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Nr. 1

On Some Oriental and Ethiopian Typhlocybinae

(Homoptera, Auchenorrhyncha, Cicadellidae)

With 425 figures

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Warszawa

The work is based chiefly on the collections belonging to the Staatliches Museum für Tierkunde in Dresden and to the Zoologisches Museum der Humboldt-Universität in Berlin. Several new species from other collections are included for more complete illustration of newly described genera.

The studies of collections mentioned above could be finished only in 1975 when the whole material was available. It has been appeared that A. JACOBI describing his new species from Sunda Is. have taken under consideration only parts of the samples.

Specimens of the type-series of *Empoasca rubricula* JAC., 1941 and *Empoasca prasina* JAC., 1941 and also specimens of *Typhlocyba dubia* DIST. recorded by A. JACOBI from Lombok, belong to *Balcluthini*. Single specimen recorded by A. JACOBI as *Homa insignis* DIST. (now abdomen lost) is identic with *Homa haematoptilus* (KIRK.). *Empoasca notata* MEL. has not been found in the collections; maybe these specimens are identic with that of *Austroasca soembawaica* DWOR. recorded in this paper, but there are any JACOBI's labels at the specimens.

Results of my studies of JACOBI's *Typhlocybinae* type-series have been published previously and references are gathered by R. EMMRICH. In this paper only one lectotype (*Typhlocyba duplicata* JAC.) is designated, seven new taxa of generic rank and 39 new species are described and there are some new records from Africa and SE Asia.

Abbreviations of names of the posessors of the type-series, on the first place is mentioned the owner of the holotype.

- Ber. — Zoologisches Museum der Humboldt-Universität in Berlin
- Dres. — Staatliches Museum für Tierkunde in Dresden
- BM — British Museum (Natural History) in London
- ISEZ — Institute of Systematic and Experimental Zoology, Polish Academy of Sciences in Kraków
- RL — Collection of Dr. R. LINNAVUORI in Raisio (Finland)
- Terv. — Musée Royal d'Afrique Centrale in Tervuren (Belgium)
- USNM — United States National Museum in Washington.

The generic names are to be treated as arbitrary combinations of letters except where it is explained.

In all cases: Gender – Feminine.

I am indebted to Drs. R. EMMRICH and R. KRAUSE for invaluable assistance in studies of collections being in their care and to Dr. U. GÖLLNER-SCHIEDING for enabling me studies of the materials kept in the Zoologisches Museum in Berlin.

Dikraneurini

Motschulskyia (Togaritettix) serrata (MATS.)

1 ♀, Taiwan, Takao, 1907, coll. H. SAUTER.

Javadikra marcowa DWOR.

1 ♂, 4 ♀♀, Taiwan, coll. M. KATO; 1 ♂, Taiwan, Takao; 1 ♀, Taiwan, Pilam, coll. H. SAUTER in 1907.

Empoascini

Empoasca aequatorialis PAOLI

1 ♂, Cameroon, Bamessé, June 19, 1905, coll. BLAUNING.

Empoasca barbistyla PAOLI

10 ♂♂, 3 ♀♀, R. S. A., Transvaal, Lindenburg, Jan. 13, 1883, coll. Dr. WILMS; 1 ♂ (parasitised = p.), Cameroon Mt., „Mannsquell top“, 2250 m., Apr. 30, 1938; 1 ♀, Cameroon Mt., „Musake top“, May 5, 1938, coll. BUHR; 1 ♂ (p.), Kenya, Kibwezi, coll. HUEBNER.

Empoasca dubiosissima DWOR. (Figs. 1–10)

3 ♂♂ (p.), 1 ♀, Cameroon Mt., „Mannsquell top“ 2250 m., Apr. 30; 2 ♂♂ (p.), 2 ♀♀, same locality, May 7; 5 ♂♂ (p.), 3 ♂♂, 6 ♀♀, Cameroon Mt., „Musake top“ May 10; 1 ♀ Cameroon Mt., „Johann Albrecht top“, 2870 m., May 13, coll. BUHR in 1938; 2 ♂♂ (p.), Sudan, Equatoria, Imatong Mts., nr. Gilo, March 18–24, 1963, coll. R. LINNAVUORI; 2 ♂♂, Cameroon Mt., Buea, Nov. 18, 1957, coll. H. KNORR; 1 ♂, Urundi: Bururi, 1800–2000 m, March 5–12, 1953, coll. P. BASILEVSKY.

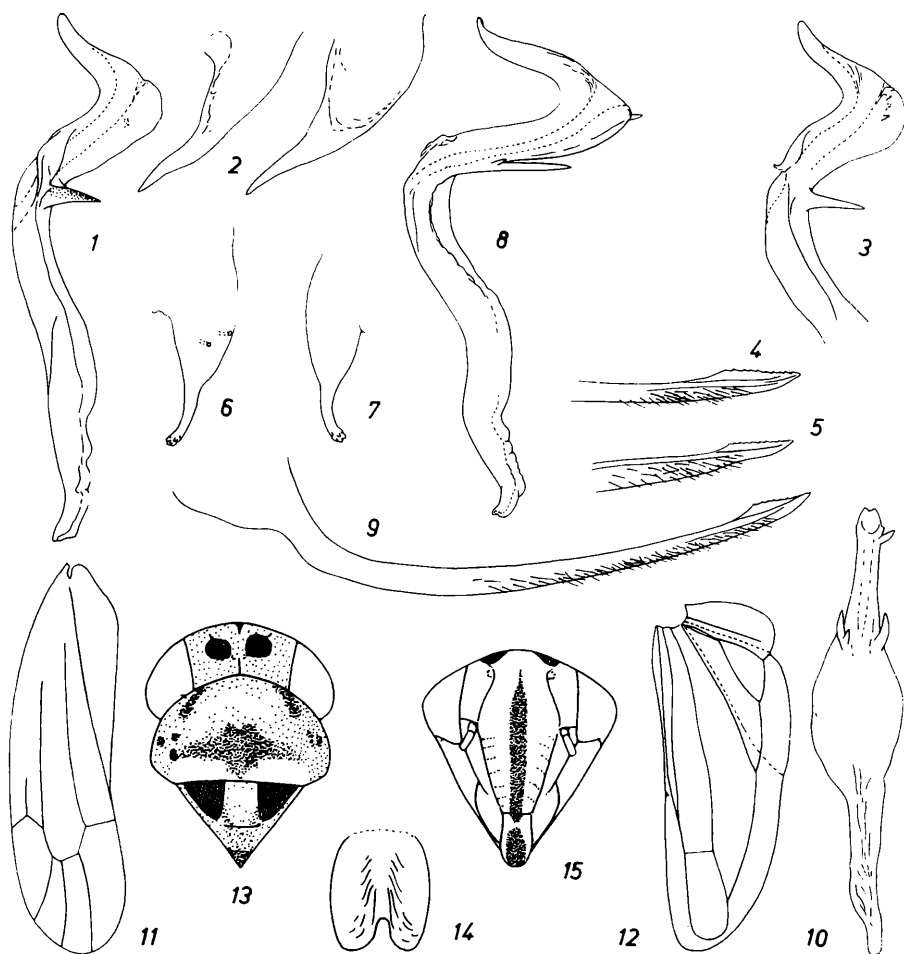
Empoasca sundaica BERGMAN, 1956

Empoasca javanica DWORAKOWSKA, 1972a **syn. n.**

1 ♂, W Sumbawa, Soembawa Besar, Apr. 24–May 2; 1 ♂, 1 ♀ E Sumbawa, Dompoe, May 24 and 25; 2 ♂♂, E Sumbawa, Wawo, June 2–4; 1 ♂, Central Flores, southern part, Ende, June 10–16; 1 ♂, E Flores, Geli Moetoe [? Keli Mutu], July 14–20, coll. RENSCH Expedition in 1927.

Empoasca majowa DWOR.

1 ♂, Lombok, Sombalon, March 30 or 31, 1927, coll. RENSCH Exp.



Figs. 1-15.

Empoasca dubiosissima DWOR. 1-5: specimens from Sudan, slightly mutilated by parasites. 1, 3: penis from side - 2: anal tube appendages - 4, 5: tips of pygophore appendages. - 6-10: normal specimen from Urundi. 10: penis from behind.

Dialecticopteryx jacobii (CHRISTIAN). 11: fore wing - 12: hind wing - 13: head and thorax from above - 14: VIIth abdominal sternite of the female - 15: face.

Empoasca reducta DWOR.

2 ♂♂, Taiwan, coll. M. KATO; 1 ♂, Taiwan, Takao, 1907, coll. H. SAUTER.

Empoasca pikna DWOR.

1 ♂, Cameroon, Mukonje, at light, March 31, 1938, coll. BUHR.

Empoasca (Distantasca) terminalis DIST.

2 ♂♂, W Sumbawa, Soembawa Besar, Apr. 24–May 2; 5 ♂♂, 2 ♀♀, E Sumbawa, Dompoe, May 24 and 25; 1 ♀, W Flores, Rana-Mêsê, June 20–30, coll. RENSCH Expedition in 1927

Empoasca (Distantasca) faciatu DWOR.

1 ♂, Sumbawa, Batoe Doelang, Apr. 10–15, 1927 1 ♂ (p.), Lombok, Soembalon, March 30 or 31, 1927, coll. RENSCH Exp.

Kyboasca bipunctata (OSH.)

1 ♂, China, Peking, July, 1913, coll. SCHOEDE and MÜLLER.

Austroasca sagittata (JAC.)

Lectotype, female: „Sunda-Exp. Rensch Soembawa Batoe Doelang 10.–15. 4. 1927” „Typus” „1940 2” „Typh. sagittata Jac.” and „Lectotype of Typhlocyba sagittata Jac. selected in 1968 by I. Dworakowska” Paralectotypes: 2 ♂♂, 2 ♀♀, same collecting data as at lectotype (Dres.). 1 ♂, 3 ♀♀, collecting data as at the lectotype (one female additionally labeled „Typus” and „106”); 2 ♂♂, 1 ♀, 1 specimen with abdomen and fore wings lost: „Sunda-Exp. Rensch O. Soembawa Wawo 2.–4. 6. 1927” 1 ♀: „Sunda-Exp. Rensch O. Soembawa Dompoe 24.–25. 5. 1927” 1 ♀: „Sunda-Exp. Rensch Lombok Soembalon 30.–31. 3. 1927” (Ber.). The type-series consists of 17 specimens from Sumbawa and one from Lombok. In Mus. Dresden there are kept two pins with collecting labels indicating that two missing specimens of the type-series (from Sumbawa) were mounted on them.

1 ♂, Sumbawa, Soembawa Besar, Apr. 24–May 2; 1 ♂, Sumbawa, Batoe Doelang, Apr. 10–15; 1 ♂, 4 ♀♀, 1 specimen with abdomen lost, Lombok, Sombalon, March 30 and 31; 1 specimen with abdomen lost, S Lombok, Ekas, Apr. 17–20, coll. RENSCH Exp. in 1927

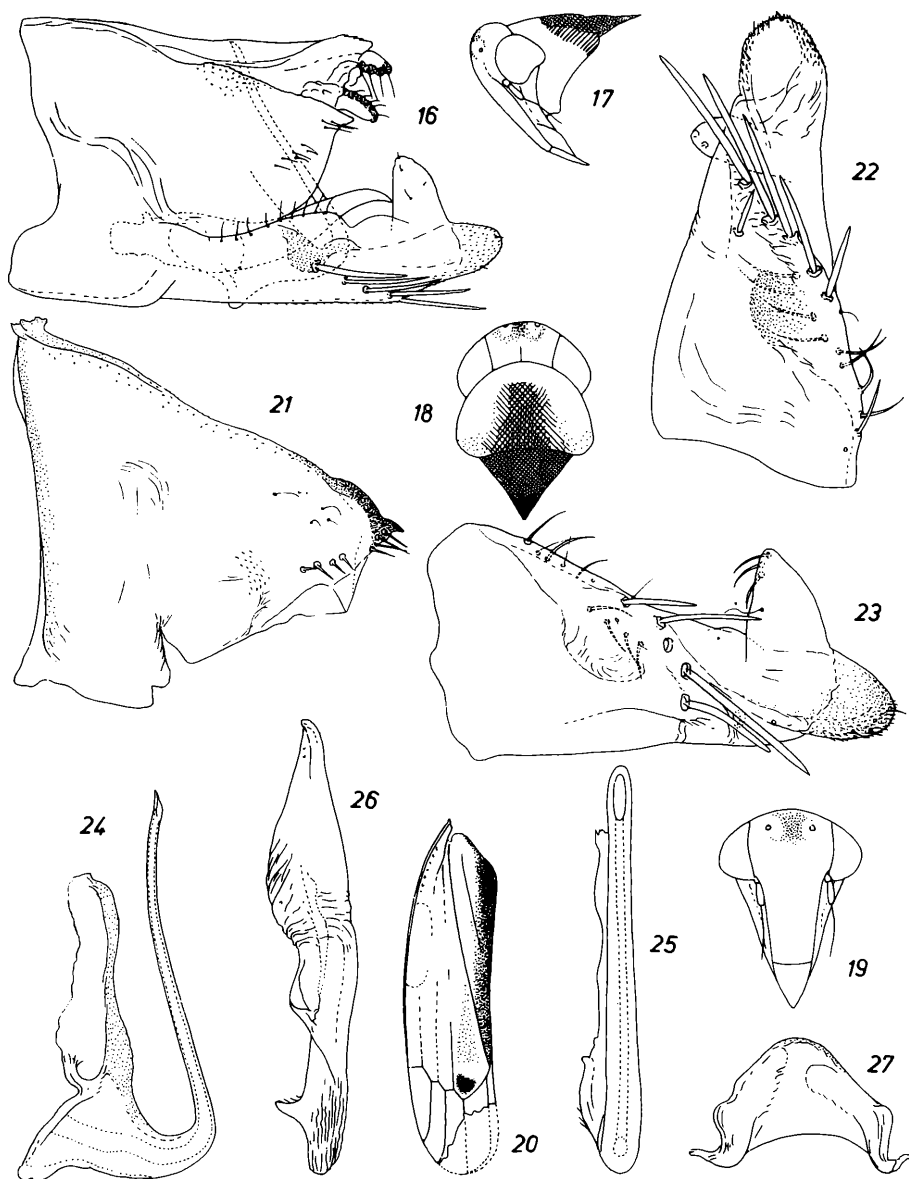
Austroasca soembawaica DWOR.

7 ♂♂, 10 ♀♀, E Lombok, Selong, Apr. 21; 2 ♂♂, 6 ♀♀, Sumbawa, Batoe Doelang, Apr. 10–15; 1 ♂, 1 ♀, E Sumbawa, Dompoe, May 24 and 25; 1 ♀, S Central Flores, Endeh, June 10–16, coll. RENSCH Exp. in 1927 2 ♂♂, 17 ♀♀, S Central Java, Djokjakarta, Feb., 1932, coll. H. OVERBECK.

Amrasca biguttula punctata (MEL.)

Lectotype, abdomen and left fore wing lost: „Sunda Exp. Rensch O.-Soembawa Dompoe 24.–25. 5. 1927”, „Typus” „1940 2” „Em. uniguttata Jac.” „Lectotype of Empoasca uniguttata Jac., selected in 1968 by I. Dworakowska” — Paralectotypes. 1 ♂, 1 ♀, same collecting data; 1 ♂, 1 specimen with abdomen lost: „Sunda-Exp. Rensch W.-Soembawa Soembawa Besar 24. 4.–2. 5. 1927” (Dres.). — Other paralectotypes. 1 ♂, 3 ♀♀: „Sunda-Exp. Rensch W.-Soembawa Soembawa Besar 24. 4.–2. 5. 1927” two specimens with abdomen lost, same data, selected as paralectotypes by me in 1970 (Ber.). The type-series consists of 11 specimens of both sexes coming from Sumbawa.

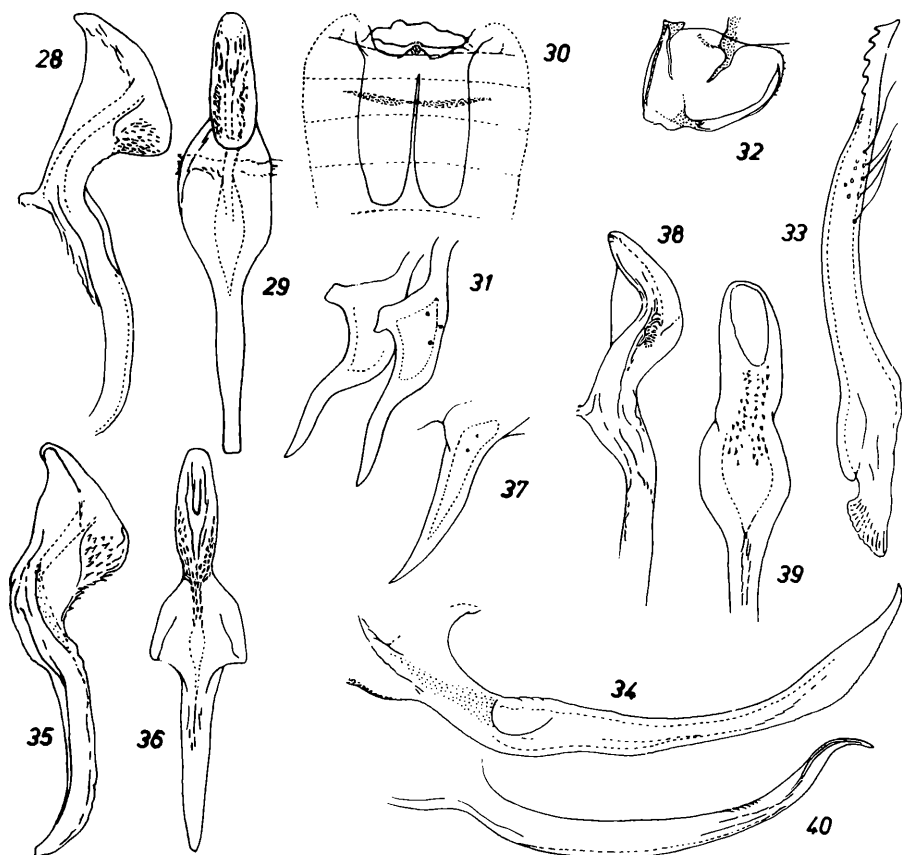
2 ♂♂, 3 ♀♀, W Sumbawa, Soembawa Besar, Apr. 24 – May 2; 6 ♂♂, 2 ♀♀, Sumbawa, Batoe Doelang, Apr. 10–15; 2 ♂♂, 3 ♀♀, E Sumbawa, Wawo, June 2–4; 2 ♀♀, 2 specimens with



Figs. 16–27 *Abrabra bura* sp. n.

16: anal block — 17: head and tergites from side — 21: pygophore side — 22: subgenital plate, ventral view — 23: subgenital plate, lateral view — 26: paramere — 27 connective.

abdomen lost, E Sumbawa, Dompoe, May 24 and 25, coll. RENSCH Exp. in 1927 1 ♂, W Sumbawa, Apr. 24 — May 2, 1927, coll. B. RENSCH.



Figs. 28–40. *Empoasca borowikae* sp. n.

28–34: normal specimen. 30: abdominal apodemes — 32: proportions of pygophore side and appendages. — 35–40: specimens mutilated by parasites.

***Amrasca bombaxia* GHOURI**

1 ♂, Sumbawa, Batoe Doelang, Apr. 10–15, 1927, coll. RENSCH Exp.

***Amrasca* ? *splendens* GHOURI**

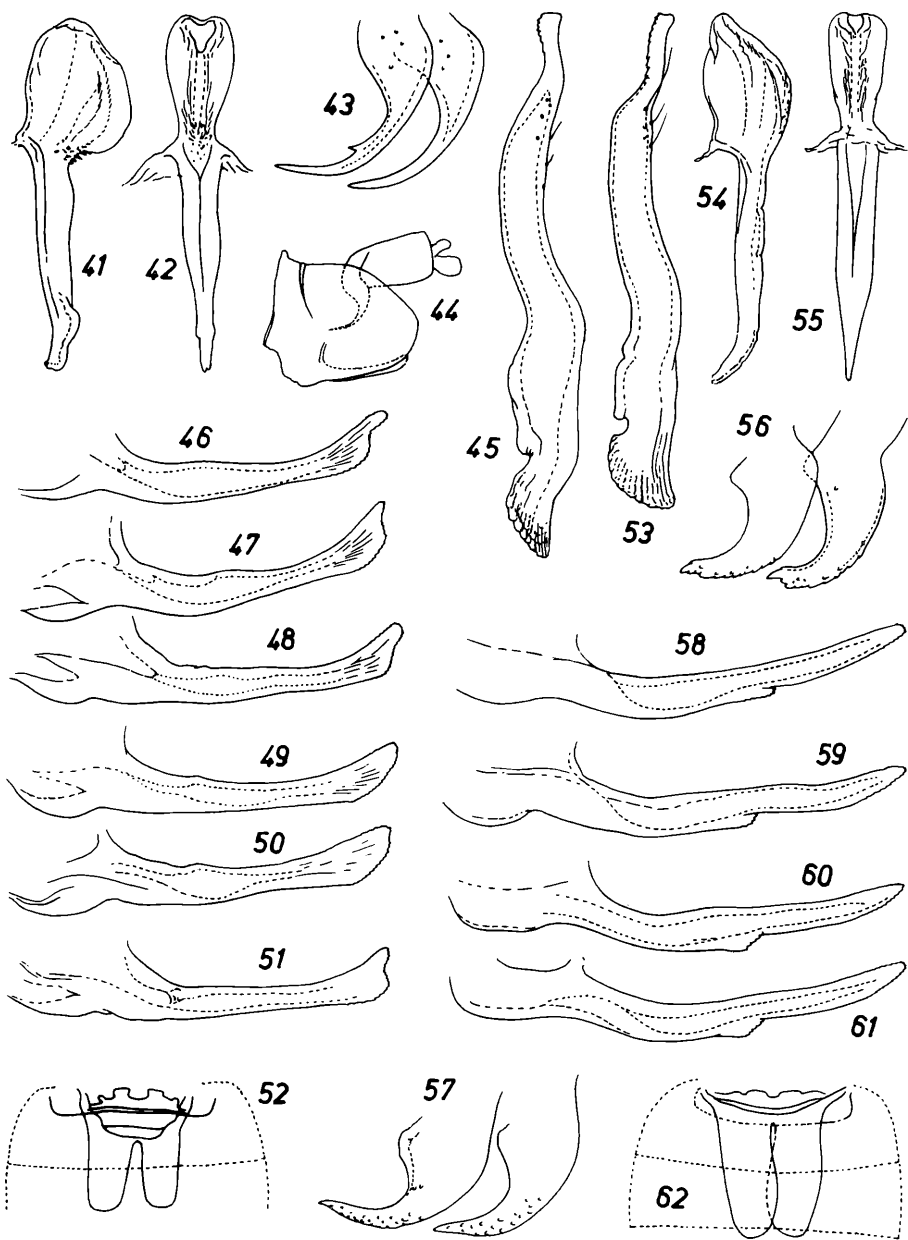
1 ♀, E Sumbawa, Wawo, June 2–4, 1927, coll. RENSCH Exp.

***Jacobiasca boninensis* (MATS.)**

2 ♂♂, Taiwan, Takao, 1907, coll. H. SAUTER.

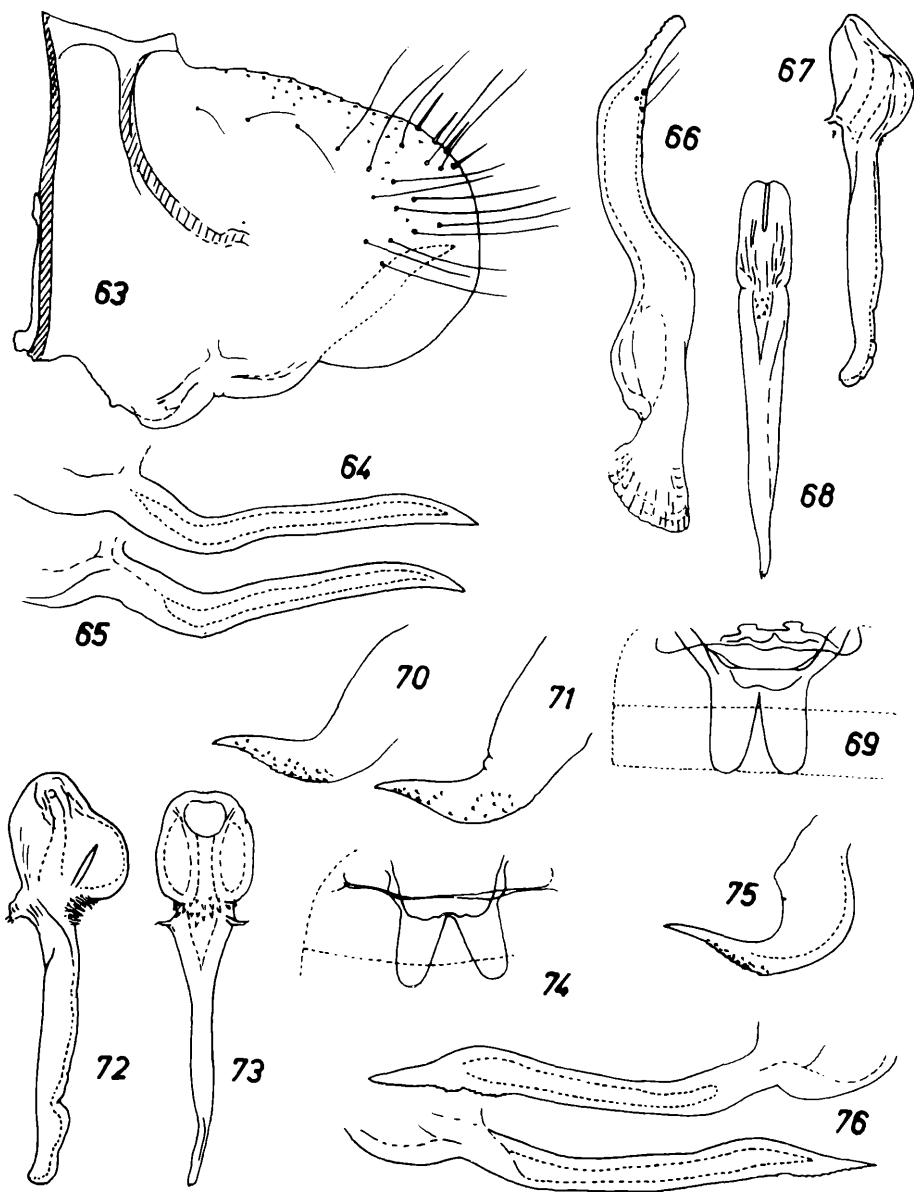
***Afroccidens lodosi* GHOURI**

1 ♂, Cameroon Mt., „Johann Albrecht top“, March 1, 1896, coll. L. CONRADT.



Figs. 41-62.

Empoasca nigerica sp. n. 41-52. — *E. sudanica* sp. n. 53-62.

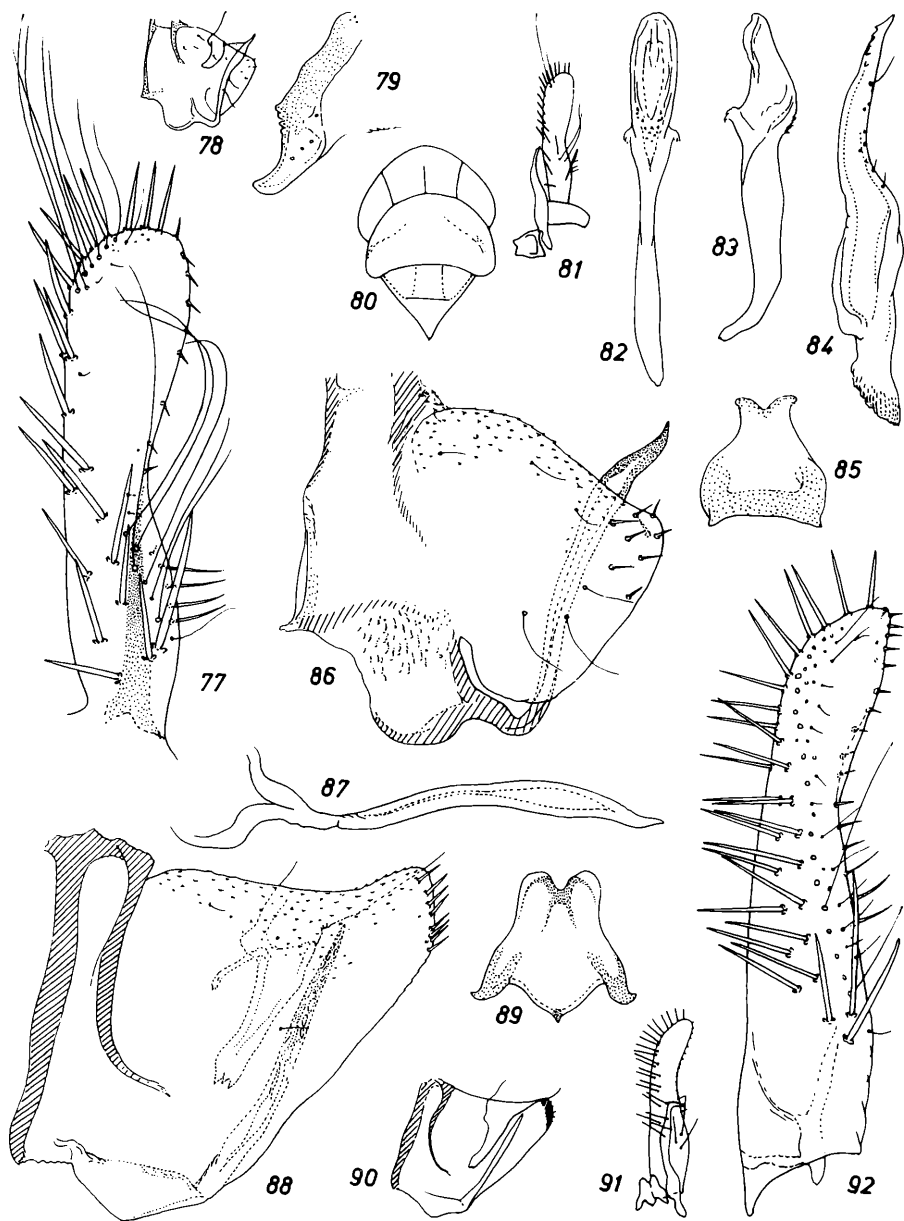


Figs. 63-76.

Empoasca etroni sp. n.: 63-71. — *E. georgii* sp. n.: 72-76.

***Luvila lutea* DWOR.**

1 ♂, 1 ♀, Cameroon, Moline, Apr. 13, at light, coll. BUHR.



Figs. 77-92.

Empoasca interrupta sp. n.: 77-87. 81: proportions of subgenital plate, paramere and connective. - *E. (Buhria) angusta* sp. n.: 88-92.

***Acia exsultans* McATEE**

1 ♂, Taiwan, Pilam, 1907 2 ♀♀, Taiwan, Takao, 1907, coll. H. SAUTER.

***Mahmoodia tristis* (MEL.)**

1 ♂, Sumbawa, Besâr, Apr. 24 – May 2, 1927, coll. B. RENSCH; 1 ♂, S of Central Java, Djokjakarta, Feb. 1932, coll. H. OVERBECK.

***Alebroides perstrigatus* (JAC.)**

Lectotype, specimen with abdomen lost „Lombok Plawangan 3. 4. 27 B. Rensch S. G.“ „Typus“ „1940 2“ „Ty. perstrigata Jac.“ and „Lectotype of Typhlocyba perstrigata Jac. selected in 1968 by I. Dworakowska“ – Paralectotypes. 1 ♂: same collecting data as at the lectotype (Dres.). 1 specimen with abdomen lost, destroyed: „Lombok Plawangan 3. 4. 27 B. Rensch S. G.“, „Typus“ and „116“; 1 ♂ „Sunda-Exp. Rensch O.-Flores Geli Moetoe [? Keli Mutu] 14.–20. 7 1927“ (Ber.). The type-series should consist of 4 ♀♀ from Lombok and E Flores, according to the original description. The evident mistake was caused by very long and narrow subgenital plates of male in the genus *Alebroides* MATS. 2 ♂♂, W Flores, Badjava, June 17 1 ♂, 1 ♀, W Flores, Geli Moetoe [? Keli Mutu], July 14–20; 2 ♂♂, 1 ♀, Lombok, Sembalon, March 30 and 31; 3 ♂♂, 4 ♀♀, Lombok, Segare, June 5, coll. RENSCH Exp. in 1927 1 ♂, 1 ♀, W Flores, Rana-Mêsè, June 20–30; 1 ♀, Lombok, Plawangan, Apr. 3, coll. B. RENSCH in 1927.

***Dialecticopteryx jacobii* (CHRISTIAN, 1953) comb. n. (Figs. 11–15)**

Typhlocyba duplicata JACOBI, 1941 nom. praecox.

Typhlocyba jacobii CHRISTIAN, 1953 nom. n.

Lectotype, female: „Sunda-Exp. Rensch W.-Flores Rana-Mêsè 20.–30. 6. 1927“, „Typus“, „103“, „Lectotype of Typhlocyba duplicata Jac. selected in 1969 by I. Dworakowska“ and „Akotettix jacobii (Christian) det. I. Dworakowska 1969“ (Ber.). The type-series consists of 1 ♂ and 3 ♀♀ coming from Flores. Other specimens, however, could not be found in the collections.

Erythroneurini***Koperta gemina* (JAC.)**

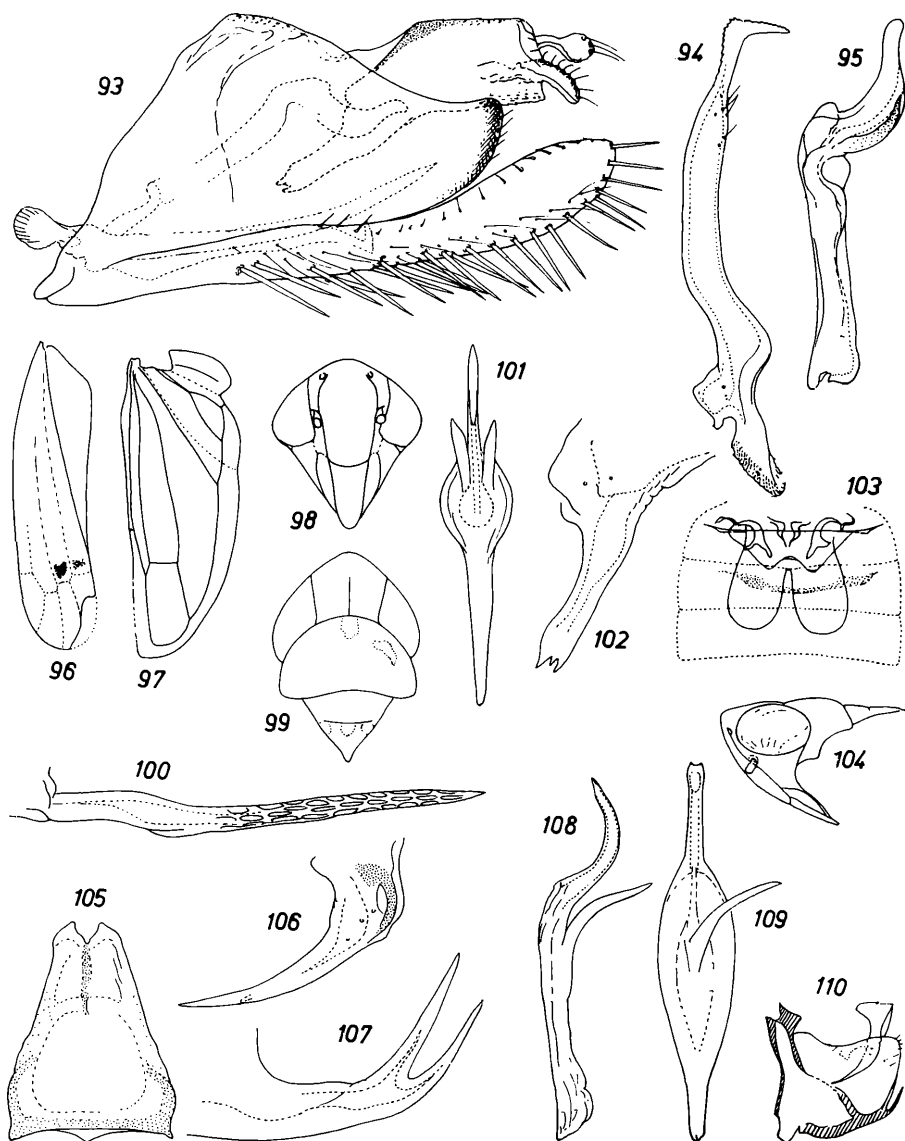
Lectotype, male: „Lombok Plawangan 3. 4. 27 B. Rensch S. G.“, „Typus“, „1940 2“ „Ty. gemina Jac.“ and „Lectotype of Typhlocyba gemina Jac. selected in 1968 by I. Dworakowska (Dres.).

***Koperta* sp.**

1 ♀: „Sunda-Exp. Rensch Lombok Soembalon 30.–31. 3. 1927“, „Typus“, „115“ „Typhlocyba gemina Jac. det. ex coll. A. Jacobi“ „Paralectotype of Typhlocyba gemina Jac. selected in 1969 by I. Dworakowska“ and „Koperta sp. det. I. Dworakowska 1969“ (Ber.).

***Thaia orientalis* DWOR.**

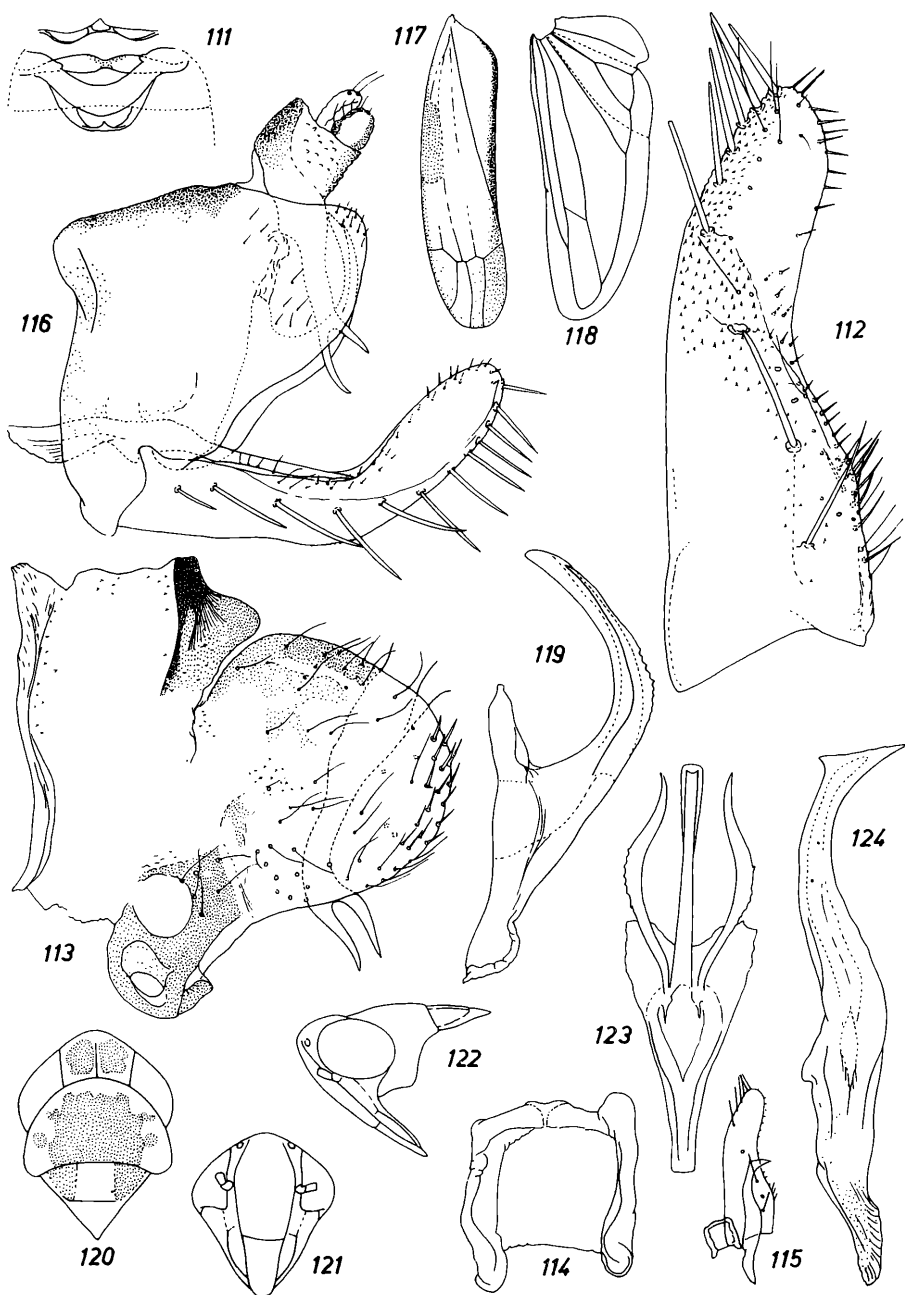
1 ♂: „Sunda-Exp. Rensch W.-Flores Rana-Mêsè 20.–30. 6. 1927“, Typhlocyba gemina Jac.



Figs. 93–110.

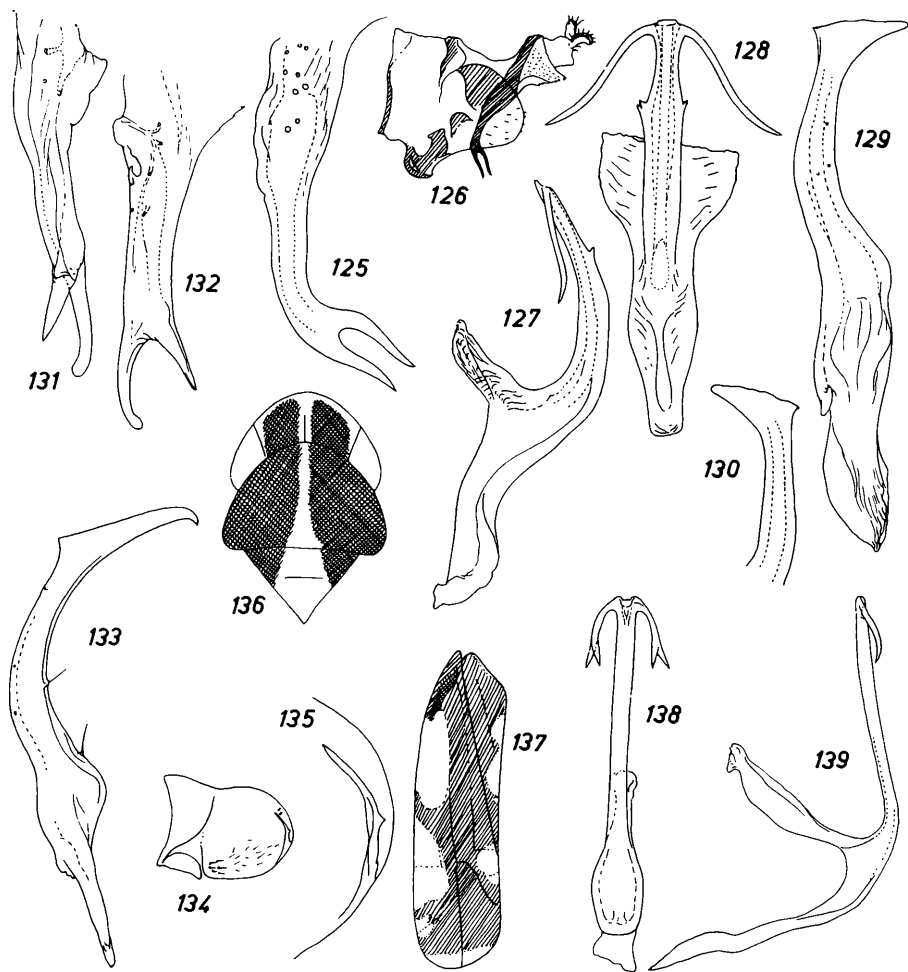
Empoasca (Buhria) angusta sp. n.: 93–104. — *Alebroides cornutus* sp. n. 105–110.
109: penis in posterior view, appendage displaced in slide.

det. ex coll. A. Jacobi" „Paralectotype of *Typhlocyba gemina* Jac. selected in 1969 by I. Dworakowska" „Holotypus" and „*Thaia orientalis* sp. n. det. I. Dworakowska 1969" (Ber.).



Figs. 111-124.

Optya (Nkima) secunda sp. n.: 111-115. — *O. (N.) manua* sp. n.: 116-124.



Figs. 125–139.

Optya (Nkima) manua sp. n.: 125–130. — *O. (N.) secunda* sp. n.: 131, 132. — *Eupteryx occidentalis* sp. n.: 133–139.

***Thaia similis* DWOR.**

1 ♂ „W.-Flores Rana-Mêsè 20.–30. 6. 27 B. Rensch S. G. „Typhlocyba gemina Jac. det. ex coll. A. Jacobi“, „Paralectotype of Typhlocyba gemina Jac. selected in 1969 by I. Dworakowska“ „Holotypus“ and „Thaia similis sp. n. det. I. Dworakowska 1969“ (Dres.).

The type-series of *Typhlocyba gemina* JAC. consists of 5 ♂♂ and 3 ♀♀ according to the original description. They are coming from Lombok and Flores. There were found in the collections only 3 ♂♂ mentioned above and 3 ♀♀. (one of them mentioned above). 1 ♀: „Sunda-Exp. Rensch O.-Flores Geli Moetoe [? Keli Mutu] 14.–20. 7. 1927“, „1940 2“, „Typhlocyba gemina Jac. det. ex coll. A. Jacobi“ „Paralectotype of Typhlocyba gemina

Jac. selected in 1968 by I. Dworakowska" and „Erythroneurini g. sp. det. I. Dworakowska 1969" (Dres.). 1 ♀: same labels as at previous female but without „1940 2" congeneric with the previous female (Ber.).

Thaia ghaurii DWOR.

2 ♂♂, 1 ♀, E Sumbawa, Dompoe, May 24 and 25, 1927, coll. RENSCH Exp.

Singapora shinshana (MATS.)

1 ♂, China, Canton, Oct. 10, 1908, coll. R. MELL.

Bakera nigrobilineata (MEL.)

1 ♀, 1 specimen with abdomen lost, Philippines, Mindanao, Kolambugan, coll. W. H. MUCHE.

Kaukania anser DWOR.

1 ♂, Upper Laos, Nam Hou, coll. MICHOLITZ.

Zyginoides (Platytetticis) ilsae (JAC.)

Lectotype, male: „Sunda-Exp. Rensch W.-Flores Badjawa 17 6. 1927" „Typus" „1940 2" „Typh. ilsae Jac." and „Lectotype of Typhlocyba ilsae selected in 1968 by I. Dworakowska" Paralectotypes 3 ♂♂, same collecting data, paralectotype labels (Dres.). 1 ♀: „Sunda-Exp. Rensch W.-Flores Badjawa 17 6. 1927" „Typus" „105" 1 ♀, 1 specimen with abdomen lost, same collecting data (Ber.). The type-series of *Typhlocyba ilsae* JAC. consists of 7 specimens of both sexes coming from Flores.

2 ♀♀, W Flores, Badjawa, June 17, 1927, coll. RENSCH Exp.

Kapsa furcifrons (JAC.)

Lectotype, specimen with abdomen lost: „Sunda-Exp. Rensch O.-Flores Geli Moetoe [? Keli Mutu] 14.—20. 7 1927" „Typus" „1940 2" „Typhl. furcifrons Jac." and „Lectotype of Typhlocyba furcifrons Jac. selected in 1968 by I. Dworakowska" Paralectotypes 2 ♂♂, 2 ♀♀, 1 specimen with abdomen lost: same collecting data as at the lectotype. One male paralectotype is the holotype of *Khoduma jacobii* DWOR. (Dres.). It was not indicated how many exemplars is in the type-series consisting of males and females from E Flores. Probably also specimens listed below belong to the type-series but there are no distinct labels.

15 ♂♂, 18 ♀♀, 3 specimens with abdomens lost, E Flores, Geli Moetoe [? Keli Mutu], July 14—20, 1927, coll. RENSCH Exp.

Arboridia jacobii (DWOR., 1972) (Figs. 140—147)

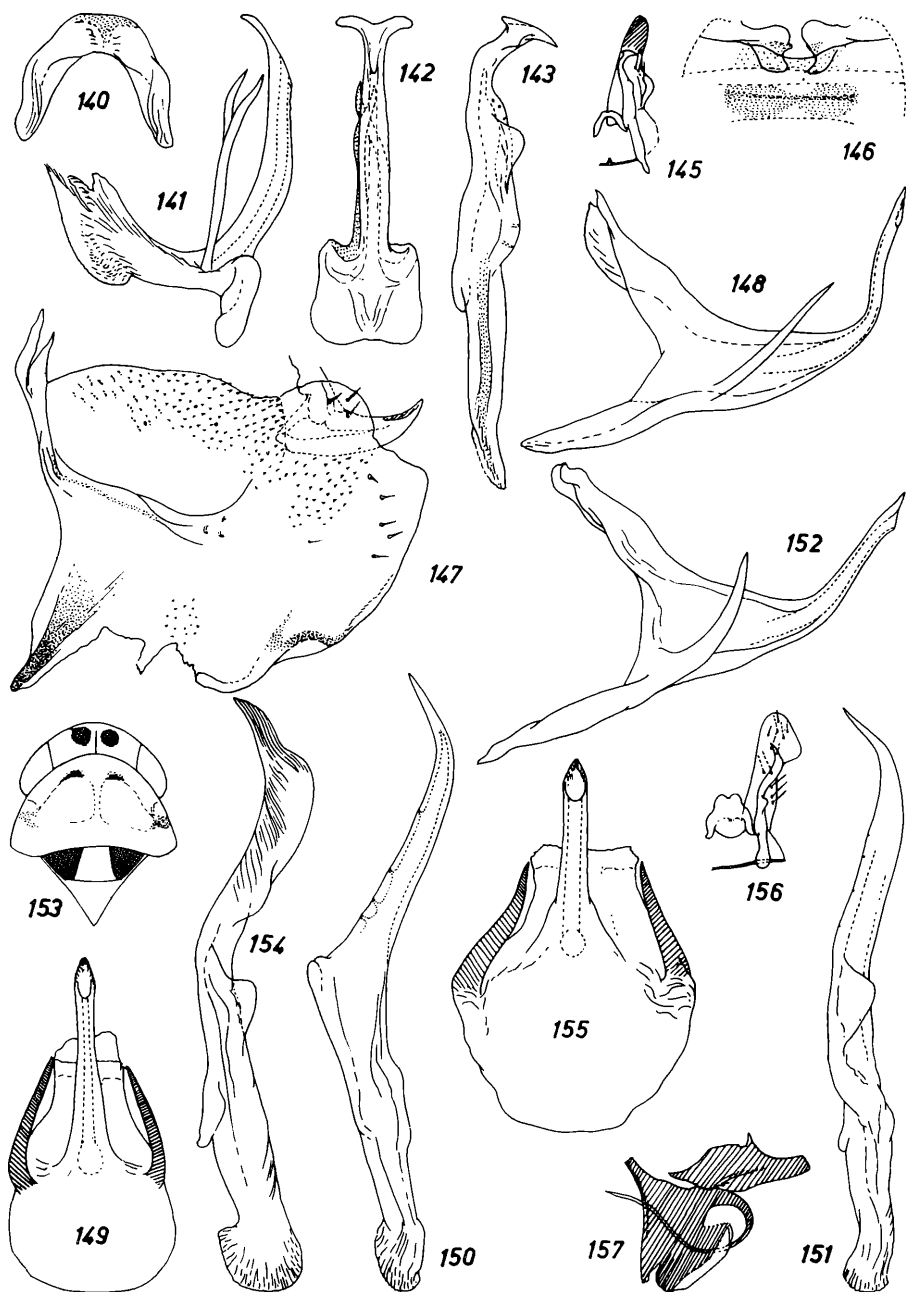
Khoduma jacobii DWOR., 1972

1 ♂, E Flores, Geli Moetoe [? Keli Mutu], July 14—20, 1927, coll. RENSCH Exp.

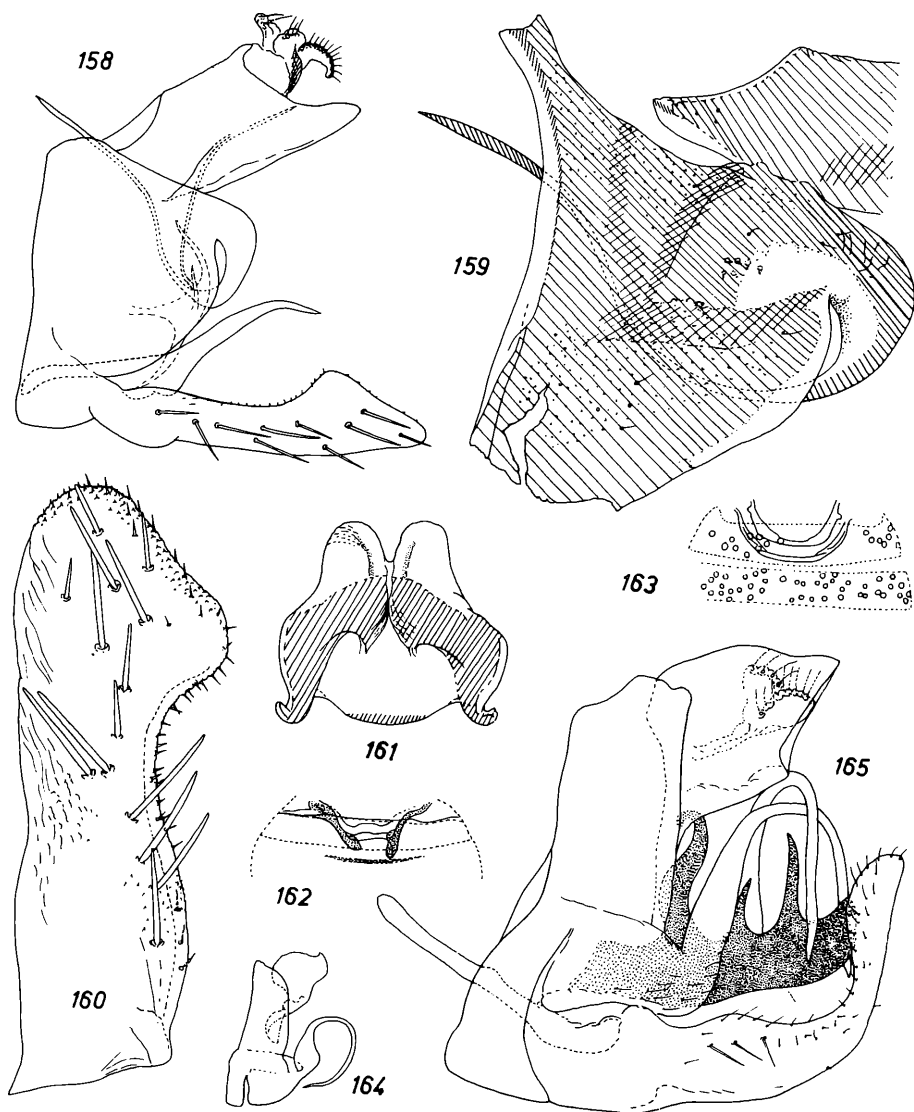
Frutioidia ricei (ROSS, 1965) **comb. n.**

Erythroneura ricei ROSS, 1965

1 ♂, Kenya, Kibwezi, coll. HUEBNER.



Figs. 140-157
Arboridia jacobii (DWOR.): 140-147 - *Harmata condensata* (JAC.): 148-157.
 148-151 specimen mutilated by parasites - 152-157 normal specimen.
 (No. 144 was not given)



Figs. 158–165.

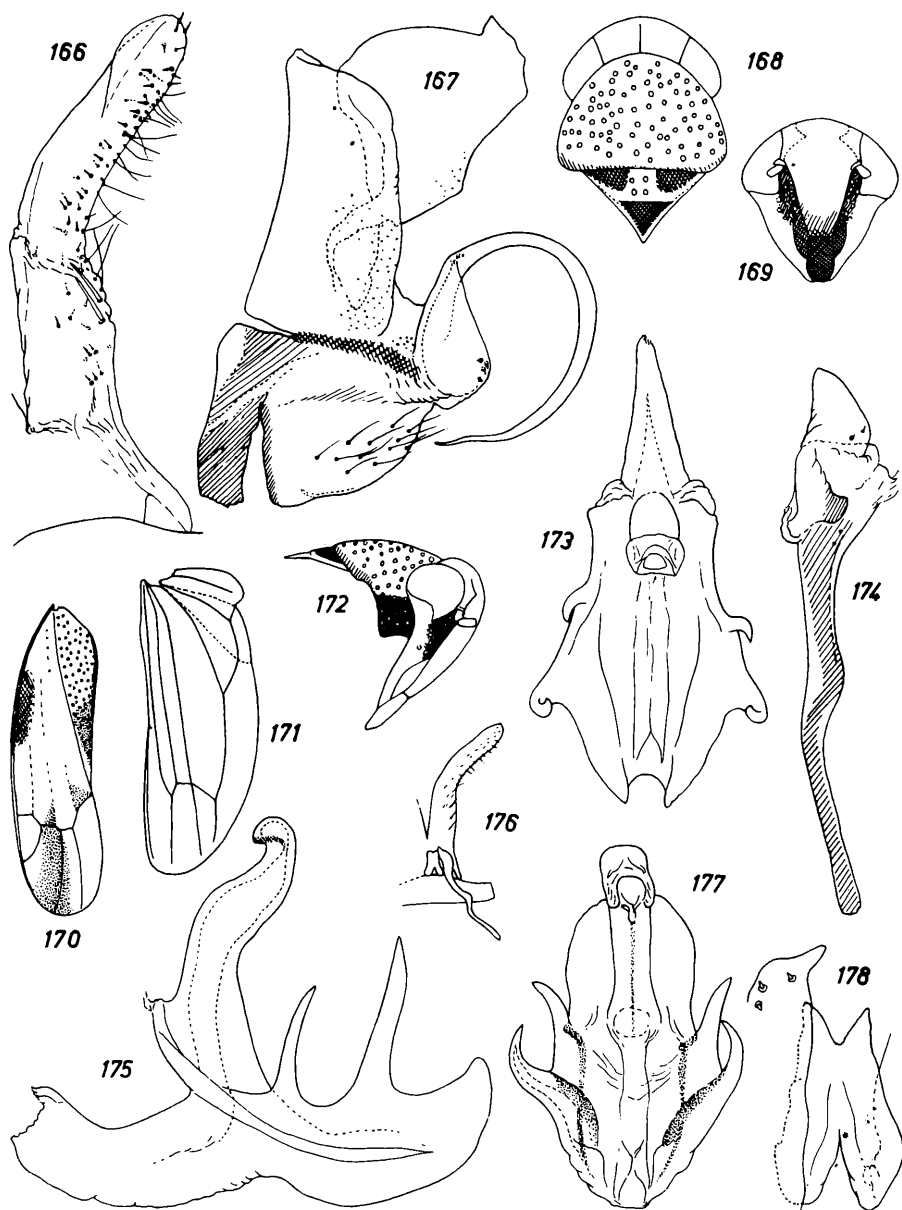
Harmata condensata (JAC.) 158–162. 158: anal block of specimen mutilated by parasites, the other figures: normal specimen. — *Ska argentea* sp. n.: 163–165.

***Seriana ochrata* DWOR. (Figs. 343–346)**

1 ♂, 2 ♀♀, Taiwan, Takao; 1 ♂, Taiwan, Kagi; 1 ♂, Taiwan, Pilam, coll. H. SAUTER in 1907

***Empoascanara cyclopula* (JAC.)**

Lectotype, female: „Sunda-Exp. Rensch W.-Flores Badjawa 17 6. 1927“, „Typus“, „Typhloc.



Figs. 166–178. *Ska argentea* sp. n.

cyclopula Jac.” and „Lectotype of *Typhlocyba cyclopula* Jac. selected in 1968 by I. Dworakowska”. — Paralectotypes. 1 ♂, 2 ♀♀: „W Flores Rana-Mêsè 20.—30. 6. 27 B. Rensch S. G.” (Dres.). 1 ♀, 1 specimen with abdomen lost: „W.-Flores Rana-Mêsè 20.—30. 6. 1927” 1 ♀.

„W.-Flores Mborong 2.–3. 6. 27 B. Rensch S. G. 1 ♀: „Sunda-Exp. Rensch O.-Soembawa Dompoe 24.–25. 5. 1927“ „Typus“ and „108“ (Ber.). The type-series consists of one female from E Sumbawa and 8 specimens of both sexes from W Flores.

1 ♂, W Flores, Badjawa, June 17 1 ♂, 2 ♀♀, E Sumbawa, Dompoe, May 24 and 25, coll. RENSCH Exp. in 1927 1 ♀, W Flores, Rana-Mêse, June 20–30; 1 ♂, 1 ♀, W Sumbawa, Batoe Doelang, May 10–15, coll. B. RENSCH in 1927

***Empoascanara plagialis* (JAC.)**

Lectotype, male: „Sunda-Exp. Rensch Lombok Segare 5. 6. 1927“ „Typus“ „107“ and „Lectotype of *Typhlocyba plagialis* Jac. selected in 1969 by I. Dworakowska“ Paralectotype, specimen with abdomen lost: „Sunda-Exp. Rensch Lombok, Sembáun, 1200 m 30.–31. 3. 1927“, „Typus“ „107“ and „Paralectotype of *Typhlocyba plagialis* Jac. selected in 1969 by I. Dworakowska“ (Ber.). The type-series consists of three exemplars of both sexes, all of them from Lombok. There were found only two exemplars labeled as belonging to the type-series.

1 ♂, 1 ♀, Lombok, Sembáloen, Apr. 13, 1927, coll. B. RENSCH; 1 ♂, Lombok, Sembalon, March 30 or 31, 1927, coll. RENSCH Exp.

***Empoascanara sonani* (MATS.) (Figs. 260–265)**

4 ♂♂, Taiwan, Takao; 1 ♂, Taiwan, Tainan; 2 ♀♀, Taiwan, Pilam, coll. H. SAUTER in 1907

***Empoascanara formosella* DWOR.**

3 ♂♂, Taiwan, Kagi; 2 ♂♂, Taiwan, Takao; 1 ♀, Taiwan, Pilam, coll. H. SAUTER in 1907

***Empoascanara coreca* DWOR.**

2 ♂♂, 1 ♀, E Sumbawa, Dompoe, May 24 and 25, 1927, coll. RENSCH Exp.

***Empoascanara tytaniae* DWOR.**

1 ♂, 1 ♀, Lombok, Sembalon, March 30 and 31, 1927, coll. RENSCH Exp.

***Empoascanara ethiopica* DWOR.**

5 ♂♂, 3 ♀♀, Cameroon, Mukonje, Apr. 5; 1 ♂, 3 ♀♀, Cameroon, Bota, March 18, collected at light in 1938 by BUHR.

***Empoascanara (Kanguza) ? ibis* (DWOR.)**

1 ♀, W Flores, Badjawa, June 17, 1927, coll. RENSCH Exp.

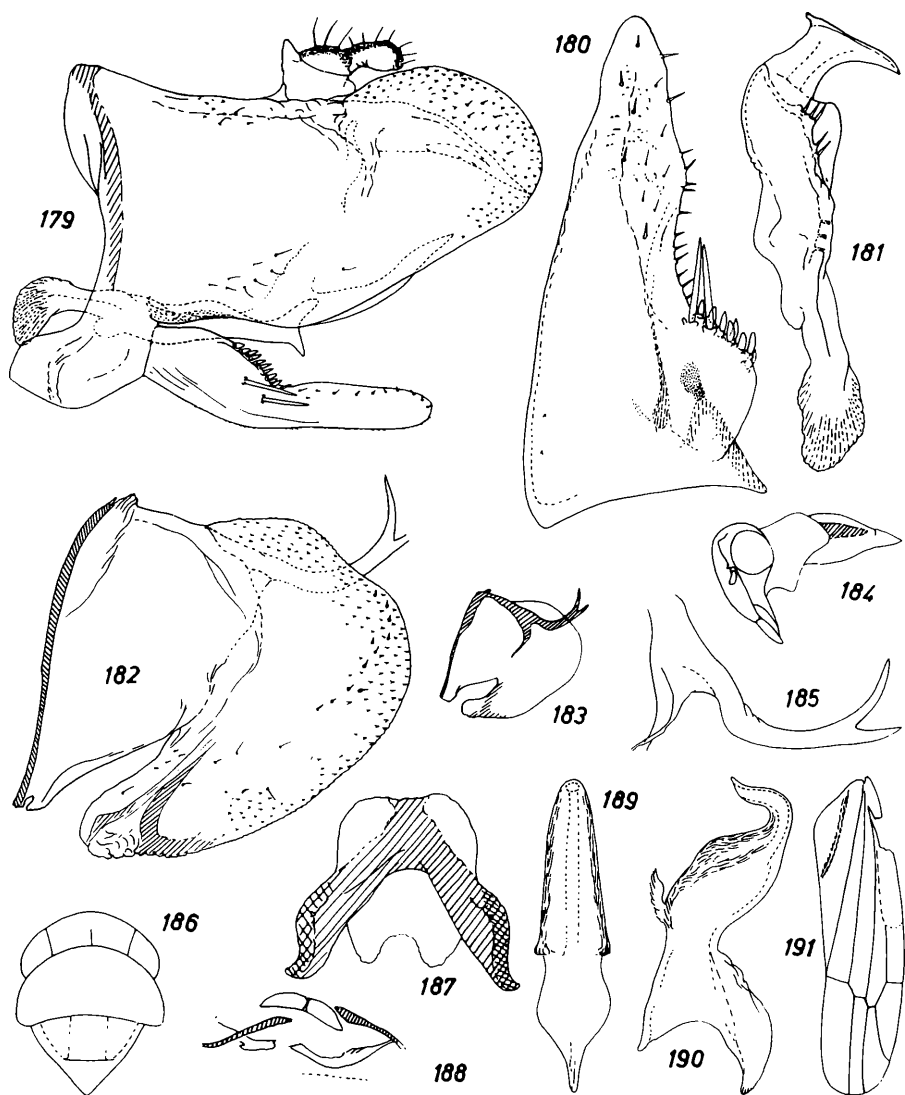
NEW TAXA

Alebrini

***Abrabra* gen. n.**

Type-species: *Abrabra bura* sp. n.

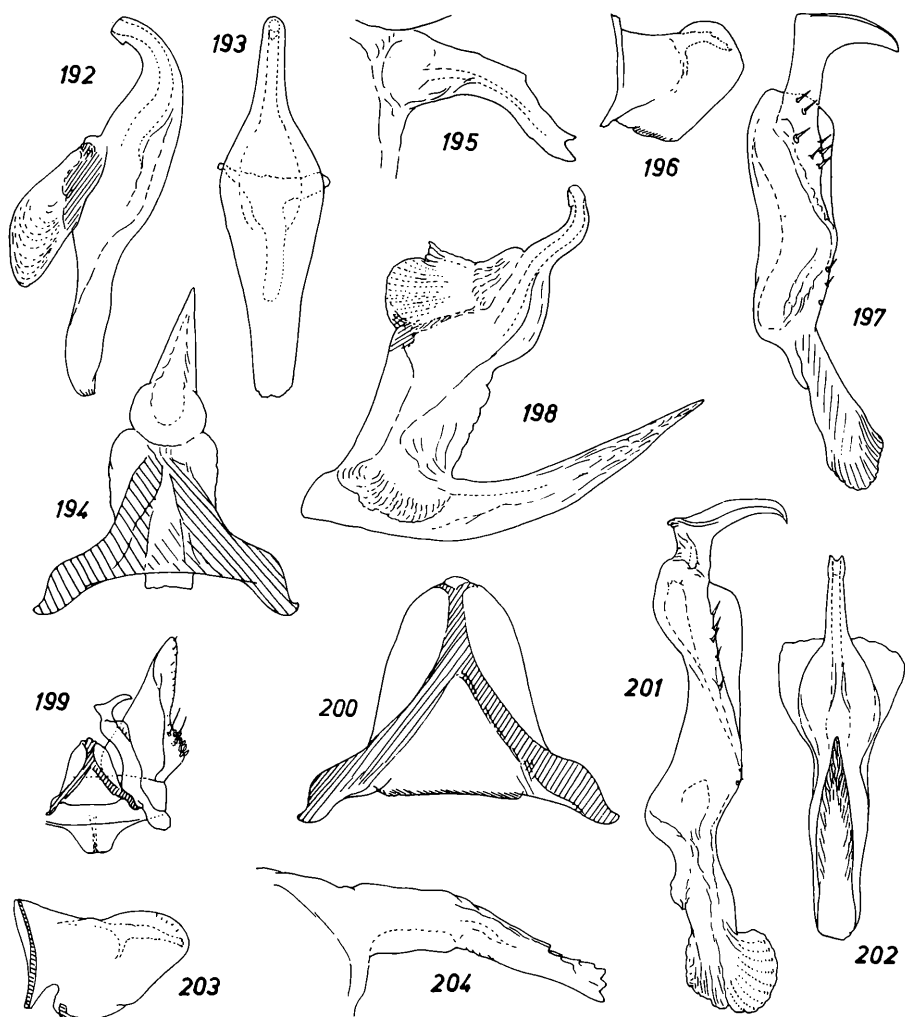
Closely related to *Asialebra* DWOR. Externally differing from it by longer pronotum (Fig. 18), long frontoclypeus and anteclypeus narrow at tip (Fig. 19). Wings venation as in *Asialebra* DWOR. but apical cells of fore wing slightly longer (Fig. 20).



Figs. 179–191.

Coganoa serrata sp. n.: 179. — *C. lutescens* sp. n.: 180–191.

Male genital apparatus could be characterized by stronger reduction and differentiation of setosity (Figs. 21–23) in comparison with *Asialebra* DWOR. Smaller connective (Fig. 27) seems to depend on stronger sclerotized subgenital plate, presence of sclerotization on pygophore side (Fig. 21) and more massive paramere (Fig. 26). Contrary to *Asialebra* DWOR. subgenital plate in the new genus extends beyond pygophore side (Fig. 16), anal tube very small, membranous.

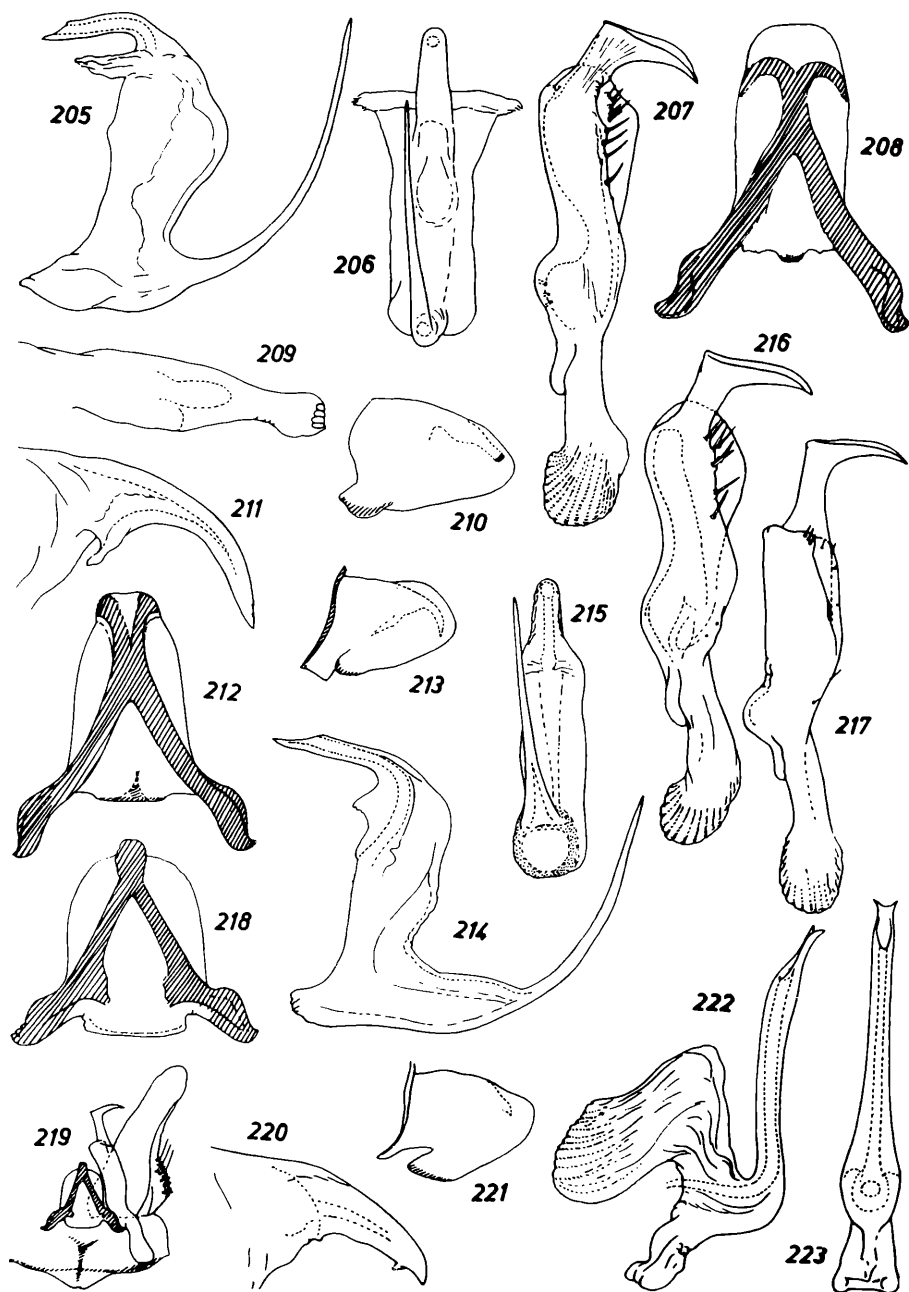


Figs. 192–204.

Coganoa minuta sp. n.: 192–197. 194: connective with thorn being previously connected with the base of penis. — *C. serrata* sp. n. 198–204.

Pygophore side with sclerotized ledge bearing teeth at hind upper angle. Setosity consists of a row of short rigid microsetae at hind part and not numerous short slender microsetae more basally (Fig. 21).

Subgenital plate with tapering tip part (Fig. 23) similar to that of *Asialebra* DWOR. There are setae along margin of plate, several of them very short and thin and the others quite thick and rigid. Similar rigid setae are on tip part of plate. Very short rigid microsetae are



Figs. 205–223.

Coganoa palpata sp. n.: 205–210. — *C. arcuata* sp. n.: 211–216. — *C. cogani* sp. n.: 217–223.

situated on middle part of plate, the most extending caudad (Figs. 22, 23). Big macrosetae form an oblique row.

Paramere massive, with short blunt apical part.

Penis (Figs. 24, 25) tubular, gonopore ventral, praeatrium large.

***Abrabra bura* sp. n.** (Figs. 16–27)

Ground testaceous. Brown are: signs of two longitudinal streaks on sides of frontoclypeus, ocelli, centre and hind margin of pronotum, scutum, scutellum (Fig. 18) and a broad streak along hind margin of clavus (Fig. 20), the last mark is the darkest at hind inner angle. There is big semicircular spot in hind part of longitudinal cu cell. Fore wing semitransparent, light testaceous, wax-field and veins light. Whitish roundish patches mesad of ocelli (Fig. 19).

Pygophore side sclerotized at its hind upper angle, provided with tooth (Fig. 21). Process-like tip of paramere only slightly longer than basal part. Paramere swollen in the middle of its length (Fig. 26). Penis long, strongly flexed, slightly compressed dorso-ventrally (Figs. 24, 25).

Length ♂: 3.70 mm.

H o l o t y p e , male: Upper Laos, Nam Hou, coll. MICHOLITZ. (Dres.)

Empoascini

***Empoasca borowikae* sp. n.** (Figs. 28–40)

This new species belonging to the group of *Empoasca dolichi* PAOLI shows great difference in male genital structure between normal and mutilated by parasites individuals. The difference concern even external features, so there are given descriptions of both forms.

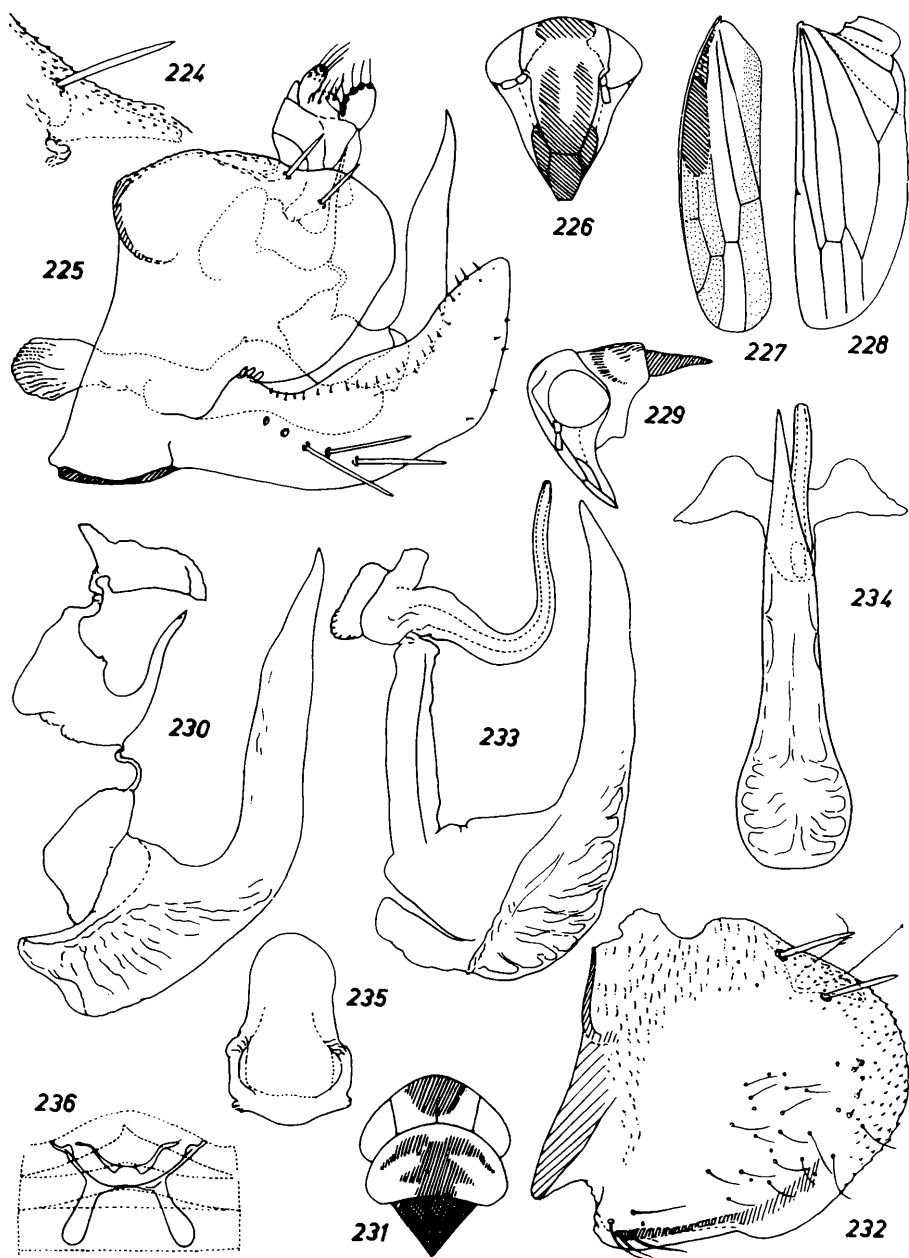
Normal specimens. Body quite robust. Vertex slightly produced in the middle. Eyes brown. Ground light green. Fore wing hardly semivitreous, clavus more dull. Whitish hypodermal pattern on upper side of thorax typical for the group, but hardly visible.

Parasitated specimens. Body rather slim. Ground yellowish-testaceous. Eyes brown. Vertex slightly produced in the middle. Whitish hypodermal pattern well developed on vertex and thorax. At anterior margin of pronotum numerous ivory patches, central stripe on scutum and three triangles on scutellum also ivory. Fore wing dull, milky greenish.

Length ♂ 3.10–3.50 mm.

H o l o t y p e , male: Zaire, Lubumbashi, Dec. 5, 1951, coll. CH. SEYDEL. — P a r a t y p e s 1 ♂, Liberia, Suakoko, March 2–9, 1952; 1 ♂, same locality, March 1–9, 1952, coll. C. C. BLICKENSTAFF; 1 ♂, Nigeria, Ile-Ife, Apr. 5, 1969, coll. J. T. MEDLER; 1 ♂, Cameroon, Mukonje, Apr. 5, 1938, coll. BUHR. (USNM, ISEZ, RL, Ber.)

The new species is named in honour of my friend Dr. MAGDALENA BOROWIK (Mrs.), the parasitologist.



Figs. 224-236.

Lichtrea nigrescens sp. n., specimen mutilated by parasites: 224-232. 224: a part of upper margin of pygophore side. — Normal specimen of *Lichtrea nigrescens* sp. n.: 233-236.

***Empoasca interrupta* sp. n.** (Figs. 77–87)

This species belongs to the group of *Empoasca signata* (HPT.).

Slim. Vertex produced in the middle (Fig. 80). Ground light testaceous. Fore wing with greenish tint.

Anal tube appendage (Fig. 79) simple, short, well sclerotized. Pygophore appendage directed upwards (Fig. 86), narrow, broadened before tip (Fig. 87), sclerotized apically. Pygophore side setosity consists of not numerous rigid microsetae and several slender ones. Subgenital plate with distinctly interrupted rows of slender setae (Fig. 77). Penis stem quite narrow in side view (Fig. 83) with small spines on hind wall at base. Paramere solid with numerous setae on almost whole concave surface (Fig. 84). Connective lamellate (Fig. 85).

Length ♂ 2.80 mm.

H o l o t y p e, male: W Flores, Rana-Mèsè, June 20–30, 1927, coll. B. RENSCH. (Ber.)

***Empoasca nigerica* sp. n.** (Figs. 41–52)

The new species belongs to the group of *Empoasca signata* (HPT.).

Ground of upper side of body yellowish-green. Eyes dark brown. Vertex greenish-yellow with the tip often ochraceous-yellow. Anterior margin of pronotum broadly whitish or yellowish-white. Centre of scutum whitish, at anterior margin of scutellum three triangular whitish patches. Fore wing greenish, apical cells slightly smoked.

Pygophore appendage broadened in a form a triangle apically (Figs. 49, 50) or with two small rounded lobes (Figs. 46–48, 51).

Length ♂ 2.60–2.80 mm.

H o l o t y p e, male, and **p a r a t y p e s** 7 ♂♂, Nigeria, Umuahia, EC State, Apr., 1973, coll. J. T. MEDLER. (Ber., USNM, RL, ISEZ)

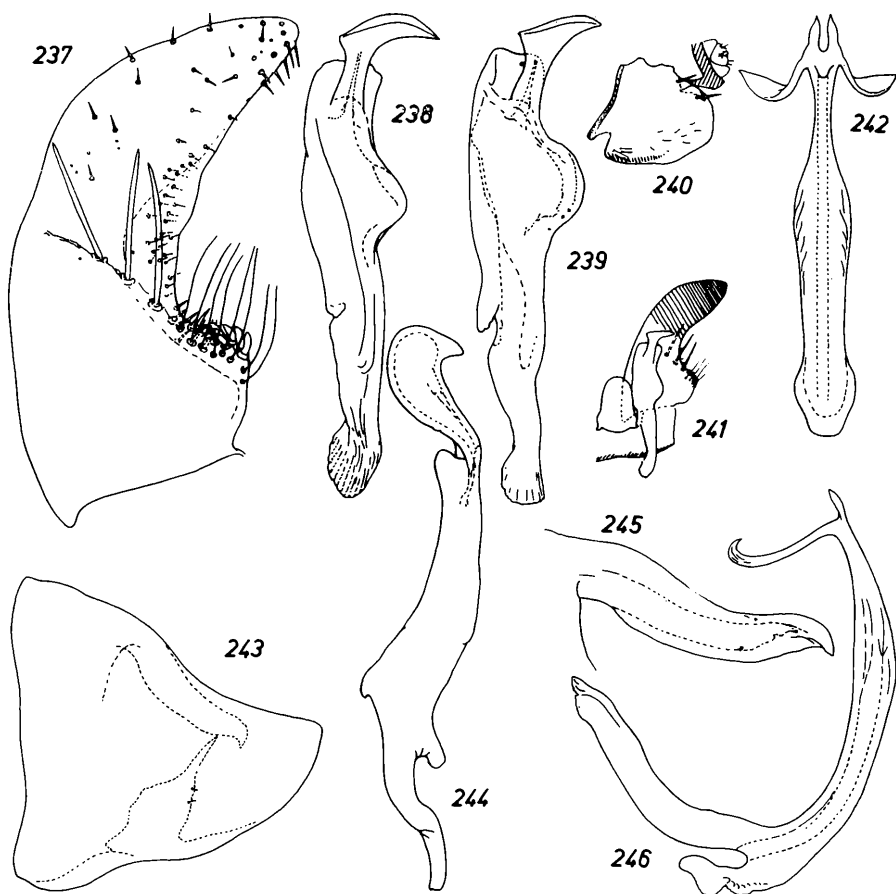
***Empoasca sudanica* sp. n.** (Figs. 53–62)

The new species belongs to the group of *Empoasca signata* (HPT.).

Vertex slightly produced in the middle, rounded. Ground green. Eyes dark brown. Face uniformly green. Whitish hypodermal pattern consists of two patches behind eyes, one patch in the centre of anterior margin of pronotum, one patch in the centre of scutum and the other at the anterior margin of scutellum. In some cases ground rather yellow-green but fore wing always remain greenish, semivitreous.

Length ♂ 2.50–2.70 mm.

H o l o t y p e, male, and **p a r a t y p e**, ♂ Nigeria, Umuahia, EC State, Apr., 1973. — **O t h e r p a r a t y p e s** 1 ♂, Nigeria, Badeggi, NW State, Dec. 22, 1968, all coll. J. T. MEDLER; 3 ♂♂, 2 ♀♀, Sudan, Blue Nile, Singa — Damazin, Nov. 15–17, 1962; 1 ♂, Sudan, Equatoria, Maridi — Ibba, Apr. 16, 1963; 2 ♂♂, 7 ♀♀, Ethiopia, Koka (Artificial Lake), June 6, 1963, coll. R. LINNAVUORI. (Ber., ISEZ, USNM, RL)



Figs. 237–246.

Lichtrea nigrescens sp. n.: 237–241. 238: normal specimen. The other figures show parasitised specimen. — *Szymczakowskia testacea* sp. n. 242–246.

***Empoasca etroni* sp. n. (Figs. 63–71)**

The new species belongs to the group of *Empoasca signata* (HPT.).

Robust. Vertex produced in the middle. Ground yellowish-green. Eyes brown-greyish. Light hypodermal pattern indistinct but hind half of vertex and broadly anterior margin of pronotum more yellow than green. Face yellowish. Fore wing semitransparent, greenish. In some specimens whitish hypodermal pattern visible on pronotum behind eyes, in the centre of scutum and as three small triangles at anterior margin of scutellum.

Length ♂: 2.50–2.60 mm.

Holotype, male: Nigeria, Ile-Ife, Feb. 26, 1970. — **Paratypes** 2 ♂♂, same locality, Feb. 10, 1970, all coll. J. T. MEDLER. (Ber., RL, USNM)

***Empoasca georgii* sp. n.** (Figs. 72–76)

The new species belongs to the group of *Empoasca signata* (HPT.).

Vertex produced in the middle. Eyes brownish-grey. Ground yellowish-green with very indistinct signs of lighter hypodermal pattern at anterior margin of vertex, in the centre of scutum and at sides of scutellum. Fore wing semitransparent, greenish.

Paramere with acute apex.

Length ♂: 2.65 mm.

H o l o t y p e, male: Nigeria, Bida, NW State, Sep. 1, 1970, coll. J. T. MEDLER. (Ber.)

The new species is named in honour of Dr. GEORGIJ A. ANUFRIEV, the Russian homopterologist from Gorky.

***Buhria* subgen. n. of *Empoasca* WALSH**

Type-species: *Empoasca (Buhria) angusta* sp. n.

Differing from the nominate subgenus by longer vertex (Fig. 99), shortened (Fig. 98) and more convex (Fig. 104) face, equally broad all apical cells in fore wing (Fig. 96) and shortened broad apical cell in hind wing (Fig. 97). Anal tube appendage (Figs. 93, 102) massive. Pygophore side tapering and truncate at hind margin, sclerotized there and provided with rigid microsetae arranged in a row (Fig. 88). Pygophore appendage ornamented with small ledges which form cell sculpture (Fig. 100). Slender microsetae shorter in upper part of subgenital plate than in lower part (Fig. 92). Paramere strongly flexed in its apical part, not numerous short microsetae occupy subapical area (Fig. 94). Penis well sclerotized. Connective with a central lobe (Fig. 89). Abdominal apodemes well developed (Fig. 103).

The new subgenus is named in honour of the collector of the holotype of type-species.

***Empoasca (Buhria) angusta* sp. n.** (Figs. 88–104)

Ground grey-testaceous. Face light testaceous above, greyish below. Eyes blackish. Signs of whitish hypodermal pattern at anterior margins of pronotum and scutellum as in Fig. 99.

Fore wing yellowish on claval half of corium and on clavus. Blackish mark in apical part of longitudinal m, similar but smaller and lighter mark at tip of longitudinal cu (Fig. 96). Penis structure (Figs. 95, 101) resembles *Empoasca dolichi* PAOLI. Abdominal apodemes (Fig. 103) short, broad.

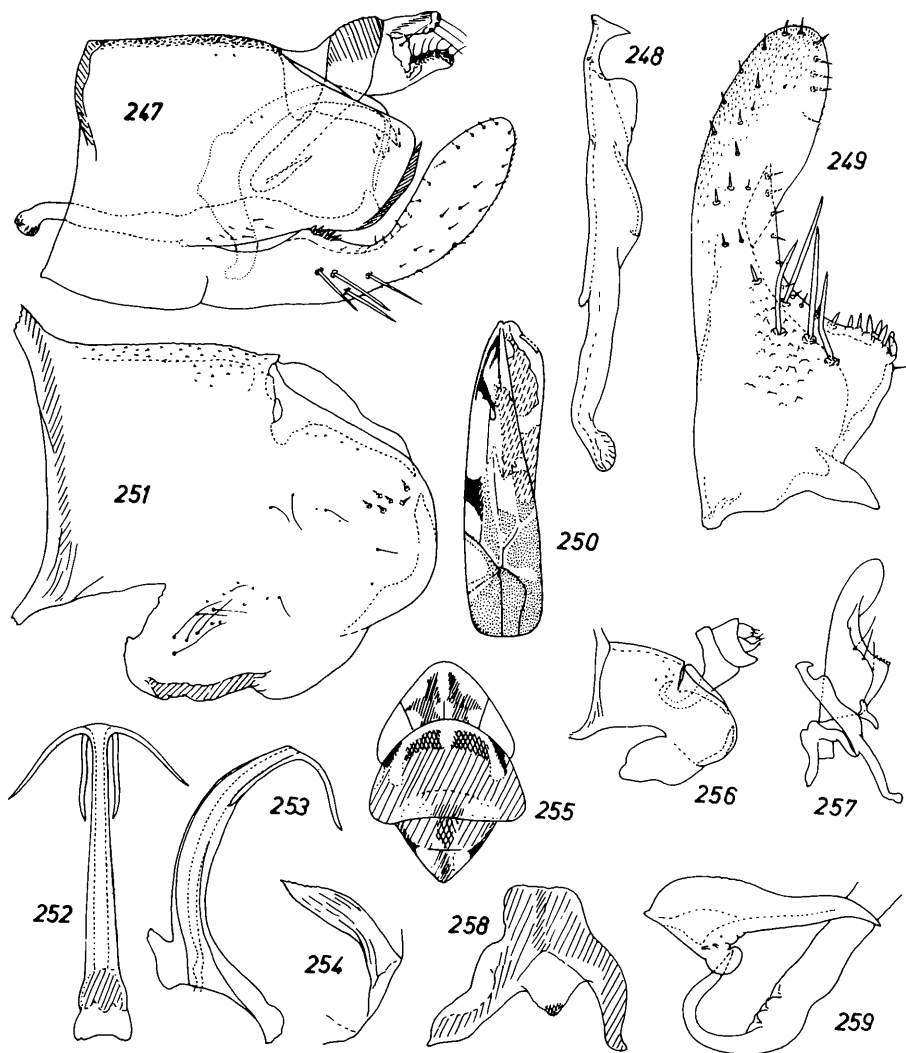
Length ♂: 2.50 mm.

H o l o t y p e, male: Cameroon, Moliwe, Apr. 13, 1938, at light, coll. BUHR. (Ber.)

***Alebroides cornutus* sp. n.** (Figs. 105–110)

Ground light testaceous. Eyes brown. On vertex whitish patches as in *Alebroides aka-shiensis* MATS. Area between basal triangles and anterior $2/3$ of scutellum, whitish. Whitish pattern seen on vertex pass to face broadly surrounding ocelli and terminate just above the antennae.

Anal tube appendage arcuated, in some cases with a small tooth subapically (Fig. 106).



Figs. 247—259. *Frutioidia kameruna* sp. n.
254: appendage of pygophore margin

Pygophore appendage resembling that of *A. perstrigatus* (JAC.) but contrary to that species, ventral branch of the appendage is shorter than the dorsal one (Figs. 107, 110). Penis provided with one long and thin thorn on atrial rim ventrad of base of penis stem (Fig. 108). The thorn directed caudad. In Fig. 109 it is artificially displaced. Connective (Fig. 105) bigger than in *A. perstrigatus* (JAC.).

Length ♂ ? 3.50 mm. (tip of fore wing broken).

H o l o t y p e , male Lombok, Sembalon, March 30 or 31, 1927, coll. RENSCH Exp. (Ber.)

Nkima subgen. n. of *Optya* DWORAKOWSKA, 1974

Type-species: *Optya (Nkima) manua* sp. n.

External features as in nominate subgenus but 2nd apical cell in fore wing (Fig. 117) narrowing before tip and apical cell in hind wing narrow (Fig. 118). Parts of veins in hind wing infuscated. VIIIth sternite of female triangularly produced in the middle, blackish. Coleostron almost equally long as preceeding abdominal segments together. Pigmentation very well developed.

Male genital apparatus differs from that of *Optya* DWOR. by shorter anal tube appendage (Figs. 113, 116) and longer flexed subgenital plate (Fig. 116). Pygophore side setosity very well developed (Fig. 113), consisting of short rigid and slender microsetae. Macrosetae on tip part of subgenital plate only slightly smaller than these at base (Fig. 112). Subapical tooth at tip of paramere (Figs. 124, 129, 130) situated on the level of upper margin thus forming a triangle. Atrial rim short (Figs. 119, 127) not elongated as in nominate subgenus.

***Optya (Nkima) manua* sp. n. (Figs. 116–130)**

Ground greenish-yellow. Testaceous pattern on vertex and olivaceous one on thorax as in Fig. 120, in some cases it has an ochreous tint. Basal triangles brownish. Face whitish below, yellowish above. Ocelli testaceous.

Fore wing greenish, olivaceous in basal part, apical cells slightly smoked. Longitudinal brown streak along hind margin of clavus. Tip of longitudinal cu cell and 1st apical cell smoked.

Length: ♂ 4.10–4.50, ♀ 4.60 mm.

Holotype, male, and paratypes 1 ♂, 1 ♀, Mt. Cameroon, „Mannsquell top“ 2250 m., Apr. 30; 1 ♂, same locality, May 7, all collected by BUHR in 1938. (Ber.)

***Optya (Nkima) secunda* sp. n. (Figs. 111–115, 131, 132)**

Ground light testaceous. An ochreous tint in the centre of pronotum and at hind and inner margins of fore wing. Eyes brown. Ocelli slightly ochreous. Tip of fore wing slightly smoked. Centre of scutum and anterior half of scutellum whitish.

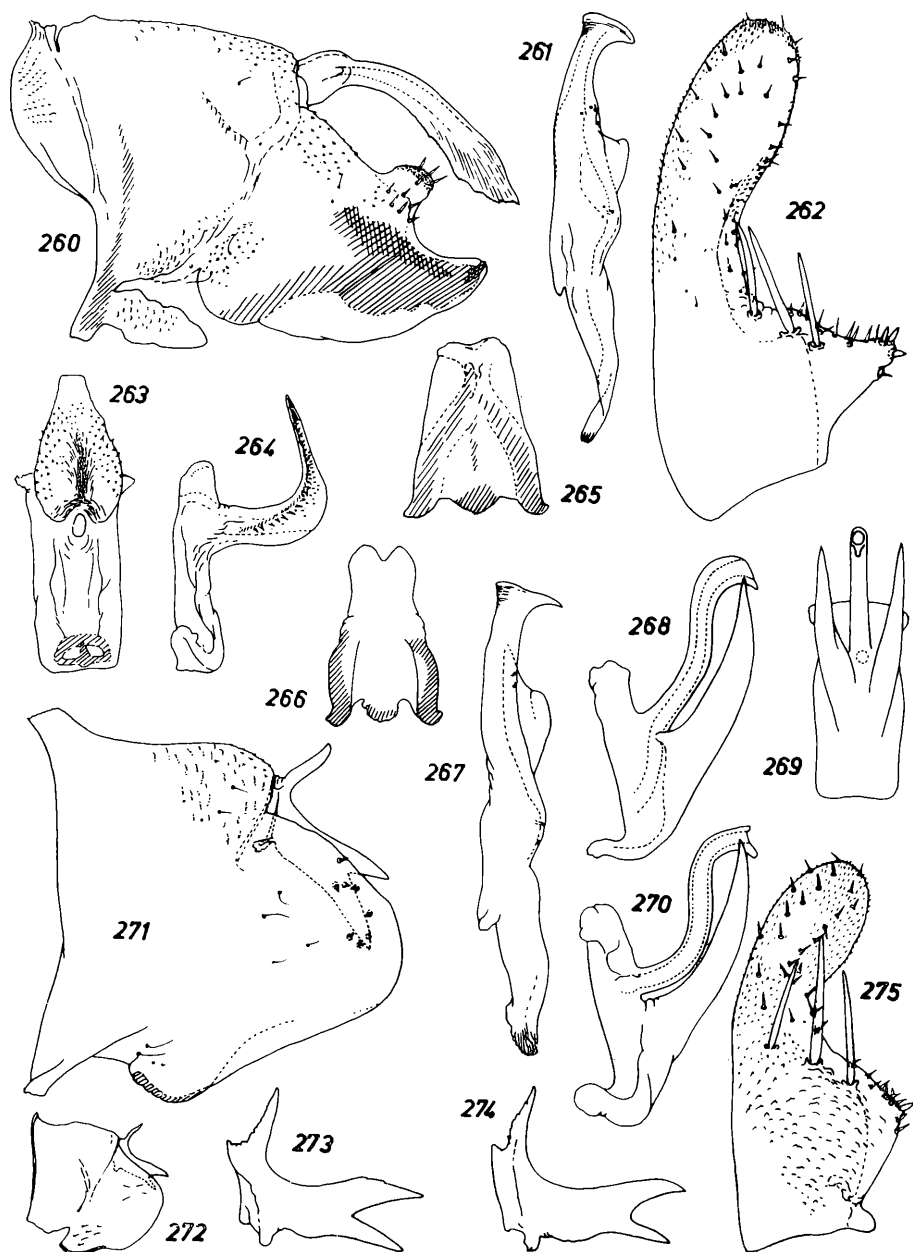
Length ♂: 3.80 mm.

Holotype, male: Erithrea, Keren – Asmara, May 23 or 24, 1963, coll. R. LINNAVUORI. (RL)

*T y p h l o c y b i n i****Eupteryx occidentalis* sp. n. (Figs. 133–139)**

Ground of vertex and pronotum yellowish-white, that of scutum and scutellum chalk-white. Two large patches on both sides of vertex, sides of pronotum (except of a narrow central streak) and two triangles on scutum, blackish (Fig. 136). Face and beneath whitish to light yellow.

Fore wing blackish except of a wax-field and a patch in terminal part of longitudinal sc cell which are creamy and other patches (seen in Fig. 137) which are white.



Figs. 260–275.

Empoascanara (s. str.) *sonani* (MATS.): 260–265. — *E.* (s. str.) *africana* sp. n.: 266–275.

Penis with long stem and two terminal appendages bifurcated apically. Tips of the appendages directed basad (Figs. 138, 139). Appendage at margin of pygophore side thin, arcuated, with a small tooth (Figs. 134, 135). Paramere with almost straight apical hook (Fig. 133).

The only male studied by me is mutilated by parasites but structure of penis appendages and characteristic colouration allow to distinguish the new species.

Length ♂: 4.00 mm.

H o l o t y p e, male: Cameroon Mt., „Mannsquell top“ 2250 m., Apr. 30, 1938, coll. BUHR. (Ber.)

Erythroneurini

Harmata gen. n.

Type-species: *Typhlocyba condensata* JAC., 1941

Externally resembles *Thaia* GHAURI but coronal suture well visible (Fig. 153), face only slightly convex, lateral frontal sutures only slightly incised and anteclypeus longer. Wing venation as in *Thaia* GHAURI. VIIIth sternite of female strongly produced in the middle.

Genital capsule of male short. Subgenital plate and paramere protruding far beyond pygophore side. First segment of anal tube long and broad, its ventral part longer (Fig. 157). All parts of genital capsule well sclerotized and pigmented.

Subgenital plate setosity resembling *Thaia balbinae* DWOR. but marginal microsetae not differentiated in basal part. Marginal fold very narrow. Surface covered by minute teeth sculpture.

Pygophore side (Fig. 159) ornamented by minute teeth, several thin microsetae at its upper hind angle and at lower basal angle. There is a big appendage arising from hind upper angle. Short rigid microsetae on inner side of sclerite at base of the appendage. The appendage curved ventrad, then upwards and cephalad.

Connective with big central lobe, lamellate (Fig. 161).

Penis stem tubular, gonopore subterminal, praeatrium large. Paired appendages at both sides of atrial rim (Figs. 148, 149, 152, 155). Paramere (Fig. 154) of *Thaia* type (it is better visible in parasitised specimen, Figs. 150, 151).

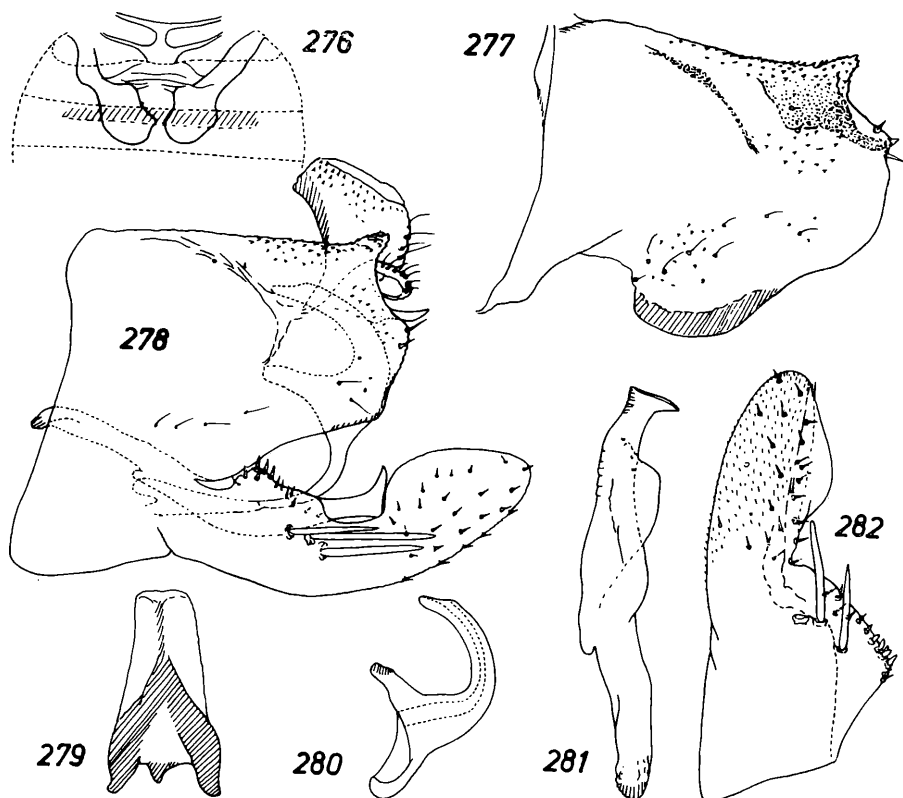
Harmata condensata (JAC., 1941) **comb. n.** (Figs. 148–162)

Typhlocyba condensata JAC., 1941

H o l o t y p e, female: „Sunda-Exp. Rensch W.-Flores Badjawa 17 6. 1927“, „Typus“ „1940 2“ and „Typhloc. condensata Jac.“ (Dres.).

1 ♂, E Flores, Geli Moetoe [? Keli Mutu], July 14–20; 1 ♀, W Flores, Badjawa, June 17
1 ♂, 1 ♀, Lombok, Sembaloen, Apr. 13; 2 ♂♂, Lombok, Sembalon, March 30 and 31, all collected by RENSCH Exp. in 1927.

Testaceous. Centre and hind margin of pronotum dark grey, the very hind margin milky. Eyes, basal triangles and two spots on vertex blackish. Face light testaceous. Anteclypeus and two streaks on frontoclypeus blackish-brown. Streaks on frontoclypeus usually reach



Figs. 276–282. *Empoascanara (Kanguza) bucephala* sp. n.

the level of antennae. In darker specimens two brownish patches in the centre of anterior half of pronotum (Fig. 153). Fore wing light grey, often covered by wax. A narrow streak on clavus passing to the longitudinal cu cell and other streak situated on both sides of darkened longitudinal m vein, brown. Apical veins infuscated. Apical cells and near area darkly smoked. VIIth female abdominal sternite blackish.

Length ♂ 4.65–5.00, ♀ 4.90–5.00 mm.

Ska gen. n.

Type-species *Ska argentea* sp. n.

Type-species of the new genus has distinct pattern of small impressed dots on pronotum (Fig. 168), scutum, face (Figs. 169, 172) and clavus (Fig. 170). So, the remarks given in my previous paper (DWORAKOWSKA 1972c, p. 405) concern this genus either.

Head and thorax from above resemble *Pettya* KIRK. Vertex rounded on transition to face (Fig. 172). Face slightly convex, frontoclypeus narrowing in its lower part, anteclypeus slightly broadened before tip, truncate, lorae well visible. Inner parts of genae with impressed dots. Lateral frontal sutures incised (Fig. 169).

Fore wing venation as in *Pettya* KIRK. but 3rd apical cell is bordered by transverse sc-m and a part of transverse m-cu vein (Fig. 170). Thus the 3rd apical cell is very broad and longer than 2nd apical cell. Hind wing venation similar to that of *Eldama* DWOR. but submarginal vein at costal margin in tip part of wing, situated very closely near it and subapical vein sc+r and m divergent from each other. The 1st apical cell is narrower than usually and the 2nd one is broadened apically (Fig. 171).

Anal block high, comparatively short (Fig. 165). There are numerous not sclerotized parts. Anal tube broad, short.

Pygophore side consists of three well sclerotized parts (Figs. 164, 167) (upper, lower and terminal) joined together by not sclerotized ligaments. The upper sclerite is connected with the anal tube, it is covered by minute teeth on hind half of its surface. The lower sclerite slightly infuscated, provided with a couple of slender setae at its hind lower angle. The terminal sclerite of pygophore side forms a big process (Fig. 167) which is arcuated and directed to the opposite side of anal block just above penis basal appendage (Fig. 165).

Subgenital plate long, curved dorsad in its apical $\frac{2}{3}$, closing genital capsule from behind (Fig. 165). It is almost equally wide on its whole length (Fig. 166), not sclerotized. Marginal fold not developed. Both plates fused by their bases. Several macrosetae in typical position. Short marginal microsetae numerous, partly situated on ventral surface. Numerous slender microsetae in upper part occupy position of marginal row. Rigid setae on this area are shifted on ventral side and partly remain on dorsal side. Slender setae seem to be differentiated marginal microsetae. Sculpture not visible.

Connective semimembraneous, fibrous (Fig. 178).

Paramere well developed in its lower part (Fig. 174). Central and apical parts of paramere reduced. Nevertheless, short and thick sensory setae of apical part of paramere well developed (Figs. 174, 178).

Penis base extending far beyond pygophore side (Fig. 165). It is broadened and provided with well sclerotized symmetrical processes (Figs. 173, 175, 177). Penis stem not well sclerotized, partly membranaceous, gonopore subapical.

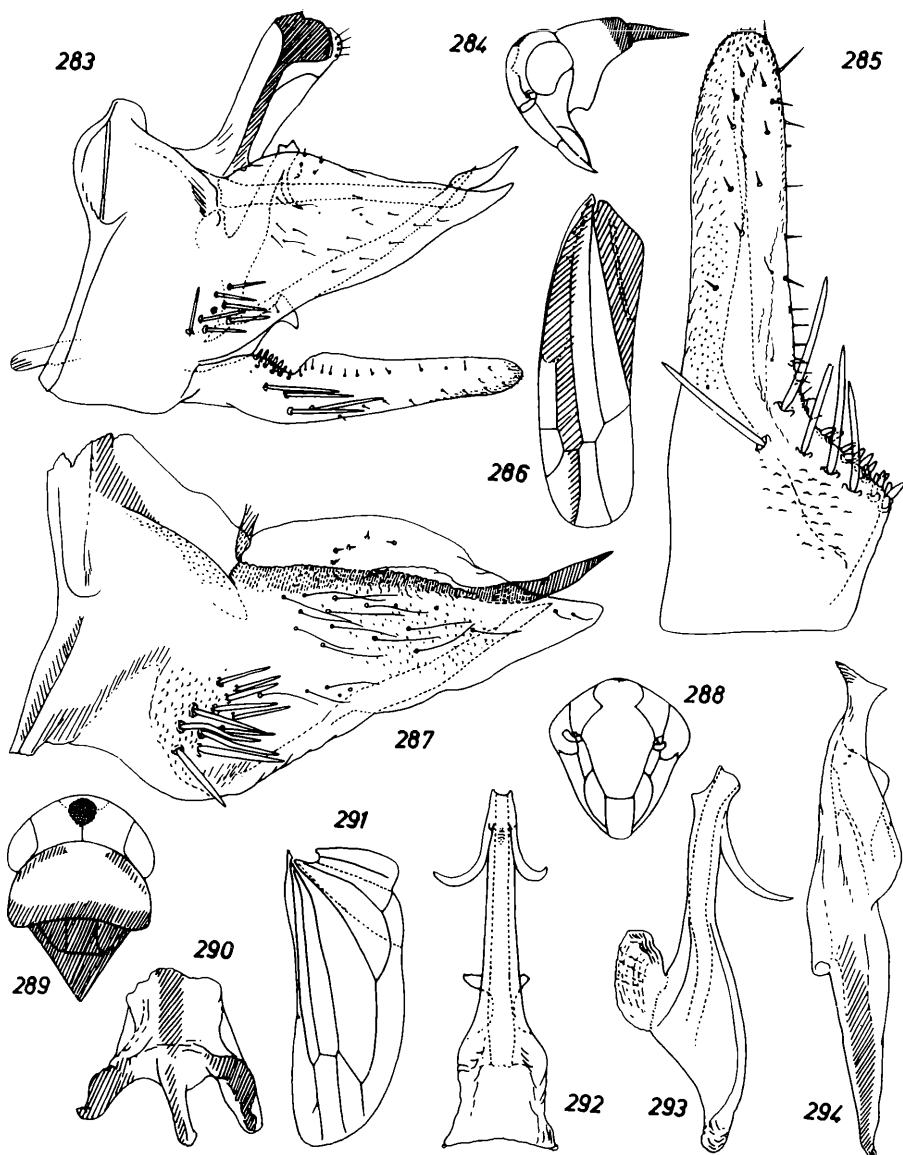
Abdominal apodemes not developed (Fig. 163). Abdominal sclerites infuscated, dots visible as roundish colourless patches (Fig. 172).

***Ska argentea* sp. n. (Figs. 163–178)**

Ground light greyish-white. Very hind margin of pronotum brownish at sides. Sides of pronotum infuscated with light dots. Scutum suffused with brownish. Basal triangles and scutellum blackish (Fig. 168). Face of ground colour. Lower part of frontoclypeus brownish-black. Inner parts of genae, lorae and anteclypeus blackish (Fig. 169). Eyes blackish. Fore wing light. Hind margin of clavus, basal $\frac{2}{3}$ of costal margin, wax-field, a patch on clavus and two patches in tip part of fore wing infuscated (Fig. 170). The patches in basal part of wing are brown and the apical ones only darkly smoked.

Length ♂: 4.60 mm.

Holotype, male: E Flores, Geli Moetoe [? Keli Mutu], July 14–20, 1927, coll. RENSCH Exp. (Ber.)

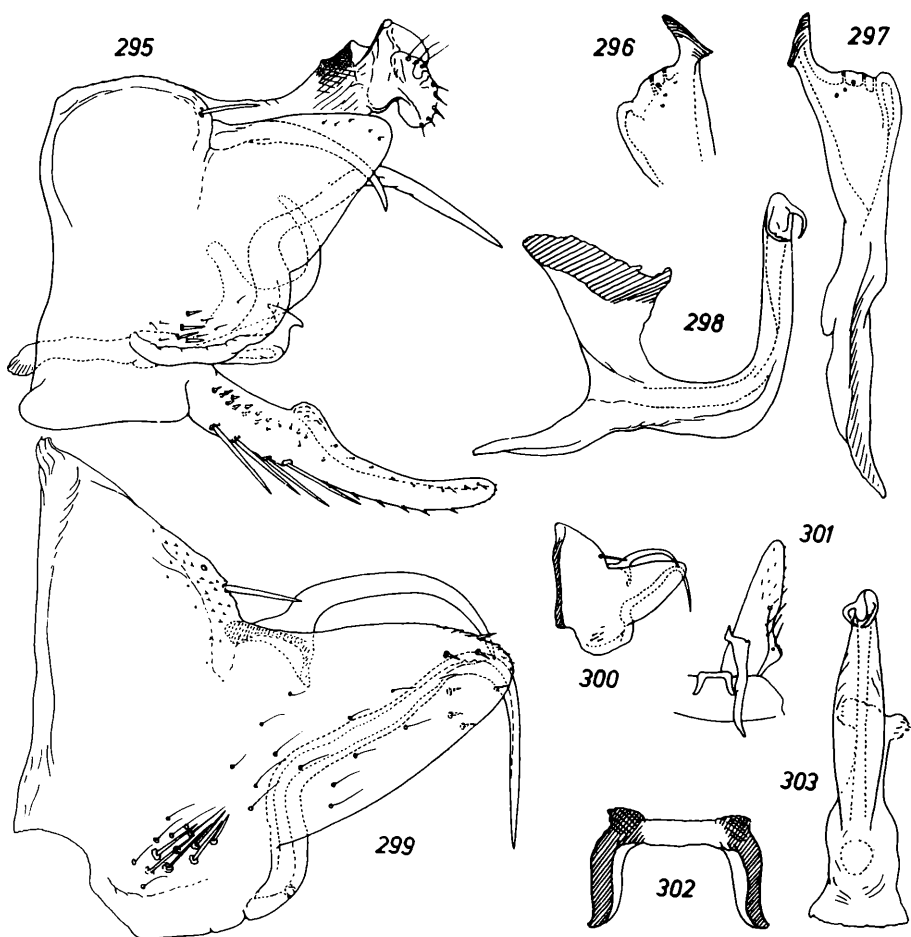


Figs. 283–294. *Salka asna* sp. n.

Coganoa gen. n.

Type-species *Typhlocyba purpureatincta* COGAN, 1916

Externally resembles *Imbecilla* DWOR. but pronotum distinctly broader than head (Fig. 186). Face broad. Frontoclypeus and anteclypeus as in *Imbecilla* DWOR. but lateral fron-



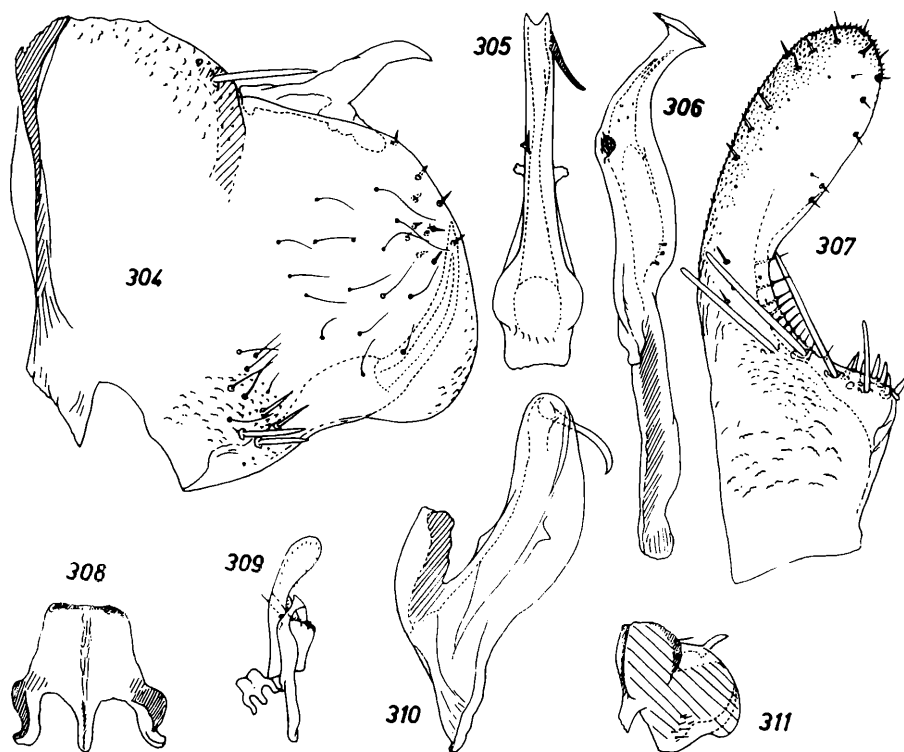
Figs. 295–303. *Salka armata* sp. n.

tal sutures much more incised and shifted toward eyes in their upper parts. Antennae small, 2nd limb cylindrical.

Wings venation similar to that of *Imbecilla* DWOR. but in hind wing transverse cu_1 -m vein touch m vein nearer the base than m-r transverse vein. Drawings of both wings of typical species have been published by GERARD (1972).

Pygophore side structure and paramere setosity (Figs. 181, 182) resemble that of *Olszewskia* DWOR.

Subgenital plate (Fig. 180) not sclerotized, pocket-like in tip part, marginal plica well developed. The plate is often shorter than pygophore side (Fig. 179). It is covered by fine teeth sculpture. Several short rigid microsetae on ventral side of tip part of plate, other microsetae at outer margin, these near „basal group” very thin. Marginal microsetae forming „basal group” very big and thickened.

Figs. 304–311. *Salka lobata* sp. n.

Paramere (Fig. 181) with well developed apical part, subapical lobe large. Several quite big microsetae situated subapically. Sensory pits in basal part. Lower part of paramere very well developed.

Connective (Fig. 187) consisting of well sclerotized central V-shaped part and not pigmented lateral lobes at connection with penis and not or only slightly pigmented central lobe.

Penis base resembles that of *Nlunga* DWOR., in some species even thorn at the connective present (Fig. 194). Penis stem tubular, simple, gonopore apical (Figs. 190, 192).

Abdominal apodemes not developed (Fig. 188).

Male VIIth sternite characteristically broadened in the middle.

The generic name was formed after the author of the type-species E. S. COGAN.

***Coganoa lutescens* sp. n. (Figs. 180–191)**

Sandy yellow. Tip of vertex and anterior part of pronotum slightly ochreous, hind part of pronotum milky. Face ochreous-yellow. Lower part of anteclypeus brownish in the

centre. Eyes blackish. Fore wing semivitreous, veins light. Wax-field and subcostal cell dull. Hind margin of fore wing slightly infuscated.

Length ♂ 3.00 mm.

H o l o t y p e, male: Kenya, Kibwezi, coll. HUEBNER. (Ber.)

***Coganoa minuta* sp. n.** (Figs. 192–197)

Light testaceous-grey. Eyes blackish. The specimen was probably at first preserved in alcohol and then dried.

Length ♂: 2.20 mm.

H o l o t y p e, male: Ivory Coast, Adiopodoume, Feb. 10, 1957, coll. P. DESSART. (Terv.)

***Coganoa serrata* sp. n.** (Figs. 179, 198–204)

Ground dark testaceous-ochre. Anteclypeus blackish-brown at least on its apical half. Coronal suture infuscated. Two indistinct brownish patches on vertex. Hind margin of pronotum milky, its centre brownish. Scutum and scutellum infuscated. Basal triangles dark brown. Eyes blackish. Fore wing dull, light testaceous. Hind basal angle and hind margin of clavus narrowly bordered with dark brown. Basal part of costal margin also marked by dark brown.

Length ♂ 3.20–3.30 mm.

H o l o t y p e, male, and **p a r a t y p e s** 4 ♂♂, Nigeria, Bida, NW State, Sep. 1, 1970, coll. J. T. MEDLER. (ISEZ, BM, RL)

***Coganoa palpata* sp. n.** (Figs. 205–210)

Light ochraceous-yellow. Tip of anteclypeus and parts of legs greenish. Eyes brownish-black.

Length ♂ 3.00 mm.

H o l o t y p e, male: Nigeria, Badeggi, NW State, March 19, 1972, coll. J. T. MEDLER. (RL)

***Coganoa arcuata* sp. n.** (Figs. 211–216)

Light testaceous-ochre. Frontoclypeus, anteclypeus and basal triangles ochreous or brownish-ochreous. Fore wing semivitreous, pale. Eyes brownish-black.

Length ♂: 3.00 mm.

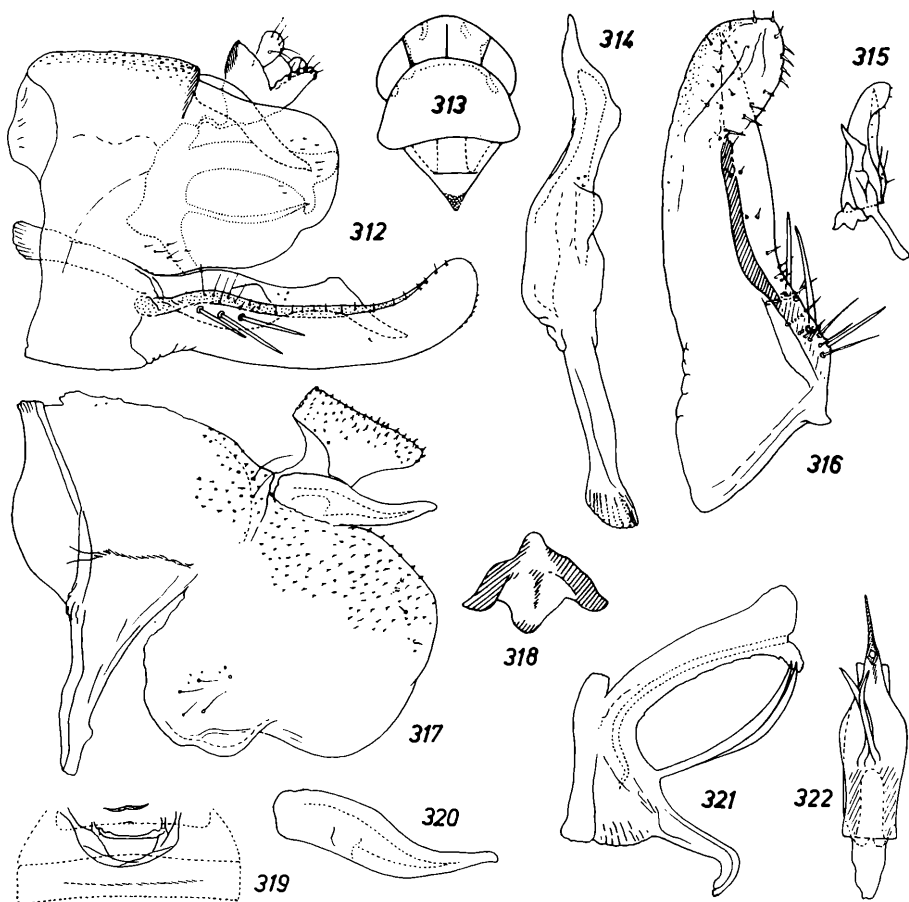
H o l o t y p e, male, and **p a r a t y p e**, ♂ Nigeria, Bida, NW State, Sep. 1, 1970; 1 ♂, Nigeria, Katsina, NC State, Sep. 5, 1970, coll. J. T. MEDLER. (RL)

***Coganoa cogani* sp. n.** (Figs. 217–223)

Dark testaceous-ochre. Fore wing dull, more grey, with olivaceous tint. Anteclypeus, frontoclypeus and inner parts of genae more ochreous. Eyes blackish-brown.

Length ♂ 2.40–2.75 mm.

H o l o t y p e, male, and **p a r a t y p e s** 22 ♂♂, Nigeria, Ile-Ife, Jan. 10, 1970; 1 ♂, Nigeria, Badeggi, NW State, Sep. 9, 1970, coll. J. T. MEDLER. (ISEZ, BM, RL)

Figs. 312–322. *Lectotypella diversa* sp. n.

The new species is named in honour of Dr. E. S. COGAN, prominent late specialist on African *Cicadellidae*.

Lichtrea gen. n.

Type-species: *Lichtrea nigrescens* sp. n.

Externally resembles *Molopopterus* JAC. Vertex quite long (Fig. 231). Face only slightly convex in lateral aspect (Fig. 229). Ocelli absent and contrary to *Molopopterus* JAC. only upper parts of lateral frontal sutures well visible (Fig. 226).

Venation of both wings similar to that of *Molopopterus* JAC. but 1st apical cell in fore wing is the biggest, claval vein not distinct (Fig. 227) and hind wing narrower and without submarginal vein at costal margin subapically (Fig. 228). Membrane of hind wing infuscated, veins brownish except of transverse r-m vein.

Abdominal sternites very dark. VII female sternite angularly produced in the middle. Length of coleostron about two times bigger than all previous abdominal segments together.

Genital capsule well sclerotized. Subgenital plate of a deep spoon-like structure, broad, much longer than pygophore side (Fig. 225). Anal tube short, without appendages.

Pygophore side roundish (Fig. 232), there is a small sclerotized plate on its inner side at upper part (Fig. 224). The plate is connected with the base of penis and with base of anal tube. Surface of pygophore side is ornamented by teeth sculpture. Setosity consists of several big macrosetae at hind upper angle, several short microsetae at hind margin, a couple of slender microsetae at hind lower angle and thicker microsetae at the very basal lower angle.

On subgenital plate (Fig. 237) several macrosetae at about its basal $\frac{2}{5}$. Numerous dispersed microsetae on ventral side of apical part. Microsetae of the marginal row the shortest and the most numerous at about middle length, thinner and longer toward base. „Basal group“ consists of several peg-like, quite big setae. Several ordinary microsetae beyond „basal group“ at the base of plate.

Paramere well developed (Figs. 238, 239) with big apical part provided with sensory pits and with high subapical lobe. The lobe has not numerous small sensory setae (better visible in parasitised specimen, Fig. 239). Basal part of paramere swollen just at sensory pits.

Penis base connected with the plate on inner side of pygophore (Fig. 230) and with additional manubrium (Fig. 233) which is joined with big appendage touching the ordinary connective. Penis stem short, tubular, atrial rim short and broad (Figs. 233, 234).

Connective lamellate (Fig. 235).

Abdominal apodemes very narrow, reaching IVth abdominal sternite (Fig. 236).

***Lichtrea nigrescens* sp. n. (Figs. 224–241)**

Dark testaceous. Pronotum ochreous. Scutum and scutellum blackish. A patch in the centre of vertex dark brown. Pattern on pronotum seen in Fig. 231, blackish-grey. In female there is longitudinal blackish streak along pronotum. Sides of lower part of frontoclypeus often blackish (Fig. 226). Eyes blackish.

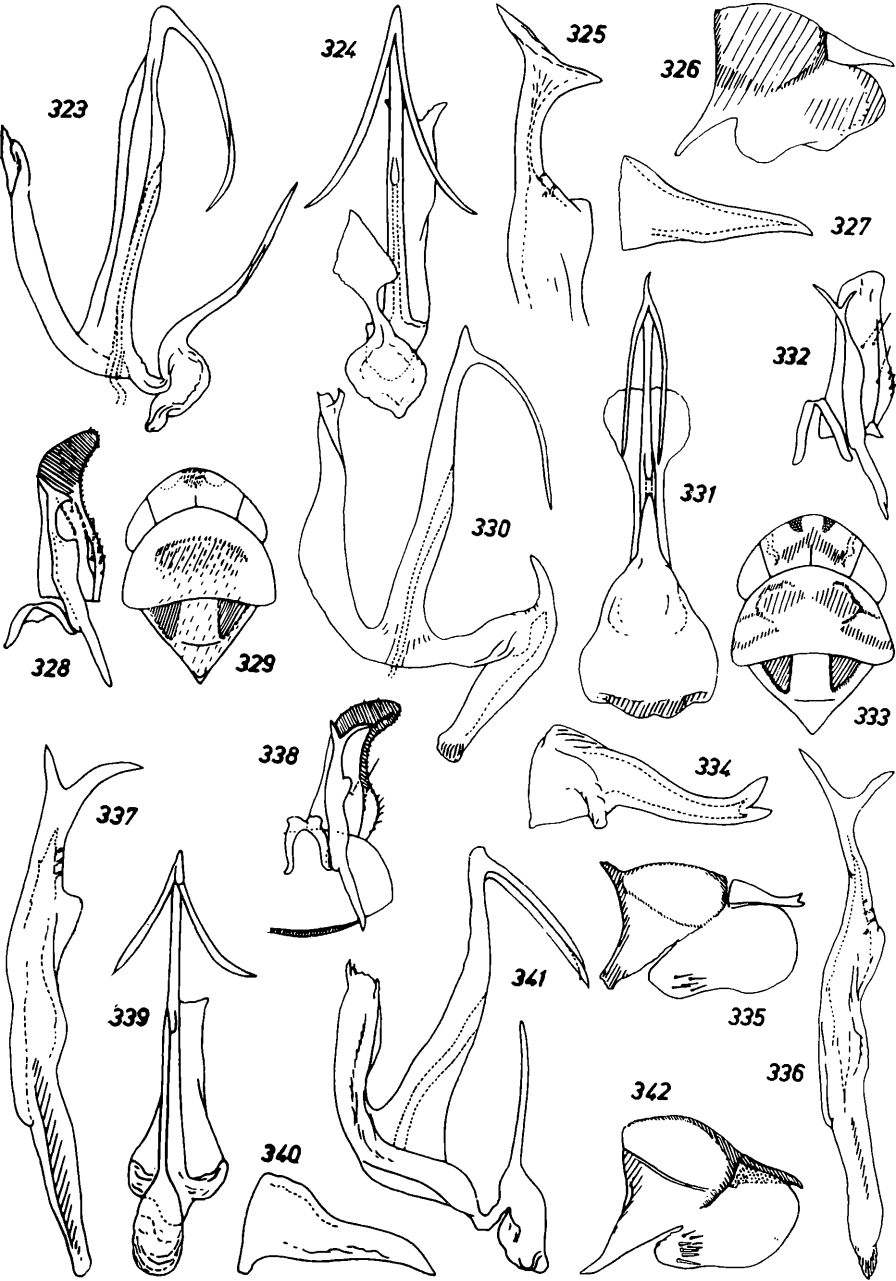
Costal, inner and hind margins of fore wing infuscated. Base of wing at costal margin and wax-field dark brown (Fig. 227). Surface of fore wing smoked except light areas forming a longitudinal streak as in Fig. 227. Veins slightly infuscated.

Length: ♂ 2.80–3.20. ♀ 3.25 mm.

H o l o t y p e, male, and **p a r a t y p e s** 1 ♂, 1 ♀, Cameroon, Mukonje, Apr. 5, 1938, at light, coll. BUHR; paratype, ♂, Nigeria, Yankari, Dec., 1968; ♂, Ibadan, W State, Mar. 16, 1969, coll. J. T. MEDLER. (Ber., RL)

***Szymczakowskia testacea* sp. n. (Figs. 242–246)**

Ground testaceous. Basal triangles yellowish-grey. Hind part of clavus slightly golden. Eyes brownish-grey.



Figs. 323–342.

Anufrievia grisea sp. n.: 323–329. — *A. badjawae* sp. n.: 330–336. — *A. ciconia* sp. 337–342.

Subgenital plate with a short doubled row of macrosetae. Paramere with broad hooked apical part (Fig. 244) similar to that of *S. linnavuorii* DWOR.

Length ♂: 4 mm.

H o l o t y p e, male: Cameroon, Mukonje, Apr. 5, 1938, at light, coll. BUHR. (Ber.)

Frutioidia kameruna sp. n. (Figs. 247–259)

Ground ivory. Greyish-brown pattern on vertex as in Fig. 255. Basal part of vertex at coronal suture yellow-testaceous. Blackish patches at both sides of pronotum behind eyes. Centre of pronotum and partly its sides ochreous-brown, anterior part of this patch dark brown-grey. Patches at basal triangles in hind part of pronotum grey. Basal triangles light brown-grey, sides and centre of scutum darker brown. In the centre of scutellum broad brownish streak. Face yellowish. Eyes dark grey.

Fore wing ivory, veins light yellow except longitudinal m and r and apical m which are ochreous. Basal part of costal margin and the margin at anterior angle, brownish. Wax-field ochreous-yellow, similar colour in hind part of longitudinal sc cell and at base of wing inside r and sc cells. Base of corium ochreous. Bluish marks on both ends of wax-field and at bifurcation of veins at base of wing. Two patches on clavus and two patches on corium (marked with dashes in Fig. 250), orange. Remaining areas (marked by spots) darkly smoked.

Upper appendage at pygophore side (Figs. 251, 256) equally long to it. Anal tube appendage thin, long (Fig. 256), with no distinct articulation (Fig. 259).

Genital structure of the new species similar to that of *Frutioidia plagiata* (HELL. et. LNV.) comb. n. (*Erythroneura plagiata* HELLER et LINNAVUORI, 1968) but both extensions of paramere (Fig. 248) of almost equal size and penis stem (Figs. 252, 253) not broadened at apex and its apical processes do not differ considerably by size.

Length: ♂: 3.00, ♀ 3.30 and 3.40 mm.

H o l o t y p e, male: Cameroon Mt., „Elisabeth top“, 3960 m., May 13. — P a r a t y p e s 1 ♀, Cameroon Mt., „Mannsquelle top“ 2250 m., Apr. 30; 1 ♀, Cameroon, Busa, May 30, at light. All specimens collected in 1938 by BUHR. (Ber.)

Empoascanara africana sp. n. (Figs. 266–275)

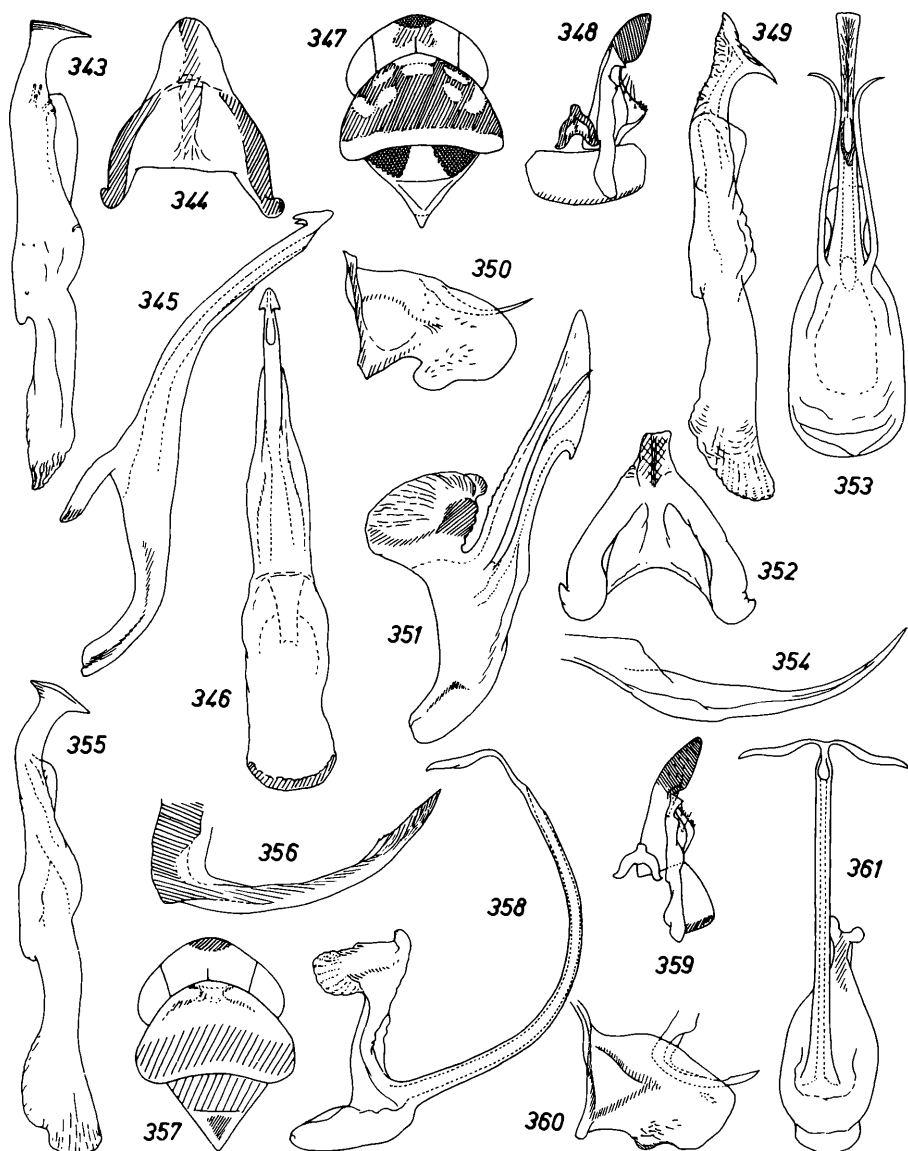
Dark testaceous. Basal triangles and eyes blackish. Anteclypeus frontoclypeus and centre of pronotum brownish. Tip of vertex with an indistinct darker patch. Fore wing dark grey, semitransparent.

Length: ♂ 2.40, ♀ 2.60 mm.

H o l o t y p e, male, and p a r a t y p e, ♀: Cameroon, Bota, March 18, 1938, coll. BUHR. — P a r a t y p e s 3 ♂♂, Nigeria, Ile-Ife, Jan. 10, 1970; 1 ♂, 3 ♀♀, Badeggi, NW State, Sep. 9, 1970; 2 ♀♀, same locality, Dec. 22, 1968; 2 ♂♂, Bida, NW State, Sep. 1, 1970; 1 ♂, Ibadan, W State, Mar. 16, 1969; 1 ♂, Yankari, NE State, Dec. 29, 1968, coll. J. T. MEDLER. (Ber., Dres., BM, ISEZ, RL)

Empoascanara (Kanguza) bucephala sp. n. (Figs. 276–282)

Body form resembles *Empoascanara (Kanguza) ibis* (DWOR.) comb. (*Kanguza ibis*



Figs. 343-361.

Seriana ochrata DWOR.: 343-346. — *S. dziobata* sp. n.: 347-354. — *S. biarmata* sp. n.: 355-361.

DWORAKOWSKA, 1972b) but face shorter and slightly convex. Ground light grey. Frontoclypeus yellow-testaceous, darker in upper part. Anteclypeus infuscated. Chalkish pattern consisting of a narrow stripe along hind margin of vertex, triangular patches at eyes

and broad bordering of anterior margin of pronotum. Wings milky, semitransparent, shining.

Length: ♂ 1.95–2.10, ♀ 2.30–2.35 mm.

Holotype, male, and **paratypes** 3 ♂♂, 2 ♀♀, Taiwan, Takao, 1907, coll. H. SAUTER. (Dres., ISEZ)

***Salka asna* sp. n.** (Figs. 283–294)

Externally differs from *Salka nigricans* (MATS.) by body more robust and face much shorter, more convex and broad.

The most distinguishing feature in male genital apparatus is absence of macrosetae at hind upper angle of pygophore side (Fig. 287). Connective has distinct central lobe (Fig. 290).

Ground orange-testaceous. Eyes and roundish spot on vertex (Fig. 289), blackish-brown. Hind margin of pronotum, scutum and scutellum brownish-grey. Fore wing dark grey, shining. Clavus and a streak along corium (Fig. 286) and wax-field, brownish.

Length: ♂ 3.45–3.55, ♀ 3.60 mm.

Holotype, male, and **paratypes** 4 ♂♂, 1 ♀, 1 specimen with abdomen lost, Taiwan, Takao; 2 ♂♂, paratypes, Taiwan, Pilam, all coll. H. SAUTER in 1907 (Dres., ISEZ)

***Salka armata* sp. n.** (Figs. 295–303)

Sides of face and antennae testaceous. Anteclypeus and lower part of frontoclypeus brownish-black. Remaining parts of frontoclypeus and inner parts of genae brown. Eyes black. Vertex and anterior part of pronotum testaceous. On the centre of vertex large roundish slightly triangular blackish patch, broader at the base of vertex. Remaining area of pronotum and fore wing greyish-brown. Veins darker. Scutum and scutellum brownish-black. Thorax beneath blackish. Legs pale.

Length ♂ 3.00 mm.

Holotype, male: Taiwan, coll. M. KATO. (BM)

***Salka lobata* sp. n.** (Figs. 304–311)

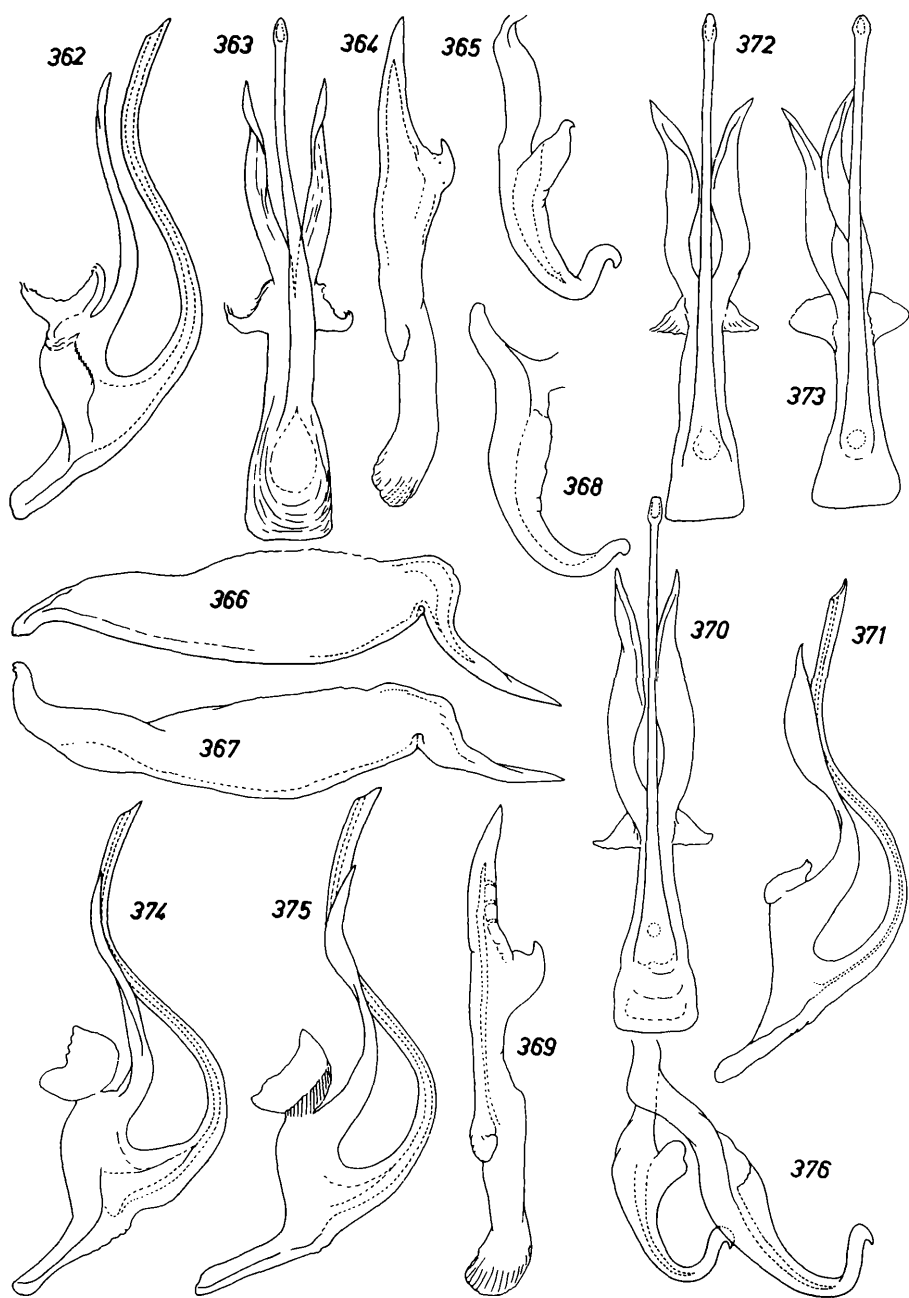
Scutellum and fore wing brownish-black. Veins lighter. Thorax beneath and abdomen blackish. Legs pale. Head and pronotum missing.

Length ♂: ? 3.50 mm.

Holotype, male: Taiwan, coll. M. KATO. (BM)

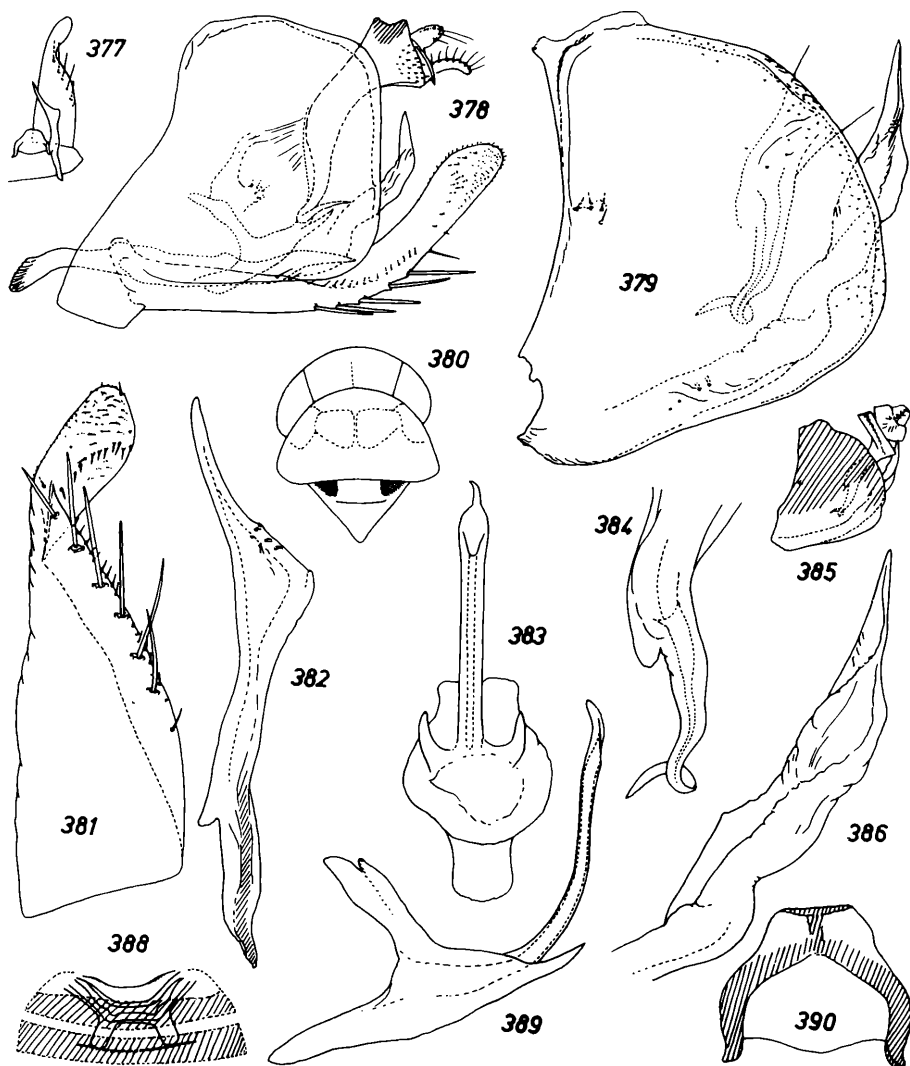
***Lectotypella diversa* sp. n.** (Figs. 312–322)

Ground light testaceous with yellowish tint. Two patches on vertex and at anterior margin of pronotum white. Tip of scutellum infuscated (Fig. 313). Yellow colour is the best visible in the centre of hind margin of pronotum. Eyes brown. Fore wing light grey, dull at base, then semitransparent. Hind of clavus, costal margin, wax-field and partly veins in tip part of wing, ochraceous.



Figs. 362–376.

Thaia oryzipora GHAURI, specimen from Chittagong (Bangla Desh) 362–366. – *T. katoii* sp. n., specimen from China: 367–371. – *T. katoii* sp. n., specimen from Burma: 372–376.

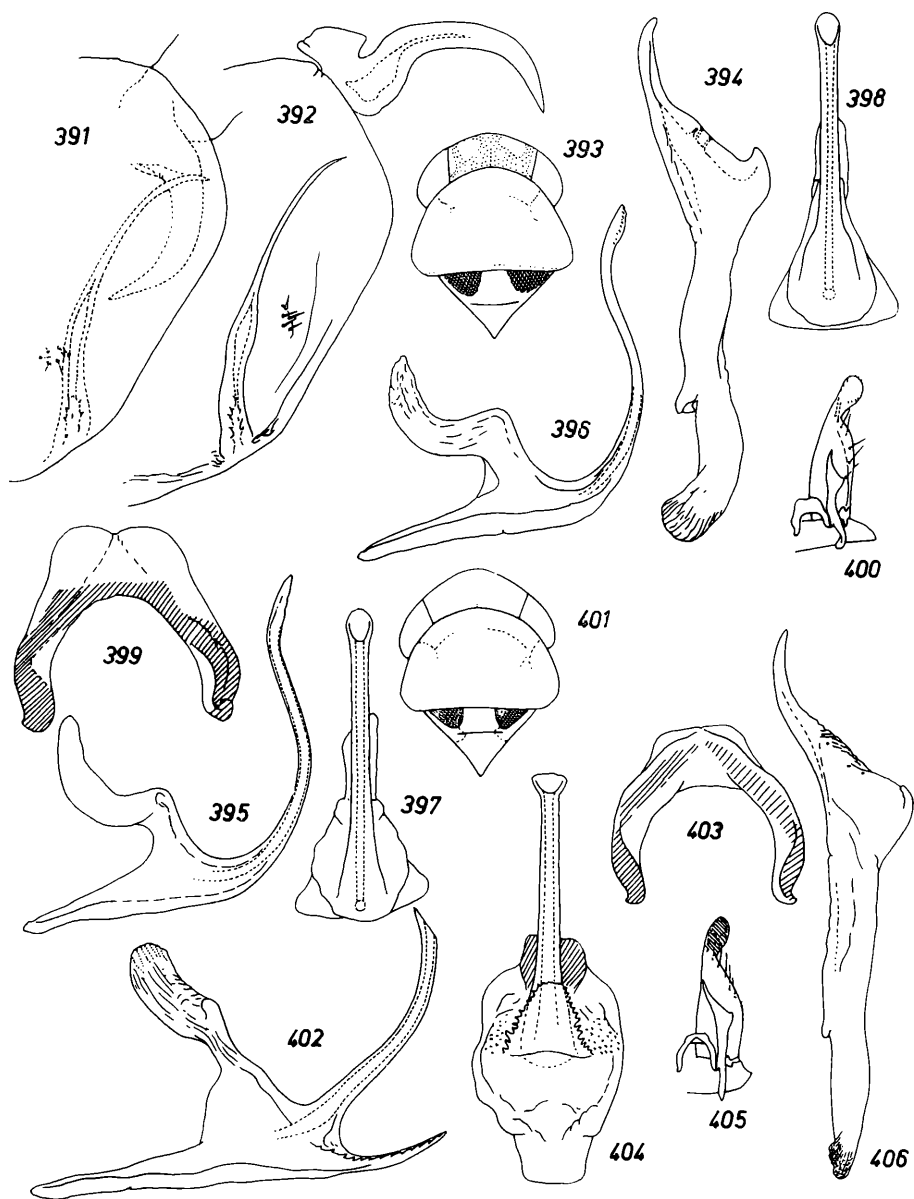


Figs. 377–390. *Thaia tata* sp. n.
(No. 387 was not given)

Male genital apparatus differs the new species from both closely related *L. albisoma* MATS. and *L. kabiri* (AHMED) by simple, short and tapering penis stem (Fig. 322), basal processes on atrial rim (Figs. 321, 322), well developed thick and long upper appendage at the pygophore (Figs. 317, 320) and paramere with produced upper part and serrated its inner margin (Fig. 314).

Length ♂ 2.80 mm.

H o l o t y p e , male: E Sumbawa, Dompoe, May 24–25, 1927, coll. RENSCH Exp. (Ber.)



Figs. 391–406.

Thaia confusa sp. n.: 391–400. — *T. producta* sp. n.: 401–406.

***Anufrievia grisea* sp. n. (Figs. 323–329)**

Vertex and anterior part of pronotum light testaceous-yellow. A mark at the tip of vertex

(Fig. 329), centre and hind parts of pronotum, scutum and scutellum testaceous-ochre. Eyes and basal triangles blackish. Face and lower part of body light yellowish-testaceous. Fore wing semitransparent, shining, grey. Costal margin slightly infuscated. Wax-field and basal costal part of corium brownish. Tip of wing infuscated at very margin, apical m vein also infuscated. Other veins light.

Length ♂: 3.90 mm.

H o l o t y p e , male: W Flores, Rana-Mêsê, June 20–30, 1927, coll. RENSCH Exp. (Ber.)

Anufrievia badjawae sp. n. (Figs. 330–336)

Externally much resembles *A. vilbastei* DWOR. Ground testaceous-ochre. Two semi-circular patches at tip of vertex (Fig. 333) and quite complicated broad transverse stripe on pronotum, brown. There is dark a grey-testaceous pattern on vertex and pronotum (marked by dashes in Fig. 333). Eyes and basal triangles blackish. Anteclypeus and frontoclypeus below the antennae dark grey-testaceous.

Fore wing brownish. Basal half of costal margin blackish. Veins light with slightly infuscated borders.

Length ♂: 3.75 mm.

H o l o t y p e , male: W Flores, Badjawa, June 17 1927 coll. RENSCH Exp. (Ber.)

Anufrievia ciconia sp. n. (Figs. 337–342)

Vertex only slightly produced in the middle. Body robust. Ground testaceous. Tip of vertex orangeous. Centre and some patches at sides of pronotum brown-ochreous, hind margin of pronotum milky. Scutum and scutellum yellowish. Basal triangles dark brown. Eyes black. Fore wing pale, semitransparent, no markings.

Length ♂: 3.00 mm.

H o l o t y p e , male: Taiwan, coll. M. KATO. (BM)

Seriana dziobata sp. n. (Figs. 347–354)

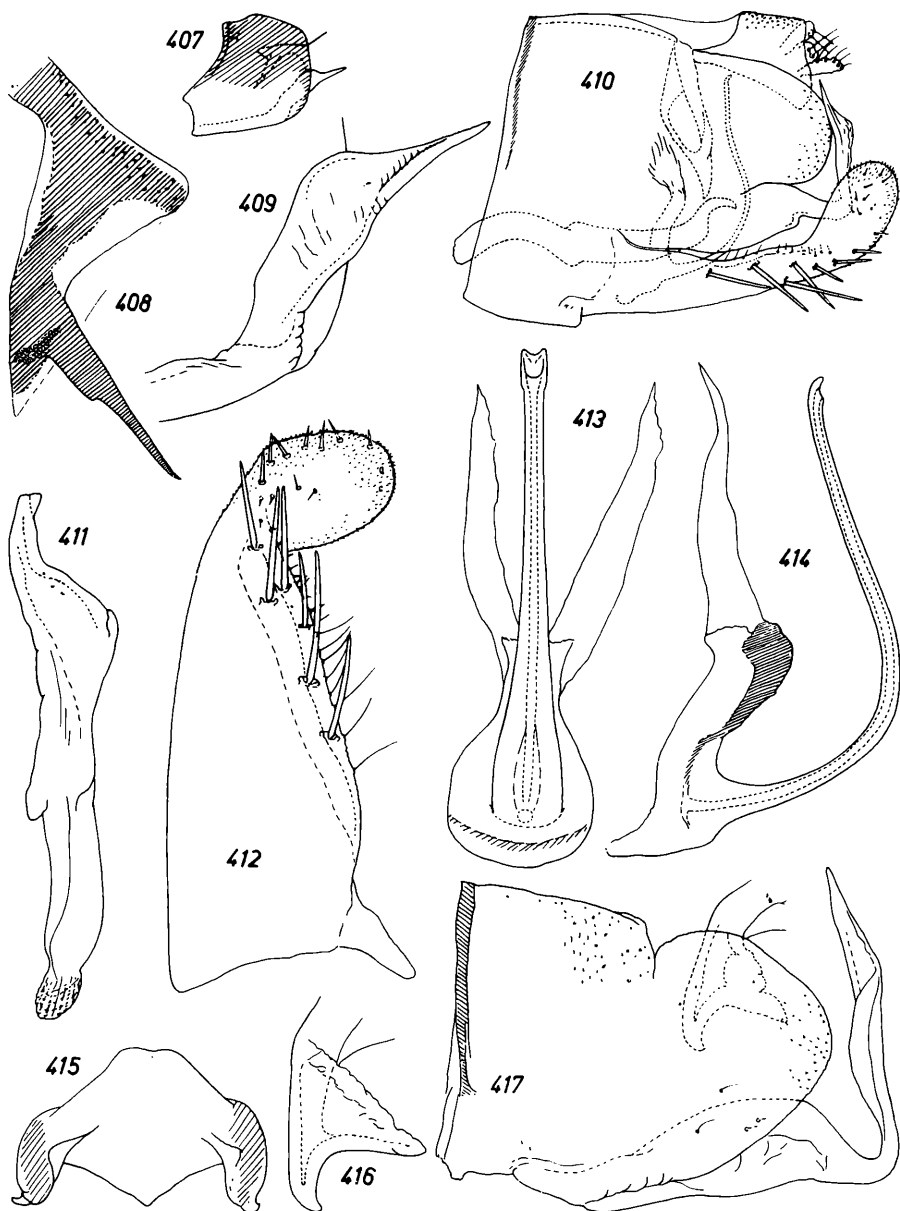
Ground of vertex, scutum and scutellum testaceous, that of pronotum brown. On vertex apical blackish patch joined with the other one situated near the base (Fig. 347), this second patch rather brown. Characteristical light patches on pronotum testaceous, hind margin broadly milky. Basal triangles blackish. Face testaceous. Anteclypeus clear brown, two brownish streaks on sides in lower part of frontoclypeus.

Fore wing milky. Clavus, hind part of longitudinal cu cell, 1st and 2nd apical cells, distal half of longitudinal r cell, wax-field and proximal part of longitudinal sc cell, infuscated. Wax-field and basal part of sc cell even dark brown, remaining infuscated areas lighter.

In female, which is newly hatched, there is indistinct colouration of vertex but face and fore wing coloured more contrasty.

Length: ♂ 4.00, ♀ 4.10 and 4.30 mm.

H o l o t y p e , male: E Flores, Geli Moetoe [? Keli Mutu], July 14–20. — P a r a t y p e s 2 ♀♀, W Flores, Badjawa, June 17, all coll. RENSCH Exp. in 1927 (Ber.)



Figs. 407-417.

Thaia producta sp. n.: 407-409. — *T. typica* sp. n.: 410-417

***Seriana biarmata* sp. n. (Figs. 355-361)**

Ground testaceous with brownish tint. On tip of vertex well defined large blackish patch

(Fig. 357). Pronotum with broad blackish-brown transverse fascia at hind margin, very hind margin milky. The pattern of light circular patches, which is characteristic for the genus, hardly visible in centre of anterior half of pronotum. Scutum and scutellum very dark. Face testaceous, frontoclypeus slightly ochreous. Eyes blackish.

Fore wing semitransparent, shining. Hind margin, basal half of costal margin and veins marked brownish. Clavus, wax-field and costal part of longitudinal r cell infuscated brownish.

Length ♂: 3.90 mm.

H o l o t y p e , male: E Java, Tengger, abg. 4000 (feet ?), coll. FRUHSTORFER. (Ber.)

***Thaia katoi* sp. n. (Figs. 367–376)**

Thaia subrufa: DWORAKOWSKA, 1970, nec MOTSCHULSKY, 1863.

Much resembles *Thaia oryzivora* GHAURI (Figs. 362–366). Small differences exist in general colouration which in the new species is more bright. Pronotum darker than scutum and scutellum. Fore wing milky.

The most distinguishing feature is shape and size of appendages at atrial rim. They are broader and more divergent in the new species (Figs. 370, 372, 373) while in *T. oryzivora* GHAURI (Fig. 363) they are narrow and more straight.

Length ♂ 3.20–3.40, ♀ 3.50–3.80 mm.

H o l o t y p e , male, and p a r a t y p e s 4 ♂♂, 1 ♀, China, Foochow, 1935–1936. — Other p a r a t y p e s 3 ♀♀, Foochow, July 10–14, 1936, coll. M. S. YANG; 7 ♂♂, 5 ♀♀, Taiwan, all coll. M. KATO. (BM)

Also specimens from Rangoon (Burma) collected at light on Nov. 5, 1971 by Ing. DOSTÁL (belonging to the Moravian Museum in Brno) belong to newly described species.

***Thaia tata* sp. n. (Figs. 377–390)**

Anterior margin of vertex rounded (Fig. 380). Head as wide as in *T. subrufa* (MOTSCH.). Vertex testaceous-yellow. Pronotum yellowish at yeas, light testaceous or even whitish in the centre and in hind part. Scutum and scutellum whitish-grey. Eyes brown. Basal triangles blackish. Face slightly ochraceous in upper part, darker in lower part of frontoclypeus and on anteclypeus.

Fore wing light greyish, apices slightly smoked.

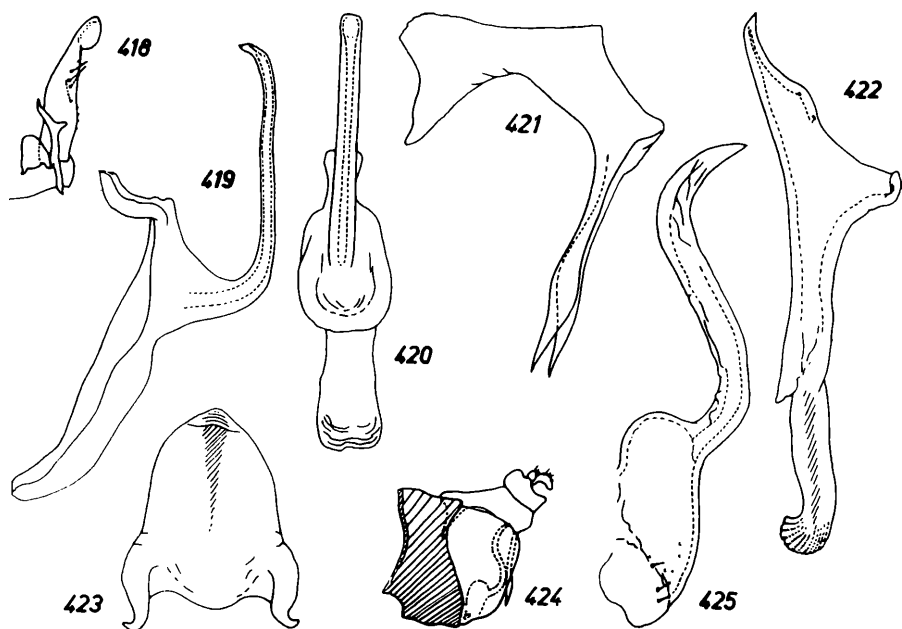
Appendage of lower pygophore lobe is broader than in Fig. 386 which show the structure flattened in slide. Its produced tip is directed dorsad (Fig. 385). Gonopore ventral (Figs. 383, 389).

Length ♂: 4.10 mm.

H o l o t y p e , male: E Sumbawa, Dompoe, May 24–25, 1927, coll. RENSCH Exp. (Ber.)

***Thaia orientalis* DWORAKOWSKA, 1970**

The holotype was revised. Vertex slightly produced in the middle, whitish anteriorly. Pronotum pale, whitish, with minute transverse furrows in the middle of anterior part.

Figs. 418–425. *Thaia (Nlunga) maxima* sp.

Scutum testaceous. Basal triangles blackish. Scutellum bordered with a narrow blackish line. Centre of frontoclypeus and anteclypeus darker testaceous. Fore wing whitish, semitransparent. Abdomen and also anal block well pigmented. (Ber.)

***Thaia confusa* sp. n.** (Figs. 391–400)

Externally as *T. orientalis* DWOR. but vertex less produced in the middle (Fig. 393). Head narrower than pronotum. Ground light testaceous-grey with whitish areas at anterior margin of vertex and milky-grey centre and hind part of pronotum. Basal triangles and eyes blackish. Anteclypeus and lower part of frontoclypeus slightly ochreous-grey.

Fore wing light, semivitreous, apex smoked, apical veins infuscated.

Anal tube appendage (Figs. 391, 392) as in *T. orientalis* DWOR. but the appendage of the lower pygophore lobe is like that in *T. similis* DWOR. Paramere (Fig. 394) as in majority of species of the genus (it is not a feature of taxonomical importance as it was suggested at descriptions of two above mentioned species). Penis (Figs. 395–398) rather resembles *T. orientalis* DWOR. but there is massive joining of atrial rim with basal parts of anal tube appendage, praecatrium is narrow and penis stem is twice longer in comparison with *T. orientalis* DWOR.

Length ♂: 4.40 mm.

H o l o t y p e, male: Sumbawa, Batoe Doelang, Apr. 10–15. — **P a r a t y p e** ♂, Lombok, Sembalon, March 30–31, all coll. RENSCH Exp. in 1927 (Ber.)

***Thaia producta* sp. n.** (Figs. 401–409)

Externally resembles *T. orientalis* DWOR. Ground yellow-testaceous. Vertex distinctly produced in the middle (Fig. 401). Pronotum yellowish at anterior part, light grey in the centre and even milky at hind margin. Scutum and scutellum testaceous-grey. Basal triangles and eyes blackish. At vertex eyes suffused with testaceous. Face testaceous-yellow. Anteclypeus and adjacent part of frontoclypeus in the centre, ochraceous-brown.

Fore wing milky, smoked in apical part and at costal margin. Tips of apical veins infuscated.

Gonopore ventral (Figs. 402, 404). Anal tube appendage partly membranous (Fig. 408).

Length ♂: 4.35 mm.

H o l o t y p e, male: Central Flores, Ende, June 10–16, 1927, coll. RENSCH Exp. (Ber.)

***Thaia typica* sp. n.** (Figs. 410–417)

Ground testaceous-orange, face brightly russet, anteclypeus brownish. Hypodermal pattern on pronotum as in *T. subrufa* (MOTSCH.).

Fore wing greyish, grey or brownish-grey, sometimes waxed.

Anal tube appendage feebly connected with the anal tube (Fig. 410), short, bifurcated (Figs. 416, 417). Subgenital plate (Fig. 412) resembles that of *T. orientalis* DWOR. Atrial rim with only not sclerotized, colourless ligaments, instead of appendages (Figs. 413, 414).

Length: ♂ 3.45–3.60, ♀ 3.55 mm.

H o l o t y p e, male, and **p a r a t y p e s** 1 ♂, 2 ♀♀, Malacka, Kelanton, coll. V ROLLE. (Dres., ISEZ)

Nlunga* DWORAKOWSKA, 1974, subgen. of *Thaia* GHAURI, 1962, **stat. n.*

This subgenus of *Thaia* GHAURI is characterised (except features mentioned at the original description) by anal tube appendage strongly connected with lower margin of hind part of the 1st segment of the anal tube, manubrium at penis and long connective.

Thaia (Nlunga) indica* (RAMAKRISHNAN et MENON, 1974) **comb. n.*

Sirosoma indica RAMAKRISHNAN et MENON, 1974.

***Thaia (Nlunga) maxima* sp. n.** (Figs. 418–425)

Ground light testaceous. Anteclypeus and lower $\frac{2}{3}$ of frontoclypeus slightly ochreous. Basal triangles blackish-brown. Eyes black.

Fore wing semitransparent, milky. Brownish pattern (a patch) covering almost whole surface of clavus. Similar longitudinal patch inside longitudinal cu and at hind part of m cell. Basal part of costal margin and the wax-field brownish.

The new species is the closest related to *T. (Nlunga) formosana* MATS. figured in previous paper (DWORAKOWSKA 1972b).

Length ♂: 6.00 mm.

H o l o t y p e, male: Taiwan, coll. M. KATO. (BM)

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