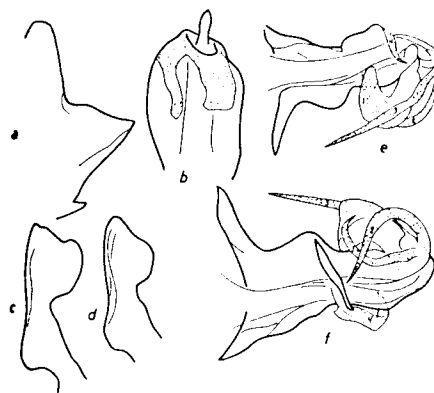


FIG. 42. *Oliarius scylla* sp.n.: a pygophore from left; b anal tube, ventral aspect; c–d styli; e–f penis.

O. scylla sp.n.

Length 7–8 mm. Resembling *frontalis*, but bigger and more robust. Face flatter, frons mainly dark brown. Clavus with an oblique, triangular dark basal band along suture near to the junction of the claval veins. Basal compartment of vertex somewhat more strongly tapering apicad. Male genitalia: Pygophore (Fig. 42 a) symmetrical, side lobes triangular, medio-ventral process as in *frontalis*. Anal tube (Fig. 42 b) with asymmetrical apico-ventral pro-

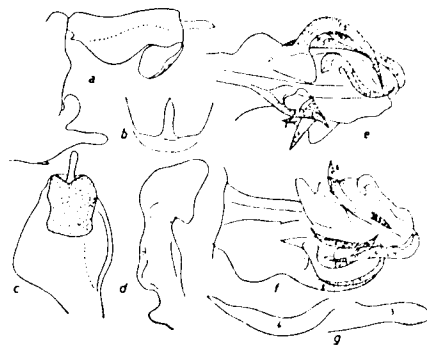


FIG. 44. *Oliarius camilla* sp.n.: a pygophore and anal tube from left; b medio-ventral process of pygophore; c anal tube, ventral aspect; d stylus; e–f penis; g appendages Nos. 6 and 3 of same.

O. camilla sp.n.

Length 7 mm. Face golden brown; frons with a faint transverse fuscous fascia at frontal ocellus; upper part of frons and anterior margin of head strongly shiny, black. Vertex mainly dark brown, keels, margins and the small medio-apical areolet yellowish brown. Pronotum and tegulae yellowish brown. Scutellum golden brown, laterally and apically ± darkened, keels concolorous. Elytra hyaline, immaculate; stigma pale, with caudal margin dark; veins pale, with dense dark tubercles apical cross-veins dark. Dorsum dark brown. Under surface yellowish brown,

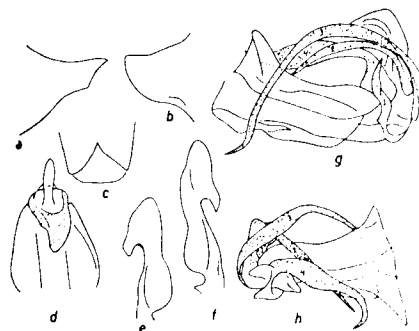


FIG. 43. *Oliarius pattersoni* Lall.: a left, b right side lobe, c medio-ventral process of pygophore; d anal tube, ventral aspect; e–f styli; g–h penis.

with dark markings. Legs yellow-brown, femora darker.

Robust. Anterior margin of head somewhat callose, strongly shiny, smooth, the apical transverse ridge bordering vertex absent or poorly developed. Frons strongly broadening ventrad, concave, rather short, median carina sharp, in upper margin evanescent, the fork absent; clypeus with a sharp, percurrent median carina. Eyes remarkably large, prominent. Vertex nearly as broad as long (13:14), distinctly narrower than eye (13:16); basal compartment concave, well delimited, with lateral margins subparallel in basal two-thirds, apex broadly conical (shape nearly as in *O. hipponax* Fenn., but slightly shorter); apico-lateral compartments rather broad, anteriorly not clearly delimited. Pronotum short, median carina sharp, margins also carinate. Sublateral keels of scutellum evanescent both apically and basally. Setae of elytra long and dark, claval veins uniting at middle of clavus. Hind tibiae trispinose. Male genitalia: Pygophore (Fig. 44 a—b) symmetrical, side lobes provided with a bifurcate apical prolongation, medio-ventral process long and narrow. Anal tube (Fig. 44 c) strongly asymmetrical. Styli symmetrical (Fig. 44 d). Penis as in Fig. 44 e—g.

Easily recognized by the large eyes, the structure of the head, the long setae of the elytra and the male genitalia.

Equatoria: Kapoeta-Boma, 1 ♂, type and 2 paratypes, 26—27. III. 1963.

CIXIUS Lt.

C. chinai Svn. — 78—79, 1 ex. Previously known from Zaire.

MYNDUS St.

M. cupido sp.n.

Length 5 mm. Yellowish brown. Vertex sometimes with two faint dark longitudinal stripes. Scutellum between carinae black, sometimes also laterally

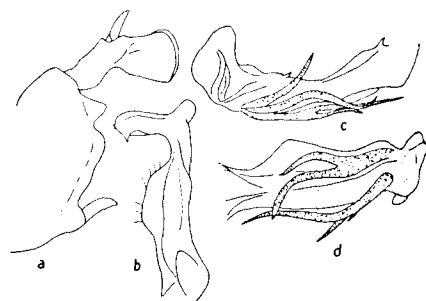


FIG. 45. *Myndus cupido* sp.n.: a pygophore and anal tube from left; b stylus; c—d penis.

± darkened, median carina pale, others black. Elytra hyaline, shiny, with yellowish tinge, apex darker, apical veins with a triangular dark brown apical spot, partly suffused into each other in apical margin; stigma pale, but with a triangular fuscous spot at either end, veins otherwise pale, tubercles darker. Under surface mainly dark brown. Legs yellow-brown.

Face with a sharp median carina. Frons distinctly broadening ventrad, 1.14 × as long at middle as greatest width, margins arcuate. Vertex 1.33 × as long at middle as broad basally, narrow, sharply conical, proportion between the basal and apical compartments 16:15. Lateral keels of scutellum diverging caudad. Elytra as in, e.g., *M. mutakatoensis* Syn. Male genitalia: Pygophore and anal tube in Fig. 45 a. Stylus (Fig. 45 b) with a strongly expanded, narrow, hammer-shaped apex. Penis (Fig. 45 c—d) with two bifurcate and falcate appendages.

Equatoria: Kateri-Gilo, 1 ♂, type and several paratypes, 18. III. 1963. Swept from undergrowth in forests of the *Podocarpus* zone.

M. nymphias sp.n.

Length 3 mm. Yellowish brown. Elytra hyaline, tinged with yellowish; tip of clavus, apical and subapical veins, including cross-veins, infuscate, also some apical cells ± infuscate, a fuscous spot



FIG. 46. *Elaphodelphax nigropictus* Fenn.: a pygophore; b anal tube, ventral aspect; c stylus; d diaphragm; e medio-ventral process of pygophore; f penis. — *Myndus nymphias* sp.n.: f penis (the sclerified area stippled).

at either end of pale stigma, veins otherwise pale, with concolorous tubercles.

Frons broadening ventrad, as long at middle as greatest width, lateral margins arcuate, median keel sharp. Vertex slightly shorter medially than broad basally, shape otherwise much as in *M. mutakatoensis* Syn. but shorter, conical; apical margin bluntly angularly produced, sharp; apical compartment distinctly deflected ventrad, proportion between the basal and apical compartments 9:11. Lateral keels of scutellum slightly diverging caudad. Elytra as in *M. mutakatoensis*. Male genitalia: Pygophore and anal tube in Fig. 47 g. Stylus (Fig. 47 h) curvate, with a rounded subapical expansion. Penis (Fig. 46 f) medially membranous, ventral margin with a long, falcate appendage, apex with a strongly upcurved, clawlike process.

Equatoria: Yambio, 1 ♂, type, 18—25. IV. 1963.

HEMITROPIS Fb.

H. seticulosa (Leth.) — Many exx. from 6; 2; 9; 23. On *Tamarix*. Eremian.

BASHGULTALA Dlab.

B. maculipennis sp.n.
Length 5 mm. Pale ochraceous. Ver-

tex laterally slightly embrowned. Scutellum somewhat darker ochraceous. Elytra hyaline, costal margin with about 6 ± developed dark fuscous transverse spots, clavus and other parts of corium also with transverse fuscous spots; a broken, irregular, transverse, dark smoky apical band present; cross-veins of subapical area and ends of apical veins dark smoky. Legs ochraceous, immaculate.

Body as in *B. clara* Dlab., but somewhat shorter and more robust. Frons broader and broadening more strongly downwards. Vertex much shorter, scarcely extending beyond anterior margins of eyes.

Easily distinguished from *B. clara* Dlab. (Afghanistan) by the maculate elytra and the structural details mentioned above.

South Yemen: Lahej-Dhala road, 1 ♂, type, 9—15. VII. 1963.

BRIXIA St.

B. speciosa Muir — 52, 1 ex.; 81—82, several exx.; 63—62, 1 ex.; 68, 1 ex.; 64—63, 1 ex. In swamps. At lamp. Zaire, E. Africa (Nyassaland).
B. meeli Syn. — 68, 1 ex.; 74, 1 ex. Zaire.

DELPHACIDAE

A paper on the *Delphacidae* of the Sudan has been published by FENNAH (1969). In it several new species and genera, marked as endemics in the following list, have been described. The generic classification within the family is at present rather tentative especially regarding the splitting of the large old heterogeneous genera *Dicranotropis* Fb., *Delphacodes* Fb. and *Calligypona* J.Sb. In the list below I have followed advice received from Dr. Fennah in a letter on the generic location of various species originally referred to these genera, but the present treatment is in some cases very tentative.

Asiracinae

ELAPHODELPHAX Fenn.

E. nigropictus Fenn.

Male genitalia as in Fig. 46 a—e.
77, 1 ex.; 64—63, 1 ex. E. Africa.

Delphacinae

TROPIDOCEPHALA St.

T. elegans (C.) — 70, 2 exx.; 64—63, 3 exx.; 60, 1 ex.; 59—60, 4 exx. The Mediterranean subregion, N. Africa. I also have specimens from S. Africa (identified by Fennah).

T. umbrina sp.n.

Length 2.5—3.5 mm. Like *T. brunnipennis* Sgn., but face strongly concave in profile and vertex longer, 1.7 × as long as broad, 1.5 × as long as pronotum. Male genitalia (Fig. 47 a—e) very dissimilar. The genitalia of *brunnipennis* are figured by ISHIHARA (1949, plate 2).

The genus is in need of revision. *T. brunnipennis* Sgn. has been regarded as Palaeotropical by METCALF 1943:93—94, since it was reported from Europe and Egypt, but these records undoubtedly refer to *T. elegans*. It was originally described from Madagascar and has later been recorded from Africa to Japan and the Australian Region. My concept of *brunnipennis* is based on

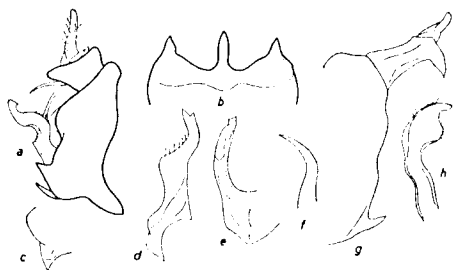


FIG. 47. *Tropidocephala umbrina* sp.n.: a pygophore from side; b same, ventral aspect; c appendage of anal tube; d stylus; e stem, f basal process of penis. — *Myndus nymphias* sp.n.: g pygophore from side; h stylus.

Japanese specimens in my collection and on the redescription of ISHIHARA mentioned above.

79, 1 paratype; 63—62, 1 paratype; Lotti forest, 1 ♂, type, and many paratypes, 14—17. III. 1963; 78—79, 1 paratype; 62, 4 paratypes; 66—67, 1 paratype; 66—64, 1 paratype.

T. montana sp.n.

Length 4—5.5 mm. Orangish. Carinae of head and of thorax white and finely bordered with fuscous. 1st antennal joint with one, 2nd with two oblique dark rings.

Gracile. Vertex 1.9—2.0 × as long as broad, 2.1 × as long as pronotum (median lengths measured), narrow; median carina sharp, lateral margins sharply upcurved. Frons nearly 3 × as long as broad, shallowly concave in profile, in lower half parallel-sided, then tapering upwardly, lateral margins and median keel elevated; clypeus with a sharp median keel, flattish, upper margin rounded. Pronotum with sharp keels. Also scutellar keels distinct. Elytra long, 2.8 × as long as their greatest width; veins with pale tubercles, each bearing a long yellowish seta, special knobs absent. Male genitalia in Fig. 48 a—e.

Related to *T. nesis* Fenn. (French Guinea) and *T. incompta* Muir (Sierra Leone), but differing in the larger size and the male genitalia.

78—79, 2 paratypes; 79, 1 paratype; Lotti forest, 1 ♂, type and 1 paratype, 14—17. III. 1963.

T. aurantiaca sp.n.

Length 3.25 mm. Like the preceding, but 1) much smaller, 2) colouring more strongly orangish, elytra golden brown with spots in apical cells, a subapical fascia and costal margin hyaline, apical veins with a distinct fuscous triangular spot, 3) head much shorter: vertex 1.3 × as long as broad and likewise 1.3 × as long as pronotum, frons 2.1 × as long as broad and 4) with different male genitalia (Fig. 48 j—h): medio-ventral

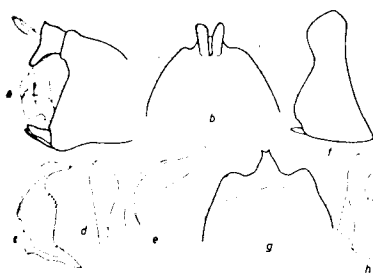


FIG. 48. *Tropidocephala montana* sp.n.: a genital segment from side; b pygophore, ventral aspect; c stylus; d apex of same, broad aspect; e penis. — *T. aurantiaca* sp.n.: f pygophore from side; g same, ventral aspect; h stylus.

process of pygophore conical, with a slightly bifid apex and stylus much more robust. Penis and anal tube as in the preceding species.

Medio-ventral process of pygophore much as in *T. nesis* Fenn., but head much shorter, caudo-lateral margins of pygophore dissimilarly curvate in profile, apophysis of stylus much thicker and penis dissimilarly curved.

Equatoria: near Gilo, 1 ♂, type, 18—24. III. 1963; 73—75, 1 ♀ paratype.

EURYSA Fb.

E. imatonga sp.n.

Length 5—5.5 mm. Stramineous. Elytra hyaline, veins pale. Dorsum of abdomen, excluding pygophore, orangish in ♂. Spines of legs black-tipped.

Long and gracile. Vertex slightly broader than long (20:19), basal compartment 1.67 × as broad as long, apical part of vertex rugose, broadly rounded to face. Frons 1.8 × as long as broad, broadest at lower part of eyes, rugose median keel sharp, evanescent at apex of head. Clypeus with a distinct median keel. 2nd antennal joint twice as long as 1st. Lateral carinae of pronotum diverging caudad, not reaching the basal margin. Elytra much longer than abdomen, narrow, nearly 5 × as long as broad, rather acuminate apically, apical

cells long, veins finely tuberculate and provided with dark setae. Male genitalia in Fig. 49 f—j, 50 a—b.

Easily recognized by the size, colouring, the long and narrow elytra and the genitalia (medio-ventral process of pygophore strongly produced, appendages of anal tube long, falcate and crossed, styli small).

79, several paratypes; Kateri-Gilo, 1 ♂, type and several paratypes. From mountain meadows.

E. bidentata sp.n.

Length 3.5—3.75 mm. Yellow-brown. Clypeus and frons partly infumed. Elytra brownish hyaline. Abdomen dorsally reddish brown, laterally blackish. Fore and middle legs and hind femora with dark longitudinal bands.

Relatively robust, parallel-sided. Vertex 1.22 ×, basal compartment 1.83 × as broad as long; apex of head rugose, keels evanescent; frons 1.84 × as long as broad, slightly tapering downwards, with a sharp median keel, continuing on to clypeus. Lateral keels of pronotum diverging caudad, not reaching the basal margin. Elytra somewhat longer than abdomen, narrow, rather acuminate apically, 3 × as long as broad. Flying wings reduced, scale-like. Male genitalia

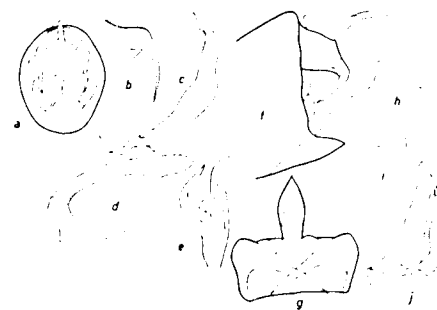


FIG. 49. *Cemus leviculus* Fenn.: a genital segment, caudal aspect; b appendage of anal tube, lateral aspect; c stylus; d penis from side; e apical appendages of same, dorsal aspect. — *Eurysa imatonga* sp.n.: f genital segment, lateral aspect; g anal tube, ventral aspect; h medioventral process of pygophore; i diaphragm; j penis.

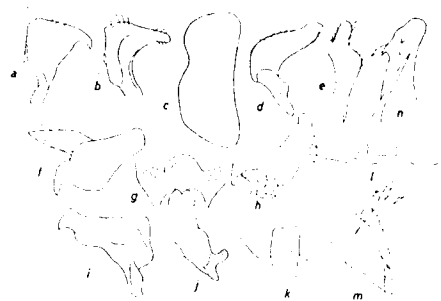


FIG. 50. *Eurysa imatonga* sp.n.: a—b stylus. — *E. atramentaria* sp.n.: c pygophore from side; d—e stylus; f anal tube; g diaphragm; h penis. — *E. bidentata* sp.n.: i stylus; j appendage of anal tube; k diaphragm; l medio-ventral process of pygophore; m—n penis.

in Fig. 50 i—n. Medio-ventral process of pygophore short, provided with two remote teeth. Diaphragm long and narrow. Appendages of anal tube short, apically bifid.

Closely related to the preceding species.

Yemen, Wadi Sabir, N. face of Jebel Sabir, 1 ♀, type, British Museum, 1 ♂ paratype, my collection, 19. XII. 1937, Scott & Britton.

E. atramentaria sp.n.

Length 2.75 mm., f. brach. Very similar to *E. nigroacuminis* Muir (S. Africa), but 1) elytra in ♂, sometimes also in ♀, blackish brown, 2) vertex and frons somewhat broader, the former $1.57 \times$, its basal compartment $2.44 \times$ as broad as long, frons $1.42 \times$ as long as broad, 3) the median lobe of diaphragm (Fig. 50 g) much shorter and semicircular, apophysis of stylus (Fig. 50 d—e) shorter and thicker and penis (Fig. 50 h) dissimilarly shaped. Pygophore and anal tube (Fig. 50 c, f), as in *nigroacuminis*. Elytra only slightly longer than abdomen, apically rounded.

Equatoria: near Gilo, 1 ♂, type, and 4 paratypes, 18—24. III. 1963. In alpine meadows.

PEUDARAEOPUS Kk.

P. iranicus Dl. — 7—8, 3 exx.; 17, 2 exx. On

desert grasses. Eremian, previously known from Iran.

BOSTAERA Ball

B. bolivari (Mel.) — 17, several exx.; 52, 1 ex. On *Panicum turgidum*. Eremian (Portugal, Spain, Egypt, Israel, Arabia).

AMBLYCOTIS St.

A. alpinus sp.n.

Length 4—5 mm. Pale ochraceous. Clypeus and frons below eyes slightly embrowned. Elytra hyaline, veins of apical part dark fuscous, those of corium with small dark tubercles. Dorsum of abdomen medially broadly darkened. Legs with longitudinal dark stripes.

Head $1.27 \times$ as broad as pronotum. Vertex $2.3 \times$ as broad as long. Frons slightly broader than long (17:16), broadest at lower angles of eyes, then strongly tapering ventrad; median keels also separated from each other ventrally, diverging upwards to the broadest point of frons, then parallel. Clypeus moderately convex, with a sharp median carina. 1st antennal joint triangular, $1.23 \times$ as long as broad, 2nd $2.2 \times$ as long as broad, $1.38 \times$ as long as 1st. Structure otherwise as in *A. laticeps* St. Male genitalia in Fig. 51.

Resembling *A. laticeps* St. (S. Africa), but differing in the male genitalia (those of *laticeps* illustrated in Muir 1926; p. 24 and Lindberg 1958:145), e.g. the

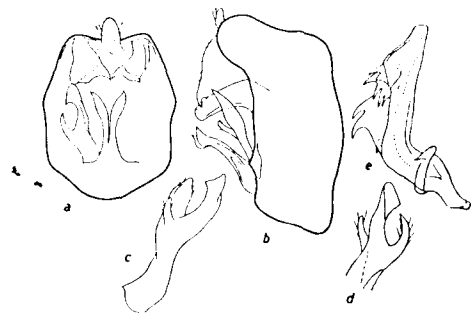


FIG. 51. *Amblycotis alpinus* sp.n.: a genital segment, caudal aspect; b same, lateral aspect; c—d stylus; e penis.

medio-ventral process of the pygophore is thicker and somewhat recurved ventrad in the lateral aspect (shallowly upwards curved in *laticeps*) and the dorso-lateral angles of the pygophore are much broader in profile. *A. horvathi* (Muir) (S. W. Africa) has an entirely dissimilar pygophore and stylus (Muir 1934:576).

Equatoria: near Gilo, 1 ♂, type and some paratypes (♂♀), 18—24. III. 1963; 77, 1 ♀ paratype. In mountain and alpine meadows.

ASIRACINA Mel.

A. badia (Muir) — 62, 2 exx. Previously known from Nigeria.

THRIAMBUS Fenn.

T. (Dicranotropis) nicias (Fenn.) — Several exx. from 52; 63—62; 72; 78—79; 77; 68; 62; 66—67; 66—64. Previously known from W. Africa.

T. (Peregrinus) vegetatus (Mel.) — 77, 2 exx. Zaire.

T. (Dicranotropis) obscurella (Lall.) — The Nile, 1 ex., Gyldenstolpe, Mus. Stockholm. Endemic. Uncertain whether taken in the Sudan or Uganda.

T. helias Fenn. — 62, 1 ex. Endemic

T. iapis Fenn. — 62, 2 exx. Endemic.

T. acca Fenn. — 62, 1 ex. Endemic.

T. paniscus Fenn. — 68, 1 ex. Endemic.

T. (Dicranotropis) narnia (Fenn.) — 52, 1 ex.;

62, 2 exx. Previously known from Senegal.

T. (Dicranotropis) idmon (Fenn.) — Many exx. from 9; 28; 22—25; 23; 21; 84; 85—84; 30 km N of 71. Previously known from Mauretania.

CEMUS Fenn.

C. viator Fenn. — 63—62, 2 exx.; 77, several exx.; 61—52, 2 exx.; 62, 3 exx.; 66—67, 1 ex. Endemic.

C. hipponax Fenn. — 77, several exx. Endemic.

C. leviusculus Fenn.

Male genitalia in Fig. 49 a—e. 63—62, 1 ex. Previously known from Seychelles and Mauritius.

DOGODELPHAX Ldb.

D. nigropunctatus Ldb. — 50, 2 exx.; 52, several exx. Previously known from Togo.

NUMATA Mats.

N. sacchari (Mats.) — 77, 1 ex.; 62, 1 ex.;



FIG. 52. *Nycheuma idas* (Fenn.) ssp. *nilotica* ssp.n.: a medio-ventral process of pygophore; b anal tube from side; c—e stylus. — *N. idas* (Fenn.): f—g stylus. — *Oaristes impictus* sp.n.: h pygophore from side; i anal tube; j stylus; k—l penis.

66—67, 1 ex. Palaeotropical, previously known from the Oriental Region, Formosa and Japan.

N. parmenio Fenn. — 84, 1 ex.; 72, 2 exx. Endemic.

MALAXODES Fenn.

M. farinosus Fenn. — 78—79, 1 ex. E. Africa.

NYCHEUMA Fenn.

N. menius Fenn. — 52, 1 ex. Endemic. *N. (Dicranotropis) endymion* (Fenn.) — 83, 1 ex.; 72, 3 exx.; 72—71, several exx.; 74, 1 ex. Senegal.

N. (Dicranotropis) ibadanensis (Muir) — 77, 1 ex. Nigeria, Cape Verde Is.

N. (Dicranotropis) idas (Fenn.) — 52, 1 ex.; 72, 1 ex.; 70—72, several exx. Previously known from Ivory Coast.

N. idas (Fenn.) ssp. *nilotica* ssp.n.

Like the nominate form, but 1) median tooth of the medio-ventral process of pygophore (Fig. 52 a) as large as the lateral ones (smaller than the others in the nominate form), 2) appendages of anal tube (Fig. 52 b) somewhat shorter and 3) subbasal lobe of stylus (Fig. 52 c—e) rounded (sharply produced in the nominate form, Fig. 52 j—g).

19, 1 paratype; Blue Nile, Singa-Damazin, 1 ♂, type, and several paratypes, 14—17. XI. 1962; 23, several paratypes; 21, several paratypes.

N. (Dicranotropis) sectator (Fenn.) — 23, 1 ex. Previously known from Cameroun.

NUMATODES Fenn.

N. antricauda Fenn. — 72, 1 ex. Previously known from Mauritius.

EUIDELLA Pt.

E. (Delphax) borvathi (Lall.) — Sudan, "The Nile", several exx. Gyldenstolpe, Mus. Stockholm. Endemic. Uncertain whether the specimens have been found in the Sudan or in Uganda.

E. (Dicranotropis) tortuosa (Ldb.) — Many exx. from 24—24 a; 25; 22—25; 21; 84; 58; 51; 52; 72; 74; 30 km N of 71; 62. Near Terakeka found on *Tamarindus indicus*. Previously known from Togo. Correct genus uncertain, probably not a proper *Euidella*.

EUIDOPSIS Rib.

E. palaemon Fenn. — 68, 1 ex.; 66—67, 1 ex. Endemic.

ANEUIDES Fenn.

A. ilaira Fenn. — 72, 3 exx. Endemic species and genus.

MICREUIDES Fenn.

M. verres Fenn. — 72—71, several exx.; 74, 1 ex. Endemic genus and species.

EUIDASTOR Fenn.

E. milonius Fenn. — 22—25, 1 ex.; 72—74, 1 ex.; 68, 1 ex.; 60, 1 ex.; 73—75, 1 ex.; 66—67, 1 ex. Endemic genus and species.

E. pansa Fenn. — 77, 1 ex. Endemic.

PERKINSIELLA Kk. (= *Araeopides* Rib.)

P. dorsata (Mel.) (= *insignis* Dist., *picta* Rib.)

I have previously (1962:22) discussed the identity of the genera *Ara-*

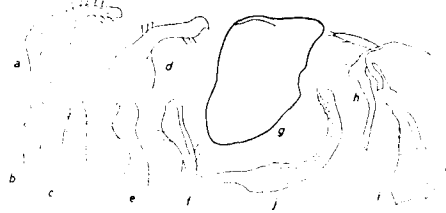


FIG. 53. *Perkinsiella dorsata* (Mel.): d stylus; e—f apex of same; broad aspect; a—c stylus of a specimen from Israel. — *Oaristes phragmitis* sp.n.: g pygophore from side; h anal tube; i stylus; j penis.

eopides and *Perkinsiella* and the species *insignis* and *picta*. Dr. FENNAH has informed me in a letter that the oldest name for this species is *dorsata* (Mel.). I accept this, although there is a slight difference in the shape of the apical part of the styli between the African specimens and the others (Fig. 53 d—f). Additional material is needed from various parts of the distribution area of the species to establish whether *insignis* represents a separate geographical race.

Numerous exx. from 24—24 a; 28; 26; 29; 22—25; 23; 21; 19; 84; 40; 41; 72; 60; 74. Palaeotropical.

P. rivularis Lv. — 2, 1 ex. Previously known from Israel and Egypt.

PEREGRINUS Kk. (= *Hagamiella* Fenn.)

P. maidis (Ashm.) — 9, 1 ex.; 22—25, several exx.; 21, several exx.; 63—62, 1 ex.; 68, 1 ex.; 77, 3 exx.; 62, 2 exx.; 66—64, 2 exx. Intertropical.

P. iocasta (Fenn.) — Several exx. from 51; 52; 63—62; 70—72; 68; 74; 60; 62; 66—64. W. Africa, Uganda.

HAPALOMELUS St.

H. ruandanus Fenn. — 79, 2 exx.; 77, 2 exx. Ruanda.

H. onytes Fenn. — 62, 3 exx. Endemic.

EUMETOPINA Bdd.

E. hancocki Muir? — 62, 2 exx. Uganda. Identification somewhat tentative in absence of males.

NEOGADORA Fenn.

N. nitens Fenn. — 64—63, 2 exx.; 73—75, 1 ex. Endemic genus and species.

CURTOMETOPUM Muir

C. turneri Muir — 41, 1 ex.; 46—45, 2 exx. At lamp in sandy localities. Previously known from S. Africa.

RHINOTETTIX St.

R. fuscipennis St. ? — 66—67, 1 ex. Identification uncertain, since the only available specimen, a male, is parasitized. S. Africa.

NATALIANA Muir

N. lineata Muir — 62, 1 ex. Previously known from S. Africa.

EMBOLOPHORA St.

E. monoceros St. — Darfur: Jebel Marra (FENNAH 1969); Upper Nile: White Nile, Hillet Nuer (Muir 1929:192); 74, many exx. Swept from grasses on a wet shore of the Nile. Also known from S. Africa.

CORBULO Fenn.

C. dodona Fenn. — 22—25, 2 exx., 62, 3 exx. Palaeotropical. Previously known from Australia.

NILAPARVATA Dist.

N. maeander Fenn. — Many exx. from 25; 21; 45; 51; 52; 72; 72—75; 60; 61—52. Previously known from W. Africa (French Guinea, Senegal, French Sudan).

N. muiri Cld. — Several exx. from 51; 52; 72; 72—75; 68; 74; 60; 61—52. Intertropical (Puerto Rico, Senegal).

N. camilla Fenn. — 68, 1 ex.; 62, 1 ex. Endemic.

XANTHODELPHAX Wgn.

X. (Delphacodes) graminis (Ldb.) — 33—31, 1 ex.; 30—31, numerous exx. On *Panicum turgidum* in sandy places. Eremian. Previously known from the Cape Verde Is.

CORONACELLA Fenn.

C. (Delphacodes) turneri (Muir) — Several exx. from 22—25; 23; 21; 45; 52; 63—62; 72—74; 68; 77; 62; 66—64. W. Africa (Guinea, French Sudan, S. Africa).

TOYA Dist. (= *Metadelphax* Wgn.)

T. (Calligypona) propinqua (Fb.) Many exx. from 6; 7; 2 (DLABOLA 1964:617); 17; 24—24 a; 23; 21; 29; 9; 84; 85—84; 83; 30—31; 52; 72—74; 72—71; 68; 77; 60; 74; 66—67. Cosmopolitan.

T. (Delphacodes) bridwelli (Muir) — 30 km N of 71, 1 ex. Nigeria.

T. (Delphacodes) nigeriensis (Muir) — 21, several exx. Nigeria.

T. (Delphacodes) varia (Hesse) — Many exx. from 7; 24—24 a; 29; 22—25; 23; 21; 52. S. Africa.

T. (Delphacodes) ceresensis (Muir) — 7, 1 ex.; 21, 1 ex.; 52, several exx.; 74, 1 ex.; 76, 1 ex. Cape Verde Is., S. W. Arabia, S. Africa.

T. (Delphacodes) thomasseti (Muir) — 62, 1 ex. Previously known from Rodriguez.

T. demophoon Fenn. — 52, 1 ex. Nigeria, Ethiopia.

T. menedemus Fenn. — 77, 1 ex. Endemic.

T. camena Fenn. — 70—72, 1 ex. Endemic.

T. canidia Fenn. — 30 km N of 71, 4 exx. Endemic.

T. mandonius Fenn. — 74, 1 ex. Endemic.

T. narcissus Fenn. — 78—79, 1 ex. Endemic.

T. (Calligypona) hispidula (Ldb.) — 7, several exx.; 2, 1 ex.; 19, several exx.; 21, 3 exx.; 35, 1 ex. Eremian (Canary Is., Morocco, Egypt).

T. (Delphacodes) sporoboli (Ldb.) — Many exx. from 1; 6; 7; 2; 17; 9; 24—24 a; 21; 45 Eremian (Cape Verde Is., Egypt).

T. (Delphacodes) epimelas (Fenn.) — 23, 1 ex.; Bahr el Ghazal, R. Malmul, 1 ex., 21—22. II. 1963; 49, 1 ex.; 51, 1 ex.; 52, 1 ex.; 72, 2 exx.; 70—72, several exx.; 60, several exx. Ivory Coast, Senegal.

T. (Delphacodes) bargreavesi (Muir) — 22—25, 1 ex.; 21, 2 exx.; 72, numerous exx.; 68, 2 exx.; 77, 1 ex.; 74, 4 exx.; 30 km N of 71, several exx. Previously known from Sierra Leone.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

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T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

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T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

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T. (Delphacodes) actaeon (Fenn.) — 21, 1 ex.; 41, 1 ex.; 52, several exx.; 72, several exx.; 72—74, 2 exx.; 72—71, 1 ex.; 70—72, 2 exx.; 68, 1 ex.; 63—62, 1 ex.; 64—63, 1 ex.; 60, several exx.; 74, 1 ex.; 30 km N of 71, several exx.; 62, 1 ex.; 66—64, 2 exx. Previously known from Senegal. Probably not a true *Toya*.

3 paratypes, 30. IV. — 2. V. 1963. On *Phragmites communis*.

O. impictus sp.n.

Length 3.25—3.5 mm. Like *O. snelli*, but paler stramineous. Clypeus and frons without black margins. Median carina and sides of pronotum and of scutellum orangish. Penis short; side lobes of pygophore short, broadly rounded, unarmed, and styli dissimilarly shaped (Fig. 52 h—l).

O. distinctus (Muir) also has an unmarked face, but differs in, e.g., the strongly produced side lobes of the pygophore.

22—25, 1 ♀ paratype; Equatoria, Juba, 1 ♂, type, 27. II—2. III. 1963.

SOGATODES Fenn.

S. (Dicranotropis) cubanus (Crawf.) (= *Chloriona panda* Fenn., *Megamelus flavolineatus* Muir) — 21, 3 exx.; 52, 1 ex. Intertropical (the West Indies, Nigeria).

SOGATELLA Fenn.

Recently revised by FENNAH (1963).

S. suезensis (Mats.) (= *vibix* Hpt.) — Many exx. from 1; 2; 6; 6—7; 7; 29; 21; 9; 35; 30 km N of 71. Holomediterranean.

S. nigrigenis (Jac.) — 21, several exx.; 68, 2 exx. Uganda.

S. parakolophon sp.n.

Length 3.25—3.5 mm. Pale ochraceous. Genae black as in *nigrigenis*. Vertex and median band of pronotum and of scutellum whitish, sides of the latter golden brown. Elytra hyaline, slightly tinged with yellow brown, unmarked, veins concolours. Dorsum of abdomen ± embrowned. Under surface of mesothorax with a large dark spot on either side. Legs pale.

Gracile. Vertex 1.4 × as long as broad, basal compartment slightly broader than long (10:9). Frons 2.67 × as long as broad, nearly parallel-sided in lower two-thirds. 1st antennal joint 1.33 × as long as broad, 2nd 2.5 × as long



FIG. 54. *Sogatella parakolophon* sp.n.: a pygophore from side; c left dorso-lateral angle of same, dorsal aspect; e anal tube; f stylus; g diaphragm; o penis. — *S. suезensis* (Mats.): b pygophore from side; d left dorso-lateral angle of same, dorsal aspect. — *S. yei* sp.n.: h pygophore from side; i left dorso-lateral angle of same, dorsal aspect; j anal tube; k stylus; l diaphragm; m—n penis.

as 1st. Lateral carinae of pronotum diverging caudad, straight, not reaching basal margin. Male genitalia in Fig. 54 a, c, e—g, o.

Resembles *S. kolophon* (Kk.), *S. catoptron* Fenn. and *S. suезensis* (Mats.) in the shape of the styli, but differs from them in the dorso-lateral angles of the pygophore which are considerably produced and recurved mesad, and in the long vertex and frons. In *S. nebris* Fenn. the longer branch of the stylus is much narrower, the penis is slenderer, the vertex shorter and the genae not black.

84, 1 ♂ paratype; Equatoria Nimule, 1 ♂, type, 11—13. III. 1963; 60—70, 1 ♂ paratype; 58, 1 ♀ paratype.

S. nigeriensis (Muir) — 7, 2 exx.; 28, 1 ex.; 22—25, several exx.; 23, several exx.; 21, many exx.; 84, 1 ex.; 41, 1 ex.; 45, several exx.; 58, 1 ex.; 72—74, 1 ex.; 72—71, 1 ex.; 30 km N of 71, several exx. N. Africa (Canary Is., Egypt), W. Africa and Uganda, a separate subspecies, ssp. *troilus* Fenn., in Madagascar.

S. timaea Fenn. — 71, 4 exx. Endemic.

S. manetho Fenn. — 74, 1 ex.; 30 km N of 71, 1 ex.; 66—64, 1 ex. S. Rhodesia.

S. yei sp.n.

Length 3.5 mm. Colouring as in *S. parakolophon*, but elytra with a longitudinal fuscous band starting from apex and extending to upper subapical cross veins.

Gracile. Vertex 1.25 × as long as broad, basal compartment 1.26 × as broad as long. Frons 2.29 × as long as broad, nearly parallel-sided in lower half, then moderately tapering upwards. 2nd antennal joint 2.5 × as long as 1st. Lateral keels of pronotum diverging caudad, slightly arcuate, not reaching basal margin. Male genitalia in Fig. 54 h—n.

The following four species resemble *S. yei* in the shape of the styli, but can be distinguished as follows:

S. capensis (Muir): dark coloured, e.g. frons dark fuscous; caudal margin of pygophore dissimilarly curved in profile; penis much slenderer, sharp-tipped.

S. nigeriensis (Muir): clavus with a dark apical spot.

S. manetho Fenn.: upper part of caudal margin of pygophore regularly rounded in profile, apical margin of stylus only slightly insinuated.

S. camptistylis Fenn.: upper part of caudal margin of pygophore more regularly curve in profile; apical processes of stylus thinner; penis slenderer.

Equatoria: Yei-Maridi, 1 ♂, type, 13—14. IV. 1963.

S. petax Fenn. — 70, 2 exx.; 30 km N of 71, several exx. Previously known Egypt and Jordania.

S. camptistylis Fenn. — 74, 2 exx. Uganda.

MATUTINUS Dist.

M. ligea Fenn. — Darfur: Jebel Marra, Dimbliti, 1 ex., 27. V. 1932, Steele, British Museum. Endemic.

M. (Calligypona) typhae (Ldb.) — 29, 4 exx.; 84, 1 ex. N. Africa (Canary Is. — Egypt, Israel).

M. (Sogata) neovittacollis (Muir) — 74, 1 ex.; 76, 1 ex. S. Africa (Pondoland).

SARDIA Mel.

S. rostrata Mel. — Many exx. from 7; 17;

24—24 a; 28; 29; 21; 22—25; 32; 45; 85—84; 74. Palaeotropical (Cape Verde Is. — Australia). *S. vindex* Fenn. — 52, many exx.; 70—72, several exx.; 72, 1 ex.; 74, 1 ex.; 61—52, 2 exx. Endemic.

ERIPISON Fenn.

E. illex Fenn. — 52, 1 ex. Cameroon.

TRILORIS Fenn.

T. alcanor Fenn. — 24—24 a, 1 ex.; 38—37, several exx. On *Cyperus* sp. in brooks with sandy bottoms. Endemic.

T. antea Fenn. — 52, 1 ex. Endemic.

SEMBRAX Fenn.

S. demades Fenn. — 68, 1 ex. Endemic.

S. ismenius Fenn. — 62, 1 ex. Endemic.

ORCAENAS Fenn.

O. juterna Fenn. — 79, 1 ex. Endemic genus and species.

STROPHALINX Fenn.

S. echo Fenn. — 72—71, 1 ex. Endemic genus and species.

ISOGAETIS Fenn.

I. thymoma Fenn. — 62, 2 exx. Endemic genus and species.

ACHILIDAE

CNIDUS St.

C. naevius Jac. — 62, 2 exx. E. Africa, Zaire. *C. variegatus* St. — 41, 3 exx.; 81—82, 1 ex.; 74, 1 ex. Zaire, Angola, E. and S. Africa.

AKOTROPIS Mats.

A. quercicola Lv. — 24—24 a, 2 exx.; 25, 1 ex.; 22—25, several exx.; 23, several exx.; 21, 1 ex.; 41, several exx.; 39, 1 ex.; 38—37, 2 exx.; 46—45, 1 ex.; 72, 2 exx.; 81—82, 2 exx. On *Gardenia ternifolia*. At lamp. Previously known from Israel and Turkey.

A. fulgens sp.n.

Length 3 mm. Head and pronotum yellow-brown, genae with a squarish black spot below antennae. Scutellum with a golden tinge on disk, margins paler. Elytra darker brownish smoky,

veins concolorous. Abdomen pale rusty brown. Legs ochraceous.

Like *A. quercicola* Lv., but somewhat more robust and vertex shorter, 0.88 × as broad as long. Easily distinguished from *A. quercicola* by the dark elytra and the short vertex.

South Yemen, Lahej-Dhala road, 1 ♀, type and 1 ♀ paratype, 9–15. VII. 1963. Somalia, Daragodleh, 1 ♀, paratype, 25–27. VI. 1963.

MLANJELLA Fenn.

M. sp. near *bivittata* Syn. — 77, 1 ex. At lamp in a rain forest.

BALLOMARIUS Jac.

B. dartevelli Syn. — 63–62, 3 exx.; 62, several exx. Previously known from Zaire.

B. kivuensis Syn. — 66–67, 2 ex. Zaire.

EPIUSANELLA Syn.

E. bimaculata Syn. — 62, 1 ex. Previously known from Zaire.

MEENOPLIDAE

Recently revised by SYNAVE (1957c)

Nisiinae

NISIA Ma.

N. atrovonosa (Leth.) — 17, 1 ex.; 22–25, several exx.; 84, 3 exx.; 50, 2 exx.; 58, 2 exx.; 51, 2 exx.; 52, 1 ex.; 77, 1 ex.; 72–71, 1 ex.; 74, several exx.; 61–52, 2 exx.; 66–67, 1 ex. On grasses in moist places. Palaetropical.

KERMESIA Mel.

K. albinervosa Muir — 62, 1 ex. W. Africa.

K. inornata Muir

Length 4.5 mm. Yellow-brown. Eyes dark. Scutellum laterally tinged with fulvous. Elytra whitish yellowish brown.

Relatively robust. Frons nearly parallel-sided, strongly concave. Male genitalia: Pygophore as in the following species. Anal tube (Fig. 55 b) short and broad, apical margin only shallowly concave, apico-lateral angles small,



FIG. 55. *Kermesia inornata* Muir: a penis; b anal tube, dorsal aspect; d stylus. — *K. calypso* sp.n.: c pygophore and penis from side; f anal tube dorsal aspect; e stylus.

blunt. Stylus (Fig. 55 d) with three apical lobes. Penis as in Fig. 55 a, stem with a sharp tooth on ventral surface, the basal lobe apically bifurcate.

Easily distinguished by the yellowish elytra (whitish in the other unicoloured species) and the male genitalia.

68, 4 exx.; 66–67, 1 ex. In swampy meadows. Sierra Leone, Zaire.

K. calypso sp.n.

Length 5–5.5 mm. Like the preceding, but more robust and somewhat darker: scutellum with two darker median bands and elytra slightly smoky. Male genitalia: Pygophore and penis in Fig. 55 c. Anal tube (Fig. 55 j) longer than broad, parallel-sided, apical margin broadly insinuated, apico-lateral angles sharp. Stylus (Fig. 55 e) incrassate, with three apical lobes.

Equatoria: Lotti forest, 1 ♂, type and several paratypes, 14–17. III. 1963.

K. pudica Syn.

Length 6.5 mm. Like *K. inornata*, but much more robust. Male genitalia: Pygophore, anal tube and penis in Fig. 56 a. Stylus (Fig. 56 b, c) slender, rather straight, with an upcurved tooth at about the middle.

64–63, 1 ex. Zaire. 66–67, many exx.; 66–64, 2 exx. In swamps. Zaire.

EPONISIA Mats.

E. albovittata Fenn. — 63–62, several exx.; 64–63, 2 exx.; 66–67, many exx. In swamps. Previously known from Zaire and Ruanda.

E. brunnescens Syn. — 63–62, 3 exx.; 68, 3 exx.; 62, 1 ex.; 66–67, many exx.; 66–64, 2 exx. In swamps. Zaire.

E. pallida sp.n.

Length 5–6 mm. Pale golden brown. Extreme lateral margins of vertex and of frons dark. Pronotum and scutellum medially whitish, with a faint longitudinal orangish keel, laterally orangish. Elytra hyaline, golden yellow, cells of apical part with faint fuscous shadows; veins whitish, apical veins with a triangular fuscous spot in margin; a hyaline, whitish median spot between apical and subapical areas.

Elongate, large. Frons strongly concave, parallel-sided, but just before clypeus slightly expanded. Venation of elytra as in *albovittata*. Male genitalia: Stylus as in Fig. 56 d–e. Penis (Fig. 56 f) with 3 pairs of long, falcate basal appendages, stem strongly expanded apically, triangular in ventral aspect.

Resembling *E. brunnescens* Syn., but bigger and with dissimilar genitalia. *E.*

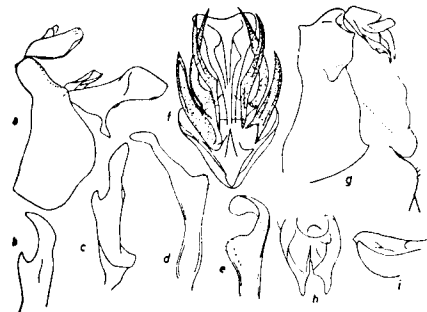


FIG. 56. *Kermesia pudica* Syn.: a pygophore, anal tube and penis from side; b–c stylus. — *Eponisia pallida* sp.n.: d–e stylus; f penis. — *Anigrus lobulifer* sp.n.: g pygophore and anal tube from side; h anal tube, dorsal aspect; i penis.

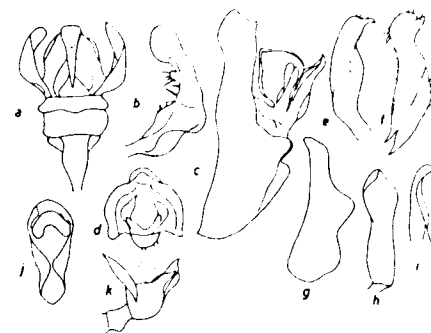


FIG. 57. *Anigrus ochreateus* sp.n.: a penis; b stylus. — *Meenoplus satyrus* sp.n.: c pygophore and penis, lateral aspect; d anal tube, dorsal aspect; e–f stylus. — *M. suavis* sp.n.: g pygophore from side; h–i stylus; j anal tube, dorsal aspect; k penis.

albinervosa Muir (Uganda), known in the female sex only, is dark fuscous, with the carinae of the head and of the thorax lighter, and the elytra fuscous with white veins.

Equatoria: Ibba-Yambio, 1 ♀, type and 4 paratypes, 16. IV. 1963. In a swamp.

Meenopliinae

ANIGRUS St.

A. lugens St. — 7–8, 1 ex.; 19, 1 ex.; 9, 1 ex.; 24–24 a, 2 exx.; 21, many exx.; 84, 2 exx.; 85–84, 1 ex.; 41, 1 ex.; 39, 1 ex.; 30–31, 1 ex.; 44, 1 ex.; 46–45, 1 ex.; 81–82, many exx.; 70–72, 2 exx.; 64–63, 1 ex.; 60, 1 ex.; 30 km N of 71, several exx.; 76–81, 1 ex. Very variable in size. S. Africa, Zaire.

A. lobulifer sp.n.

Length 5 mm. A dark brown species resembling *A. lugens* in general appearance, but differing in the male genitalia: Pygophore (Fig. 56 g) with a special rounded lobe in the otherwise rather straight caudo-lateral margins of the segment (distinctly insinuated and not lobate in *lugens*). Anal tube (Fig. 56 h) longer and more narrowly and deeply insinuated apically in dorsal aspect. Penis (Fig. 56 i) and stylus as in *lugens*.

Somalia, Hargeisa, 1 ♂, type, 23—28. VI. 1963.

A. amaryllis sp.n.

Length 5.5 mm. Head ochraceous yellow, clypeus darker. Pronotum whitish ochraceous. Scutellum brown, median keel pale. Elytra semitransparent, brownish, veins concolorous. Under surface and legs yellow-brown.

A large species, resembling *A. lugens* St. Frons broader, expanding ventrad, median carina fainter, evanescent in lower part. Elytra as in *lugens*. Male genitalia: Caudal margin of side lobe of pygophore (Fig. 58 a) with a deep median incision. Apices of anal tube (Fig. 58 b) with a claw-like process. Stylus in Fig. 58 c. Sclerified median part of penis as in Fig. 58 d, the lateral lobes of the common shape.

Kassala: Jebel Elba, 1 ♂, 1. II. 1933, Priesner, my collection.

A. vicinus Dlab. — Many exx. from 24—24 a; 25; 26; 22—25; 23; 21; 84; 85—84; 36—40; 39; 81—82; 60; 66—64. Possibly eremian. Previously known from Iran, Israel, and Arabia.

A. ochreatus sp.n.

Length 4—4.25 mm. Greyish ochraceous. Clypeus brown, with a pale median stripe. 1st antennal joint usually



FIG. 58. *Anigrus amaryllis* sp.n.: a pygophore anal tube and penis from side; b apex of anal tube, dorsal aspect; c stylus; d sclerified median part of penis.

dark brown. Scutellum with brown basal triangles. Elytra uniformly greyish ochraceous, hyaline, veins pale. Abdomen dark brown, segmental margins pale.

Head as in *A. vicinus*, but frons broader and medially more convex, median keel present as a ± faint elevation only in upper part. Male genitalia as in Fig. 57 a—b.

Resembling *A. vicinus* Dlab., but differing in the faint median carina of the frons and in the shape of the penis. *A. sordidus* St. has fuscous marks in the elytra, the penis is narrower and the apex of the stylus is considerable longer.

South Yemen, Dhala, 1 paratype, 25. IX. 1937; Jebel Harir, 1 ♂, type, 1—2. XI. 1937; Jebel Jihaf, 1 paratype, 7. X. 1937; Jebel Jihaf, Wadi Lejj, 1 paratype, 28. IX. 1937, Scott and Britton, British Museum, paratypes also in my collection.

MEENOPLUS Fb.

M. satyrus sp.n.

Length 4.5 mm. Yellowish brown. Scutellum with two faint, fuscous longitudinal bands and a fine white median keel. Elytra hyaline, yellowish brown, with the fuscous pattern also present in *M. fuscomaculatus* Mel.: apical veins dark, bordered with fuscous, the dark colour expanding triangularly towards apical margin; cells with fuscous shadows especially at ends, these marks most abundant in apical third of elytra, but single spots also present in median third of corium and 3 spots in clavus. Abdomen brownish.

Medium-sized, rather robust. Frons distinctly broadening ventrad, depressed in upper part, near clypeus more convex. Vertex short. Median keel of scutellum distinct, lateral keels obsolete. Elytral venation much as in *M. turneri* Muir, but 3rd apical vein bifurcate. Male genitalia: Anal tube (Fig. 57 d) short, broader than long. Pygophore and penis in Fig. 57 c, the latter with two, roughly quadrangular, dorsal la-

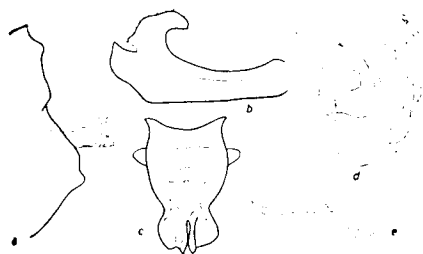


FIG. 59. *Meenoplus adonis* sp.n.: a pygophore and penis from side; b stylus; c anal tube from above. — *Elasmoscelis garambaensis* Syn.: d penis from side; e left side of same, ventral aspect.

mellae. Stylus (Fig. 57 e—f) gracile and rather straight.

Close to *M. fuscomaculatus* (Mel.) (E. Africa), which, however, is bigger, length 6 mm., and has a dark roundish spot at the end of either apical vein of the elytra. *M. turneri* Muir (S. Africa) has narrow and curvate styli with a blunt apex. *M. rotula* Fenn. (Cameroons) is larger, over 6 mm in length and has entirely different genitalia.

24—24 a, 3 paratypes; Singa-Damazin, 1 ♂, type, 15—17. XI. 1962; 23, 1 paratype.

M. suavis sp.n.

Length 3.2 mm. Like the preceding, but 1) much smaller, 2) somewhat paler, fuscous marking of elytra fainter, 3) frons broader, nearly parallel-sided and 4) male genitalia different: Anal tube (Fig. 57 j) long and narrow. Side lobes of pygophore (Fig. 57 g) with a bluntly rounded median expansion. Stylus and penis in Fig. 57 h—i, k.

Blue Nile: Abu Hashim-Galegu, 1 ♂, type, 23—24. XI. 1962.

M. adonis sp.n.

Length 4.75 mm. Whitish ochraceous. Antennae and sides of head more yellowish. Scutellum strongly shiny, laterally golden, medially pale. Elytra whitish ochraceous, apical veins fuscous; a spot in corium at the tip of clavus and two spots in the opposite part of costal

margin fuscous; also commissural margin of clavus with a small dark spot.

Frons rather broad, broadest below antennae, medially flat, lateral margins strongly upcurved. Scutellum with a distinct median carina, lateral keels very faint. Male genitalia as in Fig. 59 a—c.

Easily distinguished by the male genitalia.

Kassala: Erkowit, 1 ♂, type, 7—10. VII. 1961.

M. ianthe sp.n.

Length 3.5 mm. Golden yellow. Scutellum medially more whitish. Elytra hyaline, golden yellow, veins generally concolorous, only apical veins dark brown.

Frons broadening ventrad, strongly depressed medially. Vertex short. Median carina of scutellum distinct, lateral keels more obsolete. Elytra about as in *M. rutshuruensis* Syn. Male genitalia (Fig. 60 a—b) unique.

Resembling *M. rutshuruensis* Syn. (Zaire), but genitalia entirely different.

Equatoria: Nimule, 1 ♂, type, 11—13. III. 1963.

M. inimvuensis Syn.

Length 5—5.5 mm. Yellow-brown. Pronotum whitish yellow. Scutellum



FIG. 60. *Meenoplus ianthe* sp.n.: a genital segment from side; b anal tube, dorsal aspect. — *M. inimvuensis* Syn.: c pygophore and anal tube from side; d stylus; e penis; f appendage of same.

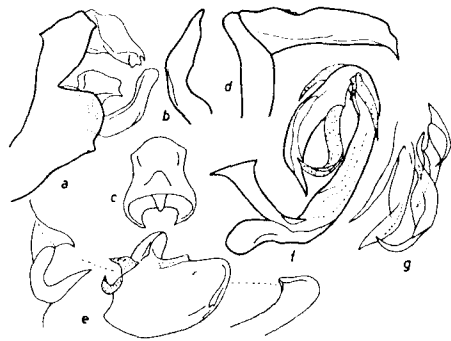


FIG. 61. *Meenoplus kassiphone* sp.n.: a pygophore, anal tube and penis from side; b stylus; c anal tube, dorsal aspect. — *Malenia cydippe* sp.n.: d pygophore and anal tube from side; e stylus; f penis; g apex of same (another specimen).

golden. Elytra brownish smoky, becoming darker apically, veins concolorous. Abdomen dark, sides narrowly pale.

Robust. Frons broadening ventrad, relatively convex, depressed only near upper margin. Median keel of scutellum distinct, lateral keels nearly absent. 3rd apical vein of elytra bifurcate. Male genitalia unique: Anal tube (Fig. 60 c) very long, with a broad basal membrane (marked with broken line in the figure), side lobes of pygophore (Fig. 60 c) broadly insinuated. Stylus (Fig. 60 d) with a long subapical process. Penis (Fig. 60 e—f) with two long, bifurcate basal processes.

52, 1 ex.; 63—62, 2 exx.; 62, 1 ex.; 66—64, 2 exx. Zaire.

M. kassiphone sp.n.

Length 5—6.2 mm. Like the preceding, but more robust and dark brown, with only head and legs somewhat paler. Male genitalia: Anal tube (Fig. 61 c) short, apical margin broadly insinuated, apico-lateral angles sharp. Side lobes of pygophore (Fig. 61 a) with a deep V-shaped notch. Penis (Fig. 61 a) short. Stylus (Fig. 61 b) simple, sharp-tipped.

Equatoria: Lotti forest, 1 ♂, type and 1 ♀ paratype, 14—17. III. 1963.

M. nausikaa sp.n.

Length 2.5 mm. Blackish brown. Upturned lateral margins of frons and vertex yellowish brown. Margins of pronotum narrowly and tegulae whitish. Scutellum black. Elytra dark coffee-brown, costal cell paler, veins concolorous. Legs dark brown, hind tibiae and tarsi yellowish brown.

Very small, but relatively robust. Clypeus convex. Frons broadening markedly ventrad, rather convex in lower two-thirds, dorsally somewhat concave. Vertex very short. Scutellum with a faint median carina, lateral keels absent. Elytra with two bifurcate apical veins.

Easily distinguished by the very small size and the dark colouring.

Equatoria: Kapoeta-Boma, 1 ♀, type, 26—27. III. 1963.

DERBIDAE

MALENIA Hv. (= *Cedusa* auct.)

M. fusca (Muir)

The Sudanese specimens possibly represent a related species differing from the typical *fusca* in the yellow-brown head and thorax. Anyhow, according to the original description (Muir 1928: 500), one specimen of the type series is similarly coloured.

77, 2 exx. S. Africa.

M. cydippe sp.n.

Length 3.2—5.2 mm. Shiny. Light yellow-brown. Frons sometimes with a red median dash. Median keel of scutellum often orangish. Elytra hyaline, yellowish brown, apical part sometimes slightly infuscate, veins concolorous. In one specimen there is a longitudinal fuscous band extending from the base of the clavus caudad across the corium, broadening apicad and filling most of

the apex of the elytron. Wings hyaline, veins concolorous of slightly darker.

Clypeus long and narrow, medially carinate. Frons distinctly broadening ventrad, broadest at the beginning of the lower third, then tapering towards clypeus, ecarinate, lateral margins strongly upturned. Vertex distinctly broader than long. Median keel of scutellum distinct, lateral keels rather obsolete. Male genitalia: Anal tube (Fig. 61 d) very long. Side lobes of pygophore short, shallowly curvate. Stylus as in Fig. 61 e. Penis (Fig. 61 f—g) with a long stem, provided with falcate appendages as indicated in the figure. Pregenital plate (♀) bluntly triangular.

Most closely related to *M. aburiensis* (Muir), but differing in, e.g., the shape of the styli. *M. natalensis* (Muir) is bigger, with a dark abdomen.

83, 1 paratype; Equatoria, Nimule, 1 ♂, type and several paratypes, 11—13. III. 1963; 62, 1 paratype.

PROUTISTA Kk.

P. fritillaris (Bh.) — 83, 2 exx.; 63—62, 2 exx.; 61, 1 ex., British Museum; 62, 1 ex. Swept from a swamp. Tropical Africa.

ZORAIDA Kk.

Z. sudanica Syn. — 77, 1 ex. At lamp in a rain forest. Endemic.

PARAPHENICE Muir

P. dissimilis Syn. — 62, 1 ex. Endemic.

DIOSTROMBUS Uhl.

D. whitfieldi Muir — 22—25, 2 exx.; 39, 1 ex., British Museum. Endemic.

D. apicalis miniacea Muir — 83, 1 ex. East Africa.

D. hancocki Muir — 66—67, 1 ex. East Africa.

KAMENDAKA Dist.

K. albomaculata Muir — 25, 2 exx.; 22—25, 1 ex.; 64—63, 1 ex.; 62, 1 ex. Previously known from W. Africa (Sierra Leone).

K. ugandensis Muir — 77, 1 ex. Previously known from Uganda.

K. hyalina Syn. — 64—63, 1 ex. Endemic.

K. kordofana Syn. — 38—37, numerous exx. On *Borussus flabelliferus*. Endemic.

LOPHOPIDAE

LOPHOPS Spin.

L. servillei Spin. — 22—25, 1 ex.; 64—63, 1 ex.; 62, 1 ex. W. Africa (Cameroon etc.), Zaire, E. Africa.

L. angustipennis St. — 26, 2 exx.; 84, 1 ex.; 85—84, Geil, 2 exx.; 30—31, 1 ex.; 46, 2 exx.; 46—45, several exx.; 53, 3 exx.; 54, 1 ex.; 51, 1 ex.; 70, 1 ex. On *Gramineae* (*Phragmites* etc.) in shore meadows. Eremian (N. Africa: Tunisia, Egypt, Senegal).

ELASMOSCELIS Spin.

Recently revised by SYNAVE (1958: 19—24) and 1962:23—35.

E. cimicoides Spin. — 83, 1 ex.; 63—62, 1 ex.; 64—63, 2 exx.; 62, 1 ex. Zaire, E. and S. Africa.

E. trimaculata Wk. — 63—62, 1 ex.; 64—63, 1 ex. W. and E. Africa, Zaire, Ethiopia, Socotra.

E. garambaensis Syn.

Length 6—7.2 mm. Like *E. trimaculata*, but penis (Fig. 59 d—e) entirely different, stout, provided with two pairs of falcate appendages, the ventral pair long and slightly diverging apicad, the dorsal pair shorter and lying close to each other, moreover a long unpaired dorsal horn also present.

70, 3 exx.; 73—75, several exx.; 66—64, 1 ex. Zaire.

E. impala sp.n.

Length 5.5—6.5 mm. Like the preceding, but smaller. Penis (Fig. 62 e—f) slender, with a pair of long, spiral appendages like the horns of an impala antelope, stem ventrally membranous.

Equatoria: Juba-Nimule, 1 ♂, type and 1 paratype, 10—11. III. 1963; 73—75, 1 paratype; 74, 1 paratype.

E. punctata Syn. — 78—79, 1 ex.; 77, numerous exx.; 62, 2 exx.; 66—67, several exx. Previously known from Zaire.

E. damon sp.n.

Length 6.5 mm. Like *E. punctata*, but

somewhat smaller and paler: median red band of frons not reaching the lower margin, upturned lateral margins of vertex with only 3 small, obscure brownish spots, pronotum and scutellum mainly yellowish brown and elytra paler, with base of costal margin with distinct transverse pale stripes. Penis (Fig. 62 a—b) stout, with two pairs of appendages: the first pair two-branched, one branch short and directed dorsad, the second long, at first directed ventrad and then strongly deflected apical along the ventral margin of penis, the common stem of the branches short; the second pair lying close to each other in the dorsal surface of penis, these appendages expanded subapically.

Blue Nile: Ingessana Mts., 1 ♂, type, 17—22. XI. 1962.

E. spinifer sp.n.

Length 7—8.2 mm. Like *E. damon*, but bigger, the upturned lateral margin of vertex with only two faint orangish spots and corium without a hyaline median spot. Penis (Fig. 62 c—d) narrower in lateral aspect, with two pairs of appendages: the first pair much as in *damon* (two-branched), the second much shorter and straight (in *damon* distinctly deflected dorsad in the apical

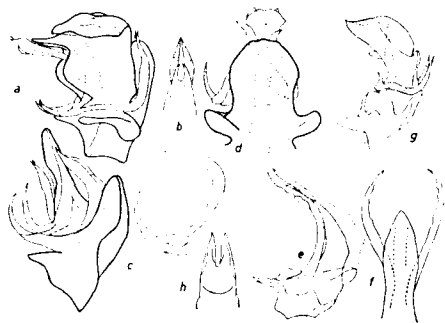


FIG. 62. *Elasmoscelis damon* sp.n.: a penis from side; b apex of same, ventral aspect. — *E. spinifer* sp.n.: c—d same. — *E. impala* sp.n.: e—f same. — *E. despecta* Mel.: g—h same.

part), falcate, without a conspicuous subapical expansion.

South Yemen: Al Hussein, near Lahej, 1 ♂, type and a paratype, 29. XI. 1937, Scott and Britton, British Museum, paratype in my collection. Possibly a synonym of *E. iram* Kk. (*Socotra*) synonymized with *E. trimaculata* by MELICHAR 1915: 360.

E. despecta Mel.

This and the following species differ from the others in the completely pale lateral margins of the vertex. Penis as in Fig. 62 g—h.

74, 3 exx. Previously known from French Sudan.

E. saegeri Syn.

Length 6.5 mm. Like *E. despecta*, but much smaller, elytra with only the large transverse pale spot at middle of costal margin (apical margin only very slightly paler) and legs with ± distinct pale markings. Penis (Fig. 67 e) with two pairs of appendages: the basal pair strongly curvate, the second pair very long, extending far beyond apex of penis; also a single horn-shaped process present basally in the dorsal surface.

83, 1 ex.; 54, 3 exx.; 51, 1 ex. Zaire.

TROPIDUCHIDAE

TROPIDUCHUS St.

T. marpsias sp.n.

Length 9 mm. Yellowish, probably green in life. Apical cells of elytra with a transverse fuscous stripe along apical margin.

Vertex in middle line shorter than an eye, slightly shorter than pronotum, 4 × as broad as long, lateral margins distinctly curvate, apical margin arched; disk strongly concave owing to the elevation of the margins, a slight median keel present basally. Frons broadening somewhat ventrad, broadest below antennae, 1.53 × as long as broad, median keel sharp but not incassate, lateral margins elevated; clypeus with a sharp



FIG. 63. *Tropiduchus marpsias* sp.n.: a anal tube, pygophore, stylus and penis from side; b right stylus. — *Numicia lotis* Fenn. (Yambio): c penis; d—g appendages Nos. 1, 2, 3 and 4 of same.

median keel. Elytra about 2.3 × as long as broad, venation about as in *T. iphis* Fenn. (the 1st sector bifurcate relatively near base, before the middle of elytra), costal margin with about 20 cross veins. Male genitalia as in Fig. 63 a—b. Penis with a dentate, sharply triangular subapical expansion. Styli fused to each other, asymmetrical.

Apparently related to *T. iphis* Fenn. (Zaire), known in the female sex only, but elytra considerably longer and provided with distinct fuscous marginal stripes in all apical cells. Genitalia distinctive.

Equatoria: Lotti forest, 1 ♂, type, 14—17. III. 1963.

NUMICIA St.

N. ghesquierei Lall. — 63—62, 1 ex.; 68, 1 ex.; 77, 1 ex.; 75, 1 ex.; 64—63, 1 ex.; 74, 1 ex.; 76—81, 1 ex.; 62, 1 ex. In moist localities, swamps, shores, forests etc. Zaire.

N. chiron Fenn. — 64—63, 1 ex. Zaire.

N. lotis Fenn.

Penis as in Fig. 63 c—g.
62, 1 ex. Previously known from Zaire.

N. orphana sp.n.

Length 5.5—7 mm. Like *N. lotis* Fenn. (also penis), but 1) smaller 2) uniformly yellowish green (only one

specimen with traces of fuscous pattern in apical part of elytra), 3) vertex 0.7 × as long as broad at apex of posterior emargination (1.0 × or more in *lotis*), 4) frons 1.65 × as long as broad (2 × in *lotis*) and 5) elytra narrower, scarcely broadening apically, about 3 × as long as broad (in *lotis* distinctly broadening apically, 2.5 × as long as broad).

Kassala: Erkowit, 1 ♂, type and some paratypes, 4—5. XI. 1962. On *Phoenix* sp.

N. talassio sp.n.

Length 5.5—6.5 mm. Like *N. lotis*, but 1) smaller, 2) vertex and median parts of pronotum and of scutellum without dark bands; fuscous pattern of elytra as in *lotis*, but hyaline area somewhat larger, 3) vertex 0.83 × as long as broad at apex of the posterior emargination, 4) frons 1.7 × as long as broad and 5) process No. 1 of penis (Fig. 64 a—c) much broader, blade-shaped and process No. 4 simple, falcate.

Equatoria: Yambio, 1 ♂, type and 1 ♀ paratype, 18—25. IV. 1963.

N. memnon Fenn. — 83, 4 exx.; 77, 2 exx.; 64—63, 1 ex.; 74, 3 exx.; 73—75, 1 ex.; 62, 2 exx.; 66—64, 2 exx. In moist localities. Previously known from Zaire.

N. gorgo sp.n.

Length 7.5—8.5 mm. Like *N. taenia* (F.), but differing in the absence of the apical appendage of penis (Fig. 64 d—e).

Vertex 1.24 × as long as broad at



FIG. 64. *Numicia talassio* sp.n.: a—b penis; c appendage No. 4 of same. — *N. gorgo* sp.n.: d penis; e appendage No. 2 of same.

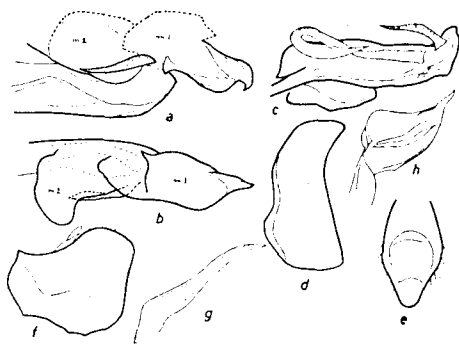


FIG. 65. *Numicia doleib* sp.n.: a—b penis (m_1 and m_2 = the membrane lobes). — *Catullaria ugandae* Muir: c penis. — *Ommatissus tumidulus* sp.n.: d pygophore from side; e anal tube, dorsal aspect; f stylus; g stem, h basal lobe of penis.

apex of the posterior emargination. Frons $2 \times$ as long as broad.

In *N. maenia* Fenn. appendage No. 2 of the penis is similarly shaped, but, according to the original figures (FENNAH 1957: 130), appendage No. 1 is bifurcate and dissimilarly shaped.

Equatoria: Yambio, 1 ♂, type and 2 ♀ paratypes, 18—25. IV. 1963.

N. doleib sp.n.

Length 5.5—7 mm. Pale green. Vertex with a fuscous stripe starting from apico-lateral corner and directed medio-basad on either side. Median area of pronotum with two round black basal spots. Scutellum with a roundish black spot on either side. In ♂ tegulae also dark. Pattern of elytra as in *N. canopus* Fenn., but in ♀ the apical fuscous figure \pm strongly reduced to minor separate spots, the most distinct of which is located by pterostigma, the basal transverse band broadening mesad (♂♀) and not laterad as in *canopus*, in ♂ branch extending from the apical figure into apical part of clavus. Spines of legs black-tipped.

Body much as in *N. canopus*. Vertex

0.73—0.80 \times as long as broad at apex of the posterior emargination. Frons 1.4 \times as long as broad. Elytra rather parallel-sided, 3.2 \times as long as broad. Penis (Fig. 65 a—b) with two large membranous lobes.

Differing from *N. canopus* Fenn. in the blackish markings of the vertex and the thorax and in the shape of the penis.

51, 1 paratype; 61—52, 1 paratype; 30 km N of Terakeka, 1 ♂, type, 4—5. III. 1963. On doleib palm (*Borassus flabelliferus*).

CATULLIARIA Muir

C. ugandae Muir. Penis as in Fig. 65 c. — 78—79, 3 exx.; 66—67, several exx. Previously known from Uganda.

C. brevipennis Syn. — 62, several exx. Zaire.

OMMATISSUS Fb.

O. tumidulus sp.n.

Length 4.5 mm. Like *O. binotatus* Fb., but darker and the black spots on pronotum and frons larger. Frons distinctly tapering ventrad (rather parallel-sided in *binotatus*), with lateral margins more strongly upcurved and disk distinctly microsculptured. Elytra shorter. Stylus (Fig. 65 f) much broader. Stem of penis shorter, length 0.375 mm., the basal plate (Fig. 65 g—h) broad. Other genitalia as in Fig. 65 d—e.

Kassala, Erkowit, 1 ♂, type and many para-

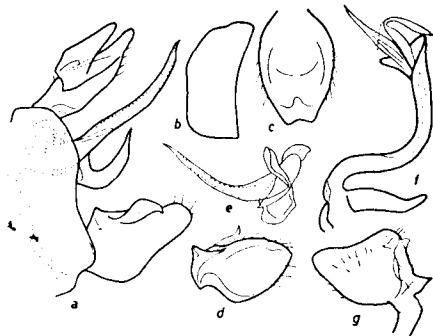


FIG. 66. *Ommatissus binotatus* Fb. (Iraq): a genital segment from side. — *O. alpinus* sp.n.: b pygophore from side; c anal tube, dorsal aspect; d stylus; e penis. — *Trypsetimorpha canopus* sp.n.: g stylus; f penis.

types, 5—10. VII. 1961; 10, 1 paratype; 14, several paratypes. On *Phoenix* sp.

O. binotatus Fb (= *lybicus* Bgv.)

Male genitalia in Fig. 66 a. Stylus distinctly narrowing apicad. Stem of penis long, length 0.495 mm., basal plate thin, digitate.

Material studied: Iraq, Basrah, 1 ♂, 29. V. 1935, Dowson, British Museum. On date palm.

O. alpinus sp.n.

Length 4.5 mm. Usually macropterous. Mainly coffee-brown. Margins and keels of head and of thorax yellowish brown. Upper margin of frons and sides of pronotum with the large round black spots common in the genus, tip of scutellum pale. Elytra hyaline, faintly brownish, veins brown. Segmental margins of abdomen narrowly pale. Under surface blackish. Femora dark brown, other parts of legs yellowish brown.

Resembling *O. binotatus*, but narrower. Frons strongly tapering ventrad, 1.5 \times as long as broad, median keel sharp. Vertex nearly 0.6 \times as long as broad. Pronotum and scutellum with distinct keels. Elytra distinctly longer than abdomen in the brachypterous form, and much longer in the macropterous form. Male genitalia: Side lobes of pygophore (Fig. 66 b) roundedly truncate apically. Anal tube (Fig. 66 c) broadly ovate, apical margin slightly insinuated. Stylus (Fig. 66 d) ovate, with a falcate dorsal process. Penis (Fig. 66 e) with stem thin, sharp-tipped, basal plate small.

Easily recognized by the dark colouring etc.

Equatoria: near Gilo, alpine zone, 1 ♂, type, and several paratypes, 18—24. III. 1963.

TRYPSETIMORPHA C.

T. canopus sp.n.

Length 3.5—4.5 mm. Yellow-brown. Frons with a broad, blackish transverse band in lower part and a faint brown

median spot in upper half. Tip of clypeus dark. Genae with two black transverse spots. 1st and 2nd antennal joints with a black transverse stripe on anterior surface. Uprturned lateral margins of vertex with a small dark spot. Pronotum laterally slightly darker. Sides of scutellum with golden tinge. Elytra hyaline, medially largely dark brown; veins mainly concolorous, in costal and apical margin dark brown, basally also narrowly bordered with the same colour. ♀ with a shiny black knob on either side of apex of abdomen. Legs with irregular fuscous spots and lines.

Resembling *T. pilosa* Hv. in general appearance, but more robust. Face and elytral veins with erect hairs. Clypeus with a triangular knob. Frons relatively parallel-sided, 1.36 \times as long as broad, median keel sharp. Vertex pentagonal, 0.8 \times as long as broad. Stylus and penis in fig. 66 f—g. Pygophore (♀) with a triangular dorsal hump on either side.

Differs from *T. pilosa* Hv. in the larger size, the frontal markings, the absence of large round milky spots in the dark central area of the elytra and in the only narrowly fuscous marginal veins of the elytra.

Blue Nile: Ingessana Mts., 1 ♀, type and 2 paratypes, 17—22. XI. 1963.

MANGANEUTES Fenn.

M. agenor Fenn. — 1, 1 ex.; 29. IX. 1962, Panelius; 15, 2 exx.; 17, 3 exx.; 19—18, 1 ex. In dry localities. Previously known from Somalia.

NOGODINIDAE

PHILBYELLA Ch.

P. elba sp.n.

Length 9—10 mm. Like *P. arabica* Ch., but much more robust. Vertex 2.82 \times as broad as long medially, anterior margin distinctly angulate. Frons 1.56 \times as long as greatest width. Costal

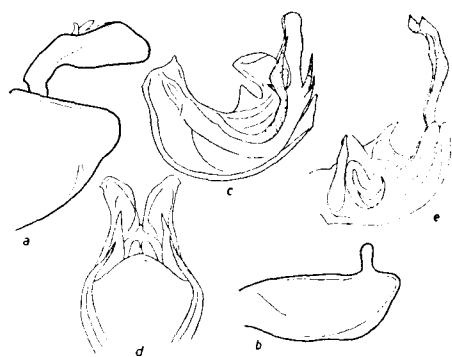


FIG. 67. *Philbyella elba* sp.n.: a pygophore and anal tube; b stylus; c penis from side; d apex of same, ventral aspect. — *Elasmoscelis saegeri* Syn.: e penis from side.

margin of elytra with about 10 dark spots.

Male genitalia: Side lobes of pygophore (Fig. 67 a) roundedly triangular. Anal tube (Fig. 67 a) distinctly broadening apicad in later aspect. Stylus in Fig. 67 b. Penis (Fig. 67 c—d) short and broad, strongly recurved dorsad, with two pairs of falcate processes in apical part, dorsal surface with an unpaired triangular subapical lobe.

P. arabica Ch. is much smaller and has a much narrower anal tube. *P. glareae* Dlab. (Iran) is dissimilarly coloured, has an anal tube with a still more expanded apical part and a differently shaped penis.

Kassala: Jebel Elba, 1 ♂, type and 2 ♀ paratypes, 10—14. XII. 1962. At lamp.

P. ailet sp.n.

Length 8.5 mm. Like the preceding, but slightly smaller. Vertex anteriorly more rounded. Male genitalia: Pygophore and anal tube as in the preceding species, but anal tube longer and somewhat narrower. Stylus as in fig. 68 a. Penis (Fig. 68 b—c) longer and narrower in lateral aspect, with two long basal

lobes directed dorsad, apical part with 4 pairs of claw-like processes.

Eritrea, Ailet, 1 ♂, type, 30—31. V. 1963. Somalia, Daragodleh, 1 ♀ paratype, 25. VI. 1963. At lamp.

ISSIDAE

Recently revised by SYNAVE (1957 a: 1—78).

CALISCCELIS Lp.

C. eximia St. — 19—18, 4 exx.; 72—74, 1 ex.; 74, 1 ex. Previously known from Ceylon and Turkestan.

C. berenice sp.n.

Length 3.5—4 mm. Shiny. Blackish. Frons and vertex with a very fine, indistinct pale median stripe. Margins of vertex and pronotum, and keels of scutellum very narrowly pale. Elytra yellow-brown, with a ± distinct, large shinier, squarish dark brown spot across corium; claval suture with a white, callose, longitudinal narrow stripe extending to near upper apical angle of elytra, this stripe narrowly bordered with blackish on either side; the pale areas of elytra less shiny. Dorsum of abdomen black, with an irregular yellowish brown median stripe in basal half, 1st visible tergite with a large triangular whitish yellow spot on either side; venter black,



FIG. 68. *Philbyella ailet* sp.n.: a apex of stylus; b penis from side; c apex of same, ventral aspect. — *Myrmissus bellicosus* gen. et sp.n.: d. — *Afronaso rhinarius* Jac.: e head from side.

with a large yellowish white triangular basal spot; connexivum partly narrowly pale. Thorax pale ochraceous, propleurae mainly dark, metapleurae with a large shiny black spot. Legs dark, with minute pale irroration, middle and hind legs paler.

Gracile. Frons $1.36 \times$ as long (total length as broad, nearly parallel-sided, its upper part between eyes flat, laterally concave, shagreened, with two distinct median keels diverging ventrad, upper margin concave; lower part of frons strongly convex, shiny, with very fine transverse wrinkles, not shagreened, keels obsolete. Clypeus shiny, convex, ventrally with a median keel. Vertex $1.54 \times$ as broad as long, concave, apical margin roundedly produced. Pronotum with a faint median keel. Lateral keels of scutellum distinct. Elytra coriaceous, $1.5 \times$ as long as broad, apex obliquely truncate; a distinct median concavity in upper part of elytra giving their profile a relatively pronounced saddle-shaped appearance (less pronounced than in *C. wallengreni* St.). Abdomen "ant-shaped", strongly constricted basally, apically strongly convex but narrow. Fore femora and tibiae strongly lamellate; femora triangularly expanded apicad, $2.42 \times$ as long as greatest width; tibiae elongately ovate in outline, $2.1 \times$ as long as broad. Middle and hind legs long and gracile.

Easily distinguished by the colouring, the gracile, "ant-shaped" abdomen, and the structure of the head.

55, 2 ♂, paratypes; Nimule, 1 ♂, type, 11—13. III. 1963.

ASARCOPUS Hv.

A. palmarum Hv. — 17, 1 ex. On date palms. Eremian (Egypt, Arabia).

AFRONASO Jac.

A. rhinarius Jac. — 77, 4 exx.; 60—70, 1 ex. Zaire (Albert Park), E. Africa (Meru).

MYRMISSUS gen.n.

Peculiar, somewhat ant-shaped species. Head relatively large. Vertex sloping apicad, shallowly concave, nearly as long as broad, apical margin rounded and feebly carinate. Face tumid, anterior margin in profile bluntly angular; frons obliquely sloping, moderately convex, slightly longer than broad, lateral margins regularly curvate, disk finely rugose, ecarinate; clypeus sharply conical, medially carinate, basally only faintly separated from frons. Pronotum short, laterally completely concealed by eyes, medially carinate, shallowly concave, with lateral margins elevated. Scutellum globosely humped, basally carinate in middle, apically and laterally broadly concealed by elytra. Elytra short, covering only base of abdomen, strongly saddle-shaped in profile, medially strongly concave, medio-apically produced dorsad in a long beak. Abdomen basally strongly constricted, apically expanded as in ant. Rostrum extending to middle coxae. Legs long and gracile, hind tibiae with one lateral tooth, 5 apical teeth, 1st and 2nd hind tarsal joint with two apical spines.

Type: *M. bellicosus* Lv.

Afronaso Jac. is a closely related genus differing in the long, subhorizontal proboscis (formed by frons and clypeus) of the head (Fig. 68 e), the flat and ecarinate pronotum, the flat median part of the scutellum, the flattish elytra, the basally not constricted abdomen and the shorter and thicker legs.

M. bellicosus sp.n.

Fig. 68 d. Length 2.8 mm. Shiny black. Genae and antennae dark brown. Elytra with an ivory stripe along claval suture, clavus shiny black, other parts of elytra brown. Base of abdomen with an ivory spot on either side. Under surface of thorax medially broadly yellow-brown. Venter basally whitish yellow. Legs yellowish brown, anterior



FIG. 69. *Issopulex chloe* sp.n.: a head from side; b stylus; c anal tube, broad aspect; d penis from side; e apex of same from the direction indicated with arrow. — *I. nasutus* sp.n.: f head from side; g penis, lateral aspect; h same from the direction indicated with arrow.

tibiae darker with whitish apex, tarsi apically dark.

Brachypterous. Vertex nearly as long as broad, slightly sloping apicad. Upper margin of frons concave, lateral margins curvate.

Equatoria: Opari-Magwe, 1 ♂, type, 13.III. 1963.

ISSOPULEX Ch. & Fenn.

The genus was recently described by CHINA & FENNAH (1960:134—137) from the Iles Glorieuses in the Indian Ocean.

I. chloe sp.n.

Length ♂ 2 mm., ♀ 2.25 mm. ♂ shiny black. Frons, except laterally, vertex, pronotum and median parts of scutellum, yellowish brown. Sometimes also commissural margin of clavus narrowly pale. Legs yellow-brown, hind femora ± infuscate. ♀. The pale areas of upper surface more greyish, ± densely rugose and darkly punctate. Abdomen with a pale median stripe on dorsum. Legs dark brown.

Small, ovoid, convex. ♂ finely punctate. Vertex about twice as broad as long, with a roundish shallow depression on either side, anterior keel and lateral

margins not raised. Frons (Fig. 69 a) strongly sloping, roundedly curvate in profile, ecarinate, lateral margins distinctly curvate; clypeus medially keeled, triangular. Pronotum short, ecarinate, laterally completely overlapped by eyes. Scutellum with two round pits. Elytra squarish, as long as broad, coriaceous, rugosely punctate, venation obscure. Dorsum shagreened, but only very finely and sparsely punctate. Hind tibiae with one lateral spine. ♀ more robust. More coarsely punctate and rugose. Frons depressed. Elytra broader than long. Male genitalia in Fig. 69 b—e, aedeagal appendages subequal in length.

Kordofan, Dilling-Kadugli, 1 ♂, type and 1 ♂ paratype, 1—2. II. 1963. 85—84, 1 ♀ paratype; 72—74, 1 ♂ paratype. At lamp in sandy and gravelly places. Apparently living on ground among fallen leaves, etc.

I. nasutus sp.n.

Length 2.2 mm. Shiny black. Face and vertex tinged with brown. Abdomen, under surface and legs yellow-brown. Femora with brown spotting.

More cylindrical. Face (Fig. 69 f) longer, its anterior margin nearly straight in profile, with faint puncturing. Frons tapering ventrad, with traces of 3 keels, the lateral ones rather distinct in upper margin. Clypeus sharply produced, distinctly carinate. Pronotum medially carinate. Pronotum, scutellum and elytra shagreened. Scutellum with only faint roundish depressions. Elytra squarish, longer than broad. Dorsum rugose, finely dotted with brown. Male genitalia much as in the preceding species, but one of the aedeagal appendages (Fig. 69 g—h) much shorter than the other.

Equatoria: Yei-Iwatoka, 1 ♂, type, 12—13. IV. 1963.

GWURRA gen. n.

Sexually dimorphic and pterygodimorphic species resembling the genus *Ommatidiotus* Spin. Body elongate, pa-

ralled-sided. Vertex (Fig. 70 a) longer than broad, basally parallel-sided, apically ± strongly triangularly produced, flat or slightly concave, shagreened, margins sharp but not upcurved, a blunt median keel present. Eyes long, extending caudally to near basal margin of pronotum. Face long, nearly parallel-sided; frons not separated from clypeus by a distinct furrow, with 3 blunt carinae, the lateral ones sometimes evanescent, the median keel continuing on to clypeus. Pronotum short, median lobe flat, shagreened, nearly quadrangular, with 3 keels, the lateral ones slightly diverging caudad. Scutellum with 3 keels, shagreened. Elytra usually reduced, squarish, coriaceous, with indistinct venation and covering only base of abdomen; in the macropterous form longer than abdomen, hyaline, venation as in Fig. 70 f. Abdomen dorsally convex. Genital segment small. Hind tibiae with 1 lateral spine, legs otherwise as in *Ommatidiotus*.

Type: *G. aphrodite* Lv.

Differs from *Ommatidiotus* in the much smaller size, the more strongly marked sexual dimorphism, the shape of the head, the tendency for a stronger

reduction of the elytra, the venation of the elytra and the genitalia.

G. aphrodite sp.n.

Fig. 70 a. Length ♂ 2.2 mm., ♀ 4 mm. Golden or yellow-brown, ♂ shiny, ♀ rather opaque. 2 bright red longitudinal stripes from apex of head to tip of abdomen, and abdomen with a red lateral band on either side. In ♂ these bands are less distinct, but the apical part of the abdomen has a median black band. Sides of abdomen tinged with red. Legs yellowish, femora with a round black apical spot on under surface.

♂ very small. Vertex 1.3 × as long as broad, concave, apex rather bluntly angular. Frons (as also in ♀) strongly convex, median keel not elevated, lateral keels evanescent. Elytra quadrangular, relatively hyaline, extending beyond middle of abdomen, with 3 more distinct longitudinal veins. ♀ with vertex 1.55 × as long as broad, strongly produced apically. Elytra squarish, covering only base of abdomen, coriaceous, rugose, with 3 more distinct longitudinal veins. Male genitalia in Fig. 70 b—e.

56, 1 paratype; near Gwurra, 1 ♂, type, and several paratypes; 54, 1 paratype. In swampy meadows.

G. astarte sp.n.

♀ f.brach. 4—4.5 mm., f.macr. 4.5—5.2 mm. Resembling the preceding but 1) considerably darker: general colour darker brown; the red bands of upper surface less distinct, especially in abdomen evanescent; margins and keels of head and of thorax whitish; abdomen with fine dark dotting; under surface mainly blackish brown; keels of frons and of clypeus pale; venter sometimes medially pale; legs dark brown, (f.brach.) or yellowish brown, with a relatively large black apical spot on under surface (f.macr.) and 2) frons with 3 distinct keels.

Vertex 1.33—1.43 × as long as

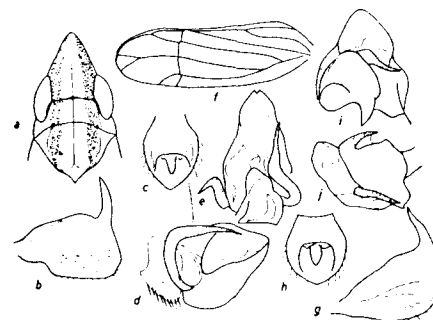


FIG. 70. *Gwurra aphrodite* gen. et sp.n.: a head and thorax (♀); b stylus; c anal tube, broad aspect; d—e penis. — *G. astarte* sp.n.: f elytron (f. macr.). — *G. sappho* sp.n.: g stylus; h anal tube, broad aspect; i—j penis.

broad. Elytra of the brachypterous form as in the preceding species, those of the macropterous form longer than abdomen (Fig. 70 f).

72—74, 1 ♀ paratype; Loka forest, 1 ♀ type and 2 ♀ paratypes, 8—10. IV. 1963; 66—67, 1 ♀ paratype. In swampy meadows, once also found in a field.

G. sappho sp.n.

F. brach. ♂ 2.2 mm., ♀ 3.5—4 mm. ♂ upper surface blackish, with a broad whitish yellow median band completely occupying vertex and extending caudad to tip of abdomen. Face blackish, apex of clypeus pale. Under surface otherwise pale ochraceous. Legs pale ochraceous, femora with 2 oblique transverse black apical stripes on under surface. ♀ Dirty yellowish brown, with dark spotting and irroration. Dorsum of abdomen with 3 pale longitudinal bands with sparse irroration, the median one with a narrow brown longitudinal stripe. Keels of face pale. Venter medially pale, unmarked. Legs as in ♂.

Vertex relatively bluntly produced in both sexes, in ♂ 1.6 ×, in ♀ 1.33 × as long as broad. Frons with 3 keels, the lateral ones weakly developed. Elytra of ♂ quadrangular, extending to middle of abdomen, blackish, medially pale; those of ♀ squarish, covering only base of abdomen, dotted with brown. Male genitalia as in Fig. 70 g—j.

53, 4 paratypes; R. Malmul-Tonj, 1 ♂, type, and several paratypes, 21—22. II. 1963; 60—70, 2 paratypes. Moreover one macropterous female from 26 may also belong to this species. From various meadows.

DURIUM St.

D. scylax sp.n.

Length 3.5—4.2 mm. Uniformly yellow-brown, rather opaque. Elytra with a few very indistinct brownish spots along veins.

Seen from above, anterior margin of head rounded, crown of uniform length, 1.62—1.75 × as broad as long; vertex

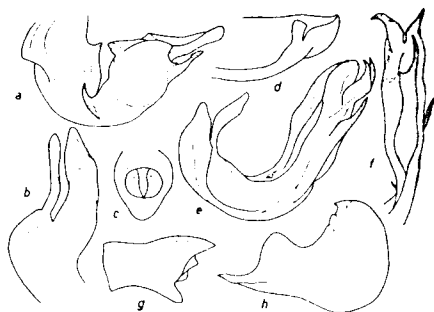


FIG. 71. *Durium scylax* sp.n.: a penis from side; b same; ventral aspect; c anal tube, broad aspect; d apex of stylus, dorsal aspect. — *Trienopa dionaea* sp.n.: e penis from side; f same, ventral aspect; g anal tube from side; h stylus.

anteriorly with blunt rounded angles, delimited by carinae, about twice as broad as long, median carina basally distinct, apically evanescent. Frons 1.5 × as long at middle as broad, lateral margins shallowly curvate, 3 distinct median carinae, the central one extending on to clypeus. Pronotum with a median carina and two small round pits. Scutellum tricarinate. Elytra longer than abdomen, about twice as long as broad, veins elevated. Hind tibiae with 3 distinct lateral spines. Male genitalia: Styli (Fig. 71 d) fused, their general shape as in *D. tschakomensis* Syn. Anal tube (Fig. 71 c) very small. Penis as in Fig. 71 a—b.

Running down to *D. senegalense* (Sgn.) in SYNAVE's key (1957 a:20). That species differs in the darker general colouring, the two brown spots in the costal margin of the elytra and in the shorter frons (1.2 × as long at middle as broad).

Blue Nile: Singa-Damazin, 1 ♂, type and several paratypes (♂♀), 14—17. XI. 1962.

TRIENOPA Sgn.

T. dionaea sp.n.

Length 4.2 mm. Yellow-brown. Upper lateral corners of frons dark. Head and thorax with a greenish tinge. Elytra

dark yellowish brown, extreme costal margin reddish.

Vertex concave, 0.82 × as long as broad, lateral margins roundedly converging apicad in basal half, parallel in apical one, apical margin nearly straight. Frons broadening only slightly ventrad, nearly parallel-sided, 3.1 × as long as broad, lateral margins distinctly up-curved, median keels distinct. Clypeus tumid, median carina rather faint. Pronotum medially concave, carinae elevated, median lobe parabolic. Lateral keels of scutellum very faint, median keel absent. Elytra with a strong medio-basal hump; costal membrane remarkably broad, nearly as broad as clavus, with numerous transverse veins; claval veins not united until in the apical third, apex of clavus distinctly produced; veins of elytra less raised, its surface rugose. Hind tibiae with two lateral spines situated in the apical third. Male genitalia as in Fig. 71 e—h. Styli fused.

Resembling *T. paradoxa* (Gst.) in the broad costal membrane, but differing in the smaller size, the broader median lobe of the pronotum and the dissimilarly shaped penis. A revision of the genus in SYNAVE 1957 a:38—43.

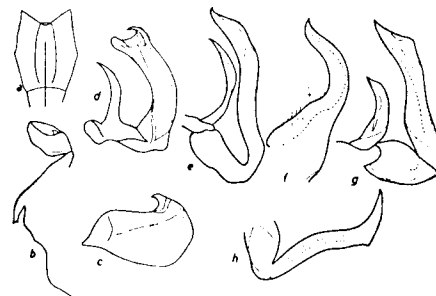


FIG. 72. *Adenissus brachypterus* gen. et sp.n.: a frons; b pygophore and anal tube from side; c stylus; d penis, lateral aspect. — *Hilda undata* (Wk.): e penis from side; f fused styli in lateral aspect. — *H. patruelis* (St.) (Singa-Damazin): g penis, lateral aspect; h same of a small specimen from Lotti forest.

Equatoria: Kapoeta-Boma, 1 ♂, type, 26—27. III. 1963.

HYSTEROPTERUM A.—S.

H. katonae Mel. — Numerous exx. from 78—79 and 79. In undergrowth of the *Podocarpus* zone and in mountain meadows. E. Africa (Kilimandjaro area), Zaire.

H. melichari Schmidt ssp. *viduum* Lv. — 26, several exx. Endemic.

H. melichari Schmidt ssp. *kivuense* Syn. — Many exx. from 79; 78—79; 77 and 66—67. In humid forest biotopes. E. Africa (Kivu), S. W. Ethiopia.

H. concaviceps Lv. — 17, several exx. From scanty herbaceous mountain vegetation in dry localities. Endemic. The taxonomy and distribution of the African *Hysteropterum* species has already been treated by me (LINNAVUORI 1970).

ADENISSUS gen.n.

Body robust and dorso-ventrally depressed. Vertex strongly concave, anterior margin truncate. Frons broadening slightly to the lower angles of eyes, then tapering considerably ventrad, so that lateral margins form a blunt angle, upper lateral angles sharp; median keel absent in upper third, otherwise sharp and extending on to clypeus; lateral keels sharp and nearly parallel, lying closer to the median keel than to the lateral margins (Fig. 72 a), not uniting in the strongly concave upper margin. Disk of pronotum concave, hind margin straight. Scutellum with a median ridge and two short lateral ones. Elytra short, squarish, tectiform, extending only to 4th tergite, venation reticulate. Flying wings reduced. Hind tibiae with one lateral spine. Genital segment (♂) remarkably small. Penis with an unpaired dorso-basal horn.

Type: *A. brachypterus* Lv.

A. brachypterus sp.n.

Length 4.5 mm. Fig. 16 f. Brownish grey. Frons very densely irrorated with black, save above the clypeal suture. Vertex with black lateral margins and with an irregular X-shaped brownish median figure. Pronotum with some

dark spots. Scutellum with dark brown irroration. Elytra blackish, scutellar and commissural margin of clavus and a large ovate area in base of corium pale greyish brown, each elytron thus presenting a roughly semicircular blackish figure. Under surface uniformly pale greyish. Dorsum of abdomen with dark spots and irroration. Legs with fuscous rings and other markings.

Vertex twice as broad as long. Frons $1.44 \times$ as long as broad. Male genitalia as in Fig. 72 b—d.

South Yemen, Lahej. Dhala road, 1 ♂, type and 1 ♂, paratype, 9—15. VII. 1963.

TETTIGOMETRIDAE

Hildinae

HILDA Kk.

1. *H. undata* group:
Crown strongly produced. Face strongly concave in profile.

H. undata (Wk.)

Crown $1.11 \times$ as broad (measured at medio-basal angles of eyes) as long, $1.7 \times$ as long as pronotum. Male genitalia: Stem of penis (Fig. 72 e) long and rather slender, the dorsal process long, falcate in lateral aspect. The fused styli (Fig. 72 f) without a special lobe at the point indicated with an arrow.

Table 1. The variability in the shape of vertex of *Hilda patruelis* (St.)

Locality	Ratio of breadth to length of crown	Ratio of length of crown to length of pronotum
Rustenburg (S. Africa)	1.30—1.43	1.30—1.52
Uganda (1 ex.)	1.33	1.36
Lotti and Kateri	1.42—1.44	1.46—1.60
Nimule and Juba	1.20—1.25	1.50—1.60
Kapoeta — Boma	1.24—1.29	1.48—1.50
Singa — Damazin	1.24—1.26	1.46—1.48
Asmara — Decamere (Eritrea)	1.30—1.33	1.44—1.60
Harrar (Ethiopia, 1 ex.)	1.25	1.50



FIG. 73. *Hilda patruelis* (St.): a fused styli, ventral aspect; b same from side. — *H. minerva* sp.n.: c penis, lateral aspect. — *H. speciosa* Hesse: d head in profile; e penis, lateral aspect; g fused styli, ventral aspect; f same, lateral aspect.

62, 1 ex. W. Africa, Zaire

H. rubrospersa Fenn.

Easily recognized by the large size. Description in FENNAH 1957:117—119.

51, 2 exx.; 68, 1 ex.; 61—52, 1 ex. Previously known from Zaire.

2. *H. patruelis* group:

Crown less produced, although distinctly longer medially than next to eyes, $1.20—1.44 \times$ as broad as long, $1.3—1.6 \times$ as long as pronotum. Face less concave, with upper margin of head not strongly foliaceous in profile. Medium-sized species, length 4.2—5.5 mm.

H. patruelis (St.)

A very variable species in the size, the colouring and the shape of the head. The elytra can be olivaceous or reddish brown, with \pm distinct pale bands as in *undata*, or, like the rest of the upper surface, greyish brown, with fuscous dotting and only poorly developed pale bands. The darkest specimens are strongly irrorate with blackish brown. The face always with a well-delimited black transverse band. The variability in the shape of the vertex is seen in table 1.

The populations from South Africa, Uganda and the Lotti area in the Sudan are relatively short-headed, moreover the Lotti population is noticeably smaller in size. Separate races might possibly be distinguished in this species, if larger series of specimens were studied from different parts of Africa. FENNAH 1957:117) has regarded *H. elegantula* (Gst.) as a race of *patruelis*. *H. paolii* Lall. (Somalia) and *H. welwitschii* Dist. (S. Africa) may possibly also be races of this species. Male genitalia as in Figs. 72 g—h, 73 a—b.

22—25, 1 ex.; 23, 1 ex.; 38—37, 1 ex.; 51, 2 exx.; 72, 2 exx.; 78—79, 2 exx.; 81—82, 2 exx.; 77, several exx.; 74, 1 ex.; 71—81, 1 ex. Widely distributed in Africa (S. and E. Africa, Zaire, Ethiopia, S. W. Arabia).

H. minerva sp.n.

Length 5—5.5 mm. Like *H. patruelis*, but more robust, less elongate and paler.

Colouring: Remarkably pale. Pale yellow-brown. Face usually with only a faint trace of the dark transverse band. Crown, pronotum and often also median parts of scutellum yellowish, immaculate, save for a row of dark spots along anterior margin of crown. Scutellum laterally dark brown. Elytra lighter or darker brown, with a well-developed whitish or greenish pattern of *patruelis* type, costal margin with $3 \pm$ large, pale or green spots, moreover apical part of clavus and the adjacent inner angle of corium \pm pale or greenish; veins and

apex sometimes with a reddish tinge. Under surface and legs pale yellowish, tibiae with distinct black spots.

Crown broadly spatulate, $1.28—1.50 \times$ as broad as long, $1.23—1.48 \times$ as long as pronotum. General shape of head as in *patruelis*. Male genitalia as in *patruelis*, but stem of penis (Fig. 73 c) relatively short, much thicker and strongly deflected, the dorsal process longer and sharper.

6, 2 paratypes; 21, Umm Barona, 1 paratype; Kordofan, Umm Shubeita-Jebel Shivai, 1 ♂, type, 6—7. II. 1963. In dry, sandy localities on shrubs and bushes (*Acacia*, *Quassia italica*).

3. *H. speciosa* group:

Small species. Crown often remarkably short, only slightly longer at middle than next to eyes.

H. speciosa Hesse

Length 3.5—3.7 mm. A small dark species, with a well-developed whitish pattern on elytra. Vertex short, only roundedly produced, $1.35 \times$ as long at middle as next to eyes, $1.44 \times$ as broad as long, $1.6 \times$ as long as pronotum. Face (Fig. 73 d) rather shallowly concave, with lower part relatively convex in profile. Male genitalia: Stem of penis (Fig. 73 e) rather gracile. The central prolongation of the fused styli (Fig. 73 f—g) broad, but sharp-tipped.



FIG. 74. *Hilda ceres* sp.n.: a head in profile; b penis from side; c fused styli, ventral aspect. — *H. diana* sp.n.: d head in profile; e anterior pale band of elytron; f fused styli, ventral aspect; g same, lateral aspect; h penis from side.

Material studied: S. Africa, Natal, Umtentweni, 1 ♂, Capener, in my collection.

H. ceres sp.n.

Length 4 mm. Resembling *H. speciosa*, but paler: Yellowish brown with a greenish tinge. Face with a broad white transverse band, but the dark band narrow and poorly delimited or nearly absent (broad and distinct in *speciosa*), upper part of face with fine reddish dotting. Crown, pronotum and scutellum pale, the first-named sometimes with fine reddish dotting and with dark marginal spots. Basal angles of scutellum black. Elytra with a distinct *undata* pattern: clavus greenish yellow, with only the basal fourth blackish; corium mainly dark fuscous, with the pale pattern mentioned before, area along apical half of claval suture largely greenish yellow, the fuscous colour also broken by lighter areas elsewhere. Femora blackish, legs otherwise pale, tibiae with distinct black spots.

Face (Fig. 74 a) shallowly concave, with lower part much less convex than in *speciosa*. Vertex only roundedly produced as in *speciosa*, $1.35 \times$ as long at middle as next to eyes, $1.4 \times$ as broad as long, $1.35 \times$ as long as pronotum. Male genitalia characteristic: Penis (Fig. 74 b) with stem unusually long and slender, dorsal process falcate. The central prolongation of the fused styli (Fig. 74 c) also very long and narrow.

25, 1 ♂ paratype; Upper Nile; Renk-Malakal, 1 ♂, type, 3—5. I. 1963.

H. diana sp.n.

Length 4 mm. Like *H. speciosa* in colouring, but more opaque and the general colouring of the upper surface darker fuscous (crown and thorax with dense pale irroration). Pattern of elytra mainly as in *speciosa*, but the anterior whitish yellow band (Fig. 74 e) very broad.

Face (Fig. 74 d) as in *speciosa*, but

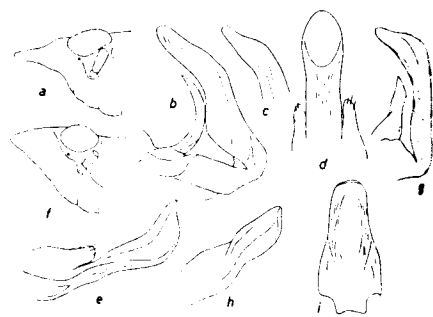


FIG. 75. *Hilda aurora* sp.n.: a head in profile; b penis from side; c apex of same (another specimen); d fused styli, ventral aspect; e same from side. — *H. juno* sp.n.: f head in profile; g penis, lateral aspect; h fused styli, lateral aspect; i same, ventral aspect.

upper part more strongly concave. Crown bluntly roundedly angularly produced as in the short-headed form of *patruelis*, strongly concave, $1.5 \times$ as long at middle as next to eyes, $1.37 \times$ as broad as long, $1.36 \times$ as long as pronotum. Male genitalia: Penis (Fig. 74 h) with stem thick, dorsal surface with a small basal triangular expansion in lateral aspect, dorsal process long and falcate. The central prolongation of the fused styli (Fig. 74 f—g) very broad, apex rounded.

Much smaller than the species of the *patruelis* group. *H. pulchra* (Carl.) (Ethiopia) unknown to me, differs in the colouring (the crown and the pronotum are sulphur-yellow, the pattern of the elytra different, the legs yellow).

Ethiopia, Machi, 1 ♂, type, 9. VI. 1963.

H. aurora sp.n.

Length 3.75—4 mm. Bright green, rather opaque. Clypeus and antennae dark brown, sometimes the former reddish and the latter green. Frons with a whitish transverse band above clypeus, above this faintly orangish, upper part pale. Sometimes a blackish transverse band present on frons. Costal margin

sometimes with dark dots. Legs dark brown, reddish or yellowish, tarsi pale. Variability: Colouring constant. Only one specimen (Ed Daein) dark brown, with minute pale irroration in elytra, but without any traces of the *undata* pattern.

Face (Fig. 75 a) strongly concave, upper margin of head foliaceous, horizontal in profile. Crown only roundedly produced, $1.67 \times$ as long at middle as next to eyes, $1.4 \times$ as broad as long, 1.67 — $1.7 \times$ as long as pronotum. Male genitalia: Penis (Fig. 75 b—c) with stem rather thick, dorsal margin with a rounded basal expansion, dorsal process falcate. The central prolongation of the fused styli (Fig. 75 d—e) broad and apically rounded in ventral aspect, blade-shaped in profile.

11, 1 paratype, 21. I. 1929, Efflatoun; Blue Nile, Wad Medani, Umm Barona, 1 ♀, type, and several paratypes, 26—28. VI. 1961; 36—40, 1 paratype; 45, 1 paratype; 44, several paratypes. South Yemen: Lahej-Dhala road, 1 paratype, 13—14. VII. 1963. On various shrubs and bushes (*Guiera senegalensis*, *Quassia italica*, *Balanites aegyptiaca* etc.) in dry, sandy localities.

H. juno sp.n.

Length 3.75 mm. Rather opaque. Yellowish brown. Face with a broad white and a broad brown transverse fascia, upper margin minutely dotted with brown. Crown and thorax tinged with golden brown and with fine dark brown irroration. Tip of scutellum and elytra yellowish green; costal margin with small fuscous spot in inner apical angle of corium. Under surface yellowish. Legs pale ochraceous, with dark irroration.

A small species, resembling the preceding, but face (Fig. 75 j) only slightly concave in profile. Vertex considerably shorter, $1.37 \times$ as long at middle as next to eyes, $1.6 \times$ as broad as long, $1.3 \times$ as long as pronotum. Male genitalia characteristic: Penis (Fig. 75 g) with stem short and robust, dorsal process short. Styli entirely fused (Fig. 75

h—j), forming a broad, spatulate plate, without separate basal lobes. Ethiopia, Machi, 1 ♂, type, 9. VI. 1963.

RICANIIDAE

POCHAZIA A.—S.

P. fasciata (F.) — 77, 1 ex. Palaeotropical (tropical Africa, India, Indonesia).

POCHAZOIDES Sgn.

P. schoutedeni Schm. — 17, 1 ex. Previously known from Eritrea.

RICANIA Gm.

R. hedenborgi St. — Sudan (METCALF 1955: 63). Pontomediterranean.

R. quinquefasciata St. — 26, several exx.; 39, 2 exx., Wilson, Mus. Oxford. Palaeotropical (tropical Africa, the Oriental region, China).

R. fuscata Mel. — 77, 2 exx. W. Africa (Cameroon, Nigeria etc.), Zaire.

R. atra Lall. — 66—67, 1 ex. Previously known from Zaire.

PRIVESA St.

P. pusilla sp.n.

Length 7—8.5 mm. Ochraceous. Upper margin of frons dark brown. Crown and pronotum with irregular dark markings, the most distinct of which form two faint longitudinal median bands. Base of scutellum blackish with 3 branches extending apicad. Elytra with irregular dark fuscous vermiculate stripes, especially apical area darkened, costal margin with 3 dark brown areas. Abdomen partly embrowned. Legs pale.

Small. Frons $0.75 \times$ as long as broad, lateral margins curved, disk with 3 keels, the lateral ones starting from the upper margin between the median keel and the lateral margins, slightly nearer to the latter than to the former. Clypeus flattish, with a faint median keel and faint oblique transverse stripes. Crown very short and broad, apical margin slightly curved. Pronotum with a median carina. Scutellum with 3 keels. Elytra $2.3 \times$ as long as broad, venation of the common type. Hind tibiae with

2 lateral spines. Male genitalia as in Fig. 81 c—e.

Easily recognized by the small size. South Yemen: Jebel Jihaf, 1 ♀, type, British Museum, 1 ♂, paratype, my collection, IX. 1937, Scott and Britton.

FLATIDAE

Recently studied by SYNAVE (1955) and FENNAH (1957).

FLATINA Mel.

F. liciata Mel.

In the Sudanese specimens the oblique transverse red bands of the elytra are very reduced (only two of them are more distinct) and the whitish spots absent.

77, 2 exx. W. Africa, Zaire

F. rubrotincta (Hgl.)

In the studied specimen the red spots of the elytra are nearly totally absent.

66—67, 1 ex. W. Africa Zaire.

GYARINA Mel.

G. nigritarsis (Karsch) — 78—79, 1 ex. E. Africa, Zaire.

GYARIA St.

G. limbipunctata (Karsch) — 25, 1 ex.; 26, 2 exx.; 39, 1 ex., Wilson, Mus. Oxford; 38—37, 1 ex. Previously known from Zaire.

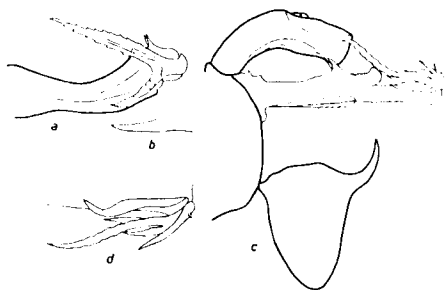


FIG. 76. *Paranotus deiopieia* sp.n.: a penis from side; b lower aedeagal appendage of another specimen. — *Cryptostata paphia* sp.n.: c apex of abdomen from side.

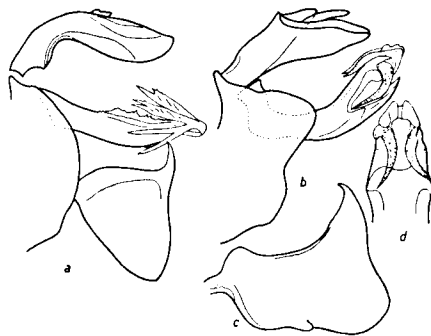


FIG. 77. *Cryptostata paphia* sp.n.: a apex of abdomen from side. — *Phantia pinax* (Fenn.): b—c same; d apex of penis, ventral aspect.

G. longispina Syn. — 52, 1 ex.; 73—75, 1 ex. Zaire.

PARANOTUS Karsch

P. rufilinea (Wk.) — 72—74, 1 ex.; 70, several exx.; 77, 3 exx. W. Africa, Zaire, E. Africa.

P. deiopieia sp.n.

Length 6.5—8 mm. Like *P. rufilinea*, but 1) frons somewhat shorter, less shiny, medially carinate only in the upper two-thirds, 2) pronotum and scutellum nearly ecarinate, the latter also shorter, 3) apical margin of elytra more distinctly bordered with brown and 4) penis (Fig. 76 a—b) dissimilar, provided with two bifurcate appendages, the upper branch of which is dentate and much longer than the lower branch. Other genitalia as in *rufilinea*.

Upper Nile, Malakal, 1 ♂, type, 5—20. I. 1963; 38—37, 1 paratype; 53, 1 paratype; 46—45, 1 paratype.

CRYPTOFLATA Mel.

C. soaemis Fenn. — 52, 4 exx. Previously known from Zaire.

C. paphia sp.n.

Length 11—13 mm. A small species resembling *C. soaemis* in general appearance, but with apical two-thirds of commissural margin of clavus darkened. Frons only somewhat longer at middle

than broad (39:37), lateral margins distinctly curvate and only slightly upcurved; disk convex, with a less distinct median carina. Male genitalia as in Fig. 76 c. Caudal margin of side lobes of pygophore rounded. Anal tube strongly curvate in lateral aspect. Penis with 5 apical appendages on either side, the longest one spiral, and with two claw-shaped processes in the middle of the dorsal surface and a paired, setigerous longitudinal lamella in front of them, ventral surface scored and provided with a minutely dentate median keel.

Blue Nile, Umm Banein, 1 ♂, type, and 2 paratypes, 14. XI. 1962; 21, 1 paratype; 85—84, 1 paratype; 44, 1 paratype.

C. hera sp.n.

Length 10.5—12.5 mm. A small, green species resembling the preceding, but costal and apical margins of elytra uniformly green. Commissural margin of clavus only slightly infumated.

Frons distinctly longer at middle than broad (36:30), broadest below antennae, lateral margins in the upper part straight, diverging ventrad, then, below antennae, roundedly curvate mesad, distinctly upcurved; disk flat, with a strong median carina. Vertex apically sharply carinate. Structure otherwise as in the preceding species, but the male genitalia different (Fig. 77 a). Anal

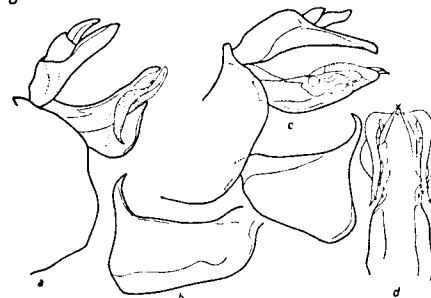


FIG. 78. *Phantia artemis* n.sp.: a pygophore, anal tube and penis from side; b stylus. — *Caesonia danae* sp.n.: c apex of abdomen from side; d apex of penis, dorsal aspect.

tube in lateral aspect longer and apically much narrower. Penis shorter, apex with a pair of 4-branched short and rather thick appendages, dorsal surface of stem in apical part with two irregularly dentate longitudinal lamellae, ventral surface strongly keeled medially.

Both new species differ from the small-sized *C. parvula* Mel. (Mali) in the acute anal angle of the elytra.

43, 1 paratype; 33—34, 1 paratype; Darfur, Ed Daein, 1 ♂, type, and 2 paratypes, 3—7. V. 1963. On *Guiera senegalensis*.

PHANTIA Fb.

P. pinax (Fenn.), comb.n.

Caesonia pinax FENNAH 1958: 534—535.

Originally described as *Caesonia*, but in fact closely related to *Phantia subquadrata* (H.—S.), e.g. the male genitalia (Fig. 77 b—d) are very similar.

Many exx. from 24—24 a; 26; 22—25; 23; 21; 84; 35—36; 41; 33—34; 50; 55; 72—74; 59—60; 76—81. Common in meadows and savannahs. Previously known from Senegal.

P. artemis sp.n.

Length 7 mm. Very similar to *P. pinax*, but paler. Especially elytra tinged with green, in ♂ uniformly green, in ♀ with a bar of larger fuscous spots in addition to the small dots present in *pinax*. Frons considerably longer and narrower (ratio median length: breadth = 20:19), with lateral margins much less expanded below eyes. 1st antennal joint of ♂ incrassate, darkish. Elytra 1.70—1.75 × as long as broad. Male genitalia (Fig. 78 a—b): Anal tube rather narrow. Side lobes of pygophore broadly rounded. Styli relatively narrow, with a long dorso-apical horn. Penis with two long, falcate appendages, lower margin of penis with a high rounded lamella.

P. belleri Lv. (Iran) is closely related, but provided with much longer and narrower elytra and a still narrower frons.

Blue Nile: Ingegana Mts., 1 ♂, type, and several paratypes, 17—22. XI. 1962. In mountain meadows.

P. coniceps sp.n.

Length 8 mm. Like *P. indicatrix* Wk. (see LINNAVUORI 1962: 4), but 1) bigger, 2) vertex strongly produced (Fig. 83 e—f), narrowly conical, $1.33 \times$ as long as broad basally, $1.25 \times$ as long as pronotum, slightly concave in profile, provided with a faint median keel extending to tip of scutellum, 3) frons much longer, $1.44 \times$ as long at middle as broad and 4) elytra longer, nearly $2.4 \times$ as long as broad, cells embrowned, veins pale.

South Yemen: near Lahej, 1 ♀, type 9—15. VII. 1963.

CAESONIA St.

Very closely related to *Phantia*, differing in the two lateral spines of the hind tibiae (one in *Phantia*). The other characters (median keel of frons, size of ocelli, absence of cross veins in clavus and shape of elytra) mentioned by MELICHAR (1902: 255) are unreliable, since they vary considerably in the genus *Phantia*.

C. aethiopica (Lv.), comb.n.

Phantia aethiopica LINNAVUORI 1962: 1.

Possibly a synonym of *C. bellula* St. as interpreted by SYNAVE (1955: 40—42) (the shape of the penis similar), although the distinct dark spots of the elytra of *aethiopica* have not been reported for *bellula* by MELICHAR (1902). According to his measurements the size of *bellula* is also smaller, 5.5—6 mm.

Material studied: East Africa: Kware near Moshi, 1 ♀, allotype, and Makoa, 1 ♂, type, Lindner, in Mus. Stuttgart.

C. danae sp.n.

Length 8 mm. Externally resembling *C. aethiopica*, but penis (Fig. 78 c—d) dissimilarly shaped: apical appendages shorter and dissimilarly curvate, apex of penis with two falcate median processes, under surface of penis without a long, unpaired, sharp-tipped processes.

C. rwindiensis (Lall. & Syn.) differs

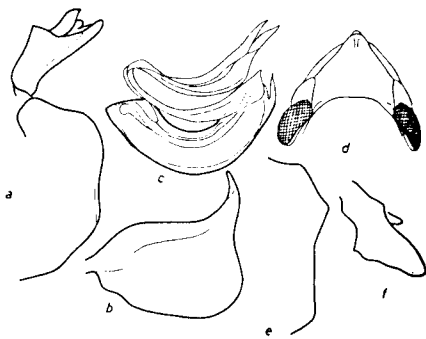


FIG. 79. *Afrophantia iphigeneia* sp.n.: a) pygophore and anal tube from side; b) stylus; c) penis, lateral aspect. — *Juba barchanorum* sp.n.: d) head (♀); e) pygophore from side; f) anal tube.

in e.g., the shorter and broader elytra (see SYNAVE 1962: 89).

Upper Nile: Renk-Malakal, 1 ♂, type, and 1 ♂, paratype, 3—4. I. 1963.

AFROPHANTIA Fenn.

A. iphigeneia sp.n.

Length 3.5 mm. Uniformly yellow-brown. Spines of hind tibiae black-tipped.

Very small, but relatively robust. Frons slightly broader than long at middle (19:20), lateral margins curvate and only slightly upturned; disk convex, shiny, median carina distinct only in the upper half. Vertex about twice as broad as long, apically subtruncate, anterior margin sloping ventrad, without a distinct transverse carina. Median lobe of pronotum broadly parabolic, medially ecarinate and flat, lateral carinae distinct in apical two-thirds, posterior margin broadly insinuated. Scutellum flattish, carinae blunt. Elytra short, structure as in *A. mycenis* Fenn. Hind tibiae with two lateral spines. Male genitalia as in Fig. 79 a—c. Penis with two very long appendages starting from base and extending to apex, then strongly recurved basad and reaching base of penis again.

Differing from *A. mycenis* Fenn.

(FENNAH 1958: 535—537) in the smaller size, the anteriorly sloping and nearly ecarinate vertex and the male genitalia. Equatoria: Juba-Nimule, 1 ♂, type, 10—11. III. 1963.

HAMEISHARA gen.n.

Like *Derisa* Mel., but 1) body considerably more elongate, 2) vertex (Fig. 80 a) very short, about $7 \times$ as broad as long at middle, shortest at middle, concealed by pronotum nearly to the straight apical margin, shallowly concave, 3) upper margin of frons rounded to vertex, median keel of frons faint, in upper margin evanescent, 4) scutellum longer and narrower, apically more convex, the flattened median area much longer, narrower and more distinctly delimited and 5) elytra longer, apical margin rounded. A complete description and illustrations in FENNAH 1964.

Type: *Derisa pallida* Fennah 1964.

The species of *Derisa* Mel. differ from the present genus as follows: Body shorter and broader. Darker. Vertex much longer (Fig. 80 b, c), not concealed by pronotum, anterior margin sharp, bluntly angulate, anterior compartment noticeably more concave than other parts of vertex, lateral keels \pm

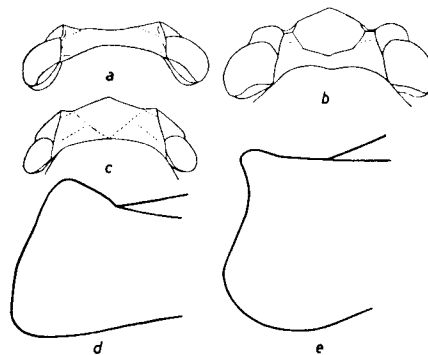


FIG. 80. *Hameishara pallida* (Fenn.): a) head (removed). — *Derisa atratula* Mel.: b) head; d) apex of elytron. — *D. pugionata* sp.n.: c) and e) same.



FIG. 81. *Derisa pugionata* sp.n.: a) genital segment from side; b) aedeagal appendage. — *Privesa pusilla* sp.n.: c) pygophore and anal tube; d) stylus; e) penis from side.

developed. Frons with a sharp median ridge, in *D. atratula* Mel. also with faint lateral ridges, nearly vertical, upper margin sharp. Scutellum shorter and broader. Elytra with apical margin truncate or concave.

Zarudnya Mel. is distinguished from *Hameishara* as follows: Large species. Elytra with upper and lower margins completely parallel, the dorso-apical angle therefore not produced. Vertex with apical margin rounded and faint. Frons much broader, more convex.

Hameishara is named after the first locality in which the type species was found.

H. pallida (Fenn.) — 10, 1 ex., 1. II. 1933, Priesner; 11, 1 ex.; 32, 1 ex. Eremian (Egypt, Israel).

DERISA Mel.

D. pugionata sp.n.

Length 6.5 mm. Dark brown, partly with a greyish or ochraceous tinge. Densely covered with whitish powder. Lower part of face yellow-brown, upper part of frons dark. Vertex yellow-brown, the concave apical compartment dark brown. Elytra, especially corium, with yellow-brown tinge. Legs yellowish brown.

Robust. Clypeus rather small, its up-

per margin nearly straight. Frons 1.24 × as long as broad, broadest at antennae, lateral margins curvate and strongly upcurved, frons therefore strongly concave, upper margin straight, sharp; median carina sharp, broadening upwards, near upper margin triangularly expanded and flattened, lateral keels absent. Vertex (Fig. 80 c) 2.27 × as broad as its median length, apical margin bluntly angulate and sharp; apical compartment triangular and concave, extending to base, other parts of vertex flattish. Eyes small. Pronotum declining apicad, median keel nearly absent, apico lateral carinae sharp, an acute eminence behind eyes. Scutellum much broader than long, with a roundish median depression, otherwise declining apicad and laterad. Elytra much as in *atratala*, but dorso-apical angle (Fig. 80 e) narrower and apical margin concave; dorsal claval vein basally strongly elevated and sharp, area on either side of it densely tuberculate. Hind tibiae with two lateral spines. Male genitalia: Side lobes of pygophore (Fig. 81 a—b) truncately rounded. Anal tube very long and narrow, shallowly arcuate in profile. Penis with two three-branched appendages.

D. atratala Mel. (illustrations in DLABOLA 1960): Bigger. Clypeus protruding upwards, its upper margin triangular. Median keel of frons stronger not expanding dorsally, lateral keels visible, although faint. Vertex (Fig. 80 b) twice as broad as its median length, the concave apical compartment not extending to basal margin. Apical margin of elytra (Fig. 80 d) truncate, dorso-apical angle more rounded. Material studied: Iran, Djiroft, Anbar-Abad, 1 ♀, 1—18. V. 1956, Richter.

Kassala: Erkwit, 1 ♂, type, 7—10. VII. 1961.

JUBA Jac.

J. arabica Syn. — 45, 1 ♀ probably of this species. Previously known from S. W. Arabia.

J. barchanorum sp.n.

Fig. 16 d. Length 8.5—10 mm. Greatly resembling *J. arabica* e.g. in the colouring, but differing in the shape of the head (Fig. 79 d): Frons broader than long at middle (35:31), ovate in outline, lateral margins curvate and sharp, disk with a large median depression, ecarinate. Vertex 1.53—1.6 × as broad as long, lateral margins basally parallel, in front of eyes forming a blunter (♂) or sharper (♀) triangle, disk only slightly convex, medially ecarinate. Pronotum shorter than vertex (11:15). Scutellum nearly twice as long as pronotum and vertex together. Elytra as in *arabica*. Hind tibiae with two lateral spines. Male genitalia as in Figs. 79 e—f, 83 a—b. Penis with two short and thick, heavily sclerified apical appendages.

South Yemen: Sheik Othman-Lahej, 1 ♂, type, and 2 paratypes, 9—15. VII. 1963. On *Acacia* and *Tamarix* in dunes.

ULUNDIA Dist.

U. madagascariensis (Sgn.)

Redescribed by FENNAH (1957: 168—169).

23, 1 ex.; 72—71, 1 ex.; 81—82, several exx. On *Acacia*. Liberia, Zaire, E. Africa, Madagascar.

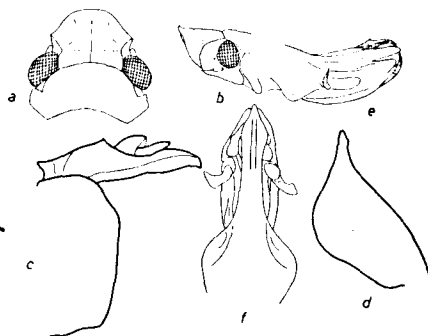


FIG. 82. *Stenocyarda salsolae* sp.n.: a head and pronotum from above; b same from side; c pygophore and anal tube; d stylus; e penis from side; f same, ventral aspect.

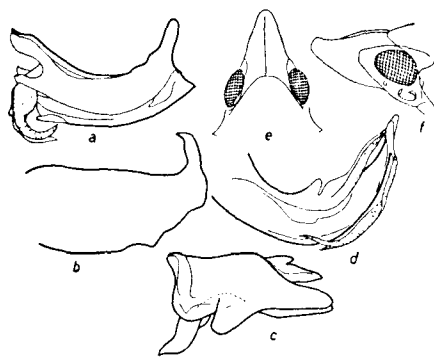


FIG. 83. *Juba barchanorum* sp.n.: a penis, lateral aspect; b stylus. — *Ulundia deidamia* sp.n.: c anal tube; d penis from side. — *Phantia coniceps* sp.n.: e head from above; f same from side.

U. deidamia sp.n.

Length 8 mm. Like *madagascariensis*, but frons ecarinate, anal tube (Fig. 83 c) shorter, dissimilarly shaped, asymmetric, and penis (Fig. 83 d) with two slender and simple appendages and two processes starting from middle of dorsal surface and directed apicad.

Ethiopia, near Harrar, 1 ♂, type, and 4 paratypes, 22—23. VI. 1963.

STENOCYARDA Fenn.

S. salsolae sp.n.

Fig. 16 d. Length 6—7 mm Reddish or coffee-brown. Under surface somewhat paler. Upper margin of frons dark.

Frons as broad as long at middle, upper part nearly semicircular in outline, then strongly tapering ventrad in lower portion, disk strongly concave, medially ecarinate. Vertex (Fig. 82 a—b) about 1.3 × as broad as long, lateral margins almost parallel in basal half, then strongly diverging in front of eyes, anterior margin broadly arched; disk flattish, apically sloping laterad. Pronotum 0.7 × as long as vertex, medially ecarinate. Scutellum only slightly longer than vertex and pronotum together (25:24). Elytra strongly tapering

apicad as in *S. ocreata* (Hesse). Hind tibiae with 2 lateral spines. Male genitalia as in Fig. 82 c—f. Penis short and thick, with two short apical appendages on dorsal surface and two short processes at the middle of the stem laterally.

Differs from the other African species of the genus in the shape of the head, in the male genitalia and two lateral spines of the hind tibiae. The claval veins also unite nearer to the apex than in *S. ocreata* (Hesse).

6, 1 paratype; 10, 1 paratype; 12—13, 1 paratype; South Yemen, Sheik Othman-Lahej, 1 ♂, type, and 1 paratype, 9—15. VII. 1963; Somalia, near; 24, 1 paratype. On *Salsola battae* in Arabia.

PAROXYCHARA Lall. & Syn.

P. capeneri Lall. & Syn. — 70, 4 exx.; 68, 1 ex. Known from S. Africa and Zaire.

FLATOSARIA Mel.

F. dbalaica sp.n.

Fig. 17 c. Length 13.5 mm. Yellowish brown. Scutellum darker. Veins of elytra brownish, somewhat darker than cells.

Vertex (Fig. 84 a—b) 1.15 × as long as broad, 1.35 × as long as pronotum, lateral margins slightly insinuated at middle, otherwise nearly parallel, sharp; anterior margin of head rounded, sharp, with a small sharp lateral tubercle on either side; disk with a distinct, complete median keel. Face horizontal. Frons

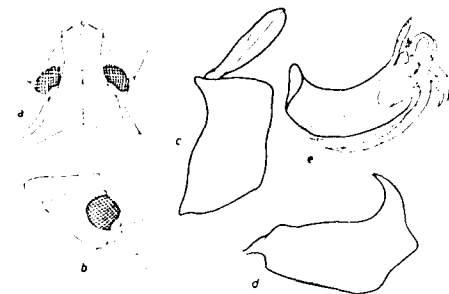


FIG. 84. *Flatosaria dbalaica* sp.n.: a head and pronotum from above; b same from side; c pygophore and anal tube; d stylus; e penis from side.

1.85 × as long as broad, broadest at middle, tapering both dorsad and ventrad, lateral margins upcurved; disk flattish, dorso-medially convex, a faint median keel present. Antennae short. Pronotum with median lobe apically nearly truncate, lateral keels distinct, concave, median keel elevated only in apical half, lateral tubercles absent. Scutellum flattish, strongly sloping anteriorly, ecarinate. Elytra tectiform, 2.43 × as long as broad; their costal membrane much broader than the costal cell, their basal corner distinctly produced anteriorly, numerous and mainly simple transverse veins present; other parts of elytra also with several cross-veins, 1 subapical line; claval veins not uniting before apex, a few cross-veins present

in clavus. Hind tibiae with two lateral spines. Male genitalia as in Fig. 84 c—e. Anal tube flat. Penis with two pairs of apical appendages, the long lower appendages provided with a basal spine; moreover a single dorso-apical process present.

South Yemen, Dhala, 1 ♂, type, in British Museum and 1 ♂, paratype, in my collection, 14. IX. 1937, Scott & Britton.

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