

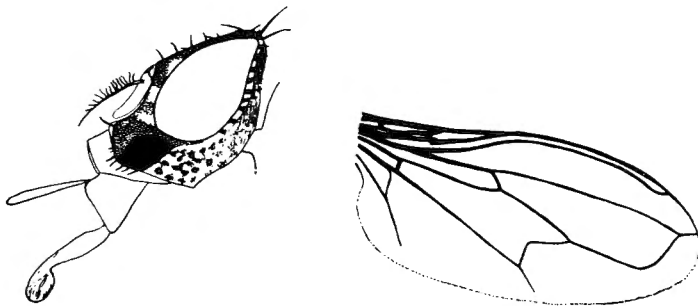
[1. — *Vanemdenia africana* PERIS.]

(Fig. 38.)

Vanemdenia PERIS, Eos, XXVII, 1951, p. 237, et An. Estac. Exp. Aula Dei, III, 1952, p. 13, fig. 3.

The original description is translated as follows : « Head, antennae and palpi black, arista yellowish at base. Thorax and abdomen black, with violet reflections and a grey pruinosity, with piliferous bare dots. Halteres yellow. Thoracic squama brownish. Femora and tibiae black, knees of second pair of legs narrowly yellow. Wings totally dark tinged, but more deeply at base and at the anterior margin. Length : 5-6 mm (fig. 38).

In his monograph (1952), PERIS gives a longer and more detailed description. He records the species from Uganda, Kenya, the Gold Coast and Sierra Leone, but saw altogether only 2 badly damaged males and 4 females.

FIG. 38. — *Vanemdenia africana* PERIS.

Head and wing of female holotype from Uganda.
(After PERIS.)

[Genus **EURHYNCOMYIA** MALLOCH.]

Eurhyncomyia MALLOCH, Ann. Mag. N. H., (9), XVIII, 1926, p. 513; TOWNSEND, Man. Myiol., V, 1937, p. 99; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 63.

Type species : *E. obtusa* from Natal.

Two species are known, one from the Ethiopian region and the other from Madagascar.

Eyes bare or with odd and short pale setae, upper facets in the male slightly to moderately enlarged. Male frons at its narrowest point not broader than the anterior ocellus, female frons at vertex measuring about $\frac{3}{4}$ of eye-length. Chaetotaxy of head complete in the female; in the male,

iv and *paf* distinct, *oc* indistinct in the Madagascan species; parafacialia setiferous. Antennal carina developed, but short. Epistome slightly protruded.

Thorax metallic, with a slight pruinosity. Bristles well developed, $ac=2+4-5$, $dc=2+4$, $ia=1+3-4$, *prs* and outer *ph* present, $h=2-3$, $n=2$, $sa=4$, $sc=3+1$. Suprasquamal ridge posteriorly with a number of black bristles, anterior part and post-alar declivity as well as propleuron bare; *pst* and *pp* distinct, meso- and hypopleurals fully developed, $st=1:1$. Wings hyaline or slightly tinged, stem-vein with black hairs, R_s open, bend of *m* rounded; thoracic squama about as long as broad. Fore-tibia with a row of *ad* and one submedian *pv*; mid-tibia with 1 *ad*, 1 *pd*, 1 *av* and 2 *pv*; hind-tibia with a row each of unequally long *ad* and *pd*, and 2-3 *av*.

Abdomen a little broader than long, metallic like the thorax or partly yellow. Cerci and paralobi free.

Nothing is known about the life-history of *Eurhyncomyia*.

[1. — ***Eurhyncomyia diversicolor*** (BIGOT).]

(Fig. 39.)

Rhyncomyia diversicolor BIGOT, Bull. Soc. Zool. France, XII, 1887, p. 595; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 63.

Rhyncomyia bigoti VILLENEUVE, Rev. Zool. Afric., III, 1913, p. 55; PERIS, id., ibid., p. 63.

Eurhyncomyia obtusa MALLOCH, Ann. Mag. N. H., (9), XIX, 1926, p. 513; CURRAN, Amer. Mus. Nov., 506, 1931, p. 21.

Eurhyncomyia thoracica CURRAN, Amer. Mus. Nov., 506, 1931, p. 21.

Up to now, only one Ethiopian species is known, which is easily recognizable by its generic features, but fairly variable with respect to the colouring and pattern.

Male. — Eyes bare, upper facets moderately enlarged, but not demarcated from the lower ones. Frons narrow in the upper part, not broader than the anterior ocellus, frontal stripe red-brown, line-shaped above and triangular widened towards the antennal groove; ocellar triangle black or blackish green, *iv* and *oc* present, as well as several bristly hairs on the triangle; parafrontalia normally blackened, with a white pruinosity, about 8 pairs of *paf* and a few additional black bristly hairs and setae; parafacialia yellow-orange with a glossy, mostly blackened spot in the lower half, remaining part white pruinose and provided with a few black setae. Antennal groove dark yellow, antennae separated from each other by a short prominence, which is longitudinally hollowed-out, antennal segments orange, the third about twice as long as the second, arista with relatively long setae, some of them slightly exceeding half the width of the third antennal segment. Height of bucca measuring a little more than $\frac{1}{3}$ rd of

eye-length; the colouring is predominantly orange, but normally a black stripe reaching from the eye to the peristomal corner and another on the post-bucca running parallel to the anterior one are developed, but they are variable in extent, especially the anterior stripe which may sometimes disappear almost completely. Vibrissa long, a few black bristly hairs above it, peristomal bristles well developed, anterior part of bucca almost bare, glossy, only a few black setae detectable, posterior part with black bristly hairs which increase in size towards the postbucca and occiput, where they are partly replaced by thin yellow hairs. Palpi yellow, spatulate, twice as broad as the second antennal segment.

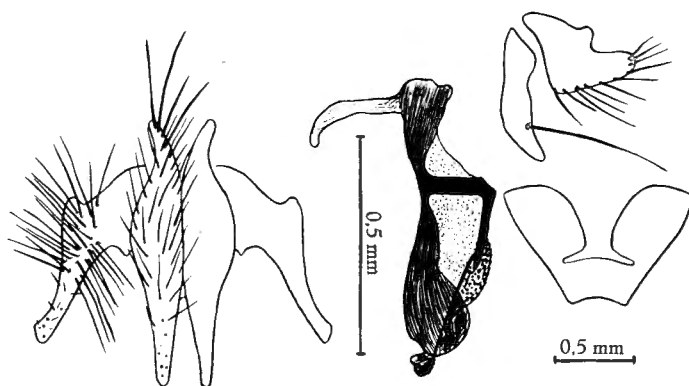


FIG. 39. — *Eurhyncomyia diversicolor* (BIGOT).
Cerci with paralobi, phallosome, parameres and 5th sternite.
Specimen from the Delagoa Bay.

Thorax metallic green and bluish or more or less cupreous, slightly white pruinose, prostigma yellow, poststigma black-brown. Bristles and hairs of the dorsum black, $ac=2+4-5$, $dc=2+4$, $ia=1+3-4$, prs and outer ph present, $h=3$, $n=2$, $sa=4$, $sc=3+1$. Suprasquamal ridge posteriorly with a number of black bristly hairs, anterior part and post-alar declivity bare, propleuron bare too. Pleurae with black and pale hairs, a long and thick pst and pp , each accompanied by a weaker bristle; mesopleurals and hypopleurals fully developed, $st=1:1$. Wings hyaline, slightly tinged, veins including basicosta yellow to yellow-brown, costal spine small, stem-vein with black bristly hairs, root of r_{4+5} dorsally with black setae, R_s open, bend of m rounded. Thoracic squama more or less brownish tinged, about as long as broad, halter yellow. Legs with the femora and the last tarsal segments blackened, tibiae and bases of tarsi yellow-brown; fore-tibia with a row of ad and a submedian pv ; mid-tibia with 1 ad , 1 pd , 2 pv and 1 av ; hind-tibia with a row each of unequally long ad and pd , furthermore 2-3 av .

Abdomen a little broader than long, yellow with a black or blackish green pattern which varies in its extent. It may cover in varying width the hind margins of the segments and form a median longitudinal vitta from the base to the tip of the abdomen, or the former transverse bands as well as the longitudinal vitta may be more or less reduced. Hypopygium and 5th sternite always blackish or dark metallic green. Cerci separated, paralobi slender (fig. 39).

Female. — Frons at vertex a little less than half as wide as the eye is long, frontal stripe reddish, slightly widened towards the antennal groove, parafacialia normally black, whitish pollinose and with glossy piliferous spots, chaetotaxy fully developed.

Length : 7-9 mm.

Collection S. A. Institute for Med. Research, Johannesburg : Natal : Tete Pan, 24.IV.1955 (3 ♂♂, leg. H. PATERSON); Illovo Beach, II.1954 (1 ♂, leg. H. PATERSON); Amanzimtoti, I.1955 (1 ♂, leg. J. MUSPRATT); Durban, 6.XII.1942 (2 ♀♀, leg. W. E. MARRIOTT). — Collection Dept. of Agriculture, Pretoria : Natal : Pt. Shepstone, 7.VIII.1920 (1 ♂♀, leg. H. K. MUNRO). — Collection Dept. of Research and Special Services, Salisbury : Natal : Durban, X.1941 (5 ♂♂, 3 ♀♀). — Collection Zool. Museum, Berlin : Mozambique : Delagoa Bay (1♂♀).

PERIS records this species also from Zanzibar and Somaliland.

[Genus **PSEUDORHYNCOMYIA** PERIS.]

Pseudorhyncomyia PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 58.

Type species : *R. braunsi* VILLENEUVE from the Cape Province.

Up to now, the genus is monotypic, containing a species with quite outstanding features which probably represents an extreme evolution from the *Rhyncomyia* complex.

[1. — **Pseudorhyncomyia braunsi** (VILLENEUVE).]

(Fig. 40.)

Rhyncomyia braunsi VILLENEUVE, Rev. Zool. Afr., VIII, 1920, p. 158; CUTHBERTSON, Occ. Pap. Rhod. Mus., IV, 1935, p. 18; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 59.

This species is easily recognizable from the features given is the key to the genera.

Male. — Eyes bare, upper facets enlarged and demarcated from the very small areas of the lower fourth of the eye. Frons at the narrowest point about as broad as the anterior ocellus; frontal stripe yellow to reddish, line-shaped in the upper part, narrow-triangular in the lower part; ocellar triangle black, with a great number of postvertical hairs arranged in a brush, one pair of *oc* of median length and thickness, *iv* long, *ev* shorter, but well distinguished from the postocular setae, *f* and *fo* wanting. Parafrontalia with a yellow to reddish underground, but covered with dense white pollinosity which leaves free the foot-prints of the bristles and hairs (setiferous spots); *paf* thin, only slightly thicker than the remaining long and densely placed parafrontal hairs; parafacialia of the same colouring and pollinosity as the parafrontalia, but at the lower end with a blackish or dark-brown, glossy, undusted, round spot; the hairs extend as far as this spot, but they are shorter than those on the parafrontalia. Bucca a little more than a third as high as the eye is long, with a glossy spot near the eye similar to that on the parafacialium, and densely placed setiferous spots in a white pollinosity, all buccal hairs are white, including the peristomal hair-like bristles; only the vibrissa and a second, relatively thick bristle below it are black. Epistome up to the tip of the antennae red-brown and for the greater part glossy; antennal groove yellow to chrome, white pollinose. Antennae yellow to light brown, separated from each other by a triangular groove, third segment $2\frac{1}{2}$ -3 times as long as the second. Palpi yellow to light brown, broader than the 3rd antennal segment, with black and white setae.

Thorax metallic cupreous-olive to green, with a white pollinosity, setiferous spots and three broad darker longitudinal stripes. Bristles of the dorsum black, hairs black and white, the latter becoming longer and thicker towards the presutural area and lateral parts of the notum; the pleurae are beset with dense long and white hairs which completely hide the propleuron and the prostigma as well as the prosternum. On the pleurae only the two *st* and a few mesopleurals are detectable as black bristles, *pst* and *pp* are wanting and the hypopleurals are white; on the dorsum, the following black bristles are recognizable: 2 postsutural *ac* normally distinct, presutural *ac* present, but weak and irregularly placed, *dc*=2+2, presutural *ia* not clearly developed, 2 post *ia*, *prs* and outer *ph* distinct, *h*=2, *n*=2, *sa*=2, *sc*=3+0. Suprasquamal ridge posteriorly with a number of thick, densely placed white hairs, alar declivity bare. Wings hyaline, veins yellow-brown, costal spine not developed, stem-vein with long, white, bristly hairs, root of r_{4+5} dorsally with a few black setae, bend of *m* broadly rounded, *R*_s open or almost closed; thoracic squama about as long as broad, white with a yellow margin; halter yellow. Legs yellow-brown to reddish, femora densely covered with a white pollinosity; fore-tibia with 4-5 short *ad* and a submedian *pv*; mid-tibia with 2 short *pd* and *pv* as well as 1-2 *ad*; hind-tibia with a row of short *ad* and several *pd*, 1-2 *av*.

Abdomen about $1\frac{1}{2}$ times as long as broad, with a black median stripe, laterally black or reddish brown, partly with cupreous reflections, like the thorax with a dense white pollinosity and setiferous spots, hairs black. Laterally and ventrally longer and thicker white hairs become more and more predominant. Hypopygium (fig. 40) of *Rhyncomya*-structure.

Female. — Eyes with small facets only, frons at vertex measuring $\frac{5}{9}$ of eye-length, frontal stripe reddish, very narrow, parafrontalia and

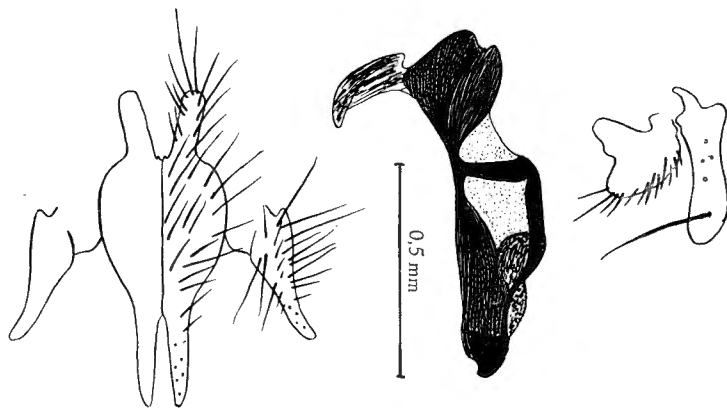


FIG. 40. — *Pseudorhyncomya braunsi* (VILLENEUVE).

Cerci with paralobi, phallosome and parameres.

Specimen from Uitenhage, Cape Province.

-facialia glossy yellow brown, with a thick yellow-white pollinosity and large setiferous spots, and two glossy spots on the parafacialium instead of one as in the male, so that including the buccal spot altogether 3 are present in the female. Bucca with the same pollinosity and setiferous spots as the parafacialium.

Length : 9-11 mm.

Collection Transvaal Museum, Pretoria : Cape Province : Willowmore, 5.V.1920 (1 ♂, leg. BRAUNS, lectotype). — Collection Dept. of Agriculture, Pretoria : Orange Free State : Glen, V.1930 (1 ♂); Bloemfontein, 14.IV.1918 (1 ♀). — Collection Dept. of Agriculture, Salisbury : Cape Province : Uitenhage, 3.III.1919 (1 ♂, leg. H. K. MUNRO); Willowmore, 4.V.1920 (1 ♂, leg. BRAUNS). — Collection American Museum, New York : Orange Free State : Bloemfontein, 8.V.1914 (1 ♂).

PERIS also saw a female specimen from Kidete, Tanganyika.

Genus **RHYNCOMYA** ROBINEAU-DESVOIDY.

Rhyncomya ROBINEAU-DESVOIDY, Ess. Myod., II, 1830, p. 424; MACQUART, Dipt., II, 1835, p. 247 (emend. *Rhyncomyia*); MALLOCH, Ann. Mag. N. H., (9), XVIII, 1926, p. 514; SÉGUY, Encycl. Ent., A IX, 1928, p. 182, et Mem. Soc. Sci. Nat. Maroc, XXIV, 1930, p. 149, et Mem. Estud. Mus. zool. Coimbra, (1), n° 67, 1933, p. 69; TOWNSEND, Man. Myiol., V, 1937, p. 107; S.-WHITE, AUBERTIN & SMART, Fa. Brit. India, Dipt., VI, 1940, p. 183; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 73; ZUMPT, Fliegen pal. Region, 64, i, 1956, p. 99.

Type species : *M. ruficeps* FABRICIUS from France.

Trichometallea TOWNSEND, Rec. Ind. Mus., XIII, 1917, p. 194; TOWNSEND, Man. Myiol., V, 1937, p. 114; S.-WHITE, AUBERTIN & SMART, Fa. Brit. India, Dipt., VI, 1940, p. 179; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 73.

Type species : *T. pollinosa* TOWNSEND from India.

Rhyncomyiopsis TOWNSEND, Rec. Ind. Mus., XIII, 1917, p. 195, et Man. Myiol., V, 1937, p. 106; S.-WHITE, AUBERTIN & SMART, Fa. Brit. India, Dipt., VI, 1940, p. 185; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 73.

Type species : *R. indica* TOWNSEND from India.

The genus *Rhyncomya*, like *Isomyia*, contains species with relatively primitive features. The chaetotaxy of the thorax is not or only slightly reduced, the general structure of the body and especially that of the head is still very much *Calliphora*-like, and also the shape of the cerci and paralobi in most species is similar to that found in primitive *Callophorini*. The arisal setae, however, are strongly reduced and sometimes hardly distinguishable.

Head in male with the eyes normally bare, rarely haired, upper facets more or less enlarged, width of frons at the narrowest point varying from a narrow line to $\frac{1}{4}$ of eye-length; in the female, it measures at vertex from $\frac{1}{3}$ to $\frac{2}{3}$ of eye-length. Chaetotaxy of female head complete, parafrontalia with hairs and a varying number of parafrontal bristles, parafacialia with setae, or these are more or less reduced in number or totally wanting; in the male, *ev*, *f* and *fo* are not developed, *paf* are reduced in number and also the hairs and setae are less numerous than in the female sex. Antennal groove with a more or less developed carina. Epistome not or only slightly protruding.

Thorax of various colours, often bright metallic, more or less pruinose; *ac*=0-3+1-7, *dc*=1-3+3-5, *ia*=0-1+2-4, *h*=2-4, *ph*=1-3 (outer one always present), *prs*=1, *n*=2, *sa*=2-6, *sc*=3-4+0-3, *st*=1:1, *pst* and *pp* present, hypo- and mesopleural bristles (of the latter at least 3) developed; propleuron mostly bare, only in few species haired in centre; post-alar declivity and suprasquamal ridge bare; prosternum haired. Wing hyaline or more or less brownish tinged, but not with a clearly demarcated anterior infuscation; stem-vein with black or pale bristly hairs, costal spine wanting, minute or

well developed; R_5 normally open, rarely closed and short-petiolate; thoracic squama longer or as long as broad, rarely broader than long. Legs with 3-5 *ad* and 1-2 *pv* on the fore-tibia; mid-tibia with 1-5 *ad*, 1-2 *av*, 1-5 *pd* and 1-3 *pv*; hind-tibia with 2 to several *ad* and *pd* and 0-3 *av*.

Abdomen of various colours like the thorax, with or without a distinct pattern. Postabdomen composed of 3 segments, but the first is often strongly reduced; preabdomen in some species with modified sternites having protruding processes (*forcipata*-group). Cerci and paralobi in most species of normal shape, but sometimes cerci fused or paralobi and cerci unusually structured. Phallosome with spine, harpes broad and well sclerotized, vesicae membranous, with a dense denticulation.

The genus *Rhyncomya* is well represented in the Ethiopian region, and several species also occur in the Southern Palaearctic region. Only a few are recorded from the Oriental region and from Madagascar.

Some details on the life-history of Ethiopian *Rhyncomya* species have been published by CUTHBERTSON (1933, 1935, 1937). They are found in close association with termites on which they prey.

Unfortunately a great number of species have remained unknown to me, especially those described by SÉGUY. Neither PERIS nor I have succeeded in getting material from Mr. SÉGUY. These species are listed on p. 185 under *Rhyncomya* spec. *incertae sedis*.

The Ethiopian species of the genus *Rhyncomya* can be arranged in several groups according to their outer features and the hypopygial structure. These groups are as follows :

- | | | |
|---|---|-------------------------|
| 1. <i>dasyops</i> BEZZI | } | <i>dasyops</i> -group. |
| 2. <i>tetropsis</i> (BIGOT) | | |
| 3. <i>ituriensis</i> n. sp. | | |
| 4. <i>elegantula</i> VILLENEUVE | | |
| 5. <i>buccalis</i> VILLENEUVE | } | <i>buccalis</i> -group. |
| 6. <i>disclosa</i> VILLENEUVE | | |
| 7. <i>depressifrons</i> VILLENEUVE | | |
| 8. <i>currani</i> n. n. | } | <i>currani</i> -group. |
| 9. <i>nigra</i> PERIS | | |
| 10. <i>messoria</i> VILLENEUVE | } | <i>messoria</i> -group. |
| 11. <i>formosa</i> PERIS | | |
| 12. <i>hessei</i> n. sp. | } | <i>maculata</i> -group. |
| 13. <i>minutalis</i> VILLENEUVE | | |
| 14. <i>maculata</i> (MACQUART) | | |
| 15. <i>interclusa</i> VILLENEUVE | | |
| 16. <i>discrepans</i> VILLENEUVE | | |
| 17. <i>paradoxa</i> n. sp. | | |
| 18. <i>bicolor</i> (MACQUART) | | |
| 19. <i>peraequa</i> VILLENEUVE | | <i>peraequa</i> -group. |

20. *obtusa* (BIGOT) *obtusa*-group.
21. *soyauxi* KARSCH
 22. *stannocuprea* SPEISER
 23. *tristis* SÉGUY
 24. *pruinosa* VILLENEUVE
 25. *io* PERIS
 26. *zumpti* PERIS } *soyauxi*-group.
27. *nana* PERIS *nana*-group.
28. *varifrons* BECKER *varifrons*-group.
29. *trispina* VILLENEUVE
 30. *cassotis* (WALKER)
 31. *forcipata* VILLENEUVE } *forcipata*-group.

KEY TO THE SPECIES.

- 1 (4) Propleuron densely haired 2
- 2 (3) Presutural *ac* and *ia* wanting. Mid-tibia with 2-4 *ad*. Parafacialia with black setae. Eyes in ♂ densely haired, bare in ♀.
 Thorax metallic green, olive or blackish, with green reflections and a white pruinosity. Legs with dark femora and yellow to reddish tibiae and tarsi. Abdomen yellow-brown to orange, with a variable dark pattern. 8-12 mm. — Ethiopian region 1. *R. dasyops* BEZZI.
- 3 (2) Presutural *ac* and *ia* present. Mid-tibia with only one *ad*. Parafacialia with short pale setae. Eyes bare in both sexes.
 Thorax black, covered with a dense olive-brown or light yellow pollinosity. Legs with black femora, reddish tibiae and more or less darkened tarsi. 8-9 mm. — West and Central Africa 20. *R. obtusa* (BIGOT).
- 4 (1) Propleuron bare 5
- 5 (12) Presutural *ac* wanting or very indistinct 6
- 6 (7) Abdomen totally metallic green or blue.
 Thorax and abdomen wholly metallic green and blue and practically bare of pruinosity. Legs with dark femora, tibiae and tarsi brown. 7-9 mm. — South and Central Africa 10. *R. messoria* VILLENEUVE.
- 7 (6) Abdomen partly yellow or reddish 8

- 8 (9) Eyes in ♂ densely beset with long pale hairs, ♀ not known. Femora wholly blackish.
 Thorax and the dark pattern of the abdomen metallic green. Parafacialia haired, $ia = 1 + 2$, mid-tibia with 1 *ad.* 9 mm. — Belgian Congo, Natal 4. *R. elegantula* VILLENEUVE.
- 9 (8) Eyes in both sexes without a distinct pilosity. Femora wholly reddish or only partly blackened 10
- 10 (11) Abdomen without a median vitta; presutural *ia* wanting.
 Thorax including scutellum metallic dark blue, with greenish reflections. 9-11 mm. — Belgian Congo, Togo 3. *R. ituriensis* n. sp.
- 11 (10) Abdomen with a median longitudinal vitta of varying shape; presutural *ia* present.
 Thorax dull metallic green, blue or cupreous, tip of scutellum more or less yellow-brown. 9-13 mm. — West and Central Africa 2. *R. tetropsis* (BIGOT).
- 12 (5) Presutural *ac* distinct 13
- 13 (20) Abdomen dark, blackish or metallic 14
- 14 (17) Thorax and abdomen metallic green or blue, with a white pruinosity of varying density 15
- 15 (16) Postbucca black, anterior part yellowish to orange. Frontal stripe black-brown. Epistome strongly protruded.
 Parafacialia haired. Thorax with fully developed chaetotaxy. Mid-tibia with 2-3 *ad.* 9-11 mm. — Central, East and (?) Southern Africa 5. *R. buccalis* VILLENEUVE.
- 16 (15) Postbucca like the anterior part yellowish to orange. Frontal stripe yellow or light brown. Epistome less protruded. 8-11 mm. — South Africa 6. *R. disclusa* VILLENEUVE.
 7. *R. depressifrons* VILLENEUVE.
- 17 (14) Thorax and abdomen black or metallic dark bronze 18
- 18 (19) Thorax and abdomen metallic dark bronze.
 Pollinosity white and relatively dense, chaetotaxy of thorax fully developed. Parafacialia haired. Legs with dark femora and yellow to reddish tibiae and tarsi; mid-tibia with 2-3 *ad.* 9-11 mm. — Transvaal, Natal 8. *R. currani* ZUMPT n. n.
- 19 (18) Thorax and abdomen black.
 Pollinosity dense and white. Parafacialia haired. Legs reddish-brown, mid-tibia with 2-3 *ad.* 8.5 mm. — Tanganyika 9. *R. nigra* PERIS.

- 20 (13) Abdomen wholly or partly yellow-brown 21
- 21 (22) R_5 closed, with a short petiole.
 Thorax metallic dark green and white dusted, with large piliferous spots. Legs with dark femora and predominantly yellow-brown tibiae and tarsi. Abdomen yellow with the tip darkened. 5-6 mm. — Southern Africa 27. *R. nana* PERIS.
- 22 (21) R_5 open 23
- 23 (32) Mid-tibia with 2-4 *ad* 24
- 24 (27) Palpi blackened terminally 25
- 25 (26) Thorax bright metallic green, white dusted; abdomen predominantly metallic green, the ground colour of the anterior parts of the segments III and IV laterally and ventrally red-brown.
 Only the female sex is described, the parafacialia of which are densely black setulose. Thoracic squama about as long as broad. Legs black, tibiae more or less dark reddish. 8-10 mm. — Kenya 11. *R. formosa* PERIS.
- 26 (25) Thorax cupreous to black, white pollinose; abdomen predominantly yellow with a brown to blackish pattern.
 Parafacialia in ♂ with only a few odd black setae, in ♀ more densely setulose. Thoracic squama slightly longer than broad. Legs reddish brown, femora black. 8-10 mm. — Cape Province, Mozambique 12. *R. hessei* n. sp.
- 27 (24) Palpi wholly yellow. Parafacialia with dense and relatively long black setae in both sexes 28
- 28 (29) Thoracic squama ellipsoid, longer than broad.
 Smaller species of 6-9 mm. In the outer features similar to *R. interclusa* and related species. — Cape Province 13. *R. minutalis* VILLENEUVE.
- 29 (28) Thoracic squama about as long as broad or broader 30
- 30 (31) About the upper half of the mesopleuron with dense black hairs, lower part with pale hairs.
 Parafacialia densely beset with long black hairs which are almost as long as those on the parafrontalia. Thorax black-cupreous, legs with black femora, reddish tibiae and darkened tarsi. 9 mm. — Cape Province ... 14. *R. maculata* (MACQUART).
- 31 (30) Only a few black hairs in the upper part of the mesopleuron, or it is totally covered with pale hairs.

Parafacial hairs variable in length and density, but always distinct. Thorax varying from blackish cupreous to bright metallic green. Dark pattern of abdomen variable. 9-13 mm.

- Cape Province 15. *R. interclusa* VILLENEUVE.
 16. *R. discrepans* VILLENEUVE.
 17. *R. paradoxa* n. sp.

32 (23) Mid-tibia with only one *ad* 33

33 (40) Parafacialia distinctly and mostly black setulose 34

34 (35) Thorax and dark pattern of abdomen glossy metallic green.

Head bright yellow. Arista practically bare. Thorax in ♂ dorsally and laterally with upright pale hairs; in the female the dorsal hairs are greatly reduced. Stem-vein with white hairs. 8-10 mm. — Cape Province

18. *R. bicolor* (MACQUART).

35 (34) Thorax and dark pattern of abdomen dull green, cupreous or blackish 36

36 (37) Fifth sternite of ♂ with two erect coniform prominences at the base of the lateral branches.

A highly variable species in respect of the colouring and the development of the parafacial setae. The taxonomic status of this form is not yet quite clear. 7-10 mm. — Sporadically together with the nominate form

30. *R. cassotis* f. *viduella* VILLENEUVE.

37 (36) Fifth sternite of ♂ normal, without prominences 38

38 (39) Thorax metallic dull green, with cupreous reflections. Antennae widely separated by a short carina. Stem-vein with thick black hairs, bend of *m* broadly rounded.

An evidently rare species, described from Transvaal (♂) and Uganda (♀). Later also recorded from Kenya and Tanganyika. 8-9 mm 19. *R. peraequa* VILLENEUVE.

39 (38) Thorax metallic cupreous black. Antennae close together, no distinct carina developed. Stem-vein with thin white hairs, bend of *m* obtuse-angled.

Only known from the Isle of Sokotra. 5-7 mm

28. *R. varifrons* BECKER.

40 (33) Parafacialia bare or with only sparse and extremely fine, whitish hairs 41

41 (44) Parafrontalia in ♂ with long pilosity in addition to the *paf*, in ♀ with dark piliferous spots 42

- 42 (43) Abdominal tergites I+II totally yellow-brown, not blackened at the hind margin.

Thorax metallic dull coppery or green, with a dense whitish or yellowish pollinosity. Legs totally brownish in ♀, with blackish femora and tarsi in ♂. Abdomen yellow-brown with a dark pattern. 5-9 mm. — Central, East and Southern Africa 21. *R. soyauxi* KARSCH.

- 43 (42) Abdominal tergite I+II with the hind margin blackened.

Legs in both sexes with the femora blackened. Otherwise similar to the foregoing species. 7-9 mm. — Central, East and Southern Africa 22. *R. stannocuprea* SPEISER.

- 44 (41) Parafrontalia in ♂ without additional pilosity, in ♀ without dark piliferous spots 45

- 45 (52) Fifth sternite of ♂ normal, without spines or protuberances 46

- 46 (47) Arista distinctly setulose, the longest setae as long as the basal arisal diameter or slightly longer.

This species has remained unknown to me. It is said to be similar to *R. cassotis*. — Mozambique, Nigeria 23. *R. tristis* SÉGUY.

- 47 (46) Arista almost bare, longest setae barely attaining half the diameter of the arisal base 48

- 48 (49) Thorax black, covered with a dense bluish-white pruinosity, apex of scutellum yellow

Legs with the femora darkened, rarely totally yellow-brown. Abdomen yellow with a black pattern. 6-8 mm. — Ethiopian region 24. *R. pruinosa* VILLENEUVE.

- 49 (48) Thorax metallic green or cupreous, apex of scutellum not lightened 50

- 50 (51) Bigger species of 9-10 mm body-length. Thorax metallic green and cupreous, with a dense bluish pruinosity.

Only the female sex is described. — Kenya 25. *R. in* PERIS.

- 51 (50) Smaller species of 4-6 mm body-length. Thorax metallic green or coppery, with a white, moderately dense pruinosity.

Recorded from Mozambique, S. Rhodesia and Bechuana-land 26. *R. zumpti* PERIS.

- 52 (45) Pregenital sternite of ♂ modified, with prominences or spines ... 53

- 53 (54) Pregenital sternite of ♂ strikingly enlarged, lying opposite tergite III-V, with a pair of forceps-like protruding processi. Fifth tergite of ♀ ventrally with the margins widely separated from each other, so that the 5th sternite is broadly uncovered. Arista in both sexes distinctly pubescent, longest setae reaching the width of the aristal base or even exceeding it a little.

Thorax metallic green or coppery, with a white pruinosity. Legs black, tibiae more or less lightened. Abdomen yellow-brown with a dark pattern. 6-9 mm. — Central, East and Southern Africa 31 *R. forcipata* VILLENEUVE.

- 54 (53) Pregenital sternite of ♂ of normal size and lying opposite the 5th tergite. In ♀ the 5th tergite is ventrally broader leaving the corresponding sternite not so much uncovered. Arista in both sexes with shorter pubescence, longest setae rarely exceed half the diameter of the antennal base 55

- 55 (56) Fifth sternite of ♂ projecting into two erect, coniform protuberances.

Otherwise similar to the foregoing species. 4-9 mm. — Ethiopian region 30. *R. cassotis* (WALKER).

- 56 (55) Fifth sternite of ♂ provided with 3 or 4 spines at the base of each lateral branch.

Similar to the foregoing species. 5-7 mm. — East and Southern Africa 29. *R. trispina* VILLENEUVE.

[1. — *Rhyncomya dasyops* BEZZI.]

Rhyncomyia dasyops BEZZI, Ann. Soc. Ent. Belg., LII, 1908, p. 382; CUTHBERTSON, Trans. Rhod. Sci. Ass., XXXVII, 1939, p. 144; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 90.

Rhyncomyia dasyops var. *nigropilosa* VILLENEUVE, Ann. Soc. Ent. France, XCVI, 1927, p. 19; PERIS, id., ibid.

Metallea pseudoinflata PERIS, Eos, XXVII, 1951, p. 240, et An. Estac. Exp. Aula Dei, III, 1952, p. 72, id. ibid. XXXII, 1956, p. 241.

This species is quite variable, but nevertheless easily recognizable by the haired propleura in conjunction with 2-4 *ad* on the mid-tibia, the wanting presutural *ac*, colouring features and, in the male sex, haired eyes. PERIS (1951) overlooked the fact that *R. dasyops* always has haired propleura, and described this species a second time as *Metallea pseudoinflata*, in which case he had detected the hairs on the propleura.

Male. — Eyes densely beset with thin, pale hairs, upper facets slightly, but to a varying degree, larger than the lower ones. Frons at its narrowest point measuring $\frac{1}{10}$ - $\frac{1}{25}$ of eye-length; frontal stripe yellow-brown, complete,

but narrow, more or less strongly widened towards the antennal groove. Ocellar triangle black, beset with dense black hairs, among which the *oc* are only slightly thicker and longer, *iv* well developed, *ev* and *f* wanting; parafrontalia to a varying extent black, otherwise yellow, with a white dust which leaves free the foot-prints of the hairs and bristles; *paf* long, in the upper part not thicker than the densely placed hairs which occupy the whole surface of the parafrontalia and also of the parafacialia down to a glossy parafacial spot; they diminish in size, but are still relatively long in the lower part. The ground colour of the parafacialia is yellow, with a white dusting as on the parafrontalia, the glossy spot is black-brown and borders the eye, but varies in size and may become indistinct. Bucca with height almost half the eye length, including the posterior part yellow to chrome like the remaining part of the face; a dark brown stripe running from the eye to the peristomal corner is more or less developed, sometimes quite indistinct. Vibrissa strong, but of median length; above it on the facial ridge are a few setae and short bristles, peristomal bristles on the anterior ridge short and thin, in a state of reduction; on the ventral ridge longer and thicker; anterior part of bucca bare, ventral and posterior part with thin yellow hairs which increase in length and density towards the post-bucca; occiput black, but thickly white pollinose. Antennal groove yellow, carina distinct, but short and broadly rounded, antennae chrome, with a slender second segment which is half as long as the 3rd, arista blackened terminally, very short pilose, the longest setae not exceeding half the basal diameter. Palpi yellow, sometimes terminally more or less brownish, spatulate, much broader than the 3rd antennal segment.

Thorax metallic green, olive or blackish with bluish reflections, pruinosity slight to rather dense. In all male specimens before me except one from Banana, Belgian Congo, the dorsum is beset with black hairs, whereas this other specimen has whitish hairs instead. The pleura show pale hairs in both forms. VILLENEUVE referred specimens with a whitish haired dorsum to the true *dasyops*, whereas he described those with black hairs as *nigropilosa*. But he could not find any other separating features of significance, except that the pollinosity of the abdomen is said to be a little more extended. He therefore inclined « fort à ne voir ici qu'une variété de l'espèce de BEZZI ». PERIS follows him in this opinion, but adds several features which are, according to my material variable and do not allow a clear separation of these two forms. I have dissected the terminalia of the single male of *dasyops* before me, but cannot find any difference in the hypopygial structure which is great enough to be valued as a specific character. The hypopygia of my « *nigropilosa* » show a certain variability which includes the structure found in the specimen of *dasyops*. I therefore include *nigropilosa* in the species concept of *dasyops*. It will have to be decided in the future, whether we are dealing with two strains which may occur in the same population, or with subspecific or even specific units.

Thoracic bristles black, $ac=0+1-2$, $dc=2-3+4$, $ia=1+2$, outer ph and prs present, $h=2-3$, $n=2$, $sa=2-3$, $sc=3+0-1$, $st=1:1$, pst and pp present. Meso- and hypopleuron with the usual black bristles. Suprasquamal ridge and post alar declivity bare, propleuron and prosternum haired. Wings hyaline, veins including basicosta yellow, costal spine minute, stem-vein with long yellow hairs, other veins bare, R_s open, bend of m broadly rounded, thoracic squama yellow, about as long as broad, halter yellow. Legs with dark femora and yellow to reddish brown tibiae and tarsi; fore-tibia with a row of ad and a long submedian pv ; mid-tibia with 2-4 ad , 1-2 pd , 2 pv and 1 av ; hind-tibia with several ad and pd and 2 av .

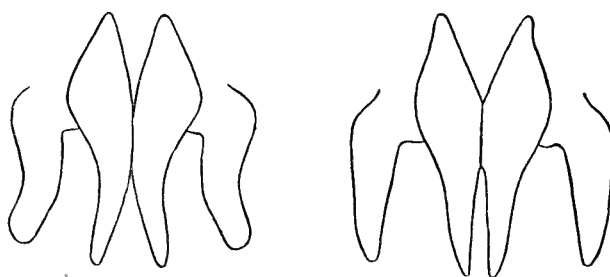


FIG. 41. — Left : *Rhyncomya tetropsis* (BIGOT). Specimen from Liberia. — Right : *Rhyncomya dasyops* BEZZI. Specimen from S. W. Africa. Cerci with paraboli, hairs omitted.

Abdomen yellow brown or orange, with a dark brown or blackish pattern, covering the last tergite and forming a median longitudinal vitta up to the base of the abdomen; furthermore the lateral edges are blackened. This pattern however, is subject to great variability. Not only may the median vitta be partly or totally reduced, but the terminal and lateral darkening may also partly or wholly disappear, so that the abdomen becomes uniformly yellow or brown. Hypopygium (fig. 41) with pointed cerci and terminally rounded paralobi, both of which vary a little with respect to their slenderness.

Female. — The two forms *dasyops* s. str. and *nigropilosa* are not separable from each other in the female sex. Compared with the male, the long pale pilosity of the thorax is strongly reduced. It is never present on the dorsum and also much less evident on the pleurae and partly replaced by black hairs. The eyes are bare. Frons broad at the vertex about half as wide as the eye is long, with long iv , ev and f ; parafrontalia white or yellowish pollinose, with piliferous spots and numerous hairs and bristles, some of which reach the length of the paf ; the under-ground, like the face, is yellow-brown or more or less darkened. The glossy spots on the parafacialia are as variable as in the male, but an additional third

one may be developed where the parafrontalium merges into the parafacialium. Abdomen in the average with a more reduced black pattern than in the male, the median dark vitta is strongly reduced, or, more commonly, not developed at all.

Length : 8-12 mm.

Collection Musée du Congo : Belg. Congo : Elisabethville, 30.XII.1920 (1 ♂, leg. M. BEQUAERT); Sankisia, IX.1911 (1 ♀, leg. M. BEQUAERT). — Collection S. A. Institute for Med. Research, Johannesburg : Transvaal : Pretoriuskop, I.1952 (1 ♀, leg. F. ZUMPT); S. W. Africa : 19°47' S-20°35' E (1 ♂); Nigeria : Ibadan (2 ♂♂, 1 ♀). — Collection Zool. Museum Berlin : Cameroons : Uam distr., VI.1914 (7 ♂♂, 7 ♀♀, leg. G. TESSMANN). — Collection American Museum, New-York : Belg. Congo : Banana, IX.1916 (1 ♂, leg. LANG and CHAPIN); Mozambique : Lourenço-Marques, 1914 (1 ♀, leg. H. A. JUNOD). — Collection Dept. of Agriculture, Salisbury : S. Rhodesia : Urungwe, 20.VIII.1938 (2 ♀♀, leg. A. CUTHBERTSON).

PERIS recorded the forma typica from the Gold Coast, Dahomey, Nigeria, Belg. Congo, Kenya, Nyasaland, N. and S. Rhodesias, Transvaal and Bechuanaland, whereas he listed only a few specimens of *nigropilosa* from the Belg. Congo, Abyssinia and S. Rhodesia.

[2. — *Rhyncomya tetropsis* (BIGOT).]

(Fig. 41.)

Frerea tetropsis BIGOT, Ann. Soc. Ent. France, 1891, p. 376; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 89.

Frerea tetropsidea BRAUER, Sitzber. Akad. Wiss. Wien, CVII, 1898, p. 15; PERIS, id., ibid.

Rhyncomya nigeria CURRAN, Amer. Mus. Nov., 506, 1931, p. 19; PERIS, id., ibid.

This species bears a superficial similarity to *R. dasyops* BEZZI. In both sexes, however, the eyes as well as the propleura are bare, the legs have reddish femora and the mid-tibia has only one *ad*.

Male. — Eyes bare, upper facets slightly enlarged, frons at the narrowest point about twice as wide as the anterior ocellus ($\frac{1}{8}$ - $\frac{1}{10}$ of eye-length). Ocellar triangle black, frontal stripe continuous, yellow brown; parafrontalia mainly of the same colouring, only partially with darker reflections; remaining part of head yellow to chrome too, with a faint white dusting. Ocellar triangle with one pair of *oc* and a great number of black hairs, *iv* well developed, about 10 pairs of *paf* which are accompanied by densely placed black hairs extending far down the parafacialia. Antennae widely separated by a flat, dorsally hollowed-out carina, all segments

chrome, 3rd segment about twice as long as the second, arista practically bare. Vibrissa relatively short, a few black setae above it; peristomal bristles black, on the anterior margin of irregular length and arrangement, on the lower margin longer and extending onto its middle. Bucca glossy, yellow like the face, almost $\frac{1}{2}$ as high as the eye is long, almost bare in the anterior part, with soft, pale hairs posteriorly. Palpi reddish yellow, spatulate, broader than the 3rd antennal segment.

Thorax dull metallic green, white pollinose and densely covered with relatively long and soft, yellow and whitish hairs. Tip of scutellum more or less yellow. Poststigma black-brown, prostigma densely covered with the long hairs, so that its colour is not clearly detectable. The propleuron is also hidden under these hairs, but the sclerite itself is bare. In spite of the soft hairs, the chaetotaxy is distinct, consisting of the following long black bristles: $ac=0+2$, $dc=2+4-5$ (which may be still further increased by weaker black hairs), $ia=1+2$ (also sometimes increased by weaker hairs), outer ph and prs present, $h=3$, $n=2$, $sa=3$, scutellum with 3 long marginals and several shorter and weaker black discal bristles, $st=1:1$, pst and pp present. Mesopleuron with a variable number of black bristles on its posterior border; hypopleurals black, sometimes several white ones. Pleurae otherwise densely covered with the above mentioned yellow and whitish soft hairs. Wings hyaline, veins yellow, costal setae black, a spine is not developed, hairs on the stem-vein yellow, R_s open; thoracic squama whitish, about as long as broad, halter dark yellow. Legs with the femora and tibiae reddish yellow, tarsi more or less darkened; fore-tibia with a row of ad of varying size and a submedian pv ; mid-tibia with one submedian ad , pd , av and 2 pv ; hind-tibia with 2 weak av and a row each of pd and ad which are, however, irregular and not very long.

Abdomen yellow to chrome, with a broad, black median stripe reaching from the base onto the hind margin of the 4th tergite, or else it also touches the base of the last tergite, but does not reach its tip; furthermore, there is a lateral black stripe which may be interrupted on the anterior part of tergite III, and which normally does not continue onto the last tergite. The abdomen is glossy, only slightly dusted, and beset dorsally with the usual black setae and hairs, ventrally predominantly with white hairs. Hypopygium (fig. 44) similar to that of *R. dasyops* BEZZI.

Female. — Head glossy yellow, only the upper part of the occiput is black and, furthermore, there is mostly a round spot on the lower part of the parafacialia. Frons at vertex almost half as wide as the eye is long, strongly widened towards the antennal groove. Thorax metallic blackish green blue or cupreous, scutellum sometimes more or less extended brown. Soft hairs are present on the pleura, but are of normal length and density; on the dorsum, they are almost absent. This feature give the female a general appearance quite different from that of the male. The bristles

also show a tendency towards reduction in the few females before me; there may be $ac=0+1$ and $dc=2+2$. The pattern on the abdomen is evidently quite variable. The median stripe may continue to the tip of the abdomen, or even cover the whole tergite, the lateral stripe may also be enlarged, and the ground colour may be black or metallic green.

Length : 9-13 mm.

Collection Musée du Congo : Uele (1 ♀, leg. RODHAIN). — Collection U. S. Nat. Museum, Washington : Liberia : Du River, 14.X.1953 (2 ♂♂, leg. H. M. GELFAND). — Collection British Museum, London : Dahomey : Cotonon, 70 miles W. of Lagos, 5.VI.1914 (1 ♂, leg. W. A. LAMBORN); Gambia : 15.III.1911 (1 ♀, leg. J. J. SIMPSON). — Collection American Museum, New York : Sierra Leone : Freetown, 14.VII.1917 (1 ♀, leg. F. SNYDER); Liberia : Lupukai, 17.VIII.1916 (1 ♀); Nigeria : Ideasi, 30.VI.1912 (1 ♂, leg. J. W. S. MACFIE, paratype of *nigeria* CURRAN).

3. — *Rhyncomya ituriensis* n. sp.

(Fig. 42.)

There are 3 specimens (2 ♂♂, 1 ♀) before me which are closely related to *R. tetropsis*, but will be easily separable by colour-features, if these prove in future to be constant. The hypopygium (fig. 42) shows more slender cerci and paralobi than that of *R. tetropsis*.

Male. — Eyes bare, upper facets slightly enlarged, frons at the narrowest point about twice as wide as the anterior ocellus. Ocellar triangle black, with a pair of *oc* and several additional short hairs, *iv* well developed; frontal stripe chrome, strongly widened towards the antennal groove, but narrow at the tip of the ocellar triangle, where it is much smaller than one parafrontalium. Parafrontalia and -facialia glossy red-brown, both beset with black hairs, which are shorter and less dense on the parafacialia; *paf* distinct, but hair-like in the upper part. There are 3 spots of white pollinosity, one on the parafrontalium, bordering the eye, and two on the parafacialium, the middle one being very large. Antennae widely separated by a flat, longitudinally hollowed out carina, antennal groove and all segments yellow chrome, 3rd segment nearly twice as long as the second, arista practically bare. Vibrissa short, peristomal bristles rudimentary, on the anterior edge wanting or only a few seta-like ones present, ventral margin with a few black, hair-like bristles. Bucca glossy red-brown, nearly half as high as the eye is long, postbucca with dense and long, yellow hairs, which diminish in length and density towards the epistome. Occiput black in the upper part. Palpi chrome, spatulate, broader than the 3rd antennal segment.

Thorax including scutellum metallic dark blue with greenish reflections, pollinosity slight. Pro- and poststigma black-brown. Hairs on the dorsum long and black, on the pleura partly wavy, black or yellow-brown with intermediate colours. The following bristles are detectable : $ac=0+1$, two pairs of prescutellar dc distinct, further 1-2 postsutural and 1-2 presutural dc weak and not clearly recognizable as bristles, $ia=0+1$, outer ph and prs present, $h=3$, $n=2$, $sa=2-3$, scutellum in the paratypes (1 ♂ ♀ from Togo) with 3 long and thick marginals, in the holotype (♂, Belg.

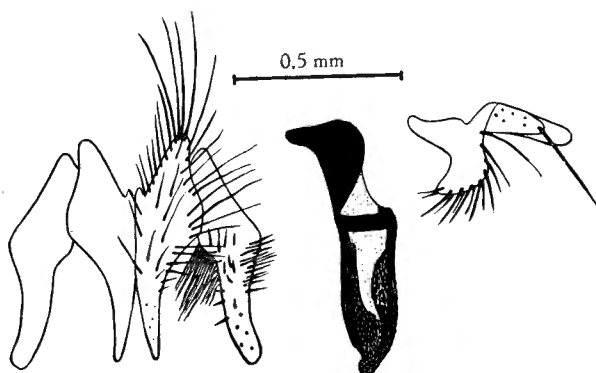


FIG. 42. — *Rhyncomya ituriensis* n. sp.
Cerci with paralobi, phallosome and parameres.
Paratype from Mangu-Jendi, Togo.

Congo) they are abnormally increased, numbering 5 on each side, $st=1:1$, pst and pp present. Mesopleuron covered with predominantly dark hairs, posterior margin with a row of black bristles, hypopleural bristles long and thin and irregularly increased in number; sterno- and pteropleuron with brownish, wavy hairs. Propleuron, suprasquamal ridge and post-alar declivity bare, prosternum haired. Wings hyaline, veins including basicoستا yellow, costal spine wanting, stem-vein with long and thin pale hairs, R_s open, bend of m broadly rounded; thoracic squama about as long as broad, halter yellow. Legs predominantly red-brown, but tibiae and tarsi terminally, and the femora partly more or less darkened; fore-tibia with a row of ad and a submedian pv ; mid-tibia with 1-2 ad (asymmetrically developed in the holotype and the female paratype), 1-2 pd and pv and 1 av ; hind-tibia with 2 av and a row each of irregular ad and pd .

Abdomen bright yellow-orange, without a median vitta, but the lateral ridges with a continuous dark stripe shining metallic dark blue or glossy black; venter coloured like the dorsum.

Female. — Frons at vertex measuring about half the eye-length, frontal stripe broad, subparallel, pollinose spots on the parafrontalia and -facialia arranged as in the male. In the only specimen before me, *iv* is well developed, but *ev* and *f* are evidently wanting, parafrontal hairs and bristles short and relatively thin, not densely placed. Thorax with short hairs on the dorsum, also hairs on the pleura shorter and less dense than in the male.

Length : 9-11 mm.

Collection Musée du Congo : Kibali-Ituri : Dungu, VI.1953 (1 ♂, leg. M. WINAND, holotype). — Collection Zoolog. Museum, Berlin : Togo : Mangu-Jendi, VII-VIII.1909 (1 ♂); Bismarckburg, VI.1891 (1 ♀, leg. R. BÜTTNER).

[4. — *Rhyncomya elegantula* VILLENEUVE.]

(Fig. 43.)

Rhyncomyia elegantula VILLENEUVE, Ann. Soc. Ent. France, XCVI, 1927, p. 20; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 120.

? *Beria inflata* ROBINEAU-DESVOIDY, Ess. Myod., II, 1830, p. 418.

PERIS had not seen this species and listed it under his doubtful ones, mentioning that it should be related to *R. tetropsis* (BIGOT). I have received the holotype (♂) and can state that it is a quite outstanding and easily recognizable species. In PERIS' key (1952), it really runs down to the « *tetropsis* group » and has, like *R. dasyops* BEZZI, haired eyes in the male sex, but the mid-tibia shows only one *ad*, the propleuron is bare and the abdomen has an extended metallic green pattern. The following re-description is based on the holotype from the Belgian Congo and a second male which I have received from Natal. The female sex is not known.

Male. — Eyes densely beset with long pale hairs, upper facets enlarged, gradually diminishing in size towards the lower margin. Ocellar triangle black with long and thick *iv*, *oc* thinner; frons below the triangle narrowed to a line, then suddenly widened forming a slender frontal stripe and broad parafrontalia which are slightly darkened in the holotype, but yellow like the remaining part of the face in the other specimen. There are 8-10 pairs of relatively thin *paf* which are accompanied by dense black and long hairs. These hairs continue onto the parafacialia and reach their lower margin. Bucca glossy yellow, $\frac{2}{5}$ as high as the eye is long, almost bare in the anterior part, with thin pale hairs posteriorly. Vibrissa short, no setae above it on the facial ridge, peristomal bristles black, short, reaching the middle of the peristome. Antennae orange, a median carina developed but short and rounded dorsally, third segment $2\frac{1}{2}$ times as long as the second, arista distinctly pilose, the longest hairs almost reaching the width of the arisal base, but in the average, they are shorter. Palpi yellow, spatulate.

Thorax metallic green with cupreous reflections, a white dusting is very faint, but notum and pleura are beset with long and soft yellow hairs; $ac=0+1$ (not $0+2$, as VILLENEUVE indicates), $dc=2+3$, $ia=1+2$, $ph=2$ (outer present), $h=3$, $prs=1$, $n=2$, $sa=2$, $sc=3+0$, $st=1:1$, pst and pp present. Mesopleuron with 3 black bristles, otherwise with yellow hairs only. Suprasquamal ridge, propleuron and post-alar declivity bare. Wings hyaline, veins yellow, hairs on the stem vein yellow too, costal spine

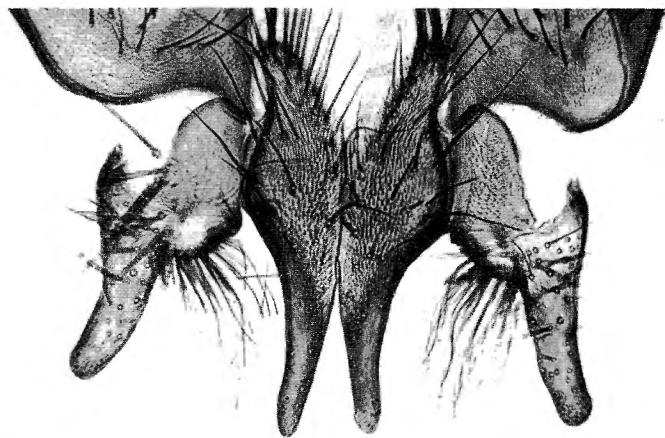


FIG. 43. — *Rhyncomya elegantula* VILLENEUVE.

Cerci with paralobi (microphotograph).

Specimen from Maputa, Natal.

indistinguishable from the other costal setae, other veins bare, R_5 open, thoracic squama yellowish, longer than broad, halter yellow. Legs with the femora blackish, tibiae yellow, hairs more or less darkened; fore-tibia with 4 ad and 1 submedian pv ; mid-tibia with one submedian ad , pd and av as well as 2 pv ; hind tibia with a number of ad , 2 pd and 1-2 submedian av .

Abdomen yellow, with a metallic green pattern, which includes the hypopygium and the last tergite, a broad median vitta reaching from the 5th tergite to the base of the abdomen, and a narrow lateral stripe which extends from the margin of tergite I+II to the tip of the abdomen. The hypopygium, taken from the specimen from Natal, shows some similarity to that of *R. dasyops*, but the base of the paralobi bears long hairs (fig. 43).

Length : 9 mm.

Collection Musée du Congo : Kashiobwe, 27.I.1912 1 ♂, leg. J. BEQUAERT, holotype). — Collection S. A. Institute for Med. Research, Johannesburg : Natal : Maputa, VI.1914 (1 ♂, leg. H. G. BREYER).

[5. — *Rhyncomya buccalis* VILLENEUVE.]

(Fig. 44.)

Rhyncomyia buccalis VILLENEUVE, Ann. Soc. Ent. France, XCVI, 1927, p. 24; PERIS, An Estac. Exp. Aula Dei, III, 1952, p. 99.

This species was based on a male from the Belgian Congo, which is now preserved in the Museum of the Congo, and which I have been able to compare with the other material before me. The author mentioned, that he also saw a female from « South Africa ». I have not come across material from localities south of the Zambesi, but received a series from Tanganyika and one female from Kenya. PERIS recorded a female from Uganda and one from Nyasaland.

R. buccalis is well characterized by its hypopygium which shows broadly truncate paralobi (fig. 44).

Male. — Eyes bare, upper facets hardly larger than the lower ones, frons at the narrowest point $\frac{1}{5}$ - $\frac{1}{6}$ as broad as the eye is long; frontal stripe complete, black-brown to reddish; parafrontalium black, but with a dense white pollinosity, at the tip of the ocellar triangle about as broad as one parafrontalium; *iv* long and thick, continuing *ocb* also relatively long, ocellar triangle black and white pollinose, with a pair of stronger *oc* and a great number of additional bristly hairs; parafrontalium besides the *paf* with hairs which partly reach the length and thickness of the *paf*; para-facialium black and densely pollinose like the parafrontalium and also with dense but shorter hairs over its whole extent, in the lower part bordering the eye with a large undusted, glossy spot. Antennal groove and antennae, as well as the facial ridge and the anterior two-thirds of the bucca, yellow to red-brown. Antennae separated by a broad equally rounded convexity, 3rd antennal segment almost twice as long as the second, arista only very short-pilose, practically bare. Epistome more protruded than in *R. disclusa* and related species, vibrissa long, several bristly hairs above, peristomal bristles black and arranged in a complete row reaching the posterior buccal corner; post-bucca black and beset with long black and pale hairs; these on the yellow to red-brown bucca diminish in size and number towards the vibrissarium. Palpi reddish yellow, distinctly broader than the 3rd antennal segment.

Thorax metallic green, but dorsal side covered with a dense dull-green and cupreous pollinosity, with white dust behind the head, on the scutellum and the lateral surfaces; pleura partly white dusted too. Pro- and post-stigma brown. Hairs on dorsum and pleura black, *ac*=2-3+4-5,

$dc=2-3+4-5$, $ia=1+3$, outer ph and prs present, $h=3-4$, $n=2$, $sa=4$ and 0-2 additional ones between the normal sa and the ia , scutellum with 3 long marginals, discal bristles not distinctly separated from the long discal hairs, $st=1:1$, pst and pp present, mesopleuron at the posterior margin with a dense row of long bristles which are accompanied by additional hairs, hypopleurals normal. Suprasquamal ridge, post-alar declivity and propleuron bare, prosternum with yellow hairs. Wings with a slight brownish tinge, veins, including basicosta and epaulet, yellow-brown; stem-vein with a row of long black bristly hairs, costal spine indistinct, root of r_{4+5} dorsally



FIG. 44. — *Rhyncomya buccalis* VILLENEUVE.

Cerci and parolobi, phallosome.
Specimen from Songea, Tanganyika.

with a few black setae, bend of m broadly rounded, R_s open, thoracic squama yellow-brown, slightly longer than broad, halter yellow. Legs totally black or black-brown; fore-tibia with 4-5 ad and a sub-median pv ; mid-tibia with 2-3 ad , 2 pd , 1-2 pv and 1 av ; hind-tibia with 2-3 ad and pd , but av weak or wanting.

Abdomen with the same colouring and pollinosity as the thorax, but the slight white dusting covers the whole dorsum. Hairs and bristles on the dorsal and ventral surfaces black.

Female. — Frons broad, measuring at vertex about $\frac{5}{8}$ of eye-length, strongly dilated towards the antennal groove. Parafrontalium with iv , ev and f as well as a great number of parafrontal bristles and hairs besides the usual row of paf . Parafacialia in the specimens before me for the greater part reddish brown, glossy parafacial spot black or reddish. On the thorax the white dusting is more extended than in the males; on the other hand, the glossy metallic underground is more distinct and the whole thorax appears less dull green and coppery.

Length : 9-11 mm.

Collection Musée du Congo : Belg. Congo : Mufungwa, 18.XII.1911 (1 ♂, leg. BEQUAERT, holotype). — Collection Museum of Natural History, Vienna : Tanganyika : Malengo Hochland, 1500-1700 m, Ugano, nr. Songea, 1-10.XII.1935 (2 ♂♂, 5 ♀♀, leg. ZERNY). — Collection S. African Museum, Cape Town : Kenya : Elderot, 1914 (1 ♀, leg. FREY).

[6. — **Rhyncomya disclusa** VILLENEUVE]

and

[7. — **Rhyncomya depressifrons** VILLENEUVE.]

Rhyncomyia disclusa VILLENEUVE, Ann. Soc. Ent. France, XCVI, 1927, p. 24; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 99.

Rhyncomyia depressifrons VILLENEUVE, id., ibid.; PERIS, id., ibid.

These two species were described from Natal and are so similar to each other that VILLENEUVE said they could be taken for two forms of the same species. He separates them by the body-length (*disclusa*=9-10 mm; *depressifrons*=8 mm) and by some colour-features. PERIS, who was able to study a few males and females of both species, gives the following key :

- « Parafaciales tan densamente setulosas como las parafrontales. ♂. Parafaciales oscurecidas en su mitad más próxima al ojo. Color negro del occipucio alcanzando el borde oral. Frente en su punto más estrecho de anchura menor que el tubérculo ocelar. Lúnula de anchura no alcanzando el doble de la del II artejo antenal. ♀. Parafrontales negras. Interfrontalia parda, sus bordes convergentes hacia adelante. Anchura de la lúnula apenas $\frac{1}{4}$ de la anchura de cada parafrontal a su nivel *depressifrons* VILLENEUVE, 1927.
- » Parafaciales no tan densamente setulosas como las parafrontales. ♂. Parafaciales testáceas. Color negro occipital no alcanzando el borde oral. Frente en su punto más estrecho tan ancho como el tubérculo ocelar. Lúnula claramente de anchura doble a la del II artejo antenal. ♀. Parafrontales testáceas. Interfrontalia testácea y de bordes sub-paralelos, de anchura algo mayor a la del tubérculo ocelar. Anchura de la lúnula aproximadamente igual a $\frac{1}{2}$ de cada parafrontal a su nivel *disclusa* VILLENEUVE, 1927. »

I have only 9 female specimens before me, no male. It is, therefore, not possible to base these two species more profoundly on the hypopygial structures. Among these female specimens, there are two which fit fairly well VILLENEUVE's and PERIS' descriptions of *depressifrons*, whereas the rest can be assigned to *disclusa*. However, these 7 specimens of *disclusa*

show a wide range of variability, so that I am not certain whether they represent only one species, or, on the other hand, whether the variability is still greater and will even include *depressifrons*.

The colouring of the thorax and abdomen is metallic green or blue, the white dusting more or less dense. The head is totally yellow and orange (except the median part of the occiput) in all specimens which I provisionally label as « *disclusa* », and which range from 10-11 mm in body-length, whereas the parafrontalia are black and a parafacial glossy spot dark brown in the 2 specimens before me which measure only 8 mm and which I take for *depressifrons*. I wanted to find more separating features but have to state that the width and shape of the frontal-stripe, the length and density of the parafacial setae, the relative width of the palpi and the shape of the thoracic squama are considerably variable, and can not be used for recognizing the two species.

I think, therefore, that it is best to leave these two species in the present doubtful status and to wait until more material and especially until enough males are available for solving this problem.

The two specimens before me of *R. depressifrons* were collected at Port St. John's, Cape Province, X.1916, whereas those assigned to *R. disclusa*, come from the following collections and localities : Collection British Museum, London : Natal : Amanzimtoti, 16.X.1931 (1 ♀, leg. J. OGILVIE). — Collection S. A. Institute for Med. Research, Johannesburg : Natal : Estcourt, 26.XII.1941 (1 ♀, leg. MARLEY); Cape Province : Port St. John's, XI.1916 (1 ♀, leg. SWINNY). — Collection Dept. of Agriculture, Pretoria : Transvaal : Pretoria, 21.IX.1913 (1 ♀, leg. H. K. MUNRO). — Collection American Museum, New York : Natal : Willow Grange, Mooi River, 10.III.1918 (1 ♀, leg. WROUGHTON); Transvaal : Pretoria, 5.X.1914 (1 ♀, leg. H. K. MUNRO).

[8. — ***Rhyncomya currani*** nom. nov.]

(Fig. 45.)

Rhyncomymia pollinosa CURRAN (nec TOWNSEND, 1917), Americ. Mus. Nov., 506, 1931, p. 20; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 121.

A metallic, dark bronze species which up to now is known only from South African localities. It is related to *R. nigra* PERIS, based on a single female specimen from Tanganyika which has remained unknown to me. A third related species from the Cameroons is before me, but as this is also represented only by a female specimen, I shall leave it undescribed.

Male. — Eyes bare, upper facets moderately enlarged but not demarcated from the lower ones. Frons at the narrowest point measuring about $\frac{1}{10}$ of eye-length; frontal stripe reddish yellow, complete; ocellar triangle and parafrontalia darkened and densely white pollinose, *iv* long

and strong, *ev* and *f* wanting, *paf* accompanied by numerous parafrontal hairs and bristles some of which are as long and strong as the *paf*. Parafacialia yellow-brown to orange, like the remaining part of the face with relatively long setae on their whole extent, white pollinose, in the lower part with an ill-defined, not or only slightly darkened glossy spot. Antennae separated by a broad and flat carina, segments orange, third segment short, only $\frac{7}{5}$ times as long as the second, arista bare. Bucca

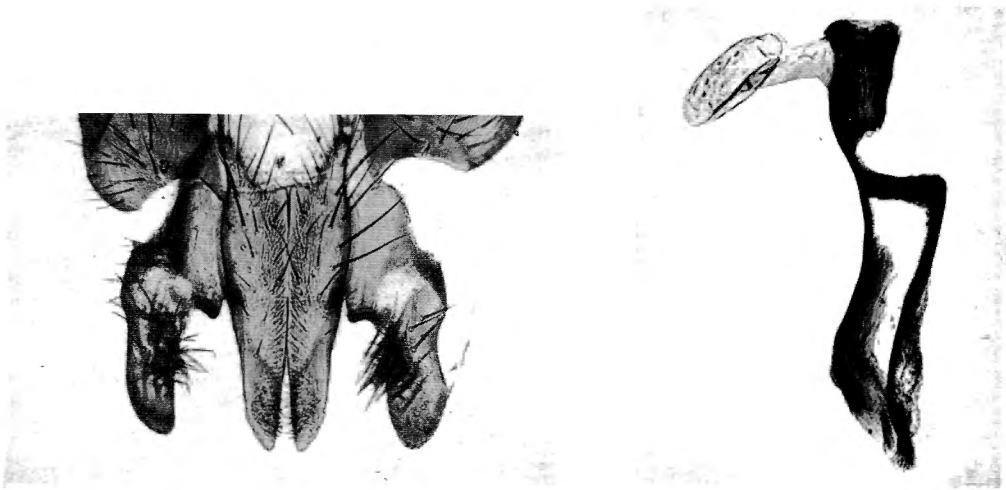


FIG. 45. — Cerci with paralobi and phallosome of *Rhyncomya currani* nom. nov. (microphotograph).

Paratype from Pretoria, Transvaal.

$\frac{2}{5}$ as high as the eye is long, totally yellow-brown to orange, white pollinose like the parafacialium; vibrissa long, peristomal bristles of normal length forming a complete row which nearly reaches the postbucca, buccal hairs black and relatively short and sparse, especially on the anterior part of the bucca; postbucca at the posterior edge with yellow hairs, which are longer and more densely placed. Occiput black. Palpi yellow, not spatulate, relatively narrow and with subparallel edges, not as wide as the 3rd antennal segment at its base.

Thorax metallic dark bronze, with a relatively dense white pollinosity leaving free the foot-prints of hairs and bristles. Prostigma yellow, poststigma yellow-brown. Bristles and hairs on the dorsum black, pleura with pale hairs which are, however, not strikingly long or wavy; *ac*=2+6-7, *dc*=3+4, *ia*=1+3, outer *ph* and *prs* present, *h*=3, *n*=2, *sa*=3, scutellum with 3-4 marginals, discals not distinctly separated from the normal, relatively long hairs, *st*=1 : 1, hypopleural and mesopleural bristles normal,

pst and *pp* present. Suprasquamal ridge, postalar declivity and propleuron bare, prosternum haired. Wings hyaline, but with a yellow-brown tinge, veins including basicosta yellow, costal spine indistinct, stem-vein with black bristly hairs, bend of *m* broadly rounded, *R*_s open, sometimes only narrowly. Thoracic squama longer than broad, halter yellow. Legs with the femora dark brown to blackish, tibiae and tarsi yellow-brown to reddish; fore-tibia with several *ad* and a long submedian *pv*; mid-tibia with 2-3 *ad*, 2 *pv*, 1-2 *pd* and 1 *av*; hind-tibia with several *ad* and *pd* of unequal length and with 1-2 *av*.

Abdomen coloured and dusted like the thorax, without any light pattern; hairs and bristles black. Hypopygium (fig. 45) with broad cerci and paralobi.

Female. — Colouring and pollinosity as in the male. Frons at vertex measuring about half the eye-length, strongly widened towards the antennal groove; frontal stripe subparallel, parafrontalia and -facialia yellowish pollinose; chaetotaxy complete, parafrontal hairs and bristles with glossy foot-prints (pilliferous spots). In one female, the anterior part of the buccae is slightly darkened and glossy.

Length : 9-11 mm.

Collection Dept. of Agriculture, Pretoria : Transvaal : Pretoria, 21.IX.1915 (1 ♂ ♀, leg. H. K. MUNRO, holo- and allotype). — Collection S. African Museum, Cape Town : Cape Province : Clanwilliam, IX.1941 (2 ♀ ♀). — Collection American Museum, New York : Transvaal : Pretoria, 29.IV.1914 (1 ♂, leg. H. K. MUNRO).

[9. — ***Rhyncomya nigra* PERIS.**]

Rhyncomya nigra PERIS, Eos, XXVII, 1951, p. 241, et An. Estac. Exp. Aula Dei, III, 1952, p. 91.

This species, based on a single female from Tanganyika, has remained unknown to me. It is evidently closely related to *R. currani* ZUMPT. PERIS (1952) in his key places it with the species which have two or more *ad* on the mid-tibia and well-developed presutural *ac*. In addition he mentions the following characteristic features (in translation).

« Abdomen completely black, with a dense white pruinosity. Arista bare. *dc*=2+4. ♀. Head, palpi and antennae reddish brown. Parafrontalia white pruinose, with setigerous spots. Thorax black, pleura with whitish pilosity. Squamae white, the lower one rounded. Wings subhyaline. Legs reddish brown. »

Length : 8,5 mm.

[10. — *Rhyncomya messoria* VILLENEUVE.]

(Fig. 46.)

Rhyncomya messoria VILLENEUVE, Ann. Soc. Ent. France, XCVI, 1927, p. 25; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 91.

Beria erula SÉGUY, Mem. Est. Mus. Zool. Univ. Coimbra, (1), n° 67, 1933, p. 68; PERIS, id., ibid.

An easily recognizable species characterized by a totally metallic green or bluish thorax and abdomen which are practically bare of pruinosity. The reduction of the presutural *ac*, in combination with the colouring, is also a good taxonomic character.

Male. — Eyes bare, upper facets distinctly larger than the lower ones, frons at its narrowest point measuring $\frac{1}{11}$ – $\frac{1}{12}$ of eye length. Frontal stripe orange, reaching the black ocellar-triangle, but is very narrow, at the antennal groove only a little broader than the total frons at its narrowest point. Parafrontalia reddish too, or more or less blackened, with a silvery pollinosity. Ocellar triangle with dense hairs, but *oc* reduced and hardly larger and thicker than the hairs, *iv* well developed; *paf* thin, parafrontalia and -facialia with long and dense hairs which, on the parafrontalium, are almost as long as the *paf*. Parafacialium totally yellow to chrome, with a white pollinosity which leaves an uncovered glossy broad spot in the lower part. Antennal groove glossy yellow, without carina; antennae slender, also yellow, the basal segments glossy, the 3rd dull, about twice as long as the second; arista practically bare, blackened terminally. Vibrissa black, above it a few setae, anterior peristomal margin bare or only with few short and irregularly placed bristles, ventral margin with black bristles which become thinner towards the post-bucca but almost reach the posterior corner of the head. Bucca almost $\frac{1}{3}$ as high as the eye is long, glossy yellow like the remaining face, not dusted, and beset with predominantly pale hairs which are very short on the anterior part. A few black hairs are present on the posterior part. Occiput metallic black-green. Palpi yellow, dilated terminally and broader than the 3rd antennal segment.

Thorax totally metallic green or bluish, practically undusted, pro- and poststigma as well as the pleural margins yellow, *ac*=0+2, *dc*=2+4, *ia*=1+2, outer *ph* and *prs* present, *h*=3, *n*=2-3, *sa*=2, *sc*=3+0, *st*=1:1. Pleura with thin and pale hairs, mesopleuron in the upper part with black hairs, mesopleural and hypopleural bristles complete and black. Supra-squamal ridge, post-alar declivity and propleuron bare. Prosternum with long pale hairs. Wings hyaline, veins yellow, stem-vein with black hairs, root of r_{4+5} dorsally with a few setae, costal spine not developed, bend of *m* broadly rounded, *R*_s narrowly open. Thoracic squama white or light yellow, about as broad as long, halter yellow. Legs with the anterior femora metallic green, the others black-brown, tibiae and tarsi more or less

brown; fore-tibia with a row of short *ad* and one submedian *pv* of moderate length; mid-tibia with 2 *ad*, 2 *pd*, 2 *pv* and 1 *av*; hind-tibia with several *ad* and *pd* and 2 *av*.

Abdomen as broad as long, like the thorax totally metallic green or bluish, very glossy, without a distinct dusting. Hypopygium (fig. 46) with slender cerci and paralobi.

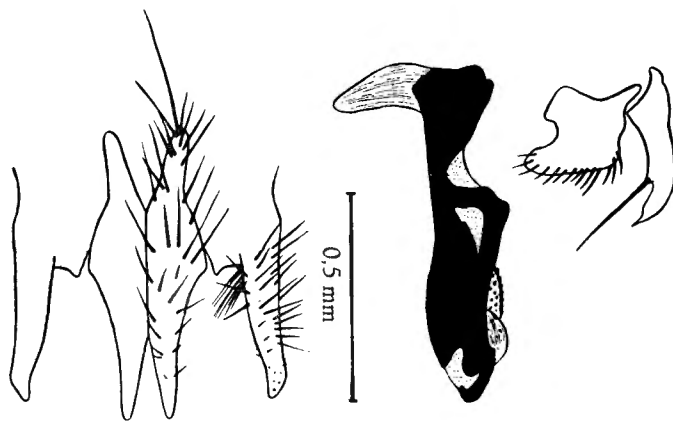


FIG. 46. — *Rhyncomya messoria* VILLENEUVE.

Cerci with paralobi, phallosome and parameres.
Specimen from « Caffraria ».

Female. — Frons at vertex about half as broad as the eye is long. Head including parafrontalia glossy yellow to orange, only occiput, proboscis and the area between the ocelli blackened. Frontal stripe subparallel, at vertex about as broad as one parafrontalium, *iv*, *ev*, *oc* and *f* well developed, *paf* stronger than in the male, parafrontalium with many fronto-orbital bristles and hairs, parafacialium with relatively densely placed black setae. Parafrontalium and -facialium with 3 white-dusted spots bordering the eye. Bristles of legs stronger than in the male.

Length : 7-9 mm.

This species seems to be rare. It was described from the Belgian Congo and as « *erula* » from Mozambique. PERIS saw a few specimens from S. Rhodesia, Basutoland and the Cape Province.

Collection Muséum du Congo : Katanga : Elisabethville, 1.XII.1919 (1 ♂, leg. M. BEQUAERT). — Collection American Museum, New York : Transvaal : Pretoria, XII.1915 (1 ♂, leg. H. K. MUNRO); Basutoland,

1 ♀, leg. JANSON). — Collection S. African Museum, Cape Town : Cape Province : Ceres, XII.1949 (3 ♀ ♀); Victoria West, X.1935 (1 ♂). — Collection S. A. Institute for Med. Research, Johannesburg : Natal : Hluhluwe Game Reserve (2 ♀ ♀). — Collection Dept. of Agriculture, Pretoria : Transvaal : Pretoria, 20.XII.1914 (1 ♂ ♀, leg. H. K. MUNRO). — Collection Museum of Natural History, Vienna : Tanganyika (1 ♂). — Collection Zoolog. Museum, Berlin : Caffraria (1 ♂, leg. DREGE).

[11. — *Rhyncomya formosa* PERIS.]

Rhyncomya formosa PERIS, Eos, XXVII, 1951, p. 241, et An. Estac. Exp. Aula Dei, III, 1952, p. 86.

This species is based on 2 female specimens from Kenya, the holotype having been collected at Rabai, the paratype near Mombassa. The latter specimen is before me and shows that we are dealing with an easily distinguishable species.

Female. — Frons at vertex $\frac{7}{13}$ as wide as the eye is long, strongly widened towards the antennal groove. Frontal stripe red-brown, parallel, parafrontalia and parafacialia densely white pollinose. The chaetotaxy of the head is complete, 2 *fo* are easily distinguishable by their length from the accompanying black bristles and setae, which are densely placed and continue onto the lower margin of the parafacialia. Underground of parafrontalia and of the occiput blackish, whereas the remaining part of the head is red-brown and, like the parafacialia, densely pollinose. Bucca almost half as high as the eye is long. Vibrissa long and thick, above it a further long bristle, the black peristomal bristles reach the post-buccal corner, anterior part of bucca with short black setae, posterior part with yellow hairs. Antennal segments partly blackened, the third about twice as long as the second, arista distinctly pilose, some setae of the basal half as long as the basal diameter. Palpi slender, yellow brown, darkened at the slightly dilated tip.

Thorax bright metallic green, with a white dusting which leaves free an ill defined pattern of longitudinal stripes. Anterior stigma light brown, posterior one blackish. Mesonotal bristles long and distinct, but a little irregularly placed : *ac*=3+3, *dc*=3+4, *ia*=1+3, *prs*=1, *ph*=3, *h*=3, *sc*=3+1, *st*=1 : 1, *pst* and *pp* present. Pleura partly densely white pollinose, especially the propleuron and the posterior half of the sternopleuron, whereas the anterior half remains metallic dark green like the mesopleuron. The latter has black setae which are long and more densely placed in the upper part, row of mesopleural bristles complete. Long white hairs are distributed over all pleura. Suprasquamal ridge, post-alar

declivity and propleuron bare. Wings hyaline, stem-vein with a row of long black bristles, veins predominantly red-brown, costal spine well developed, thoracic squama white, about as long as broad, halter yellow. Legs black, tibiae more or less dark reddish; fore-tibia with 3 *ad* and one submedian *pv*; mid-tibia with 2 *ad*, 1 *pd*, 1 *pv* and 1 *av*; hind-tibia with 3-4 *ad*, 2 *pd* and 1 *av*.

Abdomen predominantly metallic green and white dusted, the ground colour of the anterior parts of the segments III-V is, however, red-brown. This reddish colour forms lateral spots which are ill-defined dorsally, and which extend to the ventral side where they are widened and cover a great part of the tergal area. In the English summary of his monograph, PERIS (1952) described the abdominal pattern as follows : « Abdomen wholly metallic green with a pruinose pattern showing light reflections; the dust being denser on the anterior part of segments; the posterior border dark metallic green or blue ».

Length : 8-10 mm.

Collection British Museum, London : Kenya : Mombassa, IX.1922 (1 ♀, leg. SYMES and HOPKINS, paratype).

[12. — **Rhyncomya hessei** n. sp.]

(Fig. 47.)

This new species is similar to *R. minutalis* VILLENEUVE, but is easily separable from it by the sparsely setulose parafacialia and the terminally blackened palpi.

Male. — Eyes bare, upper facets slightly enlarged but not demarcated from the lower ones, frons at the narrowest point measuring about twice the diameter of the anterior ocellus ($\frac{1}{8}$ - $\frac{1}{6}$ of eye length). Frontal stripe complete, dark yellow, parafrontalia and -facialia silvery dusted, the former yellow or slightly darkened, with a number of short, thin hairs accompanying the *paf*; *iv* well developed; ocellar triangle with a pair of long *oc* and several bristly hairs; parafacialia yellow, provided only with a few odd black setae, in the lower part with a glossy black spot of variable size. Antennae reddish brown or more or less darkened, antennal groove glossy black-brown near the epistome, brown in the upper part but this colouring is also variable and in one specimen, the antennal groove is almost wholly yellow-brown. Antennal bases more widely separated from each other than in *R. minutalis*, but the carina is very short and flat, dorsally with a shallow longitudinal groove; 3rd antennal segment 2-2 $\frac{1}{2}$ times as long as the second, arista practically bare. Vibrissae long and thick, above it 2-3 black setae, peristomal bristles black, post-buccal hairs yellow. Bucca $\frac{4}{9}$ as high as the eye is long, yellow, anterior part almost bare, glossy, normally provided

with a broad blackish vitta reaching from the eye to the peristomal corner, but in one specimen this vitta is only faintly indicated near the eye. Palpi yellow, terminally dilated and blackened, almost twice as broad as the 3rd antennal segment.

Thorax cupreous, almost black in one specimen, rather densely white pollinose, with the bases of the hairs black, prostigma yellow, poststigma

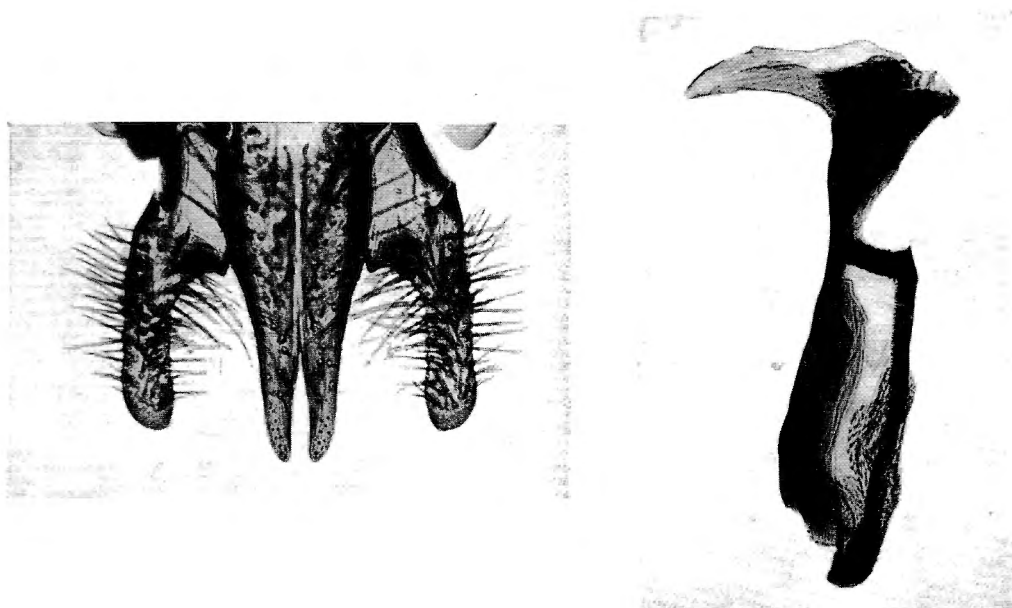


FIG. 47. — *Rhyncomya hessei* n. sp.

Cerci with paralobi in frontal view, phallosome laterally (microphotographs).

Paratype from Dikbome, Cape Province.

dark brown. Dorsum with black bristles and hairs, $ac=2+4$, $dc=2+4$, $ia=1+3$, $ph=2$ (outer present), $prs=1$, $h=3$, $n=2$, $sa=3$, $sc=3+1$, $st=1:1$, one pst and pp , mesopleurals and hypopleurals of normal development, mesopleuron in the upper anterior corner with a few black hairs, otherwise with white hairs like the other pleura; suprasquamal ridge, post-alar declivity and propleuron bare. Wings hyaline, slightly brownish tinged, veins yellow and brown, costal spine small but distinct, bristles of stem-vein black, root of r_{4+5} dorsally with a few setae, bend of m short-rounded, R_s open; thoracic squama slightly longer than broad, halter yellow. Legs reddish brown, femora black; fore-tibia with a row of short ad and one long submedian pv ; mid-tibia with 3-4 ad , 2 pd , 2 pv and one submedian av ; hind-tibia with several ad , 2-3 pd and 2-3 av .

Abdomen yellow with a brown to blackish pattern covering the last tergite, more or less of the posterior part of tergite IV, a broad but variable longitudinal stripe up to the abdominal base, and to a varying degree the abdominal sides. The pattern agrees, therefore, with that of *R. minutalis*. The white pollinosity is relatively dense, as on the thorax, and especially covers the dark pattern. Hairs and bristles black, no unusual formation on the ventral side. Hypopygium (fig. 47) with club-shaped parolobi.

Female. — In the 3 specimens before me, the parafrontalia are black; *iv*, *ev* and *f* are well developed and the *paf* are accompanied by relatively long hairs and bristles; the parafacialia also show denser and longer black setae. Width of frons at vertex about half the eye length. The female shows a closer resemblance to the maculata-group than the male. The important and probably only reliable distinguishing feature in the female sex is evidently the blackened palp, which is distinctly twice as broad as the 3rd antennal segment. The dark abdominal pattern is more extended than in the male, covering a great part of tergite III, and the lateral darkening is broader.

Length : 8-10 mm.

Collection S. African Museum, Cape Town : Cape Province : Wallekraal, Namaqualand, X.1950 (1 ♂, 3 ♀♀); Vogelfontein, P. Albert Div., III-IV.1929 (1 ♂); Dikbome, Merveville, X.1952 (2 ♂♂, holotype). — Collection American Museum, New York : Mozambique : Lourenço-Marques, 1914 (1 ♀, leg. H. A. JUNOD).

[13. — ***Rhyncomya minutalis* VILLENEUVE.**]

(Fig. 48.)

Rhyncomyia minutalis VILLENEUVE, Ann. Soc. Ent. France, XCVI, 1927, p. 22; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 99.

R. minutalis belongs to the *maculata*-group, but is separable from the bulk of the other species in this group by a narrow thoracic squama which is distinctly longer than broad. In the average, this species is also smaller, ranging from 6-9 mm in body-length, whereas the others normally exceed 9 mm, and may attain a body-length of 12 mm.

Male. — Eyes bare, upper facets only slightly bigger than the lower ones, frons at the narrowest point measuring $\frac{1}{5}$ - $\frac{1}{4}$ of eye-length, frontal stripe not interrupted, at the tip of the ocellar-triangle broader than one parafrontalium, yellow to brown in colour. Parafrontalia and -facialia silvery dusted, the former more or less darkened or even deep black, the latter yellow but provided in the lower part with a black spot of variable size. Parafrontals accompanied by long hairs, some of which almost reach the

length of the *paf*; on the parafacialia these hairs diminish in size but are present up to the black spot; *iv* and *oc* well developed. Antennae yellow-brown to dark-brown, carina indistinct, third segment $2-2\frac{1}{2}$ times as long as the second, arista practically bare. Vibrissa long, surrounded by a few black setae, peristomal bristles black and reaching the middle on the ventral edge; bucca about $\frac{2}{5}$ as high as the eye is long, yellow, with a black stripe reaching from the edge of the eye to the peristomal corner; anterior part

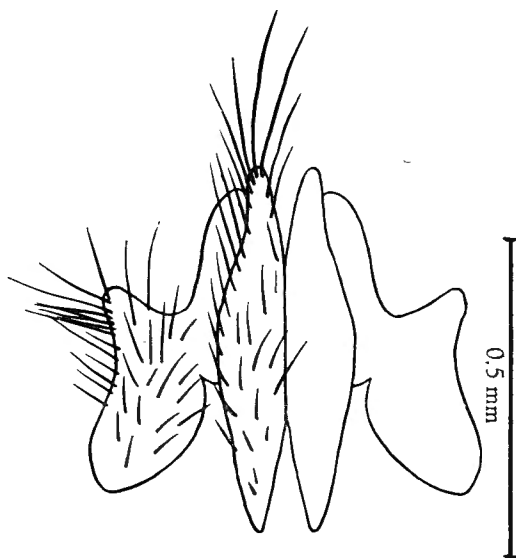


FIG. 48. — *Rhyncomya minutalis* VILLENEUVE.

Cerci with paralobi.
Specimen from Cape Town.

bare, posterior with pale hairs. Palpi yellow, dilated, broader than the 3rd antennal segment.

Thorax blackish cupreous, prostigma yellow, with a white pollinosity leaving the roots of the hairs more or less free. Additional long pale hairs are sparse and only present on the pleura. Bristles long, $ac=2-3+4$, $dc=2+4$, $ia=1+3$, outer *ph* and *prs* present, $h=3$, $n=2$, $sa=3$, scutellum with 3 long marginals, sometimes also 1-2 shorter and thinner ones distinguishable, normally only one pair of long discals present, $st=1:1$, one *pst* and *pp* each developed, mesopleuron in the upper part with several black hairs, mesopleurals and hypopleurals fully developed. Suprasquamal ridge, post-alar declivity and propleuron bare. Wings hyaline, sometimes slightly and uniformly tinged, veins yellow to brown, costal spine small, but distinct, stem-vein with black bristles, root of r_{4+5} dorsally with a few setulae,

bend of *m* obtuse, short-rounded, *R*₅ open. Thoracic squama yellowish, narrow, longer than broad, halter yellow. Legs with blackish femora and darkened tarsi, tibiae reddish; fore-tibia with a number of short *ad* and a long submedian *pv*; mid-tibia with 2-3 *ad*, 2 *pd*, 2 *pv* and one submedian *av*; hind-tibia with a dense row of irregular *ad*, 2-3 *pd* and 2 *av*.

Abdomen yellow with a metallic cupreous or greenish shining pattern, which covers the last tergite and forms a broad, irregular median vitta reaching the abdominal base. The dark pattern also covers the side of the abdomen and often also the posterior half or even the whole of tergite IV; it is, therefore, quite variable. Hairs and bristles black, no unusual formation on the ventral side. Hypopygium (fig. 48) similar to that of *R. interclussa*, but cerci stouter, paralobi lobe-like, ventrally with dense spines.

Female. — Frons at vertex measuring about $\frac{4}{7}$ of eye-length, strongly widened towards the antennal groove. Frontal stripe at the tip of the ocellar-triangle about half as wide as one parfrontalium. Pollinosity more yellowish, parafrontalium brown to black, with long *iv*, *ev* and *f* and a great number of fronto-orbital hairs, parafacial and buccal spots as in the male. In specimens with light coloured parafrontalia, a further spot is normally present at the base of the parafacialium. Palpi more dilated than in the male. Abdominal dark pattern more extended in the average.

Length : 6.9 mm.

Collection Musée du Congo : Cape Province : Cape Town, IV.1920 (1 ♂, 7 ♀♀, lég. M. BEQUAERT). — Collection S. African Museum, Cape Town : Cape Province : Murraysburg, XI.1935 (1 ♂ ♀); Victoria West (2 ♂♂, 1 ♀); Uniondale (2 ♂♂); Merveville (2 ♂♂); Beaufort West, X.1935 (1 ♂); Knersvlakte, Namaqualand, X.1950 (1 ♂). — Collection Museum of Natural History, Vienna : Cape of Good Hope (2 ♀♀, leg. WINTHEM, syntypes).

[14. — ***Rhyncomya maculata*** (MACQUART).]

(Fig. 49.)

Rhyncomymia maculata MACQUART, Mem. Soc. R. Sci. Lille, (1844), 1846, p. 194; PERIS, An. Estac. Exp. Aula Dei, III, 1952. p. 97.

PERIS (1952) unites with this species *R. discrepans* VILLENEUVE. I have the lectotype of the latter species before me, and a second species which fits Macquart's as well as Peris' descriptions. It shows, however, a quite different hypopygium. Of this second species, only one male is before me, which I caught near Mossel Bay, Cape Province. I refer it to Macquart's species.

Male. — Eyes bare, upper facets slightly larger than the lower ones, frons at the narrowest point measuring $\frac{1}{9}$ of eye-length, frontal-stripe reddish-brown, not interrupted. Parafrontalia and -facialia silvery dusted, the former black, the latter yellow, but with a black spot in the lower part. Chaetotaxy as in *R. minutalis*, but the parafacialia are densely beset with long black hairs, which are almost as long as those on the parafrontalia. Antennae with the basal segments black-brown, 3rd segment dark-brown with a yellowish base, about twice as long as the second, arista practically

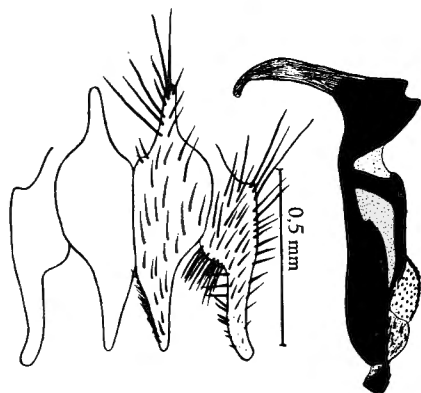


FIG. 49. — *Rhyncomya maculata* (MACQUART).

Cerci with paralobi, phallosome.

Specimen from the Robinson Pass, Cape Province.

bare, pilosity microscopically short, carina hardly developed, but bases of antennae separated from each other; epistome black up to the tips of the antennae, upper part of the antennal groove yellow. Buccal part of head as in *R. minutalis*, the black stripe is, however, only indicated by a small black spot near the eye margin (constant?).

Thorax black-cupreous, pollinosity thin, dorsum beset with long black bristles and predominantly black hairs, pale hairs are present on the anterior presutural part and at the edge of the scutellum; on the pleura the pale hairs predominate, but the bristles are black, and about the upper half of the mesopleuron is covered with long black hairs. Chaetotaxy as in *R. minutalis*. Wings with a very short-rounded, almost obtuse-angled *m*, thoracic squama distinctly broader than long. Legs with black femora, reddish tibiae and darkened tarsi; fore-tibia with 4 longer *ad* and one long submedian *pv*; mid-tibia with 3 *ad* and 3 *pd* as well as 2 *pv* and one submedian *av*; hind-tibia with 3 long *pd*, a dense row of irregular *ad*, but *av* are wanting.

Abdomen yellow with a blackish-cupreous pattern covering the 5th tergite and the posterior half of the 4th, and then extending forwards as broad median and lateral vittae, which are united with each other on tergite I+II. The ventral hairs on and near the sternites are relatively long and dense. Hypopygium (fig. 49) with heavily sclerotized, slender paralobi.

Length : 9 mm.

There is no female among my material which I could refer to this species.

Collection S. A. Institute for Med. Research, Johannesburg : Cape Province : Robinson Pass near Mosselbay, 21.XII.1953 (1 ♂, leg. F. ZUMPT).

The type locality is « Cabo ».

[15. — **Rhyncomya interclusa** VILLENEUVE.]

(Fig. 50 b.)

Rhyncomya interclusa VILLENEUVE, Rev. Zool. Afr., VIII, 1920, p. 160; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 98.

I have the lectotype and one paratypical pair from the same locality before me and in addition to them a fairly good series of specimens from various localities, which shows the pronounced variability of this species. The basic feature is the hypopygium (fig. 50), which shows lobe-shaped paralobi with spines and bristly hairs on the inner side, and relatively broad cerci.

Male. — Eyes bare, upper facets distinctly enlarged, but to a varying degree; the upper two-thirds may be demarcated from the lower ones (as in the lectotype), or there may be a gradual decrease in size from the upper to the lower ones. Between these extremes, all kinds of intermediate stages exist. Frons at the narrowest point measures from one to 3 times the width of the anterior ocellus ($\frac{1}{9}$ of eye-length); frontal stripe therefore complete or narrowed to a line in the middle. Parafrontalia and -facialia totally yellow-brown, or the former may be more or less darkened, and the latter may show a more or less developed black spot. The parafacial hairs are variable in length and density, but always present. Antennae yellow to reddish, the 3rd segment about twice as long as the second, arista bare. Carina indistinct as in *R. maculata* and *R. minutalis*. Bucca as in these two species, but it may be totally yellow or a blackish stripe from the eye to the peristomal corner may be more or less developed.

The colouring of the thorax varies between a blackish cupreous and a bright metallic green, pollinosity normally relatively dense as in *R. macu-*

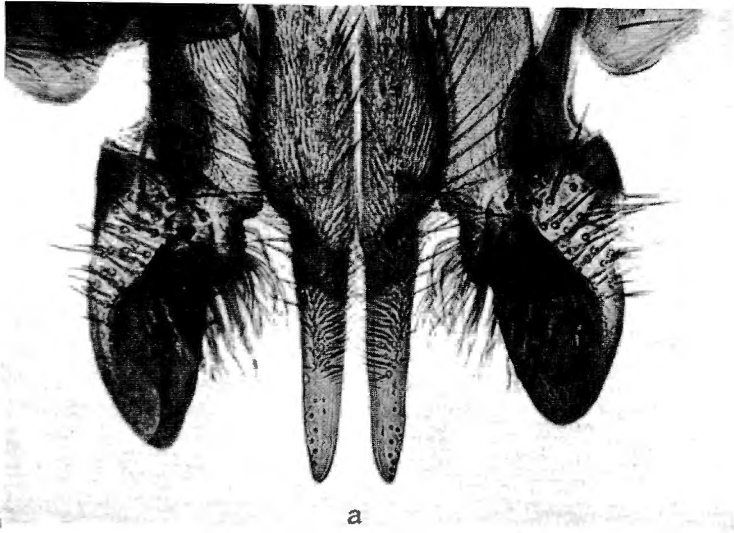


FIG. 50 a. — Microphotograph of cerci with paralobi of
Rhyncomya discrepans VILLENEUEVE.

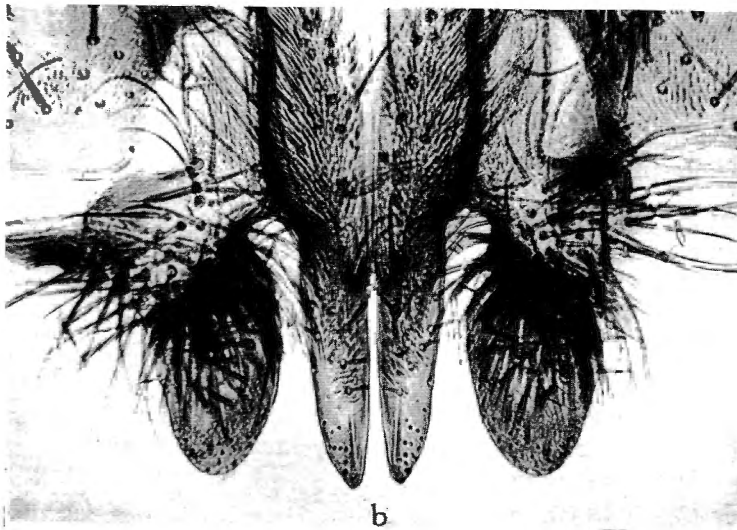


FIG. 50 b. — Microphotograph of cerci with paralobi of
Rhyncomya interclusa VILLENEUEVE.

lata. Chaetotaxy as in this species, but pale hairs usually denser and also more or less extended to the dorsum, mesopleuron with pale hairs only or there may be a few black ones present at the upper margin, but evidently never as many as in *R. maculatus*.

Chaetotaxy of legs shows all variations between the formations described for *R. maculata* and *R. minutalis*.

A similar striking variability is shown by the dark pattern of the abdomen. It may be as extended as described for *R. maculatus*, or it may be reduced as far as in the lightest coloured specimens of *R. minutalis*.

Female. — The females in the maculata-group are probably as variable as the males and their features may overlap, so that they are not separable from each other. A paratypical specimen shows a yellow, broad frons which measures at vertex about $\frac{2}{3}$ of eye-length. Chaetotaxy of head complete, parafrontal and parafacial hairs shorter than in the male. In other females before me, of which at least the majority will belong to *R. interclusa*, these hairs vary in size and density as much as in the male, but are in the average shorter than in the other sex.

Length : 9-13 mm.

Collection Transvaal Museum, Pretoria : Cape Province : Willowmore, 4.V.1920 (2 ♂♂, 1 ♀, leg. BRAUNS, lecto- and paratypes). — Collection South African Museum, Cape Town : Cape Province : Colesberg, XI.1939 (1 ♂); Burghersdorp, XI.1929 (3 ♂♂); Michell's Pass, X.1934 (1 ♂); Uniondale, X.1952 (1 ♂); Wellington, XI.1922 (1 ♂); Willowmore, 10.X.1919 (1 ♂, leg. BRAUNS); Knersvlakte, Namaqualand, X.1950 (1 ♂). — Collection S. A. Institute for Med. Research, Johannesburg : Cape Province : Resolution, 26.XI.1928 (1 ♂, leg. A. WALTON); Slang Hoek, II.1949 (1 ♂).

[16. — **Rhyncomya discrepans** VILLENEUVE.]

(Fig. 50 a.)

Rhyncomyia discrepans VILLENEUVE, Ann. Soc. Ent. France, XCVI, 1927, p. 22; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 97.

This species was based by VILLENEUVE on several specimens from Tulbagh and from Algoa Bay. I have before me a male specimen from each locality. The one from Tulbagh I have marked as lectotype; the other one belongs to *R. paradoxa* m.

The lectotype of *R. discrepans* agrees in its outer features with *R. interclusa*, but can be distinguished from it by slight differences in the cerci which are distinctly slender (fig. 50). I have received a second specimen with the same hypopygial structure from Kamieskroon, Namaqualand. It

is quite possible that the shape of the cerci of *R. discrepans* lies within the variability of that of *R. interclusa*, but unless intermediate specimens can be found, I prefer to list *R. discrepans* as a separate species.

Collection S. African Museum, Cape Town : Cape Province : Wint-hoek, Tulbagh, 3.600 ft., IV.1916 (1 ♂, lectotype); Kamieskroon, Namaqualand, IX.1936 (1 ♂).

[17. — ***Rhyncomya paradoxa* n. sp.**]

(Fig. 50 c.)

This is, like *R. discrepans* VILLENEUVE, another species which in its outer features completely agrees with *R. interclusa* VILLENEUVE, but is different in respect of the shape of the cerci. These are extremely short and narrow

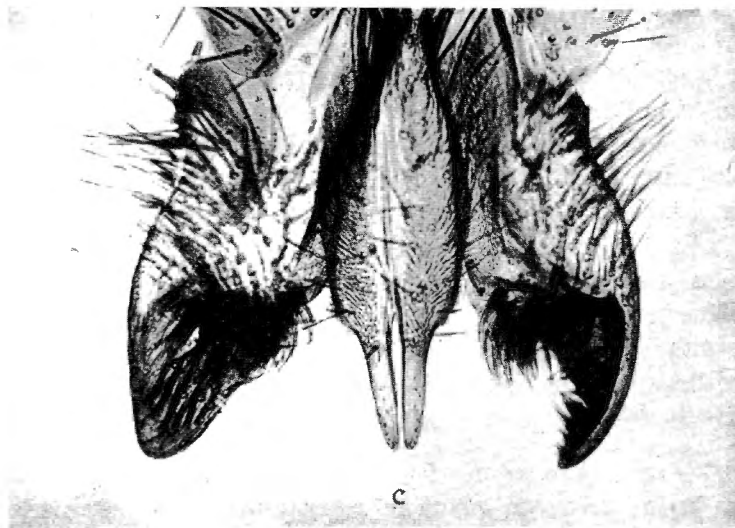


FIG. 50 c. — Microphotograph of cerci with paralobi of
Rhyncomya paradoxa n. sp.

(fig. 50). There are five specimens before me which come from the same localities as *R. interclusa* and which are probably also found in the same populations. This makes it doubtful whether we are really dealing with a good species. On the other hand, the differences in the shape of the cerci are still more pronounced than between *R. discrepans* and *R. interclusa*, and, furthermore, seem to be quite constant, so that I think it justifiable to erect a new species based on this hypopygial structure.

Collection S. A. Institute for Med. Research, Johannesburg : Cape Province : Resolution, Albany distr., 21.II.1928 (2 ♂♂, leg. A. WALTON, holo- and paratype). — Collection S. African Museum, Cape Town : Cape Province : Garies, Namaqualand, VI.1930 (1 ♂). — Collection Dept. of Agriculture, Pretoria : Cape Province : Uitenhage, 10.III.1919 (1 ♂, leg. H. K. MUNRO). — Collection Museum of Natural History, Vienna : Cape Province : Algoa Bay, 6.II.1909 (1 ♂, leg. BRAUNS).

[18. — ***Rhyncomya bicolor*** (MACQUART).]

(Fig. 51.)

Idia bicolor MACQUART, Dipt. Exot., II, 1843, p. 124; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 97.

Rhynchomyia crinicauda VILLENEUVE, Ann. Soc. Ent. France, XCVI, 1927, p. 22; PERIS, id., ibid.

I have 5 specimens (3 ♂♂, 2 ♀♀) from the Cape Province before me, which I refer to this species. One of the males is the holotype of *R. crinicauda* which PERIS has evidently seen and which he synonymizes with *R. bicolor* (MACQUART). The other male differs from it in a few features which are, however, also variable in other *Rhyncomyia* species. The hypopygia of both specimens were dissected and proved to be identical. The two females are different from the males in several respects. I have compared them with a female specimen from Stellenbosch, C.P., identified by PERIS, with which they agree in all important features. We are probably dealing with a species which is quite variable, and also shows, like *R. tetropsis* (BIGOT) for instance, a marked sexual difference.

Male. — Eyes bare, upper facets only slightly bigger than the lower ones, frons at the narrowest point only half as wide as the anterior ocellus in the one specimen, but about twice as wide in the lectotype of *R. crinicauda*. Head yellow except the occiput, parafrontalia and -facialia covered with a silvery pollinosity and with hairs and long black setulae which reach the lower area of the parafacialia. Parafrontal hairs partly as long as the *paf*, *iv* long, *oc* shorter. Antennae yellow-chrome, carina hardly developed, third segment almost twice as long as the second, arista practically bare, pilosity very short and hardly visible. No black spots on parafacialia or buccae, the latter about one third as high as the eye is long, bare and glossy anteriorly, with pale hairs towards the occiput. Vibrissa accompanied by black setae, the number of which seems to be highly variable; peristomal bristles also variable in size as far as can be judged from the two males before me. Palpi yellow, dilated terminally.

Thorax glossy metallic green, prostigma yellow, poststigma light brown. The whole thorax densely beset with upright yellowish hairs; setulae and bristles are black; $ac=2+2$, $dc=2+4$, $ia=1+2-3$, outer ph and prs present, $h=2-3$, $n=2$, $sa=3$, $sc=3-4+1-2$, $st=1:1$, pst and pp present, hypopleurals and mesopleurals fully developed. Suprasquamal ridge, post-alar declivity and propleuron bare, but sometimes more or less covered by the long pale hairs of neighbouring areas. Wings hyaline, veins yellow, costal setulae black, costal spine indistinct or very short, stem-vein with pale hairs, root or r_{4+5} dorsally bare or with a few black setulae, bend of m rounded,

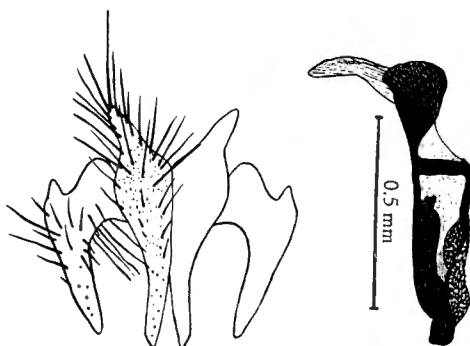


FIG. 51. — *Rhyncomya bicolor* (MACQUART).

Cerci and parolobi, phallosome.

Specimen from Hopetown, Cape Province.

R_s open. Thoracic squama light yellow, hardly longer than broad, halter yellow. Legs with more or less darkened femorae and tarsi, tibiae yellow-brown; fore-tibia with 4 longer *ad* and normally one (in the other specimen asymmetrically 1-2) *pv*; mid-tibia with one *ad* and *av*, but 2 *pd* and 2 *pv*; hind-tibia with several *ad* and *pd* and 2 *av*.

Abdomen yellow to chrome, slightly white pollinose; the last segment totally metallic green; from it a broad median vitta extends onto the abdominal base. Laterally, in the type of *crinicauda*, the segments bear metallic green spots; in the other smaller specimen these spots are absent. Ventral side with long black hairs, especially on and around the last two sternites where they form a kind of brush. The hypopygia (fig. 51) of both specimens were dissected and proved to be identical.

Female. — Frons at vertex measuring about $\frac{3}{5}$ of eye-length, strongly widened towards the antennal groove. Colouring as in the male, but parafrontalia and -facialia with a more yellowish pollinosity. Frontal stripe subparallel, slightly narrowed in the middle and here as wide as on parafrontalium at the vertex. Chaetotaxy complete; parafrontalia with dense

hairs some of which reach the length and thickness of the *paf*. Parafacialia with short black setulae which, as in the male, reach the lower part. The thorax shows a denser pollinosity than in the male and leaves the bases of the hairs more or less free; the long pale hairs are, however, greatly reduced on the dorsum, but present on the pleura. The chaetotaxy is variable and shows differences from that of the male. In one female the presutural *ac* are wanting, but they are present in the other one; the postsutural *dc* are increased in both specimens up to 4.5, and also a weak third postsutural *ia* is developed. The legs are totally yellow. Abdomen of the one female is broken off; in the other one the median vitta is reduced and does not continue onto tergite I+II; the hind margin of the last tergite is narrowly yellow, and lateral spots are present on tergites III and IV. On the ventral side, no long brushy hairs are present as in the male.

Length : 8-10 mm.

Collection S. African Museum, Cape Town : Cape Province : Stellenbosch (1 ♂ holotype of *R. crinicauda* V.U.). — Collection S. A. Institute for Med. Research, Johannesburg : Cape Province : Hopetown, 40 miles West, 27.I.1930 (1 ♂, leg. H. K. MUNRO); Resolution, Albany distr., 25.II.1928 (1 ♀, leg. A. WALTON). — Collection Zoolog. Museum, Berlin : Caffraria (1 ♀). — Collection American Museum, New York : Cape Province : Uitenhage, 13.III.1919 (1 ♂, by H. K. MUNRO).

[19. — **Rhyncomya peraequa** VILLENEUVE.]

Rhyncomyia peraequa VILLENEUVE, Bull. An. Soc. Ent. Belg., LXIX, 1929, p. 186; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 106.

This species was based on one male from Barberton, Transvaal (lectotype) and one female from Uganda. Only the lectotypic male, now located in the S. African Museum, Cape Town, is before me. PERIS has seen a few further specimens from Kenya, Uganda and Tanganyika.

With respect to the outer features, *R. peraequa* is related to *R. varifrons*, but is separable by its bigger size, a metallic green thorax with dark longitudinal stripes, the rounded bend of *m* and other features. Most probably the hypopygium will also be greatly different, but it could not be dissected from the only typical male.

Male. — Eyes bare, upper facets hardly larger than the lower ones, frons at the narrowest point measuring $\frac{1}{12}$ - $\frac{1}{13}$ of eye-length. Frontal stripe red-brown, not interrupted, but very narrow in the upper part. Parafrontalia black with a white or yellowish pollinosity; as in *R. soyauxi* KARSCH

and *R. stannocuprea* SPEISER, the *paf* are accompanied by long additional hairs and bristles which partly reach the length of the *paf*. Ocellar triangle black, with a pair of long *oc* and a great number of shorter hairs; *iv* long, *ev* and *f* wanting. Parafacialia yellow, but with an ill-defined black spot in their lower part, bordering the eye; pollinosity white; black setae distinct, but scattered and few in number. Antennae separated by a broad, dorsally rounded, short carina; 3rd antennal segment about $2\frac{1}{2}$ times as long as the second, predominantly brown, its base and the first two segments yellow; arista distinctly pilose, but the longest hairs do not reach the basal arisal diameter. Vibrissa long, above and around it several shorter bristles; peristome with a row of black bristles extending onto the middle of the ventral peristomal margin; bucca posteriorly with long pale hairs, in the middle with several short black hairs, anteriorly almost bare. Height of bucca about half the eye-length. Palpi yellow, spatulate, much broader than the 3rd antennal segment.

Thorax metallic dull green, with cupreous reflections and a relatively dense white pollinosity, with three dark indistinct longitudinal stripes. Prostigma yellow, poststigma dark brown. Mesonotal bristles long, $ac=2+4$, $dc=2+4$, $ia=1+3$, $ph=2$ (outer present), $prs=1$, $n=2$, $sa=3$, scutellum with 3 long marginal bristles, $st=1:1$. Mesopleuron predominantly with black hairs, sterno- and pteropleuron mainly with white hairs; mesopleurals and hypopleurals normally developed, *pp* and *pst* present. Suprasquamal ridge, post-alar declivity and propleuron bare, prosternum with long pale hairs. Wings hyaline but with a slight brownish tinge, especially at the anterior border; veins yellow-brown, costal spine indistinct, hairs of stem-vein black and thick, root of r_{4+5} dorsally with a few setae, *m* with a broadly rounded bend, R_5 open. Thoracic squama yellow-brown, hardly longer than broad, halter yellow. Legs with black femora and reddish-brown tibiae and tarsi; first pair of legs is missing; mid-tibia with one submedian *ad* and *pv* as well as 5 *pd* in one row; hind-tibia with a row of unequally long *ad* and *pd* and one submedian *av*.

Abdomen yellow brown, white pollinose, with a black pattern forming a broad median stripe from the base onto the completely blackened last tergite; laterally tergites III and IV are blackened too. Dorsally the abdomen is beset with black hairs and, especially on the lateral edges and on the last tergite, with long bristles; ventrally, there are long hairs which are yellow on the anterior part of tergite and sternum I+II, but black on the posterior part and on the following segments; on the sternites these black hairs are strikingly dense and brush-like.

The female is unknown to me.

Length : 8-9 mm.

[20. — **Rhyncomya obtusa** (BIGOT).]

(Fig. 52.)

Xysta obtusa BIGOT, Ann. Soc. Ent. France, 1891, p. 377; SÉGUY, Mem. Mus. Zool. Univ. Coimbra, I, n° 67, 1933, p. 68; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 71.

Rhyncomyia crocias SÉGUY, Ann. Soc. Ent. France, CIX, 1941, p. 128; PERIS, id., ibid.

The hypopygium of this species bears a striking similarity to that of *R. hessei* m., and the general appearance is also reminiscent of this species. A detailed examination shows, however, that these two species are not closely related to each other. In *R. hessei*, the propleuron is bare, the mid-tibia shows 3-4 *ad*, the bend of *m* is short-rounded and the male frons distinctly narrower.

Male. — Eyes bare, upper facets hardly larger than the lower ones, frons at the narrowest point measuring $\frac{1}{6}$ - $\frac{1}{7}$ of eye-length. Frontal stripe complete, red-brown; parafrontalia and -facialia light-yellow pollinose, underground reddish-yellow, the former with a few longer black hairs accompanying the *pat*, the latter only with short pale setae, both without glossy black spots; *iv* and *oc* well developed. Antennal groove dark yellow like the remaining part of the face, no carina developed, antennae not darkened, 3rd segment twice as long as the second, arista with microscopic setae, practically bare. Vibrissa long and thick, above it one or several black setae; peristomal bristles complete and reaching the middle of the ventral edge. Bucca about $\frac{1}{2}$ as high as the eye is long, densely yellow pollinose, with pale hairs which are long on the postbuccal area and gradually decrease in size towards the anterior part. Palpi yellow, terminally not quite as broad as the 3rd antennal segment.

Thorax black, but covered with a dense pollinosity which appears olive brown or light yellow depending on the incidence of light; bristles and hairs on the dorsum black, mixed with yellow hairs on the pleura. Prostigma yellow, poststigma black brown. There are only 2 before me, but according to them, the chaetotaxy seems to be subject to a pronounced variability. In both specimens only the median pair of *ac* is fully developed, the anterior one is wanting, the posterior consists of weaker, more hair-like bristles; the post *ac* consists of 6 pairs of distinct bristles in the one specimen, whereas in the other one, only 4 pairs are distinct; *dc*=2+4, *ia*=1+3, but the first *post* is evidently in a state of reduction, *ph*=2 (outer present), *prs*=1, *h*=3 (interior one weak), *n*=2, *sa*=3, *sc*=3+1, *st*=1:1, one *pst* and *pp*, 5 mesopleurals and a dense row of hypopleurals. Mesopleuron in the upper half with black hairs, suprasquamal ridge and the post-alar declivity bare, but propleuron as well as the prosternum densely haired. Wings hyaline with a slight tinge, veins yellow-brown, costal spine small,

bristles of stem-vein thin and pale, root of r_{4+5} with a few black setae, bend of m broadly rounded, R_s open; thoracic squama yellow-brown and distinctly longer than broad, halter yellow. Legs with black femora, reddish tibiae and more or less darkened tarsi; fore-tibia with several ad and a long submedian pv ; mid-tibia with one ad , av and pv , but with 2 pd ; hind-tibia with rows of irregular, partly strikingly long ad and pd as well as 2 av .

Abdomen predominantly yellow-brown, with a dense yellow pollinosity, only the last tergite including the hypopygium, and a triangular median



FIG. 52. — *Rhyncomya obtusa* (BIGOT).
Cerci with paralobi, phallosome.
Specimen from Libenge, Belgian Congo.

vitta on tergite IV darkened. Bristles and hairs black, no unusual features on the ventral side. The hypopygium (fig. 52) is similar to that of *R. hessei*, the phallosome however, distinctly stouter.

Female. — Frons at vertex measuring half the eye-diameter, frontal stripe reddish to chrome, subparallel up to the tip of the ocellar-triangle then widened towards the vertex. Chaetotaxy complete, iv , ev , f and oc well developed, parafrontalia with several black hairs and bristles in addition to the paf . Other features as in the male. On the abdomen, a triangular black vitta on tergite IV is sometimes wanting.

Length : 7.9 mm.

Collection Musée du Congo : Ubangi : Libenge, XII.1931 (1 ♂, leg. H. J. BRÉDO), et 31.I.1936 (1 ♀, leg. C. LEONTOVITCH). — Collection American Museum, New York : Liberia : Bendu, Robertspoort,

1.IV.1943 (2 ♂♂, 1 ♀, leg. F. M. SNYDER); S. Leone : Matin, 1.XI.1925 (1 ♂, leg. E. HARGREAVES); Dahomey : Cotonou, 8.VI.1914 (1 ♀, leg. W. A. LAMBORN); Nigeria : Ibadan, 27.IV.1923 (1 ♂); Onibongbo (1 ♀, leg. J. W. S. MACFIE).

[21. — **Rhynchomyia soyauxi** KARSCH.]

(Fig. 53.)

Rhynchomyia soyauxi KARSCH, Ent. Nachr., XII, 1886, p. 262; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 121.

Rhynchomyia picitifacies BIGOT, Bull. Soc. Zool. France, XII, 1887, p. 595; VILLENEUVE, Rev. Zool. Afr., III, 1913, p. 154; CUTHBERTSON, Trans. Rhod. Sci. Ass., XXXVI, 1938, p. 125; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 106, fig. 23 (syn. nov.).

Related to *R. stannocuprea* SPEISER, from which it is easily separable in both sexes by the features given in the key and, in the male sex, by the fused cerci.

Male. — Eyes bare, upper facets slightly bigger than the lower ones, frons at the narrowest point about as broad as the anterior ocellus. Ocellar-triangle black, with a pair of long *oc* and a number of ocellar hairs; *iv* long and thick; *pvt* also long, but thinner. Parafrontalia and -facialia with a dense white to yellow pollinosity, but ground of parafrontalia blackish, with long black hairs in addition to the *pa*f. Frontal stripe long, triangular, chrome or reddish. Parafacialia with or without a lower, undusted, glossy black spot, otherwise surface yellowish, with a few indistinct, pale or dark setae. Antennal groove yellow; antennae reddish or chrome, at base separated from each other by a broad, but shallow and short carina; third segment at least twice as long as the second; arista short pilose, longest hairs hardly reaching half the basal aristal diameter. Buccae almost half as high as the eye is long, yellowish like the remaining part of the face, with a dark stripe reaching from the lower eye-margin to the peristomal corner. Vibrissa long, 2 or 3 stouter bristles above it on the facial ridge; row of peristomal bristles reaching to the middle of the ventral margin of the peristome; post-bucca with long yellow hairs. Posterior part of bucca behind the blackish stripe with white dusting, and near the eye-margin with black setae. Occiput black. Palpi yellow, spatulate, broader than the 3rd antennal segment.

Thorax metallic dull coppery or green, with whitish or yellow pollinosity. Pro- and poststigma white or yellow. Bristles long, $ac=2+4$, $dc=2+4$, $ia=1+3$, $ph=2$ (outer present), $h=2-3$, $prs=1$, $n=2$, $sa=3-4$, $sc=3+1$, $st=1:1$, *pst* and *pp* present. Mesopleuron at the posterior border normally with 5 black bristles, near the dorsal margin with black hairs, otherwise with pale hairs. Suprasquamal ridge, propleuron and post-alar

declivity bare. Wings hyaline, veins yellow-brown, costal spine indistinct, stem-vein with black bristles, root of r_{4+5} dorsally with a few setae, bend of m rounded, R_5 open. Thoracic squama longer than broad, halter yellow. Legs with the femora black, tibiae and tarsi predominantly brown; fore-tibia with several ad and a long submedian pv ; mid-tibia with 2 pd , 1 iv , 2-3 pv , and 1 ad ; hind-tibia with 3 long ad and pd , 1 av .

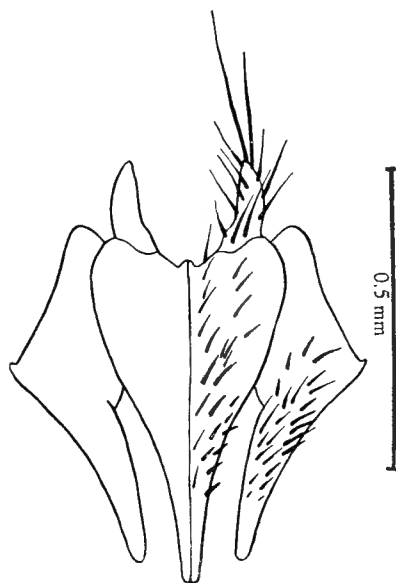


FIG. 53. — *Rhyncomya soyauxi* KARSCH.

Cerci with paralobi.
Specimen from S. Rhodesia.

Abdomen yellow-brown with a black, terminally coppery pattern of slightly variable extension. Normally a median stripe is present; the hind margin of tergite IV is darkened, and tergite V as well as the hypopygium are totally blackish or coppery. Sometimes, however, the dark pattern may be so much reduced that only the hypopygium and the hind margin of tergite IV remain black. On the other hand, the hind margin of tergite III may be more or less broadly blackened, but the hind margin of tergite I+II always remains light. Sternite V emarginated, hypopygium with the cerci fused (fig. 53).

Female. — Frons at vertex measuring about $\frac{1}{2}$ of eye-length, frontal stripe reddish-yellow, slightly concave in the middle; parafrontalia with

setiferous spots, some of the hairs reaching the length of the *paf*; *iv*, *ev* and *f* distinct. Thorax more densely dusted than in the male. Legs totally yellow-brown or only slightly darkened, not black as in the other sex.

Length : 5.9 mm.

Collection Musée du Congo : Eala, 11.IV.1932 (1 ♂, leg. H. J. BRÉDO); Elisabethville, II.1935 (2 ♀ ♀, leg. P. QUARÉ); S. E. Katanga : Ngaye, 1931 (1 ♂, leg. R. P. CLAQUIN); Lualaba : Kolwezi, 5.II.1953 (1 ♀, leg. L. GILBERT). — Collection Zool. Museum, Berlin : Angola : Pungo-Andongo (1 ♀, leg. v. HOMEYER, holotype); Tanganyika : Langenburg, II-III.1898 (1 ♂ ♀, leg. FÜLLEBORN); Cape Province : Cape of Good Hope (1 ♂, leg. KREBS). — Collection S. A. Institute for Med. Research, Johannesburg : Natal : Hluhluwe, III.1954 (1 ♀, leg. PATERSON); Cape Province : Sheldon, 1950 (1 ♀, leg. ZUMPT); Transvaal : Johannesburg, IV.1949 (2 ♂ ♂, 1 ♀, leg. ZUMPT); Pretoria, I.1949 (1 ♂ ♀, leg. ZUMPT); Loskop, VIII.1951 (1 ♂, leg. PATERSON); Vereeniging, I.1954 (1 ♀, leg. ZUMPT); Naboomspruit, II.1949 (1 ♀, leg. ZUMPT); Potgietersrust, XII.1953 (1 ♀, leg. ZUMPT); Bechuanaland : Kanye, I. 1956 (3 ♂ ♂, 4 ♀ ♀, leg. ZUMPT); S. Rhodesia : Marandella, XI.1951 (1 ♀, leg. ZUMPT). — Collection Dept. of Research and Special Services, Salisbury : S. Rhodesia : Melssetter dist., VII.1939 (1 ♀, leg. WILLIAMS); Umtali dist., VIII.1943 (1 ♂, leg. PINKEY); Salisbury distr., IX-III (many ♂ ♂ and ♀ ♀); Balla-Balla, IV.1933 (2 ♂ ♂, 1 ♀, leg. CUTHBERTSON); Victoria, VIII.1932 (1 ♂ ♀, leg. CUTHBERTSON). — Collection Dept. of Agriculture, Pretoria : Cape Province : Pt. Shepstone, VIII.1920 (2 ♀ ♀, leg. MUNRO); Vryburg, IX.1920 (1 ♂ ♀, leg. IRWING); Orange Free State : Bloemfontein, V.1914 (1 ♂, leg. MUNRO); Transvaal : Barberton, V.1913 (4 ♂ ♂, 2 ♀ ♀, leg. MUNRO); Kapmuiden, V.1920 (2 ♀ ♀, leg. MUNRO).

PERIS records this species also from the Sudan, Kenya, Nyasaland, N. Rhodesia and Bechuanaland.

[22. — ***Rhynchomyia stannocuprea* SPEISER.**]

(Fig. 54.)

Rhynchomyia stannocuprea SPEISER, Kilimandjaro-Meru Exp., X, (5), 1905, p. 150; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 108, fig. 24.

Rhynchomyia stannocuprea ssp. *abyssinica* PERIS, Eos, XXVII, 1951, p. 244, et An. Exp. Aula Dei, III, 1952, p. 109.

This species is very similar to *R. soyauxi* in general appearance. The hind margin of tergite I+II, however, is always blackened in both sexes, and the females have black femora like the males.

Further differences are, that the male frons at the narrowest point measures almost twice the length of the anterior ocellus, and also the female frons at the vertex is slightly wider than in *R. soyauxi*. Basal segments of antennae more or less darkened. Vibrissa surrounded by several black setae. Palpi narrower in both sexes, about as broad as the 3rd antennal segment. Chaesotaxy of mesonotum in the specimens before me more variable some of the bristles symmetrically or asymmetrically doubled.



FIG. 54. — *Rhyncomya stannocuprea* SPEISER.
Cerci with paralobi, phallosome and parameres.
Specimen from Johannesburg, Transvaal.

Root of r_{4+5} without setae. Mid-tibia with one *av*, hind-tibia with the *ad* increased. Cerci of male terminally free (fig. 54).

Length : 7.9 mm.

Collection S. A. Institute for Med. Research, Johannesburg : Transvaal : Johannesburg, XI.1950 (1 ♂ ♀, leg. ZUMPT); Heidelberg, II.1953 (1 ♀, leg. ZUMPT); Machadodorp, I.1952 (1 ♀, leg. ZUMPT). — Collection Dept. of Agriculture, Pretoria : Transvaal : Pretoria, VIII.1929 (1 ♀, leg. WAHL); Middelburg, X.1919 (1 ♀, leg. VOSS). — Collection Dept. of Research and Special Services, Salisbury : S. Rhodesia : Inyanga, XI.1933 (1 ♂, leg. CUTHBERTSON). — Collection American Museum, New York : Abyssinia : Addis-Abbaba, VIII.1920 (1 ♂ ♀).

Originally described from Tanganyika, it has also been recorded from Kenya.

PERIS (1951) described a subspecies *abyssinica* of *stannocuprea* from Abyssinia (1 ♂ ♀) and Eritrea (2 ♂♂, 4 ♀♀) which he characterizes as follows (in translation) :

« Differs from the forma typica by the pregenital sternite possessing irregular, densely placed spinulae along the inner border of the lateral branches. Tips of cerci less separated from each other ». The females of these two forms are said to be indistinguishable.

I have seen one pair of *stannocuprea* from Addis Abbaba, but it belongs to the forma typica. The ssp. *abyssinica*, if it is really a subspecies of *stannocuprea*, has remained unknown to me.

[23. — **Rhyncomya tristis** SÉGUY.]

Rhyncomyia tristis SÉGUY, Mem. Estud. Mus. Zool. Univ. Coimbra, (1), n° 67, 1933, p. 65; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 115.

There is apparently no proper diagnosis of this species, which SÉGUY mentions very briefly in his key to the species of « *Rhyncomyia* ». Unfortunately, according to the rules of nomenclature, this and many other of SÉGUY's species mentioned in this key, are valid in spite of the fact that there is almost nothing in this paper which permits the recognition of these species. The types were not available to PERIS and neither have they been available to me.

PERIS has referred one male from the Obo river, Nigeria, to *R. tristis*, which, according to the regulations of the British Museum, cannot be lent out. He refers it to his « *divisa* group » characterized by the following features :

Second tibia with one *ad* — *R_s* open — parafacialia not clearly setulose or if so, the setae are white and extremely fine, never black — parafrontalia in ♂ without additional pilosity, in ♀ without setigerous spots — arista distinctly pubescent, the longest hairs as long as the basal arisal diameter or slightly longer — mid-tibia in ♂ with one *v* bristle, pregenital tergite of ♂ without prominences.

From the Oriental *R. divisa* (WALKER), PERIS separates *R. tristis* by the presence of « two rows of setulae between the *ac* ».

SÉGUY compares *R. tristis* with *R. cassotis* (WALKER), with which it coincides in respect of the chaetotaxy and the colouring, but the under-ground is said to be a little more glossy. He describes the male abdomen as red, tergites III and IV having three apical, blackish green spots, the last tergite with only two lateral spots. Legs darker than in *R. cassotis*. His description of the hypopygium, which he does not figure, is quite

inadequate. In the female the abdomen shows a reduced pattern, the median spots are wanting and the lateral ones smaller and only indicated on tergite V.

The type localities are Nova-Chouponga, Tambara and Inhacora at the Zambezi, Mozambique.

[24. — **Rhynchomya pruinosa** VILLENEUVE.]

(Fig. 55.)

Rhynchomyia pruinosa VILLENEUVE, Rev. Zool. Afr., X, 1922, p. 65, et Denkschr. Akad. Wiss. Wien, XCVIII, 1923, p. 81; CUTHBERTSON, Proc. Rhod. Sci. Ass., XXXII, 1933, p. 18, et Occ. Pap. Rhod. Mus., IV, 1935, p. 18, pl. II, fig. 8; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 111.

This species shows a superficial resemblance to *R. stannocuprea* SPEISER, but it is easily separable from this and related species by the features given in the key.

Male. — Eyes bare, upper facets slightly bigger than the lower ones, frons almost completely constricted in the middle, remaining parafrontalia distinctly narrower than the anterior ocellus. Frontal stripe chrome, only developed in the lower part; parafrontalia and -facialia yellow, with white dusting, practically bare, only a few pale, microscopic setae present. Ocellar triangle black, *iv* long, *oc* relatively short and accompanied by several bristles. Face and remaining part of head, except occiput, yellow, without black spots on the parafacialia or buccae. Bases of antennae separated from each other, but carina hardly developed; antennae orange, 3rd segment more or less slightly darkened, almost twice as long as the second, arista with microscopic pilosity, longest setae not reaching half the width of basal arisal diameter. Vibrissa long, a few bristles above it; peristomal bristles forming a row down to the middle of the peristome; bucca otherwise beset with long pale hairs, height $\frac{4}{9}$ - $\frac{2}{5}$ of eye-length. Palpi yellow, widened terminally and slightly broader than the 3rd antennal segment.

Thorax black, with the tip of scutellum and the poststigma yellow; prostigma white, with relatively dense bluish-white dusting; $ac=2+4$, $dc=2+4$, $ia=1+2$, outer *ph* and *prs* present, $sa=3-4$, $n=2$, $sc=3+1$, $st=1:1$, *pst* and *pp* present. Pleura with long pale hairs, but upper part of mesopleuron also with blackish hairs. Row of mesopleural and hypopleural bristles complete. Suprasquamal ridge, post alar declivity and propleuron bare. Wings hyaline, veins yellow, costal spine wanting, hairs of stem-vein pale, root of r_{4+5} dorsally without setae, bend of *m* broadly rounded, R_s open. Thoracic squama whitish or yellow, about as broad as long, halter yellow. Legs with the femora black or black-brown, tibiae and tarsi brown, legs rarely totally yellow-brown; fore-tibia with a few

short *ad* and a submedian *pv*; mid-tibia with 2-3 *pd* and one *pv*, *av* and *ad*; hind-tibia with several *ad* and *pd* as well as 2 *av*.

Abdomen yellow with a black pattern forming a median stripe and bands at the hind margins of tergites III-V, tergite I+II with a broad transverse band, leaving the hind margin more or less free. Hypopygium with free cerci (fig. 55).

Female. — Frons at vertex measuring half the length of the eye; frontal stripe reddish, almost parallel, at the tip of the ocellar-triangle

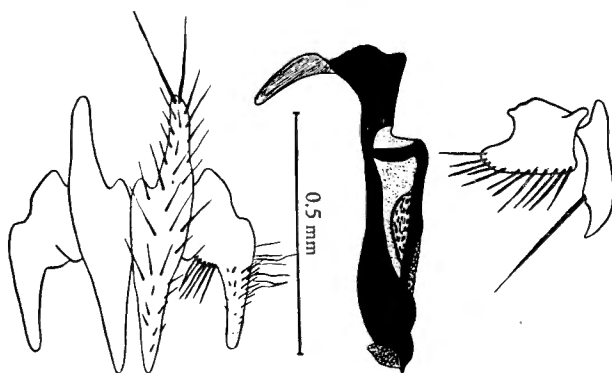


FIG. 55. — *Rhyncomya pruinosa* VILLENEUVE.
Cerci with paralobi, phallosome and parameres.
Specimen from Salisbury, S. Rhodesia.

slightly broader than one parafrontalium; *oc*, *iv*, *ev* and *f* long and strong, parafrontalium with a number of *fo* bristles and hairs, some of them reaching the length of the *paf*. These bristles are, however, not borne on bare spots as in *R. soyauxi*. Legs totally yellow-brown or femora only slightly darkened; *ad* bristles of fore-tibia normally longer than in the male.

Length : 6-8 mm.

Collection Musée du Congo : Elisabethville, XI.1922 (1 ♂ ♀, leg. M. BEQUAERT). — Collection Museum of Natural History, Vienna : Sudan : Pernar, II.1914 (2 ♀ ♀). — Collection Dept. of Research and Special Services, Salisbury : S. Rhodesia : Salisbury distr., XI.1942 (2 ♀ ♀, leg. A. CUTHBERTSON); Balla-Balla, III-IV.1933 (3 ♂ ♂, 6 ♀ ♀, leg. A. CUTHBERTSON); Chipitari, VII.1938 (1 ♀, leg. WILLIAMS). — Collection S. A. Institute for Med. Research,

Johannesburg : Transvaal : White River, III.1953 (1 ♀, leg. H. PATERSON); Mozambique : Chicualacuala, V.1951 (7 ♀ ♀, leg. F. ZUMPT); N. Rhodesia : Ndola, XII.1950 (1 ♂). — Collection American Museum, New York : Nigeria Maiduguri, 1.IX.1942 (2 ♂ ♂, leg. F. SNYDER).

Also known from Gambia, Kenya and Nyasaland.

[25. — *Rhyncomya io* PERIS.]

Rhyncomya io PERIS, Eos, XXVII, 1951, p. 214, et An. Estac. Exp. Aula Dei, III, 1952, p. 112.

This species was based on 2 female specimens, one of which is before me. Further specimens have not yet been recorded.

Female. — Frons at the vertex a little wider than $\frac{1}{3}$ of eye-length. Frontal stripe yellow, slightly narrowed in the middle; parafrontalia and -facialia densely whitish pollinose. Chaetotaxy of parafrontalia consists of *iv*, *ev*, *f* and several black *fo* bristles, of which 4-5 are longer than the remaining ones; parafacialia with sparse white setae which are easily missed. Face, except the antennae which are chrome, is light yellow like the parafacialia. Bucca a little more than one third as high as the eye is long, with white hairs; the only black ones are 4-5 short setae above the vibrissa, this bristle itself, and the peristomals which reach the middle of the ventral edge. Occiput predominantly black. Antennae separated at the base by a broad but short, flat carina; 3rd segment 3 times as long as the second; arista blackish terminally, almost bare; microscopic setulae are only detectable at the base. Palpi yellow, spatulate.

Thorax metallic green and cupreous, with a dense bluish pruinosity as in *R. pruinosa*, but the tip of the scutellum is not lightened. The chaetotaxy is as follows : *ac*=3+3, *dc*=2+4, *ia*=1+3, *prs*=1, *ph*=3, *h*=4, scutellum with 3 long marginals and one short and one longer pair of discal bristles, *st*=1:1, *pst* and *pp* present. Pro- and poststigma yellow, pleura with long pale hairs, mesopleuron with 5 long bristles on the posterior margin and a few black setae in the upper part. Suprasquamal ridge, post-alar declivity and propleuron bare. Wings hyaline, veins yellow, costal spine indistinct, stem-vein with pale bristles as in *R. pruinosa*. Squamae whitish, the lower one of a triangular shape, halter yellow. Legs predominantly yellow to reddish, but the tips of the femora and tibiae and the whole tarsi more or less darkened; fore-tibia with 3 *ad* and a submedian *pv*; mid-tibia with 2 *pv* and one *pd*, *ad* and *av*; hind-tibia with 3 *ad*, 2 *av* and 2 *pd*.

Abdomen dark yellow, tergite I+II unicoloured; tergite III with a triangular black median vitta and a lateral black band near the posterior margin, which does not reach the median spot; tergite IV with a similar pattern, the lateral bands and the median vitta are, however, connected with each other; tergite V with a median vitta and an ill-defined lateral spot.

Length : 9-10 mm.

Collection British Museum, London : Kenya : Ziواني, VIII.1947 (1 ♀, leg. VAN SOMEREN, paratype).

[26. — *Rhyncomya zumpti* PERIS.]

(Fig. 56.)

Rhyncomya zumpti PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 113.

R. zumpti was described by PERIS in his monograph (1952) and was based on one pair collected at Massangena, Mozambique, V.1951. In the meantime I have received further specimens from S. Rhodesia and Bechuanaland.

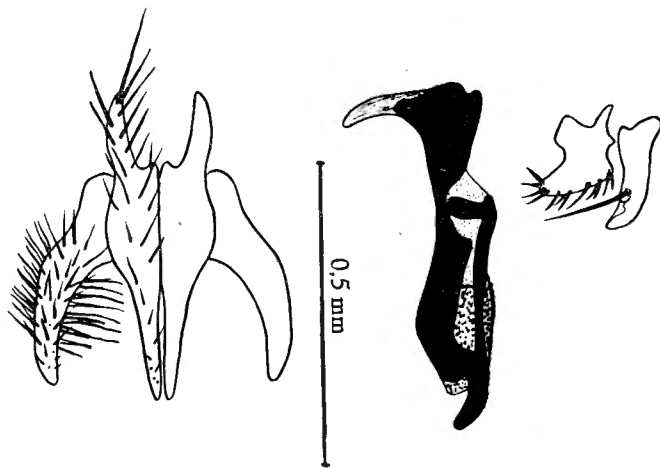


FIG. 56. — *Rhyncomya zumpti* PERIS.
Cerci with paralobi, phallosome and parameres.
Specimen from Martin's Drift, Bechuanaland.

This species is related to *R. pruinosa* VILLENEUVE, but it only measures 4-6 mm in body-length. The thorax is glossy metallic dark green or coppery, moderately dusted with white in the male, more densely dusted in the female. Frons in ♂ at the narrowest point approximately as broad as the anterior ocellus, in ♀ at vertex about $\frac{2}{5}$ of eye-length. Palpi yellow,

spatulate, slightly broader than the 3rd antennal segment. Face including antennae totally yellow to chrome, with white dusting.

Chaetotaxy of thorax generally the same as in *R. pruinosa*, but the variability seems to be more pronounced and the hairs are longer, so that it is sometimes difficult to distinguish between a hair and a bristle; *ia* normally 1+3. Scutellum slightly but distinctly broader than long (conf. PERIS). Wings with a very short, but distinguishable costal spine; stem-vein with black and or white hairs. Thoracic squama longer than broad. Legs in both sexes with black femora, also the tibiae and tarsi usually relatively dark-brown or slightly blackened. Abdominal pattern black to metallic dark green, in the male forming a median black stripe and lateral spots on the hind margins of tergites III-V. But this pattern is variable, and in the female it is almost completely reduced dorsally, well-defined spots remaining only on the ventral parts of the tergites. Hypopygium (fig. 56) very similar to that of *R. pruinosa*.

Collection American Museum, New York : S. Rhodesia : Victoria Falls, 25.VIII.1920 (1 ♂ ♀, leg. H. E. IRWING). — Collection S. A. Institute for Med. Research, Johannesburg : Bechuanaland : Martin's Drift, II.1953 (12 ♂♂, 1 ♀, leg. H. E. PATERSON).

[27. — *Rhyncomya nana* PERIS.]

(Fig. 57.)

Rhyncomya nana PERIS, Eos, XXVII, 1951, p. 240, et An. Estac. Exp. Aula Dei, III, 1952, p. 81.

PERIS based this species on a male (holotype) from the farm « Kopernija » in the Transvaal and 4 females from Mozambique and from Durban, Natal. I have a male specimen from Natal before me which I refer to this species. It is characterized by the following features :

Male. — Eyes bare, upper facets larger than the lower ones, but not demarcated from them; frons at the narrowest point about $1\frac{1}{2}$ times as wide as the anterior ocellus; frontal stripe reddish yellow, very narrow at the tip of the ocellar triangle, gradually widened towards the antennal groove. Ocellar triangle black, with a pair of proclinate *oc* and several additional hairs; parafrontalia glossy black, with a dense white pollinosity which leaves free the foot-prints of the bristles and hairs; on the parafacialia there is one large glossy black spot bordering the black parafrontalium, and a second round one in the lower part covering the whole area between the eye and the inner border of the parafacialium; the remaining part of the parafacialium is yellow to orange and white dusted, but without setae. Parafrontalium with 7-8 *paf* and a number of hairs, the longest of which are approximately as long as the *paf*, *iv* well developed. Antennal groove

yellow; antennae separated by a short carina, the first two segments yellow-brown, the third darkened terminally; the last two segments are relatively slender and the tip of the third reaches a line connecting the vibrissae; third segment a little longer than twice the second. Bucca glossy, yellow orange; a longitudinal, blackish vitta, abbreviated at both ends, extends between the eye and the peristomal corner. Vibrissa well developed, above it a few shorter bristles; peristome with bristles from the vibrissa down to the postbucca; anterior part of bucca bare, posterior with pale hairs which increase in length posteriorly; occiput black. Palpi yellow, terminally widened and broader than the 3rd antennal segment.

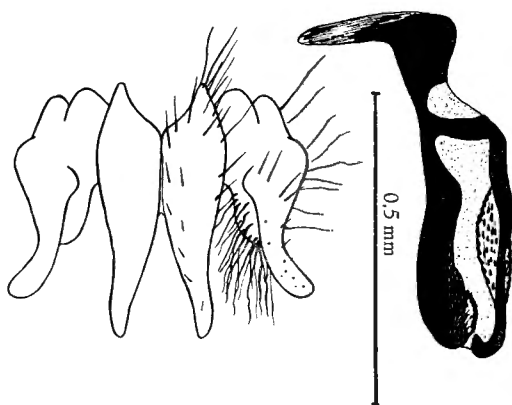


FIG. 57. — *Rhyncomya nana* PERIS.

Cerci with paralobi, phallosome.
Specimen from Maputa, Natal.

Thorax metallic dark green, white dusted and with large piliferous spots. Pro- and poststigma dark brown. Hairs of the dorsum long, so that it is sometimes difficult to separate them from the bristles. The following chaetotaxy is detectable: $ac=2+2$, $dc=2+4$, $ia=1+2$, outer ph and prs distinct, $h=3$, $n=2$, $sa=2$, scutellum with 3 long marginals, $st=1:1$, pst and pp present. Mesopleuron with black hairs on the anterior upper corner, otherwise with white hairs, posterior margin with 5 long black bristles; hypopleuron with the usual row of long bristles, otherwise bare. Propleuron, suprasquamal ridge and post-alar declivity bare, prosternum haired. Wings hyaline with a yellow tinge, veins including basicosta yellow, costal spine very short and hardly distinguishable, stem-vein with a few short black hairs, r_{4+5} bare, m broadly rounded, R_s closed and short-petiolate. Legs with metallic blackish green femora and predominantly yellow-brown tibiae and tarsi; fore-tibia with several short ad and a long submedian pv ;

mid-tibia with 1 *ad*, 1 *pd*, 2 *pv* and 1 *av*; hind-tibia with a row of irregular *ad* reminiscent of *Rhinia*, several *pd* and 2 *av*.

Abdomen yellow-brown with the tip darkened; dorsum with black, venter with black and white hairs. Hypopygium (fig. 52) without outstanding features.

Female. — I have not seen the female sex. According to PERIS, the abdomen is totally yellow-brown.

Length : 5.6 mm.

Collection S. A. Institute for Med. Research, Johannesburg : Natal : Maputa, VI.1914 (1 ♂, leg. H. G. BREYER).

[28. — ***Rhyncomya varifrons* BECKER.**]

(Fig. 58.)

Rhyncomyia varifrons BECKER, Denkschr. Akad. Wiss. Wien, LXXI, n° 2, 1910, p. 141; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 106.

This species has been recorded only from the isle of Sokotra. It was based on 7 ♂♂ and 1 ♀, of which 3 ♂♂ were kindly sent to me by Dr. M. Beier, Museum of Natural History, Vienna. I have selected one of these males as lectotype. In general appearance this species resembles the *R. soyauxi*-group, but the male terminalia are of quite outstanding structure (fig. 58). The cerci are reduced to very short, triangular lobes, whereas the paralobi are long and slender and have evidently overtaken the function of the cerci. The phallosome also has an unusual shape, the theca being greatly enlarged and forming a shovel basally.

In PERIS' key as well as in mine, it runs down to *R. peraeque* from which PERIS separates it by the angulose bend of *m*, by a yellow pilose mesopleuron and a uniformly pruinose thorax. PERIS has only seen one male not belonging to the type series, but from the Hadibu Plains on Sokotra. The features he gives in the key coincide with my specimens except that the mesopleuron also shows black setae on the upper part. It may be that PERIS overlooked this feature and that the male listed by him really belongs to *R. varifrons*, or this feature may be variable, which I doubt, so that it would belong to another similar, not yet described species on the isle of Sokotra.

Male. — Eyes bare, upper facets only slightly larger than the lower ones, frons at the narrowest point measuring $\frac{1}{4}$ of eye-length (about twice the width of the anterior ocellus). Frontal stripe dark yellow, not interrupted but reaching the black ocellar-triangle as a narrow stripe. Parafrontalia and -facialia white pollinose, the former more or less blackened, the latter yellow but with a glossy, undusted black spot on the lower half.

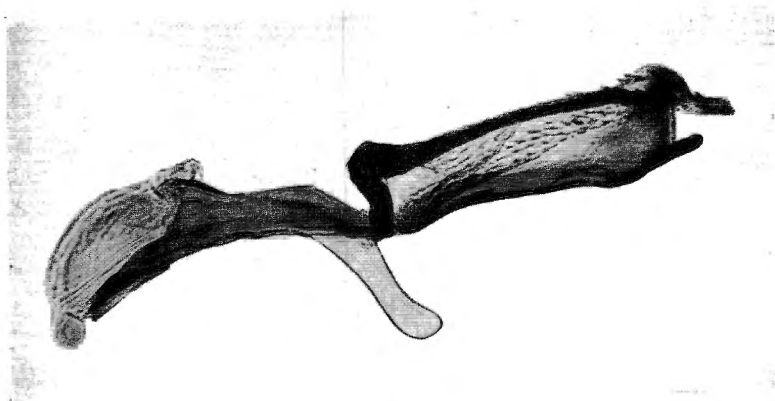
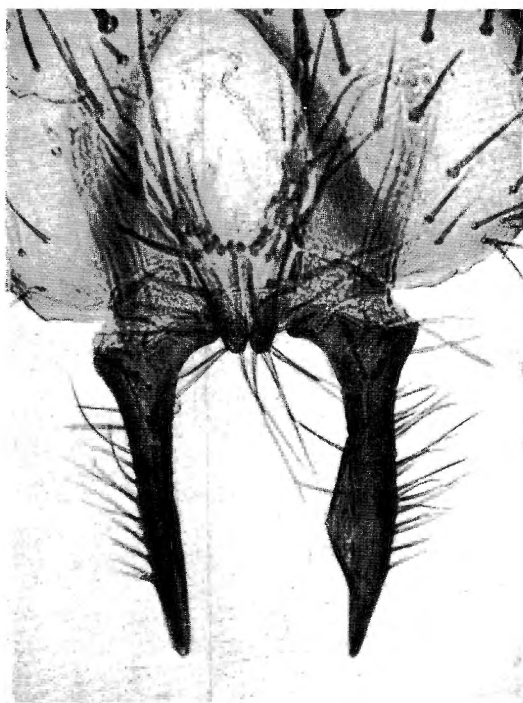


FIG. 58. — *Rhyncomya varifrons* BECKER.
Cerci with paralobi and phallosome (microphotographs).
Paratype from the isle of Sokotra.

A second undusted, black spot lies on the bucca near the ventral eye-margin. Ocellar triangle with one pair of long *oc* and several bristly hairs of different lengths, *iv* well developed, one pair of postverticals of moderate length; *paf* increase in size towards the antennae. Black setae on the parafrontalia and -facialia very distinct and relatively long, extending to the parafacial spot. Antennae chrome coloured, the 3rd segment slightly darkened, about 3 times as long as the second, arista almost bare, setae only detectable with a high magnification. Antennal groove yellow, without carina. Vibrissa long, above it a few short bristles, peristome with a row of black bristles reaching the middle of the ventral margin, bucca otherwise with yellow hairs, height of bucca almost reaching half the eye-length. Palpi yellow, widened terminally and here distinctly broader than the 3rd antennal segment.

Thorax metallic cupreous black, but with a dense whitish pollinosity. There is no mesonotal pattern; the bases of the hairs and bristles arise, however, from a darker spot. Prostigma white, poststigma yellow. Chaetotaxy slightly variable and asymmetrical, $ac=2-3+3$, $dc=2+4$, $ia=1+3$, $ph=3$, $h=3$, $prs=1$, $n=2$, $sa=3$, $sc=3+1$, $st=1:1$. Pleura white pollinose like the mesonotum, with yellow hairs; some black bristly hairs on the upper part of the mesopleuron. Posterior margin of mesopleuron with 5 long black bristles, hypopleurals black too, *pst* and *pp* well developed. Suprasquamal ridge, post-alar declivity and propleuron bare, prosternum with long pale hairs. Wings hyaline, veins yellow-brown, costal spine long, hairs of stem-vein white and thin, root of r_{4+5} dorsally with 1-3 setae, *m* with an obtuse-angled bend, R_5 open. Thoracic squama whitish yellow, longer than broad; halter yellow. Legs with blackish femora and red-brown tibiae and tarsi; fore-tibia with a few short, hardly distinguishable *ad* and a well developed, submedian *pv*; mid-tibia with 3 *pd* and one *ad* and *pv*; hind-tibia with 2 well developed *ad* and *pd* (sometimes increased by 1 or 2 shorter bristles) and one submedian *av*.

Abdomen yellow, with a metallic, cupreous-black coloured pattern, which forms a broad median stripe and includes the pregenital segment but leaves the epandrium yellow-brown. Furthermore, the edge of the abdomen bears a broad metallic band extending from tergite I+II to the hypopygium. The brownish parts of the abdomen are covered with a dense white pollinosity.

Female. — I have no female specimen before me. BECKER described this sex very briefly, mentioning that the parafrontalia and -facialia are provided with 3 glossy, black spots and that the 3rd antennal segment is not darkened as in the male.

Length : 5-7 mm.

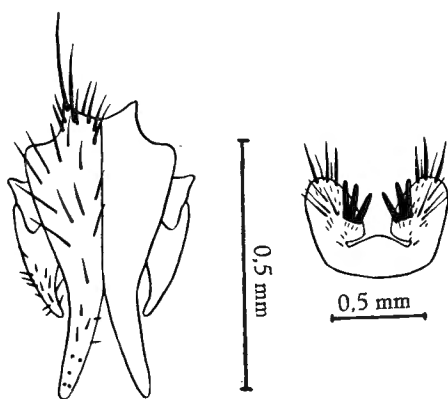
Collection Museum of Natural History, Vienna : Sokotra : Ras Shoab, I-II.1899 (3 ♂♂, leg. SIMONY).

[29. — **Rhyncomya trispina** VILLENEUVE.]

(Fig. 59.)

Rhyncomyia trispina VILLENEUVE, Bull. Ann. Soc. Ent. Belg., LXIX, 1929, p. 62; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 117, fig. 26.

On account of the armed 5th sternite of the male, *R. trispina* belongs to the « *forcipata*-group », but the 5th sternite is the least modified one bearing only 3-4 spines at the base of each of the lateral branches (fig. 59). It represents the most primitive species within this group, whereas

FIG. 59. — *Rhyncomya trispina* VILLENEUVE.

Cerci with paralobi, 5th sternite.

Specimen from Gatooma, S. Rhodesia.

R. cassotis is intermediate between it and *R. forcipata* which shows the most strongly modified sternite. In the female the structure of the 5th tergite and the corresponding sternite is quite normal. Only a relatively small 5th sternite is visible, a greater area, on the average, being covered by the tergal margins than in *R. cassotis*.

With respect to the other features, *R. trispina* coincides with *R. cassotis*. The body measures 5-7 mm in length.

Collection S. A. Institute for Med. Research, Johannesburg : Mozambique : Massangena, V.1951 (4 ♂♂, 5 ♀♀, leg. F. ZUMPT). — Collection Dept. of Research and Special Services, Salisbury : S. Rhodesia : Gatooma, V.1938 (1 ♂). — Collection American Museum, New York : Transvaal : Barberton, 12.V.1913 (1 ♂, 3 ♀♀, leg. H. K. MUNRO).

PERIS also records this species from Kenya.

[30. — *Rhyncomya cassotis* (WALKER).]

(Fig. 60.)

Tachina cassotis WALKER, List. Dipt., IV, 1849, p. 761; SÉGUY, Mem. Estac. Mus. Zool. Coimbra, (1), n° 67, 1933, p. 65; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 119, fig. 28.

? *Rhynchomyia viduella* VILLENEUVE, Ann. Soc. Ent. France, XCVI, 1927, p. 18; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 106, figs 18 & 19 (syn. nov.).

PERIS, in his monograph of the *Rhiniini*, acknowledges the two Ethiopian species *R. cassotis* WALKER and *R. viduella* VILLENEUVE. He separates them mainly by the parafacialia which are bare in *cassotis* whereas they are provided with several blackish setae in *viduella*. Furthermore, PERIS characterizes *viduella* by an abdomen which is « black except the posterior border of tergites very narrowly yellow ». From the British Museum, I received the one male from the Aberdare Range, Kenya, mentioned by PERIS. It has the parafrontalia and -facialia as well as the occiput black with a white dusting, face otherwise bright yellow to chrome. The thorax is metallic cupreous-black provided with a slight whitish pollinosity. Legs with black femora, tibiae and tarsi dark-brown. Abdomen glossy black, dorsally the hind margins of tergite I+II and tergite V very narrowly reddish, ventrally all posterior tergal margins more broadly yellow. It is 7 mm long. Another male from the Cape of Good Hope (leg. KREBS) and one female each from East London (leg. MUNRO, 1.1925) and from Durban (leg. MARLEY, XII.1941) all show, like the specimen from Kenya, distinct blackish setae on the parafacialia. The colouring of the body, however, is not so dark but similar to that found in typical specimens of *cassotis*. The length of the body of the last three specimens lies between 8 and 10 mm, whereas the length of the body in *cassotis* usually ranges from 4 to 7 mm. I have, however, also received a few specimens of *cassotis*, judging from the colouring and the bare parafacialia, which were 7 to 9 mm long.

No differences were found in the male terminalia. I have dissected a great number of males from various localities and cannot find the slightest difference between small and big males or between those with distinct setae on the parafacialia and those without setae. The structure of the terminalia is nevertheless very characteristic and quite outstanding. The 5th sternite is provided with two conical protuberances, the cerci are long-triangular and the paralobi extremely short and lobe-like (fig. 60).

A comparison of the dark coloured male from Kenya with a small, only 5 mm long, typically coloured specimen of *cassotis* gives the impression that we are dealing with two good species. In spite of this, I believe that the so-called *viduella* sensu VILLENEUVE and PERIS only represents extreme variants of *cassotis* and may be listed under this name as a variety, or preferably, treated as a synonym. It will be necessary to examine more

material in order to see whether the specimens with setulose parafacialia and or a dark colouring of the body predominate in some populations, or whether they only appear at random.

The colouring of normal *cassotis* is also variable in that the black pattern may be more or less extended, but the yellow-brown colours on the abdomen predominate and the specimens have the general appearance

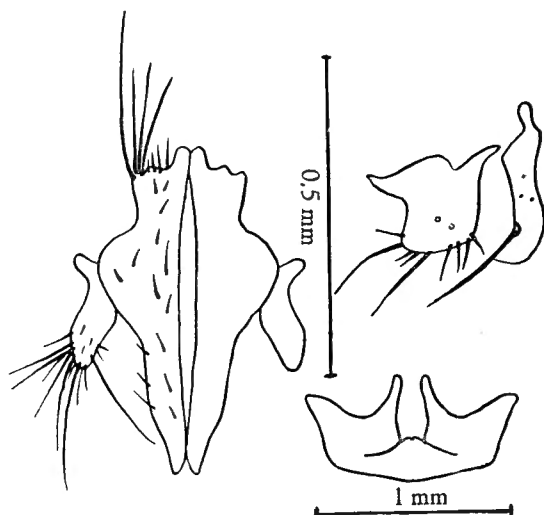


FIG. 60. — *Rhyncomya cassotis* (WALKER).
Cerci with paralobi, parameres and 5th sternite.
Specimen from Hluhuwe, Natal.

of small *R. forcipata*. The arista is however, not so long pilose, the longest setae rarely exceeding half the diameter of the aristal base. In the female the 5th tergite is broader ventrally, so that the corresponding sternite appears smaller.

Length : 4.9 mm.

Typical specimens, with bare parafacialia, were received from the following localities :

Collection Musée du Congo : Uelè : Gangala na Bodio, 15.V.1936 (1 ♀, leg. L. LIPPENS); Kabinda, X.1934 (1 ♀, leg. GILLARDIN); Elisabethville, 30.III.1921 (1 ♀, leg. M. BEQUAERT); Matadi, III.1937 (1 ♀, leg. DARTEVELLE); bassin Lukuga, 1936 (1 ♀, leg. DE SAEGER); Tanganyika :

Kigoma, IX.1918 (1 ♂, leg. MAYNÉ). — Collection American Museum, New York : Kenya : Kabete, 24.V.1916 (1 ♂, leg. T. J. ANDERSON); Nigeria : Maiduguri, 30.VIII.1942 (2 ♂♂, leg. F. SNYDER); Nyasaland : NTH. Nyasa, 1916 (1 ♀, leg. N. M. LEYS); Transvaal : Barberton, 22.V.1913 (1 ♂, leg. H. K. MUNRO). — Collection Zool. Museum, Berlin : Cameroons : Uam distr., IV.1914 (1 ♂, leg. TESSMANN); Tanganyika : Langenburg, VII.1898 (5 ♂♂, 5 ♀♀, leg. FÜLLEBORN). — Collection S. A. Institute for Med. Research, Johannesburg : Transvaal : Pretoriuskop, I.1952 (1 ♂, leg. F. ZUMPT); Natal : Hluhluwe, VI.1954 (2 ♂♂, leg. H. PATERSON). — Collection Dept. of Agriculture, Pretoria : Transvaal : Barberton, V.1913 (3 ♂♂, 3 ♀♀, leg. H. K. MUNRO). — Collection Dept. of Agriculture, Salisbury : S. Rhodesia : Salisbury distr., IX.1942 (1 ♂, leg. CAMPBELL); Melsetter distr., IX.1939 (1 ♂, leg. WILLIAMS); Balla-Balla, V.1933 (1 ♀, leg. CUTHBERTSON); Mazoe, VIII.1927 (2 ♀♀, leg. HALL).

PERIS recorded this species also from Sierra Leone, the Gold Coast, Abyssinia and Uganda.

[31. — *Rhyncomya forcipata* VILLENEUVE.]

(Fig. 61.)

Rhyncomyia forcipata VILLENEUVE, Ann. Soc. Ent. France, XCIV, 1927, p. 17; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 117, fig. 25.

R. forcipata is characterized in the male sex by having the 5th sternite (the two foregoing ones are rudimentary) of such outstanding structure that I first intended to base a new genus on this species. The related species *R. trispina* VILLENEUVE and *R. cassotis* WALKER in the Ethiopian region and *R. setipyga* VILLENEUVE from Formosa show, with respect to the structure of the 5th sternite, all intermediate stages between a simple, only spinulose sternite up to a more modified one leading clearly to the curious structure in *R. forcipata*. Since the species of this group have the typical general appearance of *Rhyncomya*, I believe it is better not to separate the *forcipata*-group as a generic unit.

Male. — Eyes bare, upper facets gradually enlarged, frons at the narrowest point not or hardly broader than the anterior ocellus. Ocellar triangle black-brown, with *oc* and *iv*, face yellow and densely yellowish pollinose, without black spots. Parafrontalium with 4-6 pairs of *paf*, otherwise with a few indistinct pale setae like the parafacialium. Antennae separated from each other at the base by a darkened shallow convexity, segments chrome-yellow, the third about twice as long as the second; arista pubescent, the longest setae reaching the width of the arisal base or even exceeding it a little. Vibrissae well developed, one or two bristles above it,

peristomal bristles black forming a row from the vibrissa to the middle of the ventral margin of the peristome. Bucca otherwise beset with yellow hairs. Height of bucca $\frac{3}{4}$ - $\frac{1}{2}$ the eye-length. Palpi yellow, spatulate, distinctly broader than the 3rd antennal segment.

Thorax metallic green or coppery, with a white dust which does not hide the surface, prostigma white, poststigma yellow. Chaetotaxy distinct, $ac=2-3+4-5$, $dc=2+4$, $ia=1+3-4$, outer ph present, $h=3$, $prs=1$, $n=2$, $sa=3$, $sc=3+1$, $st=1:1$, pst and pp present. Mesopleuron at the posterior

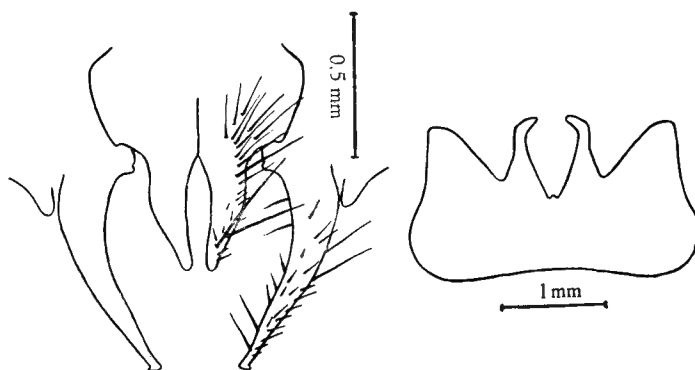


FIG. 61. — *Rhyncomya forcipata* VILLENEUVE.

Cerci with paralobi, 5th sternite.

Specimen from Zululand.

border with 3-4 black bristles, near the dorsal margin with a few black setae; otherwise the pleuron is provided with long yellow hairs. Pteropleuron near the centre with two black and short bristles, otherwise with yellow hairs like the mesopleuron. Hypopleural bristles long and in a dense row. Suprasquamal ridge, propleuron and post alar declivity bare. Wings hyaline, veins yellow, costal spine not distinct, stem-vein with pale hairs, root of r_{4+5} dorsally with a few setae, bend of m short-rounded, slightly variable, R_s open. Thoracic squama yellow, equally rounded, about as long as broad. Halter yellow. Legs black, tibiae more or less lightened; fore-tibia with several ad and a submedian pv ; mid-tibia with 2-3 pd and one pv and ad ; hind-tibia with several ad and pd , but v bristles are wanting.

Abdomen predominantly yellow-brown, with a blackish, more or less metallic green or coppery shining, slightly variable pattern. Tergite I+II wholly brown; tergite III in some specimens also unicoloured, or there is a median stripe present, or there are also vittae situated laterally near the hind margin; tergite IV with a posterior marginal band which is trian-

gularly widened in the middle; tergite V with a similar, but normally more extended blackish pattern, which sometimes covers almost the whole tergite. Terminalia totally metallic green or coppery, including the heavily enlarged 5th sternite (fig. 61). Sternites III and IV very small.

Female. — Frons at vertex measuring about $\frac{1}{4}$ of eye-length; frontal stripe yellow to yellow-brown, slightly widened towards the antennal groove, and at the tip of the ocellar-triangle about $\frac{2}{3}$ as broad as one parafrontalium. Chaetotaxy of head complete; 2 *fo* are normally distinguishable by their greater length from the other black fronto-orbital setae; pale setae on the parafacialium more distinct than in the male. Legs with the tibiae reddish-brown; mid-tibia also with one *av* bristle and hind-tibia with 2-3 *av*. Abdominal pattern normally less extended than in the male; terminalia as well as sternites yellow-brown. The 5th sternite is very broad but does not extend to the region of the 3rd and 4th sternites which are of normal shape and size. Ventral margins of 5th tergite widely separated from each other, leaving the 5th sternite broadly uncovered.

Length : 6-9 mm.

Collection S. A. Institute for Med. Research, Johannesburg : Mozambique : Massangena, V.1951 (3 ♂♂, 3 ♀♀, leg. ZUMPT); Transvaal : Brits, X.1952 (1 ♂♀, leg. PATERSON); Nylstroom, XII.1921 (1 ♂); Natal : Hluhluwe, VI.1954 (1 ♂, leg. PATERSON); Bechuanaland : nr. Nata, XII.1954 (1 ♀, leg. ZUMPT); Maun, I.1955 (1 ♂, leg. ZUMPT). — Collection Dept. of Agriculture, Pretoria : Transvaal : Pretoria, IX.1914 (2 ♂♂, leg. MUNRO); Barberton, V.1913 (2 ♀♀, leg. MUNRO); Cape Province : Kapmuiden, V.1920 (1 ♂, leg. MUNRO). — Collection Dept. of Research and Special Services, Salisbury : S. Rhodesia : Balla-Balla, XII.1931-II-IV.1933 (5 ♂♂, 4 ♀♀, leg. CUTHBERTSON). — Collection Zool. Museum, Berlin : Zanzibar (1 ♂, leg. HILDEBRANDT); Tanganyika : Dodoma, IV.1926 (1 ♀, leg. BRANDES).

Also recorded from the Belgian Congo, Kenya, Uganda, Nyasaland and Bechuanaland.

***Rhyncomya* spec. incertae sedis.**

[32. — ***Rhyncomya coelestis*** VILLENEUVE.]

Rhyncomyia coelestis VILLENEUVE, Rev. Zool. Afr., IX, 1921, p. 31; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 120.

This species, described from Mt. Elgon, Uganda, may be a synonym of *R. tetropsis* (BIGOT).

[33. — **Rhyncomya echinata** SÉGUY.]

Rhyncomyia echinata SÉGUY, Encycl. Ent., B II, Dipt., IV, 1928, p. 190;
PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 190.

Described from Brazzaville. It is impossible to recognize this species from the description or to place it into the key.

[34. — **Rhyncomya fovealis** BEZZI.]

Rhyncomyia fovealis BEZZI, Denkschr. Med. Ges. Jena, XIII, 1908, p. 188;
PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 190.

I was not able to get the description of this species, described from Little Namaqualand. PERIS did not put it in his key.

[35. — **Rhyncomya phasiaeformis** BEZZI.]

Rhyncomyia phasiaeformis BEZZI, Boll. Lab. Portici, VI, 1911, p. 72; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 191.

The type-locality is El Amango, Eritrea. The description is not available to me, and PERIS, who has probably seen it, was not able to place it into his key.

[36. — **Rhyncomya proterva** SÉGUY.]

Rhyncomyia proterva SÉGUY, Mem. Mus. Hist. Nat. Paris, (N.S.), VIII, 1938, p. 378, figs. 54 et 55; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 121.

This species is evidently closely related to *R. trispina* VILLENEUVE and SÉGUY's figures of the cerci and parolobi shows a great similarity to the hypopygial structure found in *R. trispina*. The pregenital sternite, however, is described as being deeply split, and provided laterally with two large scales of red colour which have no teeth, but long erect, bristly hairs. Length of body 7.5 mm. The type-locality is Mt. Elgon, Kenya.

[37. — **Rhyncomya proxima** SÉGUY.]

Rhyncomyia proxima SÉGUY, Ann. Soc. Ent. France, XCV, 1926, p. 12;
PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 121.

Described from the French Congo. This species may be conspecific with *R. dasyops* BEZZI.

[38. — **Rhyncomya pseudotetropsis** SÉGUY.]

Rhyncomyia pseudotetropsis SÉGUY, Ann. Soc. Ent. France, XCV, 1926, p. 12; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 191.

Like the foregoing species, described from the French Congo and related to *R. dasyops* BEZZI or *R. tetropsis* (BIGOT).

[39. — **Rhyncomya rugosa** SÉGUY.]

Rhyncomyia rugosa SÉGUY, Ann. Soc. Ent. France, XCV, 1926, p. 12; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 191.

Described from « Vallée du Pungoue », Mozambique. The description is inadequate.

In his paper on the fauna of Mozambique, SÉGUY (1933) mentioned in a key several species of which no proper descriptions exist, and of which not a single locality is given. Some of them may not have been found in the Ethiopian region. These species are the following : *R. argentata* SÉGUY, *R. decolor* SÉGUY, *R. diversicolor* SÉGUY, *R. flavipes* SÉGUY, *R. gaillardi* SÉGUY, *R. iresia* SÉGUY, *R. nigripes* SÉGUY, *R. tenuicornis* SÉGUY, *R. ursina* SÉGUY.

Genus **PERISIELLA** nov.

Type species : *I. anchora* WIEDEMANN from Guinea.

This genus is created for PERIS' *Rhyncomya anchora*-group (PERIS 1952), mainly on account of the long-pubescent arista, the strongly protruded epistome and the demarcated, infuscated wing-margin, features which are unusual for the *Rhyncomya* species. The two *Perisiella* species known up to now have a quite outstanding appearance.

Eyes bare, upper facets in male more or less enlarged. Parafacialia with a glossy black spot, setae sparse and short. Male with *iv*, *oc* and *paf*, female with a complete chaetotaxy and numerous *fo* bristles and setae arising from bare and glossy dots.

Thorax metallic green or coppery, with a yellow or white pruinosity. Chaetotaxy as given for *P. anchora*. Wing with a broadly rounded *m* and an open *R*₅; thoracic squama about as long as broad.

Abdomen yellow with a dark pattern. Hypopygium with free cerci and paralobi.

This new genus, named in honour of Dr. S. V. PERIS, is so far restricted to the Ethiopian region. Nothing is known about the biology of the species.

KEY TO THE SPECIES.

- 1 (2) Palpi yellow. Last abdominal tergite brownish or more or less darkened, but not metallic.

Face predominantly yellow-brown, with a blackish parafacial spot, one stripe directed to the epistomal corner, and a second from the eye to the peristomal corner. 7-10 mm.
Ethiopian region 1. — *P. anchora* (WIEDEMANN).

- 2 (1) Palpi black. Last abdominal tergite metallic green.

Face predominantly glossy black. 5-6 mm. Belgian Congo 2. — *P. saba* (PERIS).

[1. — *Perisiella anchora* (WIEDEMANN).]

(Fig. 62.)

Idia anchora WIEDEMANN, Ann. Ent., 1824, p. 50; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 85.

Rhynchomyia trigramma BEZZI, Boll. Lab. Portici, VIII, 1914, p. 291.

? *Rhynchomyia hyaenia* SÉGUY, Ann. Soc. Ent. France, CIX, (1940), 1941, p. 127; PERIS, An Estac. Exp. Aula Dei, III, 1952, p. 85.

Related to *R. saba* PERIS from which it is easily separable by the features given in the key.

Male. — Eyes bare, upper facets only slightly larger than the lower ones, touching each other for a distance which approximately equals the length of the triangular frontal stripe. Parafrontalia and -facialia bright yellow-brown, with a yellow dusting; at the base of the antennae and in the lower part of the parafacialium is a glossy black, undusted spot. Epistome strongly protruded, glossy yellow-brown like the anterior part of the buccae. There is a black-stripe running from the vibrissal area to the corner of the epistome and another from the lower margin of the eye to the corner of the peristome. Posterior part of buccae with dense yellow dusting. Ocellar triangle black, *iv* long and strong; *oc* thick but short, behind them several weaker bristles; *paf* increase in size towards the antennal groove; parafrontalia with additional black setae which accompany the *paf* as far as the latter extend, but parafacialia bare. Vibrissa thick, above it a few short bristles; peristomal bristles black, weak on the frontal margin, stronger on the ventral edge and extending to the middle, from where they are replaced by thin yellow hairs which also cover the posterior part of the bucca. Height of bucca $\frac{2}{5}$ of eye-length. Antennal groove between the basal segments of antennae with a broad, knob-like convexity; antennal segments chrome-yellow like the ocellar-triangle, the 3rd more or less darker brown, about $2\frac{1}{2}$ times as long as the

second; arista with setae on both sides, some of them reaching half the width of the 3rd antennal segment. Palpi yellow to chrome, spatulate, distinctly broader than the 3rd antennal segment.

Thorax totally metallic green or coppery, but provided with a yellow pollinosity, leaving uncovered the bases of the setae and three longitudinal stripes on the notum. Prostigma yellow, poststigma brown. Chaetotaxy distinct, but evidently variable, $ac=2+4-6$, $dc=2+4-6$, $ia=1+2$, $ph=3$, $prs=1$, $h=3$, $n=2$, $sa=3-4$, $sc=3+1-2$, $st=1:1$. Pleura densely yellow

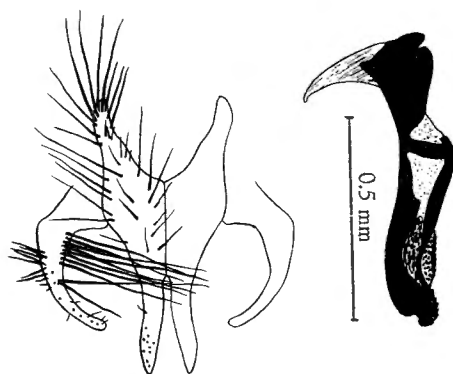


FIG. 62. — *Perisiella anchora* (WIEDEMANN).

Cerci with paralobi, phallosome.
Specimen from Liberia.

pollinose and with long yellow hairs in addition to black bristles. Posterior border of mesopleuron with 3-4 black bristles; upper part with black bristles and hairs which are replaced by yellow ones in the lower part; pst and pp present; hypopleural bristles black, in a dense row. Supra-squamal ridge, post alar declivity and propleuron bare. Prosternum with hairs. Wings with the outer margin broadly infuscated, remaining part tinged, veins including basicosta yellow-brown, costal spine wanting, root of r_{4+5} dorsally with few setae, bend of m broadly rounded, R_5 open. Thoracic squama dark yellow, about as long as broad, halter yellow. Legs with the femora black, tibiae and tarsi predominantly brownish; fore-tibia with several short ad and a long submedian pv ; mid-tibia with one ad , av and pv as well as 2 pd ; hind-tibia with several ad and pd and 1-2 av .

Abdomen yellow, with a median blackish stripe which does not extend onto the last tergite, or almost the whole last tergite and the posterior half of tergite IV are more or less darkened. Ventrally there is a lateral

greenish-black stripe reaching from the middle of tergite IV to the hypopygium which is totally metallic black-green or black-brown. Hairs and bristles are black. Hypopygium (fig. 62) with pointed cerci and hook-shaped paralobi which bear long bristly hairs on the inner side.

Female. — Frons at vertex measuring about $\frac{1}{3}$ of eye-length, strongly widened towards the antennal groove; frontal stripe red-brown, at the vertex as broad as one parafrontalium; parafacialia densely yellow pollinose, terminally with a glossy black, undusted spot as in the male; the irregularly placed hairs and bristles arise from bare, glossy circular spots (setigerous spots). Height of bucca $\frac{4}{9}$ of eye-length. Chaetotaxy of head complete; besides the *paf*, a great number of fronto-orbital bristly hairs. Other features as in the male.

Length : 7-10 mm.

Collection American Museum, New York : Liberia : Robertsport, III, X-XII.1943 (3 ♂♂, 6 ♀♀, leg. SNYDER). — Collection British Museum, London : Nigeria : Ibadan, 1931 (1 ♂, leg. KING); Nyasaland : Cholo (1 ♀, leg. WOOD). — Collection U. S. Nat. Museum, Washington : Liberia : VI.1945 (5 ♂♂, 10 ♀♀, leg. BRISCOE). — Collection S. A. Institute for Med. Research, Johannesburg : Mozambique : Massangena, V. 1951 (1 ♀, leg. ZUMPT).

[2. — *Perisiella saba* (PERIS).]

(Fig. 63.)

Rhyncomyia saba PERIS, Eos, XXVII, 1951, p. 242, et An. Estac. Exp. Aula Dei, III, 1952, p. 84, fig. 16.

This species was based on a single female from Katanga, between Elisabethville and Kasenga (26.II.1933, leg. M. BEQUAERT). I have received one pair enabling me to give a description of the male sex.

Male. — Eyes bare, touching, upper facets larger than the lower ones, but not demarcated. Parafrontalia and -facialia predominantly black in ground colour and densely white dusted, except a glossy, bare, black spot at the lower end of each parafrontalium. Frontal stripe reduced to a reddish triangle; antennal groove black, undusted and glossy in the lower half, white pollinose above. Antennae totally chrome-yellow, 3rd antennal segment twice as long as the second, longest hairs of arista reaching $\frac{1}{3}$ rd the width of the 3rd antennal segment; bases of antennae separated from each other, but a median carina is not distinctly developed. Bucca about half as high as the eye is long; fore-part glossy-black and not dusted;

hind-part, like the occiput, white pollinose and beset with white hairs. Epistome strongly protruded, vibrissa long, a few setae above it, peristomal bristles black. Chaetotaxy of the upper head as in *P. anchora*. Palpi black, spatulate, broader than the 3rd antennal segment.

Thorax metallic green, with a white pollinosity leaving free the bases of the hairs and bristles. Prostigma yellow, poststigma black. Chaetotaxy as in *anchora*. Wings with the posterior half of the margin broadly

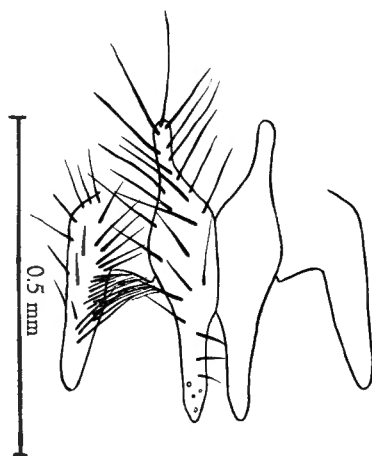


FIG. 63. — *Perisiella saba* (PERIS).
Specimen from the Belgian Congo.

infuscated, basal half only tinged like the remaining part of the wing. Colouring of legs and their chaetotaxy presumably as in *anchora*.

Abdomen yellow, with a blackish pattern similar to that in *anchora*; the last segment, however, is totally metallic blackish-green and the lateral stripe is more extended anteriorly. Hypopygium (fig. 63) similar to that of *anchora*, but paralobi almost straight.

Female. — Frons at vertex almost half as wide as the eye is long; frontal stripe red-brown, subparallel beyond the ocellar-triangle; large black setigerous spots on the parafrontalia.

Length : 5-6 mm.

Collection Musée du Congo : Lualaba : Kolwea, 10.XI.1952 (1 ♂, leg. L. GILBERT); bassin Lukuga, IV-VI.1934 (1 ♀, leg. DE SAEGER).

P. saba is only known from the Belgian Congo.

[Genus **ZUMBA** PERIS.]

PERIS, Eos, XXVII, 1957, p. 239, et An. Estac. Exp. Aula Dei, III, 1952, p. 60;
Type species : *Z. rhinoidea* PERIS from N. Rhodesia.

PERIS erected this genus for a new species described by him, and characterized it as follows (translated) in his monograph of the *Rhiniini* (1952).

« Without prostigmatic bristle. Tibia I with one submedian *pv*. Outer *ph* laterad of the *pst*. Arista with a very short and fine microscopic pubescence. Suprasquamal ridge with only a microscopal pubescence, not pilose. One pteuropleural bristle. Thoracic squama not lobulate, divergent from the suprasquamal ridge. At least one pair of presutural *dc* developed. Palpi four times as long as broad, with subparallel margins. *R*₅ open. »

PERIS has evidently overlooked the fact that *Rhyncomya antennalis* VILLENEUVE also has no prostigmatic bristle and that, according to this feature as well as to the others mentioned in his generic diagnosis, it runs down to his genus *Zumba*. The British Museum has not sent me any material of PERIS' *Z. rhinoidea*, the type species of this genus, and I have also not come across any specimens which I could refer to this species, according to the description. But there is no doubt that both species are quite different and it is even not certain whether *R. antennalis* can really remain in the genus *Zumba*, or whether another new genus has to be erected for this species.

KEY TO THE SPECIES.

- 1 (2) Head predominantly black, thorax and abdomen metallic green and densely pruinose. Chaetotaxy of mesonotum strongly reduced : *ac*=0+1, *dc*=2+2, *ia*=1+1-2, *sc*=3+0. General appearance of a *Stomorhina* species. 7 mm. — N. Rhodesia, Natal
1. — *Z. rhinoidea* PERIS.
- 2 (1) Head predominantly yellow, thorax metallic green to cupreous-black, abdomen yellow-brown with a black pattern. Chaetotaxy of mesonotum not reduced : *ac*=2+3-4, *dc*=2+4, *ia*=1+2-4, *sc*=3+1. General appearance of a *Rhyncomya* species. 5-7 mm. — Southern Africa 2. — *Z. antennalis* (VILLENEUVE).

[1. — *Zumba rhinoidea* PERIS.]

Zumba rhinoidea PERIS, Eos, XXVII, 1951, p. 239, et An. Estac. Exp. Aula Dei, III, 1952, p. 60, fig. 14.

PERIS, in his original description, based this species on 1 ♂ ♀ from N. Rhodesia. In his monograph he recorded another ♀ from Natal.

[2. — *Zumba antennalis* (VILLENEUVE).]

(Fig. 64.)

Rhynchomyia antennalis VILLENEUVE, Bull. Ann. Soc. Ent. Belge, LXIX, 1929, p. 185; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 106.

Z. antennalis is easily recognizable by the features given in the key, but it is quite variable as the following description reveals. The hypopygium is characteristic and evidently not subject to a significant variability.

Male. — Eyes bare, facets of the lower fourth distinctly smaller than those of the upper three fourths. Frons at the narrowest point about as broad as the anterior ocellus, strongly widened towards the antennal groove. Frontal stripe dark yellow, ocellar triangle black. Parafrontalia and -facialia with light yellow and white dusting, buccae of the same colouring but with a small blackish spot near the parafacial border. Antennal groove yellow, basal segments of antennae black-brown, 3rd segment yellow-brown, slightly darkened terminally, about $2\frac{1}{2}$ times as long as the second. Occiput black. One pair of long and thick, and a posterior pair of weak *oc* present, *iv* long, 5-6 pairs of black *paf*, but parafrontalia and parafacialia densely beset with additional, long pale and black hairs, some of which reach the length of the *paf*. Arista almost bare, setae microscopic and hardly visible. Vibrissa and peristomal bristles black, buccae otherwise with long and pale hairs. Height of bucca almost $\frac{1}{2}$ of eye-length. Palpi yellow, spatulate, as broad as the 3rd antennal segment.

Thorax metallic green to cupreous-black, pro- an poststigma yellowish. Dorsum as well as pleura densely covered with long white hairs. Bristles black except some of the hypopleurals which are white. The following long bristles are recognizable: *ac*=2+3-4, *dc*=2+4, *ia*=1+2-4, outer *ph* present, *h*=2, *prs*=1, *n*=2, *sa*=2, *sc*=3+1, *st*=1:1, posterior border of mesopleuron with 3-4 long black bristles, *pst* and *pp* wanting. Supra-squamal ridge without bristly hairs, propleuron and post-alar declivity bare, but hidden under the long white hairs of the surrounding areas. Wings hyaline, veins yellow-brown, costal spine present, root of r_{4+5} dorsally with a few back setae or bare, *m* with a broadly rounded bend, *R*₅ open. Thoracic squama yellowish-white, halter pale. Legs black to coppery

except the femoral tips and the greater part of the tibiae which are yellow-brown, or the legs are predominantly yellow-brown. Femora like the thorax beset with long whitish hairs beside black bristles; fore-tibia with a submedian *pv*; mid-tibia with one *ad* and one *av*, but 2 *pv* and 2 *pd*; hind-tibia with several long *ad* and *pd* as well as 2 *av*.

Abdomen normally predominantly yellow-brown, with a black pattern which covers dorsally tergites I+II except the hind margin, the median part of tergite III, the median part and broadly the hind margin of tergite IV and totally the last tergite. However, the black pattern may be greatly

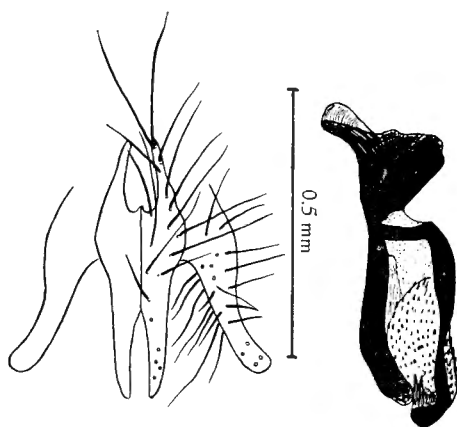


FIG. 64. — *Zumba antennalis* (VILLENEUVE).

Cerci with paralobi and phallosome.
Specimen from Vogelfontein, Cape Province.

reduced, so that only a dark median longitudinal vitta is left. On the other hand, the black pattern may be extended, so that the whole dorsum and most of the venter becomes black or black-brown. The dorsal hairs and bristles are black, the lateral partly white and the venter is predominantly covered with long white hairs, only partially with black bristles. General structure of the hypopygium (fig. 64) as in *Rhyncomya*, paralobi terminally club shaped.

Female. — Frons at vertex measuring about $\frac{2}{3}$ of eye-length, frontal-stripe beyond the ocellar-triangle narrow, subparallel, parafrontalia and -facialia broad, *iv*, *ev*, *oc* and *f* as well as several parafrontal bristles and hairs developed.

Length : 5-7 mm.

Collection S. African Museum, Cape Town : S. West Africa : Mafa, II.1923 (1 ♂, lectotype); Warmbad, II.1925 (2 ♂♂); Zesfontein, II.1925 (1 ♂); Cape Province : Vogelfontein, III-IV.1929 (2 ♂♂, leg. A. J. HESSE); Dikbome, Merweville, X.1952 (1 ♂♀). — Collection British Museum, London : S. West Africa : Aus, I.1930 (1 ♀); Transvaal : Tzaneen, IV.1934 (1 ♂).

[Genus **PARARHYNCHOMYIA** BECKER.]

Pararhynchomyia BECKER, Denkschr. Akad. Wiss. Wien, LXXI, 1910, p. 142; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 58.

Type species : *P. cribriformis* BECKER from Sokotra.

This is a monotypic genus based on *P. cribriformis* from the isle of Sokotra. I have not seen the type specimens, but PERIS recorded two males from Kenya, on which he based the following description (translated).

[1. — **Pararhynchomyia cribriformis** BECKER.]

Pararhynchomyia cribriformis BECKER, Denkschr. Akad. Wiss. Wien, LXXI, 1910, p. 143; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 59, fig. 13.

« An insect of black-violaceous colouring with metallic reflections. Bucca, thorax end abdomen covered with a silvery-white pruinosity and piliferous dots, which are very distinct on the bucca, pleura and the ventral side of the abdomen. Thorax, seen from behind, with five dark bands, the outer ones cover the humeral callus, the notopleuron and the base of the wing; the other three consist of a median one each following the line of the *dc*. Pleural pilosity fine, white, except on the mesopleuron, where it is black. Hypopleural and pteropleural bristles present, black. Wing and calypter subhyaline, slightly smoky tinged. Thoracic squama of *Phaonia* type. Antennae and palpi black. Base of arista testaceous. Third antennal segment and upper half of face strongly silvery-white pruinose. Peristomal bristles wanting, only vibrissa existing. Palpus straight and five to six times longer than broad, symmetrical with respect to the longitudinal axis. ♂. Width of frons less than the ocellar triangle. Upper facets slightly larger than the lower ones. Parafrontalia and parafacialia covered with a dense silvery pruinosity and large setigerous spots. Second tibia with a ventral bristle.

Kenya : Nairobi, VIII.1939 (VAN SOMEREN) 2 ♂ caught on Acacia galls. »

[Genus **TRICHOBERIA** TOWNSEND.]

Trichoberia TOWNSEND, J. N. York Ent. Soc., XL, 1932, p. 439; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 73.

Type species: *T. rufopilosa* TOWNSEND from Guinea.

PERIS suppressed the genus erected for *T. rufopilosa* TOWNSEND (= *lanata* VILLENEUVE) and re-transferred the species to *Rhyncomya*. I do not agree with this opinion, but believe, that on account of the wanting hypopleural bristles, this species should be listed in a distinct genus. It is certainly related to *Rhyncomya*, but probably represents a specialised branch. .

[**Trichoberia lanata** (VILLENEUVE).]

(Fig. 65.)

Rhyncomya lanata VILLENEUVE, Rev. Zool. Afr., VIII, 1920, p. 162; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 88.

Trichoberia rufopilosa TOWNSEND, J. N. Y. Ent. Soc., XL, 1932, p. 440; PERIS, id., ibid.

T. lanata is evidently rarely found in the field, but is nevertheless widespread in the Ethiopian region and up to now has been recorded from the Guinea Coast, the Belgian Congo, Abyssinia, Uganda, Nyasaland and S. Rhodesia. I have seen 4 specimens (2 ♂♂, 2 ♀♀), of which only one pair was sufficiently well preserved to enable the following descriptions to be made.

Male (fig. 65). — Head totally yellow, or partly yellow-brown, broader than the thorax; eyes with very small facets, bare, narrow in shape, about $2\frac{1}{2}$ times as long as broad. Frontal stripe yellow-brown, at the tip of the ocellar-triangle as broad as one ocellus, slightly widened towards the antennal groove, and here about twice as broad as at the narrowest point. Parafrontalia and -facialia yellow, very broad, at the frontal corner wider than the eye, densely beset with yellow and black hairs; a row each of *paf* is distinguishable, extending from the tip of the ocellar triangle almost to the base of the antennae; *iv* and *oc* distinct, *f* and *fo* are not clearly separated from the other black bristly hairs. Antennae widely separated by a very weakly arched prominence which shows basally a shallow, line-shaped impression; antennae yellow-brown like the frontal stripe, first segment half as long as the second; the third almost $2\frac{1}{2}$ times as long as the second; arista bare, long and thin, surpassing the vibrissa, the second segment dorsally with a black bristle. Vibrissa short but strong, above it another weaker bristle and 3-5 black, bristly hairs; peristome with an unbroken row of short black bristly hairs. Bucca almost half as high as the eye is long, like the occiput densely beset with yellow hairs, only the postbucca here and there with a few odd blackish hairs. Palpi broad, leaf-like, with yellow and black setae.

Thorax predominantly black-brown, but densely covered with long, thin hairs, tip of scutellum broad and ill-defined brown. The normal black bristles are reduced in size and strength, and not longer than the yellow hairs. They are, therefore only distinguishable with difficulty. A suture is not clearly visible. Of the *ac* and *dc*, 6 pairs each are recog-

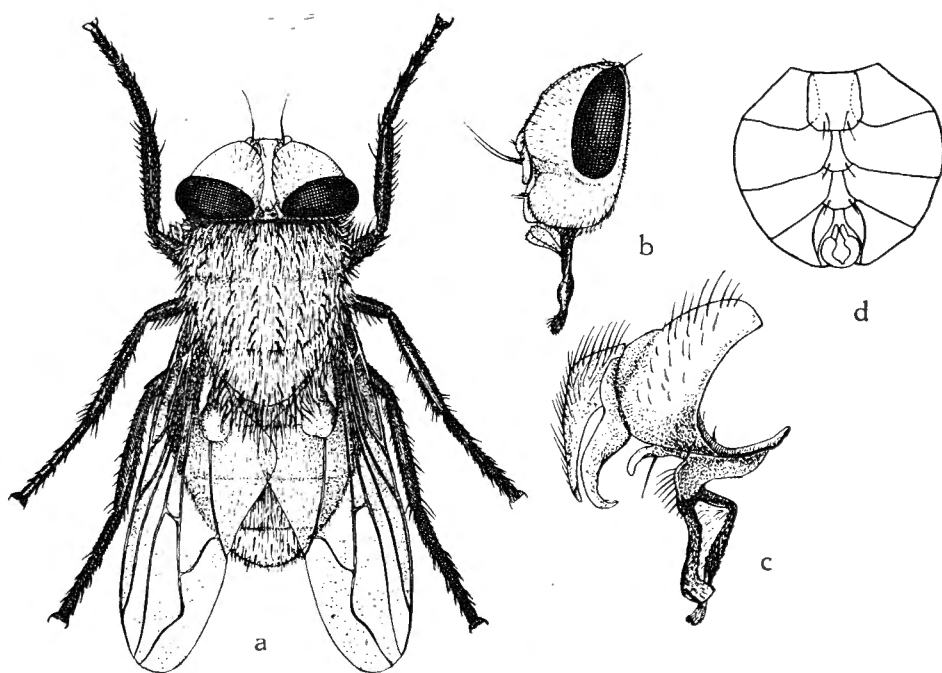


FIG. 65. — *Trichoberia lanata* (VILLENEUVE).

a : Male fly; b : Male head in lateral view; c : Hypopygium in lateral view; d : Male abdomen ventrally.

nizable. There are 4 pairs of *ia*, so that the presutural pair is presumed to be present too; outer *ph* present and inserted laterad to the *prs*; 2 notopleural and 2 sternopleural bristles present. Pleurae as densely haired as the dorsum of the thorax; pro- and poststigma yellow-orange, of normal structure; hypopleural hairs yellow, irregularly placed, increased in number and arranged in two rows. On the scutellum two pairs of marginal bristles and one pair of discal bristles are distinguishable between the yellow hairs. Wings hyaline, veins yellow; stem-vein dorsally with a row of long, but thin yellow hairs; costa with black, spiny setae, without a distinct costal spine; other veins bare; median with a short, but equally rounded curve;

R_5 widely open. Squama yellow and dorsally bare, the lower one broadly rounded; halter yellow. Legs yellow-orange; fore-femur ventrally with a row of black bristly hairs and thin yellow hairs, dorsally with black hairs and setae; fore-tibia with a longer submedian *pv* and several *ad*; mid-femur with long yellow hairs, black bristles and setae; mid-tibia with two slightly thicker *ad* and *av*, one stronger submedian ventral bristle present; hind-femur dorsally with long yellow hairs, which diminish in size towards the tip, terminal part of femur with a few short, bristly hairs; ventral part of femur with black setae and bristly hairs; hind-tibia with a dense row of black, short and bristly *pd* as well as *ad*, furthermore with 2 submedian *av* of medium size; tarsi normal, metatarsi relatively long, pulvilli about as long as the claws.

Abdomen short and broad, yellow with a blackish, median longitudinal vitta, as densely yellow haired as the thorax but the hairs are not as long; segmental margins as well as the disc of the last tergite with sparse black hairs. Hypopygium with free, but closely attached pointed cerci; paralobi longer than the cerci, shaped like a narrow leaf.

Female. — Frons at vertex measuring about $\frac{2}{3}$ of eye-length. Colouring as in the male, but there is a blackish parafacial and a buccal spot. Chaetotaxy complete, *f* distinguishable; the parafrontalia show besides the *paf* a great number of bristles and hairs, among which special *fo* are not marked by greater length or thickness.

Length : 10-11 mm.

Collection Musée du Congo : Tembisa, 1931 (1 ♀, leg. C. A. LEGROS). — Collection British Museum, London : Uganda : Nile banks, nr. Kakindu, 3,400 ft., 24.VIII.1911 (1 ♂, leg. S. A. NEAVE). — Collection S. A. Institute for Med. Research, Johannesburg : S. Rhodesia : Victoria Falls, VIII.1920 (1 ♂); Sanyali Valley, X.1925 (1 ♀).

[Genus **STEGOSOMA** LOEW.]

Stegosoma LOEW, Wien. Ent. Monatsschr., VII, 1863, p. 15; MALLOCH, Ann. Mag. N. H., (9), XVIII, 1926, p. 513; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 53.

Type species : *S. vinculatum* LOEW from the Orange Free State.

This genus is characterized by a testaceous body without any pollinosity, by a bare arista and a strong reduction of the mesonotal bristles. Only the presutural *ac*, *dc* and *ia* are developed, the outer *ph* is wanting and the other bristles are also more or less decreased in number. Prostigmatic

bristle present or absent, perhaps not even constant in the same species. Thoracic squama narrow or broad, according to the species concerned.

Up to now, only 3 species are known, which are restricted to the Ethiopian region.

The larvae have been found associated with termites and ants (CUTHBERTSON 1933, 1935 and 1938).

KEY TO THE SPECIES.

- 1 (2) Third pair of legs with the last tarsal segment blackish and clearly distinguished by its colour from the remaining segments which are yellow or light brown.

Thoracic squama intermediate in shape between those of the two following species; *pst* present. 4-6 mm. — Ethiopian region except Southern Africa 2. — *S. bowdeni* PERIS.

- 2 (1) Third pair of legs with the last tarsal segment not clearly distinguished by its colour; it may be blackish like the foregoing segment or brownish like the remaining ones 3

- 3 (4) Thoracic squama broader than long, its inner edge reaching the base of the scutellum; *pst* always (?) absent. 4-6 mm. — Ethiopian region 1. — *S. vinculatum* LOEW.

- 4 (3) Thoracic squama longer than broad, its inner edge not reaching the base of the scutellum; *pst* present. 4-6 mm. — Ethiopian region except Southern Africa 3. — *S. wellmani* LICHTWARDT.

[1. — *Stegosoma vinculatum* LOEW.]

(Fig. 66.)

Stegosoma vinculatum LOEW, Wien. Ent. Mon., VII, 1863, p. 15; MALLOCH, Ann. Mag. N. H., (9), XVIII, 1926, p. 513; CUTHBERTSON, Occ. Pap. Rhod. Mus., IV, 1935, p. 18, fig. 9; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 56.

This species is clearly recognizable by the features given in the key, but all three species of the genus are closely related to one another and may be confused if only studied superficially.

Male. — Eyes bare, upper facets moderately enlarged and demarcated from the lower ones. Head, except occiput, which is blackened in the upper part, totally glossy yellow or orange. Frontal stripe at the narrowest point not wider than the anterior ocellus, sometimes narrowed to a line. Ocellar triangle with several bristly hairs, among which the *oc* are not

clearly distinguishable by length and thickness; *iv* developed; *paf* thin and variable in number. Parafrontalia and -facialia without setae and only slightly white pruinose. Bucca almost half as high as the eye is long, anterior part bare, post-bucca with pale hairs which increase in length towards the occiput; vibrissa black, short, a few black setae above it; peristomal bristles black too and reaching the middle of the ventral edge,

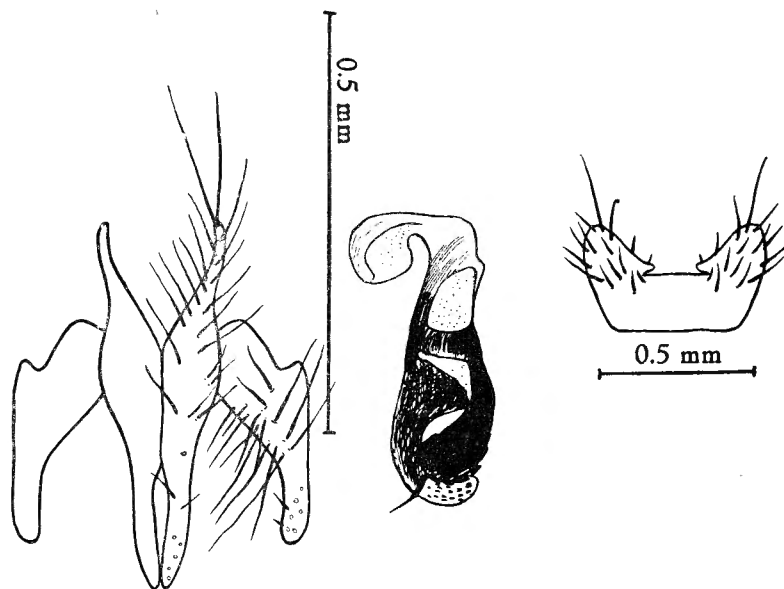


FIG. 66. — *Stegosoma vinculatum* LOEW.
Cerci with paralobi, phallosome and 5th sternite.
Specimen from Zululand.

but they are relatively thin and variable in length and number. Antennae separated from each other by a short, dorsally rounded prominence, third antennal segment $\frac{3}{8}$ - $\frac{1}{3}$ as long as the second, arista practically bare. Palpi yellow, spatulate, as broad as the third antennal segment.

Thorax glossy yellow or orange, without pruinosity. Bristles black, but strongly reduced: $ac=0+1$, $dc=0+1$, $ia=0+1$, $prs=0-1$, ph wanting, $h=1-2$, $n=2$, $sa=2$, $pa=2$, $sc=3+0$, setae of the dorsum black, but short and thin; scutellum laterally, and pleura predominantly with yellow and longer hairs. Post-alar declivity, suprasquamal ridge and propleuron bare, prosternum with yellow hairs, $st=1:1$; 1 or 2 pp , but pst wanting (constant?), mesopleurals and hypopleurals developed. Wings hyaline, veins yellow, costal spine indistinct, stem-vein with a few thin black hairs, root of r_{4+5} dorsally with a few black setae, R_5 open, m broadly rounded.

Squamae yellow, the lower one distinctly broader than long, its inner edge reaching the base of the scutellum; halter yellow. Legs predominantly yellow, but tips of the last femora, tips of all tibiae and the last two or three tarsal segments blackened; fore-tibia with two slightly longer *ad* and a submedian *pv*; mid-tibia with 1 *ad*, 1 *pd*, 2 *pv* and 1 *av*; hind-tibia with a row of long *ad*, one submedian *pd* and 1-2 short *av*.

Abdomen very stout, about $1\frac{1}{2}$ times as broad as long, coloured like the thorax, sometimes the hind abdominal margins very narrowly blackened. Bristles and setae predominantly black, anteriorly also yellow setae and hairs present.

Hypopygium (fig. 66) with separated cerci and paralobi.

Female. — Coloured like the male. Frons at vertex measuring almost half the eye-length, *iv*, *ev*, *f* and also *oc* distinct, *paf* accompanied by a few *fo* bristles, but no setae are present on the parafrontalia and -facialia.

Length : 4-6 mm.

Collection Musée du Congo : Kivu : P.N.A., 21.III.1933 (1 ♀, leg. J. GHESQUIÈRE). — Collection S. A. Institute for Med. Research, Johannesburg : S. Rhodesia : Marandella, XI.1951 (1 ♂, leg. F. ZUMPT); Bechuanaland : Kanye, I.1956 (1 ♀, leg. F. ZUMPT); Natal : Hluhluwe, I.1950 (2 ♂♂, leg. F. ZUMPT); Transvaal : Johannesburg, XII.1953 (1 ♂, reared from nest of *Trinervitermes havilandi*); Pretoria, 30.I.1949 (1 ♂, leg. F. ZUMPT); Rustenburg (1 ♀) : Naboomspruit, 20.II.1949 (1 ♂, leg. F. ZUMPT). — Collection Dept. of Agriculture, Pretoria : N. Rhodesia : Sitoti Pont, 6.VIII.1952 (1 ♂, leg. H. K. MUNRO); Transvaal : Barberton, VIII.1913 (1 ♀, leg. H. K. MUNRO); Kaapmuiden, 3.V.1950 (1 ♂, leg. H. K. MUNRO); Orange Free State : Bloemfontein, 1.II.1915 (1 ♂). — Collection American Museum, New York : Gold Coast : Accra, 26.VII.1942 (1 ♂, leg. F. SNYDER); Mozambique : Lourenço-Marques, 1914 (1 ♀, leg. H. A. JUNOD).

PERIS listed this species also from Dahomey, Nigeria, Kenya and Nyassaland.

[2. — **Stegosoma bowdeni** PERIS.]

Stegosoma bowdeni PERIS, Eos, XXVII, 1951, p. 239, et An. Estac. Exp. Aula Dei, III, 1952, p. 54.

PERIS separates this species from the other two mainly by the colouring of the legs. The thoracic squama is intermediate in shape and *pst* is present. I have received one paratype from Ibadan, Nigeria, which is listed as a male in PERIS' monograph (1952). But this specimen is a female and coincides with two other poorly preserved females from the Uam district in the Cameroons.

I have also received from the British Museum one of the 6 specimens which PERIS listed from Pretoria, 26.X.1931 and which lack the *pst*. This specimen does not belong to *S. bowdeni*, but to *S. vinculatum*. Most probably, the male from Botshabelo nr. Middelburg, Transvaal, which PERIS listed too and which is also said to lack the *pst*, will belong to *S. vinculatum*. I have not yet seen any specimens of *S. bowdeni* from Southern Africa.

Collection British Museum, London: Nigeria: Ibadan, 3.VII.1922 (1 ♀, leg. A. W. J. POMEROY). — Collection Zoolog. Museum, Berlin: Cameroons: Uam distr., 29.IV.1914 (2 ♀♀, leg. G. TESSMAN).

The holotype of this species was described from Mampong, Gold Coast.

[3. — **Stegosoma wellmani** (LICHTWARDT).]

Rhynchomyia wellmani LICHTWARDT, Dtsch. Ent. Ztschr., 1908, p. 338; PERIS, An. Estac. Exp. Aula Dei, III, 1952, p. 57.

This species is very similar to *S. vinculatum*, but shows a narrow thoracic squama which is longer than broad, and of which the inner edge does not reach the base of the scutellum. Furthermore, *pst* is present, the hind margins of the abdominal segments III and IV and sometimes also of I+II are always, but to a varying degree, distinctly blackened, and the tarsi are often totally yellow-brown. In the specimens before me, the tip of the second tibia is not blackened, but only those of the first and the third tibiae.

Whether these colour-features are constant, has to remain undecided. Unfortunately I have received only one male specimen the hypopygium of which is damaged, so that nothing can be said about the potential differences in the male terminalia.

Length: 5-7 mm.

Collection Musée du Congo : Sankuru : Lukenu, I.1948 (1 ♀, leg. J. GHESQUIÈRE); Equateur : Bitindi-Yolombo, X.1927 (2 ♀ ♀, leg. R. P. HULSTAERT); Kamalembi (Luebo), 17.IX.1921 (1 ♀, leg. H. SCHOUTEDEN). — Collection American Museum, New York : Liberia : Robertsport, 20.III.1943 (3 ♀ ♀, leg. F. M. SNYDER); Kenya : Busnia, 17.II.1948 (7 ♀ ♀, leg. N. A. WEBER). — Collection Zoolog. Museum, Berlin : Span. Guinea : Alcu Benito distr., VIII.1906 (1 ♀, leg. G. TESSMANN); Tanganyika : Mboga, III.1908 (1 ♀); Cameroons : Lobaje, V.1913 (1 ♀, leg. RAMSAY). — Collection British Museum, London : Nigeria : Yaba, 24.VII.1909 (1 ♀, leg. W. M. GRAHAM); Uganda : Aria, 1919 (1 ♂, R. E. McCONNELL).

PERIS records this species also from Sierra Leone, the Gold Coast, the Sudan and N. Rhodesia. It was originally described from Benguela, Angola.

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