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Vol 2

# NEW SPECIES OF AFRICAN HYMENOPTERA\*

## No. 8

BY DR G. ARNOLD

Family FORMICIDAE

Subfamily CERAPACHYINAE For.

*Phyracaces cooperi* Arn. (Fig. 1)

1915, *Ann. S. Afr. Mus.* XIV, 29, ♀.

♀. 4.7 mm. long. Base of the scapes ferruginous, the rest of the antennae dark brown. Legs dark reddish brown. Wings hyaline, the veins pale ochreous, the pterostigma brown. Pronotum coarsely punctured, the punctures fully as large as the anterior ocellus, and a little larger than the interspaces. Mesonotum with a few low and longitudinal rugae in the middle of the anterior half, and a few large punctures at the sides. Scutellum smooth in the middle and with a few punctures at the sides. Dorsum of the epinotum shallowly striate lengthwise, the hind margin carinate and feebly concave, shorter than the declivity. Otherwise like the ♀.

Mtunzini, Zululand, 2 ♀♀ (J. C. Faure).

Subfamily PONERINAE Lep.

Tribe PONERINI For.

*Cryptopone hartwigi* n.sp. (Figs. 2, 2a and 2b) ✓✓

♀. 2.4 mm. long, including the mandibles. Ochreous, the mandibles a little darker on the masticatory margin. Mandibles shining and sparsely punctured, the rest of the body dull, and with a close and microscopic puncturation. There is a whitish, decumbent and exceedingly fine pubescence on the thorax and abdomen. Mandibles with five small teeth. Clypeus carinate lengthwise in the middle, the carina ending in a sharp point on the anterior margin. Frontal carinae horizontal, dilated in front, covering the antennal sockets, very short, convergent behind.

\* Unless otherwise stated, the types of new species and allotypes are in the National Museum of Southern Rhodesia.

R M

type seen in Bulawayo in 1969;  
this is a true Cryptopone sensu Brown!

Frontal sulcus extending a little beyond the middle of the head. Eyes absent. Head, excluding the mandibles, slightly longer than wide, the sides moderately convex, the hind margin straight. Apical joint of the flagellum two and a quarter times longer than wide, as long as the five preceding joints united. As in *C. angustata* Sant. the thorax is strongly constricted between the mesonotum and epinotum, and the latter segment is also very narrow. Pronotum one and a half times wider than long in the middle, the sides and anterior margin feebly convex. Under a high magnification, 85 diameters, a trace of the meso-epinotal suture is visible; from that point to the upper margin of the epinotal declivity, the dorsum of the epinotum is slightly widened caudad and is two and a half times longer than wide at its apex. The declivity is steep, flat and as long as the dorsal face. Node of the petiole higher than long, the anterior face oblique and flat, the dorsal face convex transversely and lengthwise and twice as wide as long, the posterior face flat and vertical. The whole node is one-third wider behind than in front. First abdominal segment narrowed cephalad, about one-fifth wider behind than long; the second segment a little longer than the first and widest at the apex. Middle and hind tibiae with only one spur.

Pretoria, January, 2 ♂♂ (*E. K. Hartwig*).

This species differs from the other African one, *C. angustata* Sant. of French Guinea, by its greater size and the shape of the pronotum and petiole. The genus is a small one, and the majority of the species are from New Guinea and Ceylon.

#### Tribe ODONTOMACHINI Mayr.

#### ↓ ↓ *Anochetus fuliginosus* n.sp. (Fig. 3)

♂. 6 mm. long, including the mandibles. Black. Mandibles, antennae, anterior fifth of the head and the tarsi, pale brownish yellow. Tibiae brown. Dorsum of the thorax and the tergites with a few long greyish hairs. Clypeus, cheeks, anterior half of the antennal hollows and a narrow area extending from them to the hind margin of the eyes, smooth and shining. Posterior half of the antennal hollows reticulate. The middle of the head, including the frontal carinae, dull and fanwise striate, the striae reaching the clathrate groove which margins the occiput. The concavity between the eyes and the posterior corners of the head sparsely and obliquely striate. The head, measured from the base of the mandibles to the posterior corners, is a trifle longer than the greatest width, which is across the eyes. The latter, placed a little in front of the middle of the sides, are as long as the first two joints of the flagellum. The anterior ocellus is present. Mandibles nearly as long as the first eight joints of the flagellum, tridentate at the apex, the small median tooth arising from the inferior one, which is but little longer than the superior; the internal margin is edentate. Posterior corners of the head rounded, the space between them deeply and arcuately emarginate, the depth of the emargination equal to the length of the eye. The scapes extend back to the posterior corners of the head; flagellum long and

slender, the first ten joints at least twice as long as wide, the apical joint four times longer than wide. Thorax, excepting the mesopleura, dull, the pronotum concentrically rugose and punctured, the mesonotum with a clathrate groove in front, behind which it is closely and irregularly reticulate rugose on the anterior half and longitudinally rugose on the posterior half. Mesopleura smooth and shining. Epinotum transversely and finely rugose, with some reticulations and punctures, the sides and declivity of the epinotum closely, transversely striate. Pronotum a little wider than long, as long as the epinotal dorsum. The latter is parallel-sided, convex transversely, horizontal lengthwise, nearly twice as long

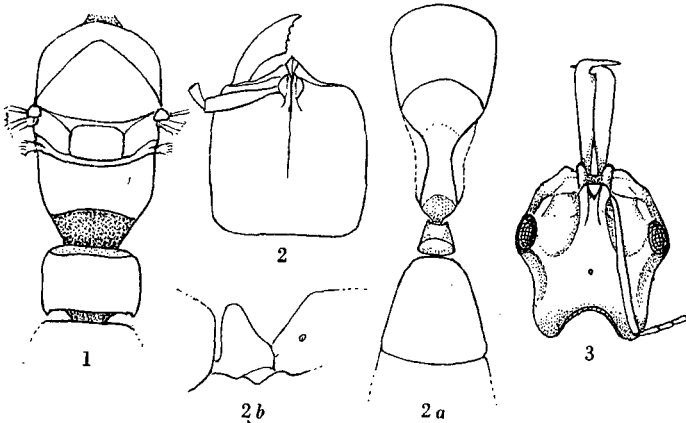


Fig. 1. *Phyracaces cooperi* ♀, thorax,  $\times 24$ .  
 Fig. 2. *Cryptopone hartwigi* ♀, head,  $\times 40$ .  
 Fig. 2a. *Cryptopone hartwigi* ♀, thorax and 1st tergite,  $\times 40$ .  
 Fig. 2b. *Cryptopone hartwigi*, petiole,  $\times 40$ .  
 Fig. 3. *Anochetus fuliginosus*, ♀,  $\times 16$ .

as wide at the apical margin which is not dentate but has a slight boss on each side. Node of the petiole shining, cuneiform in profile, the anterior face convex transversely, the posterior flat and vertical, the dorsal face linear and emarginate. Abdomen shining, the basal half of the first tergite distinctly and transversely rugulose, the remainder shining, smooth and with a few piligerous punctures.

St Lucia Lake, Zululand, February, 1 ♀ (*J. C. Faure*).

This species differs from all the other African species by the rugulose base of the first tergite; it is related distantly to *A. natalensis* Arn., from which it differs in colour, sculpture and the much deeper postocular cavities. It is also not unlike *A. Bequaerti* For., but the sculpture of the head is much coarser, and the second to fourth joints of the flagellum longer.

*Anochetus faurei* n.sp. (Figs. 4, 4a and 4b) ✓✓

♀. 10 mm. long. Varying from a pale brownish ochreous to a slightly reddish pale brown, the teeth of the mandibles and the anterior margin of the head fuscous. Glabrous and shining, the sculptured areas a little

duller. Middle of the clypeus feebly and transversely striate. Top of the head fan-wise, closely and finely striate, the striae extending in the middle from the front of the antennal carinae nearly to the posterior margin, and laterally as far as the top of the postocular concavities and covering also the posterior third of the antennal hollows; the rest of the head smooth and impunctate. Thorax finely and closely striate, transversely and somewhat concentrically on the dorsum of the pronotum and lengthwise on its sides, transversely on the mesonotum and epinotum.

The mesopleura obliquely striate in front and behind, but smooth in the middle. Upper surface of the petiole transversely and very finely striate, the abdomen smooth and impunctate. Mandibles seven-tenths as long as the head, the inferior tooth not longer than the superior. Median area of the clypeus subhexagonal, wider than long. Head widest across the eyes, about one-tenth longer than wide. Antennal hollows and the postocular concavities shallow. A wide groove, at its widest as wide as the eyes seen from above, extends from behind the frontal carinae to the hind margin of the head, which is angularly and narrowly emarginate; the posterior corners of the head convex. The eyes are very

convex, placed just in front of the middle of the sides, and as long as the second joint of the flagellum. Antennae very long and slender, the scapes extending beyond the hind margin of the head by a length equal to the length of the first two joints of the flagellum. All the joints of the flagellum much longer than wide, the first joint three and a half times longer than wide at the apex, the third to fifth each a little longer than the first. Pronotum pyriform, two-sevenths longer than wide, mesonotum about as wide as long, epinotum shallowly concave lengthwise in the middle, slightly widened caudad, two and a third times longer than wide at the apical margin, the latter with a raised margin which is subdentate on each side. The dorsum of the epinotum is seven times longer than the declivity. Petiole triangular in profile, the anterior oblique face twice as long as wide behind, convex transversely, the dorsal edge narrow, linear and bidentate, the posterior face vertical and convex transversely. First abdominal segment subconical, a trifle longer than wide behind. Legs very long, the hind tibiae as long as the scape and one-fifth longer than the basitarsus.

Nongoma, Zululand, February, numerous ♂♂ (J. C. Faure).

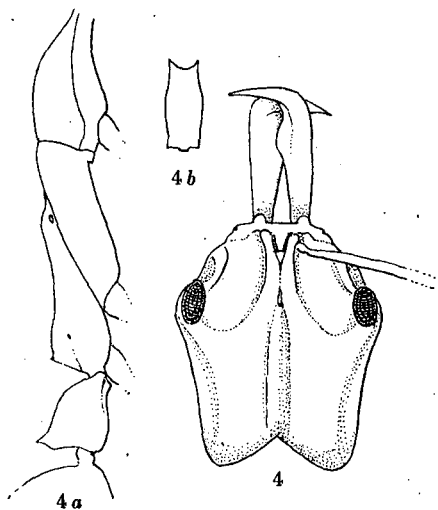


Fig. 4. *Anochetus faurei* ♀, head,  $\times 16$ .

Fig. 4a. *Anochetus faurei* ♀, thorax,  $\times 16$ .

Fig. 4b. *Anochetus faurei* ♀, petiole, front view,  $\times 16$ .

Allied to *angusticornis* Arn. but much larger, with a narrower pronotum, quite different sculpture of the thorax, and a differently shaped petiole.

## Subfamily DORYLINAE

*Dorylus* (*Alaopone*) *diadema* Gerst. subsp. *Arnoldi* For.  
(Figs. 5, 6 and 6a)

1914, *Bull. Soc. Vaudoise Sci. Nat.* v, 216, ♂.

♀. 2-3.7 mm. long. Pale amber yellow, the head becoming increasingly darker in front, so that the anterior fifth, including the mandibles, is ferruginous. In the smallest specimens, the colour is a little paler than in the larger ones. Sparsely punctured, each puncture with a pale yellow and decumbent hair. On the head the punctures are separated by spaces about four times wider than the punctures, on the pronotum the punctures are quite twice as large as those on the head, and closer together, at least at the sides. On the meso-epinotum and petiole the punctures are a little smaller and shallower than on the pronotum, and on the abdomen the punctures are smaller and more widely spaced than those on the head. The head is almost parallel-sided in the largest specimens (3.7 mm.) with only the posterior fourth slightly narrowed, in the medium-sized specimens and smallest specimens the head is slightly and gradually widened from the posterior angles forward. The proportions are as follows:

♂. 3.7 mm. long, head a little more than one-third longer than wide.

♀. 2-3.2 mm. long, one-fifth longer than wide in front.

Mandibles with two deep sulci, the apex acute, behind which are two small teeth. The frontal carinae are very short, project slightly over the almost linear clypeus, and coalesce behind, forming a V. On each side of them is a deep concavity on the outer ridge of which is the antennal socket. The scapes are sparsely punctured and extend beyond the anterior angles of the head by a length equal to their apical width; flagellum 8-jointed, the first joint a trifle longer than wide, the second to the seventh nearly twice as wide as long, the apical joint a little more than twice as long as wide. There is a very short median longitudinal sulcus a little behind the frontal carinae; the posterior margin of the head is moderately concave and the posterior corners are rounded, more so in the larger ♀♀ than in the smallest. Sides of the thorax nearly rectilinear, moderately convergent caudad, the anterior margin of the pronotum convex. In the largest ♀♀ the pronotum is one-fourth longer than wide, in the medium and smallest, it is as long as wide. In the largest the meso-epinotum is one-seventh longer than wide, in the others it is as long as wide. In profile the dorsum of the thorax is flat and horizontal. Node of the petiole trapezoidal, in the largest ♀♀ one-fifth wider behind than long; in the medium-sized ♀ and smallest one-tenth wider behind than long. The ventral lamella of the petiole is expanded cephalad into a large blunt angle. First abdominal segment about two-thirds wider behind than long, the anterior corners rounded. Pygidium

shining, the concave impression with tumid margins, the apical margin angular and with a small tooth on each side.

Matopos, Southern Rhodesia, May. Sifted from damp soil on the banks of a stream.

Although not taken with the ♂♂, there can be little doubt that these workers belong to *D. diadema* race *Arnoldi*, as that is the only species of the subgenus *Alaopone* known from Southern Rhodesia. It is probable that the 3.7 mm. long specimens described above are not the largest.

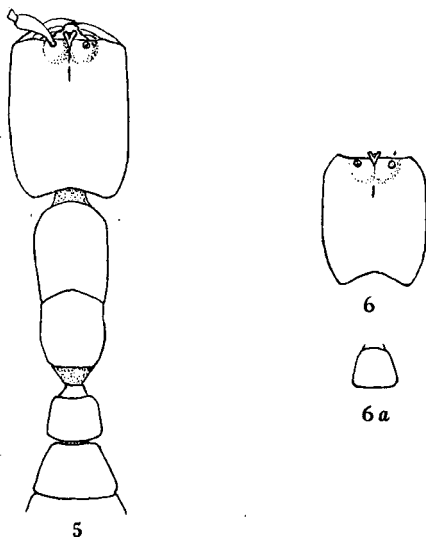


Fig. 5. *Alaopone diadema* ♀, 3.7 mm. long, head and thorax, × 24.

Fig. 6. *Alaopone diadema* ♀, 3 mm. long, head, × 24.

Fig. 6a. *Alaopone diadema* ♀, 3 mm. long, petiole, × 24.

### Subfamily MYRMICINAE

#### Tribe MONOMORIINI Emery

#### *Monomorium lubricum* n.sp. (Fig. 7)

♀. 2.4 mm. long. Dark brown, the thorax a little paler than the head and abdomen. Mandibles and flagellum brownish yellow, the legs pale brown, the tarsi pale ochreous. A few long whitish hairs on the petiole and abdomen. Shining and smooth, without recognizable sculpture. Mandibles quadridentate. Median area of the clypeus convex lengthwise, its apical margin feebly concave. Frontal carinae short and wide apart. Eyes placed halfway between the anterior margin and middle of the sides. The scapes extend back to the beginning of the posterior fourth of the head. Head about one-fourth longer than wide, the sides moderately convex, the posterior margin almost straight. First joint of the flagellum twice as long as wide, the second as long as wide, the third to

seventh wider than long, the club 3-jointed, its basal joint as long as wide, the second, one and a half times wider at the apex than long, the apical joint a little more than twice as long as wide; the whole club a little longer than the rest of the flagellum. Pro-mesonotum two-fifths longer than wide, the pro-mesonotal suture obsolete. Dorsum of the epinotum convex lengthwise, about twice as long as wide at the apex, where it merges in a wide arc with the declivity. The peduncle of the first joint of the petiole is one-fourth as long as the node below; the node is bluntly cuneiform in profile, higher than long, as wide as long, convex lengthwise above, and extended below into a transparent membranous lamella. The second node is a little wider than the first and one-fifth wider than long.

Marieskop, Transvaal, July, 10 ♀♀ (J. C. Faure).

Belonging to the subgenus *Monomorium* s.str. and allied to *M. Bevisi* Arn., from which it differs by the greater size, colour, more rounded junction of the two faces of the epinotum and the presence of the membranous lamella on the ventral side of the petiole.

#### Tribe PHEIDOLOGETINI Emery

#### Sporocleptes n.g. = *Aneleus*

♀. Antennae 11-jointed, with a very distinct 2-jointed club, of which the first joint is cup-shaped, i.e. much narrowed at the base, the apical joint more than twice as long as the preceding. Mandibles quadridentate, the apical tooth acute. The median area of the clypeus extends back between the frontal carinae, its anterior margin sinuate and with a feeble angle on each side. Frontal carinae strongly divergent caudad, extending almost to the middle of the head. Eyes very small, placed in front of the middle of the head. Pro-mesonotal suture absent, the pronotum without angular shoulders. Epinotum with lamellar spines, the dorsum marginate at the sides, the raised margin being an extension of the dorsal edge of the spines. The underside of the spines is continued as a membranous lamella which margins the declivity, and ends below in broad episternal teeth. Petiole pedunculate, more or less clavate in profile, the post-petiole narrow and trapezoidal. First abdominal segment with a concave anterior margin and angular shoulders. Femora and tibiae somewhat swollen, middle and hind tibiae without calcaria.

Genotype *S. nicotianae* n.sp.

Closely allied to the West Indian *Spelaemyrmex* Wheeler, from which it differs by the lamellar extension of the epinotal spines, rounded shoulders of the pronotum, the unarmed median area of the clypeus and the much longer frontal carinae. Of the three specimens, one has been mounted in Canada Balsam, but nevertheless, it has not been possible to see the palpi distinctly. As in *Spelaemyrmex* the first joint of the club is very distinctly cup-shaped. The genus is also close to *Aneleus* Em., but if there is a soldier caste, it is at present unknown.

**Sporocleptes nicotianae** n.sp. (Figs. 8, 8a)

♀. 1.9 mm. long. Ochreous, the abdomen paler than the rest of the body. Head one-tenth longer than wide, the sides strongly convex, the posterior margin concave, the posterior corners angular. Sides of the head in front of the eyes very finely striate lengthwise, otherwise smooth, shining and impunctate. Mandibles finely striate and somewhat dull. Front joint of the flagellum fully twice as long as wide, the second to eighth wider than long, the ninth (the first joint of the club) twice as long as wide at the apex, the apical joint three times longer than wide. Pro-mesonotum smooth and shining, a trifle longer than wide, excluding the neck of the pronotum. Meso-epinotal suture deep and clathrate. Dorsum of the epinotum dull, microscopically granulate, widened a little posteriorly and as wide there as long. Mesopleura fairly dull, rugose lengthwise. Metapleura and sides of the epinotum dull and reticulate. Declivity of the epinotum smooth, longer than the dorsum. Petiole half as long again as high, the peduncle as long as the node, the latter fairly flat above, two-thirds longer than wide, the sides marginate. Post-petiole trapezoidal, one-fifth longer than wide, convex above, the hind margin two and a half times wider than the anterior. For the rest see the characters of the genus.

Macheke, Southern Rhodesia, October, 3 ♀♀, carrying away seeds from a tobacco seed-bed.

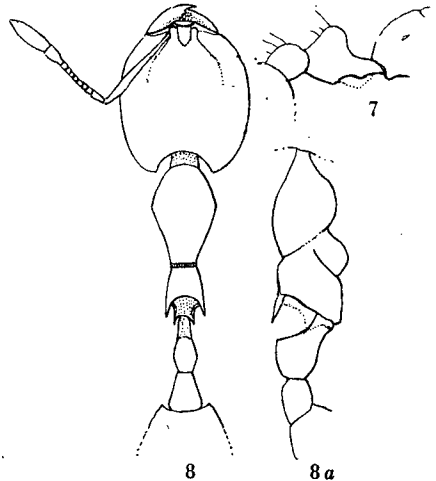


Fig. 7. *Monomorium lubricum*, ♀, petiole, ×40.

Fig. 8, 8a. *Sporocleptes nicotianae* ♀, head and thorax, ×40.

## Tribe MERANOPLINI Emery

Genus *Calyptomymex* Emery***Calyptomymex Arnoldi* Hartwigi** n.subsp.

*Calyptomymex Arnoldi* For. 1917, *Ann. S. Afr. Mus.* XIV, 360.

♀. 2.3 mm. long. As a detailed description of *C. Arnoldi* Forel. was provided in my monograph of the South African Formicidae, it will be necessary only to indicate the differences between the species and subspecies. Smaller, and darker, or dark burnt umber. The second joint of the antennal club is one-fifth wider at the apex than long, whereas in *Arnoldi* i.sp. it is as wide as long. The antennal scapes are almost smooth



and shining, but in *Arnoldi* i.sp. they are dull and reticulate. The dorsum of the epinotum is barely longer than the declivity and posteriorly has a blunt boss on each side instead of upright and acute teeth. The first node of the petiole is thicker, being quite twice as wide as long, and also more convex lengthwise on the dorsum.

♂. 2.7 mm. long. Black. The tarsi and tibiae, straw yellow, the tibiae slightly fuscous. Head and thorax dull, closely and microscopically reticulate-punctate, petiole and abdomen shining, sparsely punctured and with a sparse yellowish pilosity. Frontal triangle shining and feebly punctured, the mandibles triangular and punctured. The eyes very convex, occupying a little more than the anterior half of the sides of the head. First joint of the flagellum one and a half times longer than wide, the second three times longer than wide, all the remaining joints longer than wide, the apical nearly four times longer than wide. Mesonotum as long as wide, overhanging the pronotum, which is not visible from above. Scutellum gibbous, posteriorly overhanging the metanotum. Dorsum of the epinotum very oblique, feebly marginate at the sides, slightly concave transversely and a little longer than wide; the declivity vertical, as long as the dorsum, the sides sharply marginate. Petiole clavate seen from the side, nearly twice as long as the node is high, the node very convex above; post-petiole nearly twice as wide as long, widest in the middle, and twice as wide there as at the anterior margin, convex transversely and lengthwise. First tergite ovoid, one-fourth longer than wide.

Pretoria, January (*E. K. Hartwig*).

#### ***Calyptomyrmex cataractae litoralis* n.subsp.**

*Calyptomyrmex cataractae* Arn. 1926, *Ann. S. Afr. Mus.* XXIII, 283.

♀. 2.8 mm. long. Colour a little paler than in the type of the species. The apical joint of the flagellum a trifle more than twice as long as the two preceding joints united, whereas in *cataractae* i.sp. it is only two-thirds longer. The fine longitudinal rugae on the head are coarser, and over the anterior fourth of the head, where they are closest, are about three times as wide as the interspaces, which are shining and very indistinctly punctured. In the type of the species the rugae are much finer, and closer together, over the anterior fourth about twice as wide as the interspaces, which everywhere are dull and clearly reticulate-punctate. The dorsum of the epinotum is reticulate-punctate only, whereas in *cataractae* type, it is also sparsely rugose lengthwise. The posterior angles of the mesonotum do not end in recognizable teeth. Otherwise like the type of the species.

Richards Bay, Zululand, February, 8 ♀♀ (*J. C. Faure*).

#### ***Calyptomyrmex brunneus* n.sp.**

♀. 2.6 mm. long. Dark brown. Mandibles, flagellum and the legs burnt sienna. The hairs ochreous. Mandibles feebly punctured, shining, with four indistinct teeth. Head and thorax dull, the head longitudinally rugose, the rugae diverging caudad, closely punctured between the

rugae. Scrobe reticulate-punctate and nitidulous. Pro-mesonotum rather sparsely but coarsely rugose lengthwise, the rugae gradually thinner caudad. Metapleura transversely striate, the rest of the thorax reticulate-punctate. Nodes of the petiole dull, reticulate-punctate. Abdomen slightly shining, with a fine and very shallow puncturation. The pilosity consists of clavate hairs, not spatulate as in the majority of the species, and occurs rather sparsely on the head, thorax, petiole and tibiae. On the abdomen the hairs are also sparse and separated from one another by a space as long as the hairs. The head appears to be more narrowed anteriorly than in the other South African species, being a little (one-seventh) longer than wide at its widest, measured from the apex of the clypeal teeth to the occipital margin. The scrobes are more oblique, the lower half being visible when the head is viewed from above, whereas in the other species the scrobes are visible only from a lateral view. Scapes nearly five times longer than wide; first joint of the flagellum one and a half times longer than wide, the first joint of the club as long as wide at the apex, the second a little wider than long, the apical joint three times longer than wide. Pro-mesonotum narrow, one-seventh wider in front than long. Dorsum of the epinotum parallel-sided, as long as wide, with an acute short tooth at the posterior corners, the declivity oblique and not much shorter than the dorsum. Both nodes of the petiole twice as wide as long, the second node one-fifth wider than the first.

Ngomi Forest, Transvaal, 2 ♂♂ (J. C. Faure).

Allied to *C. piripilis* Sant. but much smaller.

#### Tribe MYRMECININI

#### *Pristomyromex cribrarius* Arn. (Fig. 9)

1926, *Ann. S. Afr. Mus.* XXIII, 281, ♀.

♀. 3 mm. long. Thorax a little darker than in the ♀, or reddish brown. Pro-mesonotal and meso-epinotal sutures obsolete. The pronotum has on each side an acute tooth, erect and slightly divergent outwardly. The epinotal spines are more divergent than in the ♀. Otherwise like the ♀.

St Lucia Lake, Zululand, February, 10 ♂♂ (J. C. Faure).

These ants and also the species of *Strumigenys* and *Microdaceton* were all obtained by sifting the detritus and damp decaying leaves found under bushes.

*Limnomyrmex* n.gen. = *Nesomyrmex*?

♀. Mandibles with five teeth. Median area of the clypeus scutate, the anterior margin not produced, the lateral areas strap-like, not raised behind to form a ridge margining the antennal sockets. Frontal carinae short and divergent. Antennae 12-jointed, with a 3-jointed club, the first joint of the flagellum longer than wide. Pro-mesonotal suture obsolete, pronotum with subangular shoulders; posterior half of the pronotum, the mesonotum and the dorsum of the epinotum marginate

at the sides. Dorsum of the epinotum with long and divergent apical spines, the episternal teeth small. First joint of the petiole with a short anterior peduncle, the node broad, higher than wide, with a small tooth at the middle of the lateral margins, and a pair of denticles on the dorsal face and a pair on the hind margin of the same; the second joint wider than the first, and with a denticle on each side. Base of abdomen not truncate. Femora swollen. Middle and hind tibiae without calcaria.

Genotype. *L. stramineus* n.sp.

This genus differs from *Atopomyrmex* by the structure of the thorax and petiole, the non-truncate base of the abdomen, and the shape of the lateral sclerites of the clypeus. From *Terataner* it differs by the short and divergent antennal carinae and by the structure of the petiole

*Type seen in Bulawayo in 1969;  
this is a Nesomyrmex!*

***Limnomyrmex stramineus* n.sp.** (Figs. 10, 10a and 10b)

♂. 2.7 mm. long. Pale ochreous or straw yellow, the masticatory margin of the mandibles pale brown. The apical margins of the first two tergites with a few short and blunt hairs, otherwise glabrous. Abdomen shining, the base with traces of longitudinal rugosity (75 diameters), the rest of the body dull, closely and very finely reticulate-punctate. Head, excluding the mandibles, one-fourth longer than wide, moderately narrowed in front, the sides feebly convex, the hind margin straight, the posterior corners rounded. Eyes placed in the middle of the sides. Median area of the clypeus longer than wide in front, its anterior margin obtusely angular. The frontal carinae do not extend back as far as the line joining the anterior margin of the eyes. The latter fairly large. The scapes fall short of the hind margin of the head by one-third of their length. First joint of the flagellum one and a half times longer than wide, the second to ninth joints wider than long, the tenth twice as long as the ninth, the apical joint two and one-third times longer than wide. Pro-mesonotum as long as wide, widest at the shoulders, which are subangular; on each side of the middle of the pronotum and a little behind the convex anterior margin there is a denticle. Mesonotum slightly swollen on each side posteriorly. Meso-epinotal suture deep. Dorsum of the epinotum sub-hexagonal, a little longer than wide, the sides angular in the middle and with a setose pimple opposite the angles, the hind margin with a spine at each corner, divergent and twice as long as wide at the base; the declivity vertical. The peduncle of the first joint of the petiole shorter than the node, the latter higher than long, one and a half times wider than long, convex above, the sides produced into triangular teeth, the dorsal face with a pair of setose denticles in front and another pair on the hind margin. The second node is a little wider than the first, one and a half times wider than long, convex above, produced at the middle of the sides into a small setose tooth. The ventral edge of the first joint of the petiole has a tooth near the base.

St Lucia Lake, Zululand, 1 ♀ (J. C. Faure).

**Tetramorium latens** n.sp. (Figs. 11, 11a)

♀. 3 mm. long. Dark brown, the pro-mesonotum a little paler than the rest of the body. Legs pale brown, mandibles and antennae yellowish brown. The legs and antennae with a fine and very sparse pubescence, otherwise glabrous. Mandibles striato-punctate, with five indistinct teeth. The sculpture on the whole body consists of a fine reticulation barely visible under a magnification of less than 60 diameters. The middle-third of the head has about ten longitudinal rugae extending from the frontal carinae to the occipital margin, and the anterior half

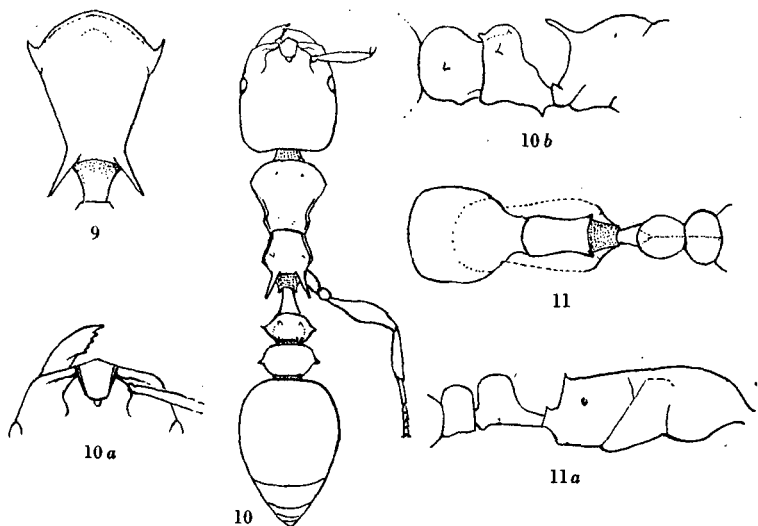


Fig. 9. *Pristomyrmex cribrarius* ♀, thorax,  $\times c. 30$ .

Fig. 10. *Linnomyrmex stramineus* ♀,  $\times 27$ .

Fig. 10a. *Linnomyrmex stramineus* ♀, clypeus,  $\times 45$ .

Fig. 10b. *Linnomyrmex stramineus* ♀, epinotum and petiole,  $\times 45$ .

Fig. 11, 11a. *Tetramorium latens* ♀, thorax, dorsal and lateral views,  $\times 27$ .

of the sides are widely reticulate rugose. Head almost parallel-sided, slightly narrowed over the anterior fifth, nearly one-fifth longer than wide. Clypeus with three longitudinal rugae on each side, nearly one and a half times wider on the anterior margin than long. Frontal carinae very short. Eyes placed on the middle of the sides, as long as one-fifth of the length of the sides. Scapes short, falling short of the occipital margin by a distance equal to one-fourth of their length; second to seventh joints of the flagellum at least twice as wide as long, the apical joint fully twice as long as wide. Hind margin of the head feebly concave, the posterior corners widely rounded. Pro-mesonotal suture very feeble; the pronotum is nearly twice as wide as long, moderately convex in front and at the sides. Dorsum of the epinotum narrow, twice as long as wide at the apex, slightly narrowed in the middle, the apical

teeth erect and very small. The peduncle of the first segment of the petiole is half as long as the node; the latter, seen from above, is broadly oval, as long as wide, its upper half slightly compressed transversely, seen from the side it is cuboid, higher than long, the ventral surface with a blunt triangle in front of the hind margin. The second node is almost one-fourth wider than the first, one and a half times wider than long, transversely oval, and like the first node slightly transversely compressed above. First tergite about one-sixth longer than wide. Femora slightly swollen.

Bulawayo, December, 1 ♀.

Several specimens seen moving up and down in the crevices of the bark of a tree, *Parinarium mobola*, but only one could be dislodged. A slow-moving ant. Distantly related to *Tetramorium semireticulatum* Arn., but the sculpture and the shape of the first node of the petiole are very different.

#### ***Tetramorium semireticulatum politum* n.var.**

*Tetramorium semireticulatum* Arn. 1917, *Ann. S. Afr. Mus.* xiv, 319.

♀. 2.8 mm. long. Larger and darker than the type of the species, the rugose middle portion of the head, the thorax and first tergite vandyke brown; the base and apex of the latter paler or yellowish brown. The reticulations on the pronotum are stronger and extend over the anterior half of the mesonotum. On the first tergite the reticulate sculpture covers only the basal fourth and ends abruptly, the rest of the segment being polished and very shining.

Matopos, Southern Rhodesia, November. Like the type of the species also found in the mounds of *Platythyrea lamellosa* Rog.

#### Tribe DACETINI Forel

#### ***Microdaceton exornatum* Sant.**

1914, *Medd. Goteborgs Mus. Zool.* III, 33, ♀.

♀. 3.4-3.8 mm. long, including the mandibles. Posterior half of the first tergite dark brown, the declivity of the epinotum transversely rugulose, otherwise like the ♀ in colour and sculpture. Pronotum very short, mesonotum about one-fourth wider than long, the anterior third convex transversely and oblique, the posterior two-thirds flat and horizontal. Epinotal teeth shorter than in the ♀, about as long as wide at the base. Otherwise like the ♀.

Hlabiza, St Lucia Lake, Zululand (J. C. Faure). February to May. Several ♀♀ and ♂♂, the former all de-alated. Obtained by sifting dead leaves and detritus under bushes.

#### ***Microdaceton exornatum laevior* n.var. :: *exornatum*?**

♀. 2.8 mm. long, including the mandibles. Pale ochreous. The dorsum of the epinotum is only very finely reticulate-punctate, without the rugosity at the base which is present in the type of the species,

otherwise the sculpture is similar, but the reticulations on the head and thorax are very low or abraded, so that the spaces between them are very shallow. The flagellum is more slender, the teeth on the posterior corners of the head are shorter and blunter. The ♀ of this variety differs from its ♂ in the same way as in the type of the species.

Dukuduku, and Richards Bay, Zululand, February, 4 ♂♂, 1 ♀ (J. C. Faure).

**Strumigenys faurei** n.sp. (Figs. 12, 12a) = *S. rufobrunnea* n.sp.

♀. 2 mm. long, including the mandibles. Reddish ochreous. Head, thorax and petiole with a fine raised reticulation forming more or less circular pits, appearing under a low magnification, reticulate-punctate. The pronotum has in addition a longitudinal rugulosity. The sculpture on the nodes of the petiole somewhat effaced. The posterior half of the sides of the epinotum smooth and shining. Abdomen smooth, the basal half of the first tergite with about twelve longitudinal and thin ridges. The anterior margins of the clypeus, and of the scapes, and the upper margin of the antennal scrobes with a line of narrowly spatulate hairs; on each side of the pronotum there is also a spatulate hair; on the nodes of the petiole and on the dorsum of the abdomen there are a few long and slightly clavate hairs. Head, excluding the mandibles, subtriangular or cordate, and excluding the mandibles, very nearly half as long again as wide behind. Mandibles curved, five-eighths as long as the head, with four teeth, the apical shorter than the preapical, the latter and the basal of about equal length, the tooth between them a little shorter than the apical. Posterior margin of the clypeus acutely angular, the anterior margin straight. The antennal scrobes wide and shallow, extending back to the posterior fifth of the head, the eyes composed of about twelve facets placed at about the middle, and below the lower margin, of the scrobes. The eyes are clearly visible when the head is viewed from above, and their anterior margin is convex, not conical as in *Proscopomyrmex londianensis*, the lateral outline of the head is interrupted by an oblique excision which is due to a vertical groove extending ventrad from the scrobes. The scapes nearly reach the posterior third of the head, flagellum 5-jointed, the apical joint one-quarter longer than the first four taken together. Hind margin of the head arcuately emarginate, much less deeply so than in *P. londianensis*. Pronotum fully twice as wide as long, the sides convex. Pro-mesonotal suture distinct, mesonotum semi-circular, a little longer than the metanotum, the meso-metanotal suture a little more distinct than the pro-mesonotal, the meta-epinotal suture deep. Dorsum of the epinotum as long as wide, feebly convex, the apical margin with a distinct triangular tooth on each side. The declivity of the epinotum vertical, a little longer than the dorsum, its sides margined by a lamella extending from the lower edge of the epinotal teeth. The dorsum of the thorax from the epinotal teeth to about the middle of the pronotum is marginate at the sides. Peduncle of the first joint of the petiole is as long as its node, the latter is two-thirds wider than long, and its anterior margin is transverse, and its dorsum convex lengthwise. The second

node is transversely elliptical, convex above, about twice as wide as long and twice as wide as the first node. On the underside of both joints of the petiole there is some spongy tissue. First tergite barely wider than long.

♀. 2.3 mm. long. Mesopleura smooth and shining. The mandibles in proportion to the length of the head, shorter than in the ♂. A broad and shallow frontal groove, which is very indistinct in the ♂, extends halfway from the hind margin of the clypeus to the anterior ocellus. Mesopleura smooth and shining. The pronotum is visible from above, its shoulders obtusely angular. Mesonotum about as long as wide behind, its outline semi-elliptical. Scutellum transversely oval. Dorsum of the epinotum twice as wide as long. First node of the petiole three times wider than long, the second node transversely elliptical and about three times wider than long. De-alated. Otherwise like the ♀.

Sordwana, Richards Bay and St Lucia Lake, Zululand, 18 ♂♂, 3 ♀♀ (J. C. Faure). The types are from Sordwana.

This species forms a link between *Strumigenys* s.str. and *Proscopomyrmex* Patrizi, for which reason I consider that the latter should be regarded as a subgenus of *Strumigenys*. It differs from *Proscopomyrmex londianensis* Patr. in having quadridentate mandibles, in the antennal scrobes extending backwards well beyond the eyes, in the distinctly bidentate epinotal dorsum and in the shape of the nodes of the petiole.

#### Subfamily FORMICINAE

**Camponotus** (s. ~~g.~~ <sup>g.</sup> **Tanaemyrmex**) **dicksoni** n.sp. (Figs. 13, 13a-c)

♂. 7.5 mm. long. Brownish black. Mandibles ferruginous, basal third of the scapes and the flagellum pale reddish brown. Coxae and trochanters and base of the femora yellowish white, the tarsi brownish yellow. The clypeus, anterior third of the head above, and of its sides below the level of the eyes and apical margin of the tergites with a few yellowish and exserted hairs. There are six similar hairs on the pronotum, two on the mesonotum, four on the middle of the epinotum and two on each side of the scale of the petiole. Shining. The sculpture consists of a microscopic reticulation just visible under a magnification of 30 diameters. In addition, there are some large punctures, from which arise the hairs, on the clypeus and sides of the head. A row of four such punctures margin on each side the space between the frontal carinae, Mandibles sparsely punctured, with seven teeth. Head very convex. widest just behind the eyes which are placed behind the middle of the sides, a little longer than wide, two-thirds wider at its widest than wide in front. Clypeus strongly carinate, as long as wide, the median area projecting by one-fifth of its length beyond the lateral sclerites, its anterior margin feebly convex and crenulate. Frontal triangle small. Frontal carinae strongly convex laterad, as long as their greatest width apart. The scapes extend back to the hind margin. Posterior angles widely rounded, the hind margin almost straight. Pronotum about two-thirds wider than long, mesonotum pyriform, widest in front and as long as wide there. Dorsum of the epinotum nearly twice as long as wide at

the apex, feebly convex transversely, its junction with the vertical sides forming an obtuse angle, slightly widened caudad, about as long as the declivity, the latter flat. Scale of the petiole convex in front, flat behind. Convexity of the thorax, length equal to two and one-fifth times the height. Femora strongly compressed, the tibiae moderately so and oblong in cross-section.

♀ media. 5.5 mm. long. Sides of the head, in front of the eyes, barely convex, convergent anteriorly. Head about one-sixth longer than wide behind, the greatest width, just behind the eyes, is five-eighths greater than the width at the anterior margin. Clypeus two-fifths wider than long, the anterior margin straight, the median carinae strong. Frontal carinae more divergent than in the ♂, and only feebly convex. Eyes more convex than in the ♂, separated from the hind margin of the head by a distance equal to their own length. The scapes extend beyond the hind margin of the head by nearly one-third of their length. Pronotum narrower, about one-fourth wider than long. Dorsum of the epinotum a little narrower than in the ♂, joining the declivity in a wider arc.

♀ minor. 4.5 mm. long. Like the ♀ media.

Strandfontein, near Cape Town, February (C. G. C. Dickson). Found milking larvae of the Lycaenid *Phasis pyrois* in little spaces in the sand below the food plant.

Allied to *Camponotus cleobulus* Sant., which is darker, and has a much longer and transversely more convex epinotal dorsum. The two depressions near the back of the head and the sparse and large puncturation in the occipital region which are present in *cleobulus* ♂, are lacking in this species.

***Camponotus* (s. ~~g.~~ <sup>g.</sup> Myrmespera) *transvaalensis* n.sp.**  
(Figs. 14, 14a and 14b)

♂. 9 mm. long. Head black, thorax pale brown, abdomen black, but the anterior face of the first tergite paler, antennae ferruginous, the legs brownish yellow. There are a few erect, yellowish hairs on the clypeus, pronotum, the brow of the epinotal declivity, the edge of the scale and on the tergites. On the latter the hairs are in two rows, one across the middle of the segments and one on the apical margins. Mandibles shining, strongly striato-punctate, quadridentate. Head dull and strongly reticulate-punctate as far as the level of the middle of the eyes, beyond that to the hind margin microscopically reticulate and very shining. The rest of the body shining, with a microscopic rugulosity and reticulation. Head massive and high, subtruncate in front, moderately narrowed in front, two-fifths longer than wide. The cheeks extend forward to the base of the mandibles so that the lateral sclerites of the clypeus are obliterated. The median area of the clypeus feebly convex transversely, a little wider than long, the apical margin widely and angularly excised. Frontal carinae a little longer than their distance apart. Eyes large, placed just behind the middle of the side. The scapes fall short of the hind margin of the head by a distance equal to the length of the eyes.



All the joints of the flagellum longer than wide. Hind margin of the head concave. Pronotum twice as wide as long, fairly flat, the sides convex; mesonotum obovate, as long as wide. Metanotum short, but distinct. Dorsum of the epinotum convex transversely, twice as long as wide, as long as the declivity into which it merges gradually in a low arc. Scale of the petiole a little wider than high, convex in front and behind, the dorsal edge trenchant. Femora transversely compressed, the tibiae elliptical in cross-section. Convexity of the thorax, length equal to two and a half times the height.

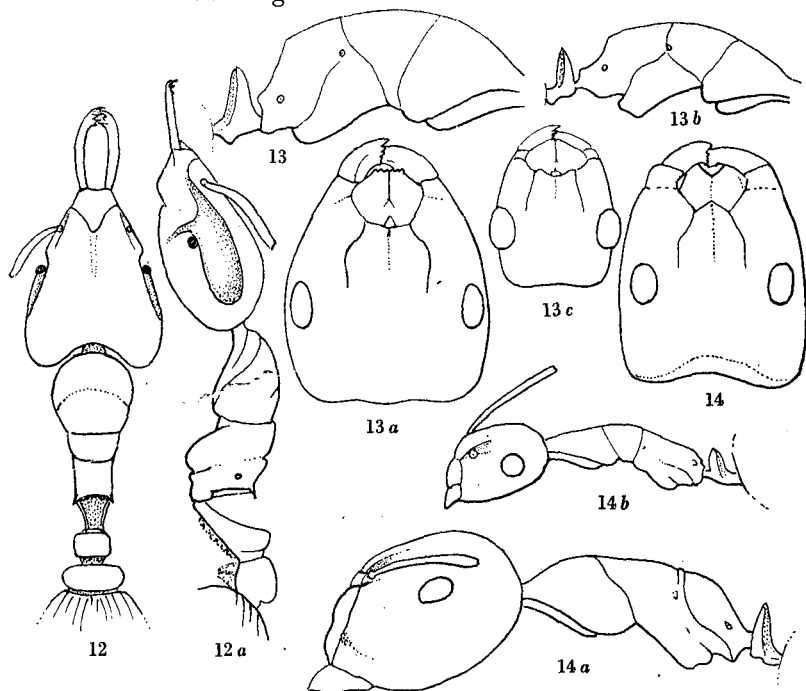


Fig. 12, 12a. *Strumigenys faurei* ♀, head and thorax,  $\times 45$ .  
 Fig. 13. *Camponotus dicksoni* ♂, thorax,  $\times 12$ .  
 Fig. 13a. *Camponotus dicksoni* ♂, head,  $\times 12$ .  
 Fig. 13b. *Camponotus dicksoni* ♀, thorax,  $\times 12$ .  
 Fig. 13c. *Camponotus dicksoni* ♀, head,  $\times 12$ .  
 Fig. 14. *Camponotus transvaalensis* ♂, head,  $\times 12$ .  
 Fig. 14a. *Camponotus transvaalensis* ♂, head and thorax,  $\times 12$ .  
 Fig. 14b. *Camponotus transvaalensis* ♀, head and thorax,  $\times 12$ .

♀. 5 mm. long. Head and abdomen brown, thorax and legs brownish ochreous, the antennae pale reddish brown. Head about one-fourth longer than wide. Clypeus half as wide again as long, feebly carinate lengthwise medially, the anterior margin feebly trisinate, not excised. Eyes very convex. The scapes extend beyond the hind margin of the head by half their length. Dorsum of the epinotum nearly four times longer than wide, three times longer than the declivity. Scale thicker than in the ♂. Convexity of the thorax, length equal to three and one-third times the height.

Standerton, Transvaal, February, 7 24, 4 ♀♀ (J. C. Faure).

Allied to *C. Havilandi* Forel. from which it differs by the darker colour in both castes, the wider head and clypeus, and greater convexity of the epinotum.

#### Family POMPILIDAE

It will be fitting to preface the descriptions of new species with some remarks on proposed changes and emendations in the classification of this family which have recently been made by Pate, Bradley and others.

Pate, *Generic Names of the Spider Wasps*.

1946, *Trans. Amer. Ent. Soc.* LXXII, 2.

In this exceedingly useful check-list of the genera of the Pompilidae, pp. 123-28, Pate rejects the validation of *Pompilus* and the suppression of *Psammochares* for reasons which are too lengthy to be repeated here, but which fundamentally resolve into the refusal to recognize the authority of the International Commission on Zoological Nomenclature. But it is by virtue of the plenary powers conferred on the Commission by the International Zoological Congress in 1913 that those changes were made. I, myself, monographed the Ethiopian species under the title *Psammocharidae*, but that was before the validation of *Pompilus* in 1945. I cannot agree with Pate's views, and shall therefore continue to use the names *Pompilus* and Pompilidae.

#### *Pseudagenia* Kohl, 1884

For the generic name, Pate (pp. 116-17) proposes that *Auplopus* Spin. 1811 should be resuscitated, and furthermore argues that even if that name should be rejected on grounds advanced by Banks, *Pilpomus* Costa 1859, for which no species were indicated, would take precedence over Kohl's name. This case furnishes a striking instance of how a strict adherence to the rules of priority, when raised to a fetish, stultify the whole object of setting up an International Commission on Zoological Nomenclature. Only one species has been described under the name of *Auplopus*, and none under *Pilpomus*, whereas dozens have been described under the genus *Pseudagenia*. Since to resuscitate *Auplopus* would lead to far greater confusion than uniformity, it would have been better if Pate had submitted a request to the Commission to validate *Pseudagenia* and suppress both *Auplopus* and *Pilpomus*. This action I have now taken myself, and until the Commission has published its decision, shall continue to recognize *Pseudagenia* Kohl.

#### *Deuteragenia* Süstera, 1913

Pate (op. cit. p. 118) remarks that Banks has recently found that the Brazilian *Dipogon populator* Fox 1897 is congeneric with *Deuteragenia*, and has therefore adopted *Dipogon* Fox 1897 as the correct name for the genus. I have not seen the paper in which Banks establishes this identification, but if correct, *Dipogon* Fox will have to be accepted.

**Apteropompiloides** Arn. 1932

For this name Pate proposes a new name *Arnoldatus*, for the reason that the genotype, *Apteropompilus Tosquineti* Br., had already been designated by Ashmead (1902) as the type of *Apteropompilus* Brauns. I am quite convinced that Ashmead never saw the types of the two species placed under this genus by Brauns, and his selection of *Tosquineti* as the genotype was purely arbitrary. Not only does *Sanssurei* agree more closely with the generic description than *Tosquineti*, but it was the first to be described and has page precedence, and according to Article 30 of the International rules, sections *r*, *s* and *t*, it is to be assumed that Brauns considered it the type of his genus, although he did not definitely designate it as such. I must therefore reject Pate's alteration.

**Calicurgus** Lep. 1845

For this genus Pate proposes the new name *Caliadurgus*, since Lepeletier's genus is not that of *Calicurgus* Brullé 1835. The latter is isogenotypic with *Cryptocheilus* Panzer 1806 and the emendation *Cryptochilus* Rafinesque 1815. This correction does not affect any species of the Ethiopian region, since the single species, *willowmorensis* Arn., which I at first ascribed to it, was later on transferred to the genus *Hormopogonius* Arn.

**Ferreola** Lep. 1845 and **Paraferreola** Süstera, 1913

The type of *Ferreola* Lep. is *F. algira* Lep. 1844, which, however, is a species of *Platyderes* Guer. *Ferreola* Lep. therefore sinks in synonymy to *Platyderes*. However, Smith and other authors ascribed to *Ferreola* Lep. various species which do not conform to a part of the generic diagnosis of Lepeletier, and for these Süstera proposed the name *Paraferreola*, designating *Sphex ursus* Fab., by which name he understood *Sphex rhombica* Christ., as the genotype. Unfortunately this insect, according to Schulz who examined the genotype, is a ♂ Mutillid, possibly of the genus *Myrmilla*. Haupt, recognizing this error, designated *Sphex rhombica* Christ. as the genotype, but that fact notwithstanding, *Paraferreola* Süstera, being a synonym for a genus of the Mutillidae as yet undetermined, cannot be sustained as a Pompilid genus. It is therefore necessary to find a new generic name for those species which conform to the generic description of which *P. rhombica* Christ. is typical. Pate (op. cit. p. 99) suggests that 'Arnold's *Eoferreola* is available and for those forms hitherto known as *Paraferreola* in the restricted sense, the new subgeneric name *Tea* is proposed elsewhere'. The subgenotype designated by Tate for *Tea* is *Sphex rhombica* Christ. Such a procedure would be incorrect, since it would reverse the status of *Eoferreola* as a subgenus with that of the genus formerly known as *Paraferreola*. *Tea* Tate is therefore the genus, not subgenus, of which *Eoferreola* Arn. is a subgenus. The species *melanostoma* Cam. and *spilopus* Cam. belong then to the genus *Tea* Tate, and *soleana* Cam. to the subgenus *Eoferreola*.

**Cryptosalius** Turner 1918

Pate (op. cit. p. 120) rightly states that since *rava* Bingham is the genotype of Turner's genus, and that the four Ethiopian species which Turner placed in that genus differ from *rava* in important characters, a new name must be found for those species. He proposes the name *Marimba*, with *contristans* Turner as the genotype. The other three species are *indocilis*, *perluctuosus* and *elgonensis* Turner.

Bradley has recently (1944, *Notulae Nat.* No. 145) brought forward a new classification of the subfamilies and the tribes of the Pompilidae, to which I cannot wholly subscribe. He divides the family into four subfamilies: (1) the Pepsinae, comprising the tribes Calicurgini, Pseudageniini, Cryptocheilini,\* Hemipepsini and Pepsini; (2) the Pompilinae, comprising the tribes Ctenoceratini, Epipompilini, Allocharini and Pompilini; (3) Notocyphinae; (4) Ceropalinae. In regard to the composition of the first subfamily, the Pepsinae, I am unable to agree to the inclusion of the Pseudageniinae as a tribe, and am of the opinion that they should constitute a separate subfamily. In his partial diagnosis of the Pepsinae, the characters listed also apply to the Pseudageniinae, excepting the last which reads 'and the hind tibiae of the females come to develop a dorsal carina which is serrate, often with scale-like teeth'. This does not apply to any of the genera which in my classification have been placed in the Pseudageniinae (Macromerinae). In not one of them is there the slightest sign of even an incipient dorsal carina. An equally important character, of which not a trace exists in the Pepsinae, is the presence of the beard on either the mentum, or as in *Dipogon* (*Deuterationia*) on the cardo. Admittedly in the genera *Cyemagenia* Arn. and *Poecilagenia* Haupt it is absent, although in *P. reversa* Bisch. there are traces of it on the mentum. In the same paper, and in his 'Preliminary Revision of the Pompilinae of the Americas' (1944, *Trans. Amer. Ent. Soc.* LXX) Bradley places the tribe Ctenoceratini (Claveliinae Haupt) in that subfamily. The absence of splayed-out spines at the apex of the hind tibiae, and of the pocket or sinus at the lower proximal corner of the second discoidal cell, both always present in the true Pompilinae, seem to me to exclude the Ctenoceratinae from the Pompilinae.

**Pompiloides** Rad.

Bradley gives reasons (1944, *Eos*, *Wien*, xx, 93-95) for substituting for this name, misspelt as *Pompiloides* by myself and auct., *Ferreoloides* Haupt. Haupt divided his genus *Pompiloides* into two subgenera, *Pompiloides* s.str. and *Ferreoloides* Haupt. The former is renamed *Ceratopompilus* by Bradley. Banks had earlier substituted *Aporinellus* Banks for *Pompiloides* Rad. but Bradley restricts that name to American species with only two cubital cells. Of the African species described in my monograph, *Braunsi* Kohl, *latifrons* Arn. and *decipiens* Arn. belong to the subgenus *Ferreoloides*, the rest to *Ceratopompilus*.

\* Bradley, loc. cit. p. 3. This new name is proposed by Bradley to replace *Macromerinae* of Haupt.

Attention should also be drawn to some inaccuracies in Banks's description of the genus *Cliochares* Banks (1940, *Proc. Acad. Nat. Sci. Philad.* xcii, 360). In his specific description he says 'This species will run somewhat close to Arnold's *Atopopompilus*, but the cubital vein (his parallel vein) does not reach the margin in that genus. The vertex is more rounded, no large spines on the front tibiae above, and the *hairs at tip of abdomen are stiff*.' On what grounds the latter statement (my italics) is made I do not know, as it is not so stated in my descriptions of either genus or species. In *A. venans* Kohl, the only species at present available for examination, the hairs are not stiff. Furthermore, the statement in the generic diagnosis, 'tip of abdomen with only fine hairs above and below' appears to be contradicted in the specific description of *Ceratopompilus convexus*, in which the abdomen is stated to have 'some stout hairs at tip, and a few fine ones on venter'. In the same paper, p. 353, Banks says that *Aporoideus* Ashm. type *Pompilioides sericeus*, replaces *Pompilus*, preoccupied, evidently ignoring the fact that *Pompilus* as a Hymenopterous genus was validated by the International Commission on Zoological Nomenclature at the Lisbon Congress in 1935. I am not impressed by the argument of Pate that the conservation of *Crabro*, *Pompilus* and other names at the Lisbon Congress was illegal because a full year's notice had not been given. This can be regularized by giving the required notice for the next Congress. What is important is to reduce the confusion resulting from synonym, and not to increase it by searching through the literature to find names which have been used only once or twice, have been forgotten, and are, as in the case of *Auplopus*, over a hundred years old. The energy of these investigators would be less misplaced if, instead of disinterring these corpses and insisting that they are not dead, they did so only with the object of requesting the International Commission on Zoological Nomenclature to give them a final and decent burial.

The types of all new species and races described herein are in the National Museum, Southern Rhodesia, unless otherwise stated. Where available, paratypes will be deposited in the British Museum (Natural History) and the Transvaal Museum.

### Family POMPILIDAE

#### Subfamily PEPSINAE

#### Genus *Hemipepsis* Dhlb.

This genus is in need of revision, and since the completion of my monograph of the Ethiopian Pompilidae (Psammocharidae) in the *Annals of the Transvaal Museum*, 1932-1937, I have endeavoured to amass for that object as many specimens as possible. However, the material to hand is not yet sufficient, but in the meantime I describe below a few new species and varieties. Some species, such as *vespertilio* Gerst and *vindex* Smith appear to be very stable, whereas others, such as *Tamisieri* Guer, *brunniceps* Tasch and *glabrata* Klug have a number of

racés and varieties which differ from the type form mainly in colour, size and minor structural, i.e. measurable, characters.

***Hemipepsis combusta tanganyikae* n.subsp.**

*Hemipepsis combusta* Smith. 1885, *Cat. Hymen. Brit. Mus.* III, 184.

♀, 31–35 mm. long; ♂, 19–29 mm. long. In the ♀ the upper half of the face, the vertex and occiput, the pronotum, mesonotum and scutellum, excepting a ferruginous streak on each side, are black. The rest of the thorax, the legs and antennae, are of a paler colour than in the type of the species, or pale burnt sienna, i.e. orange No. 192 Seguy, C.U.C. The clypeus, lower part of the head, sides of the pronotum and the metanotum and a narrow line margining the hind margin of the eyes are ferruginous. In the ♂ the antennae are fusco-ferruginous, paler in the smallest specimens. The pronotum and mesonotum are black, sometimes slightly rufescent, but the rest of the dorsum of the thorax is much darker than in the ♀, or reddish brown; the sides of the thorax are of the same colour as in the ♀. In both sexes the wings are dark fuscous, with bluish reflexions on the fore wing and purplish on the hind wing. In the smallest ♂ the colour of the epinotal dorsum becomes paler caudad, so that the posterior half, more or less, is as pale as on the ♀♀. The anterior margin of the labrum is convex, with a shallow and small median excision.

Abercorn, Northern Rhodesia, December, 4 ♀♀, 6 ♂♂ (*H. J. Brédo*); Katompe, Belgian Congo, 1 ♂ (*C. Seydel*).

***Hemipepsis luctuosa* n.sp. (Figs. 15, 15a-c)**

♀. 22–29 mm. long. Black. Mandibles, excepting the black apex, labrum, anterior half of the clypeus, upper side of the scapes and the first joint of the flagellum, fusco-ferruginous. The rest of the flagellum and the legs, including the apices of the trochanters and underside, bright ferruginous. The extreme apex of the first four tarsal joints on the inside and the apical half of the apical joint, infuscated. Wings dark fuscous, with blue and purple reflexions. Setae, on the clypeus, underside of the head, and on the abdomen, and the fine pubescence on the head and pro-mesonotum, black. Anterior margin of the labrum convex, with a median arcuate excision. Clypeus not quite twice as wide as long. Face produced in the middle above the antennae. Posterior ocelli twice as far from the eyes as from each other. Second joint of the flagellum three and a third times longer than wide at the apex and one-fourth longer than the third joint. Pronotum short, the shoulders convex. Postnotum as long as the metanotum, finely, transversely rugose. Dorsum of the epinotum moderately convex transversely, and less so lengthwise, its proportions variable, varying from a trifle more than one-half wider at the base than long, to seven-ninths wider at the base than long (type), transversely costate with about fourteen costae, the infrastigmal tubercles almost obsolete; the declivity half as long as the dorsum, smooth except for two or three rugae at the top, its junction with the dorsum sub-rectangular. On the hind tibiae there is no serrate carina, that being

replaced by a row of short, triangular teeth, fairly widely separated. Fore wing about 25 mm. long. The sides of the face, next to the eyes, and in some specimens the upper part of the occiput, are rufescent.

♂. 21–23 mm. long. Black. Head, prothorax, mesopleura, coxae and trochanters fusco-ferruginous. Antennae and legs bright ferruginous, the femora somewhat darker than the rest of the legs. Anterior margin of the labrum convex and entire. Clypeus three-fifths wider than long. Interocular distance on the vertex equal to the length of the first two joints of the flagellum. The second joint is as long as the third, and nearly four times longer than wide. Posterior ocelli as far from the eyes as from each other. Metanotum strongly convex, postnotum with a deep median longitudinal impression. Dorsum of the epinotum costate as in the ♀, three-fifths wider at the apex than long, and with a median longitudinal impression, feeble in the basal half, wider and deeper in the apical; declivity oblique, with four transverse costae in the upper half, less than half as long as the dorsum. Fore wing 21 mm. long, extending well beyond the apex of the abdomen. Allied to *H. dedjas* Guér. from which it differs by the smaller size, shorter legs and much coarser sculpture of the epinotum. The ♂ differs from *dedjas* ♂ also in having the antennae ferruginous.

Abercorn, October–December, 10 ♀♀, 1 ♂; Lake Mweru district, January and February, ♂♂.

#### *Hemipepsis ferox* n.sp. (Figs. 16, 16a)

♀. 32–34 mm. long. Black. The underside of the flagellum fusco-ferruginous, the mandibles black, but slightly reddish in the middle. Legs including the underside of the coxae and trochanters ferruginous, the extreme apex of the middle and hind tibiae and metatarsi fuscous, the second to fourth joints of the middle and hind tarsi fusco-ferruginous, the apical joints almost black. Wings dark brown, with purplish reflexions. Anterior margin of the labrum feebly sinuate on each side of the middle, which is shallowly excised. Clypeus two and a half times wider than long. Second joint of the flagellum one-third longer than the third, and four times longer than wide at the apex. Sides of the face somewhat swollen. Posterior ocelli half as far again from the eyes as from each other. Interocular distance on the vertex equal to the length of the second joint of the flagellum. The inferior anterior angles of the pronotum are rounded and prominent. Scutellum feebly convex transversely. Metanotum impressed lengthwise medially. Postnotum as long as the metanotum, finely, sparsely, and transversely striate. Dorsum of the epinotum one-third wider at the base than at the apex and three-fifths wider at the base than long, with about twelve transverse costae which become increasingly thicker caudad, those over the basal third more or less discontinuous; the hind margin is strongly raised in the middle. The declivity of the epinotum is about half as long as the dorsum, subvertical, and smooth. The carina on the hind tibiae is low, very feebly serrate, and the spines on each side of it are rather short.

Abercorn, Northern Rhodesia, November and December, 3 ♀♀  
(*H. f. Brédo*).

***Hemipepsis dedjas rufescens* n.var.**

*Hemipepsis dedjas* Guér. 1848, Lefebure, *Voy. Abyss.* vi, 355.

♀. 37 mm. long. A very distinct variety in which the head, thorax, coxae and trochanters are ferruginous instead of black. The colour of the integument is somewhat obscured on the pro-mesonotum and scutellum by the microscopic black pubescence. The clypeus is yellowish red and the pleurae fusco-ferruginous. The wings are paler than in the typical form. In the paratype the dorsum of the epinotum is not quite as long as wide at the apex.

Barotzeland, Northern Rhodesia, 1914, 2 ♀♀ (*V. Ellenberger*).

Type in the Muséum Nat. d'Histoire Naturelle, Paris, paratype in the National Muséum, Southern Rhodesia.

***Hemipepsis sublivida* n.sp. (Figs. 17, 17a)**

♀. 25 mm. long. Black. The antennae rufescent on the underside. The tergites with a dull bluish pollinose bloom, more apparent when the insect is viewed towards the tail, but much less apparent than in *H. vindex* Smith. Wings fuscous, with a blue and purple lustre. Epinotal dorsum with a long, fine, oblique and black pilosity, not obscuring the sculpture and much less dense and shorter than in *H. vindex*. Apical tergite densely setose, the setae black. Apical sternite fusco-ferruginous in its apical half. The fine tomentum on the underside of the coxae and trochanters somewhat fulvous in some lights. Anterior margin of the labrum straight and entire. Clypeus short, nearly two and a half times wider than long in the middle, convex, the apical margin concave, i.e. widely emarginate, more widely than in *H. sinuosa* Kohl. Flagellum fairly slender, the second joint three and three-quarter times longer than wide at the apex and four-elevenths longer than the third joint. Interocular distance on the vertex equal to the length of the first two joints of the flagellum. Inner orbits very feebly divergent below. Posterior ocelli a little farther from the eyes than from each other. Pronotum short, the shoulders widely rounded, the inferior anterior angles not prominent, barely visible from above. Metanotum moderately convex, nearly twice as long as the postnotum, the latter transversely costate. Dorsum of the epinotum nitidulous, closely and transversely rugoso-costate, for the greater part parallel-sided, but slightly narrowed just in front of the sharply carinate hind margin, twice as wide at the base as long, half as long again as the declivity and moderately convex transversely. The declivity has a few rugae in its upper half. In place of the usual serrate carina, the hind tibiae have a row of oblique scales, seventeen in number, which is flanked on each side with a single row of short spines. Third abscissa of the radius fully three-fourths longer than the second.

Matetsi, Southern Rhodesia, 1 ♀, type; Victoria Falls, November, 1 ♀.

Allied to *mashonae* Arn., from which it differs in colour, the shape of the clypeus, and the longer and more slender joints of the flagellum.



**Hemipepsis pilosipes** n.sp.

♂. 23 mm. long. Deep black, wings fuscous, with a strong greenish blue lustre. Pubescence and pilosity black. Anterior margin of the labrum convex and entire. Clypeus two-thirds wider than long, the apical margin straight. Inner orbits parallel over the lower half. Interocular distance on the vertex equal to the length of the first two joints of the flagellum. The second joint is three and five-sevenths longer than wide at the apex and about one-fourth longer than the third. Posterior ocelli a little nearer to each other than to the eyes. Scutellum flat in the

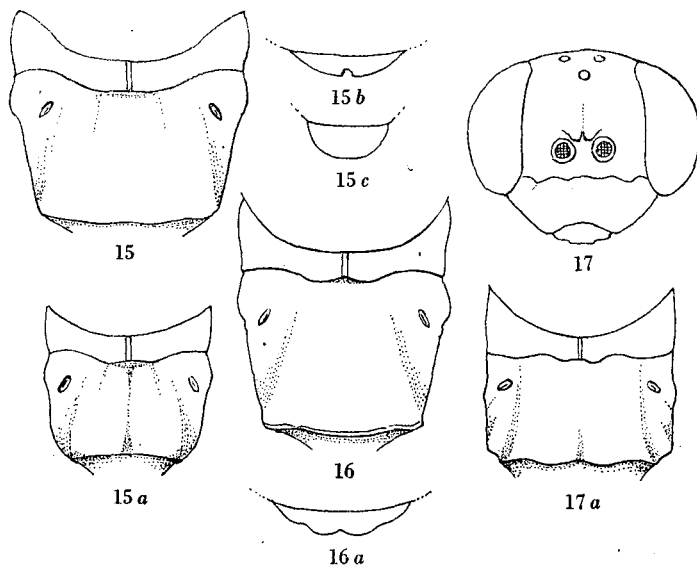


Fig. 15. *Hemipepsis luctuosa* ♀, epinotum, × 6.  
 Fig. 15 a. *Hemipepsis luctuosa* ♂, epinotum, × 6.  
 Fig. 15 b. *Hemipepsis luctuosa* ♀, labrum, × 10.  
 Fig. 15 c. *Hemipepsis luctuosa* ♂, labrum, × 10.  
 Fig. 16. *Hemipepsis ferox* ♀, epinotum, × 6.  
 Fig. 16 a. *Hemipepsis ferox* ♀, labrum, × 10.  
 Fig. 17. *Hemipepsis sublivida* ♀, head, × 6.  
 Fig. 17 a. *Hemipepsis sublivida* ♀, epinotum, × 6.

middle, sloping steeply on each side. Metanotum raised in the middle into a strong tubercle. Postnotum as long as the metanotum, with four transverse costae which fade into thin rugae over the metapleura. Dorsum of the epinotum moderately narrowed caudad, four-sevenths wider at the base than long, with about fifteen transverse costae which become stronger towards the apical margin, and with a very distinct median longitudinal groove. Infrastigmal tubercles prominent. The declivity of the epinotum is very oblique, barely half as long as the dorsum, the junction of the two faces forming a low arc. Middle tibiae on the upper side, the hind tibiae and the middle and hind tarsi excepting the apical joint, densely pubescent above and below, the pubescence

obscuring the rows of spines on the underside. Claws of all the legs dentate. Sternites with a long, outstanding and dense pilosity. First cubital cell as long as the second. The fenestra in the discoidal cell distinct.

Tupele, Mweru district, Northern Rhodesia, January, 3 ♂♂ (*H. J. Brédo*).

Quite distinct from any other species of the genus on account of the dense pubescence on the middle and hind tibiae and tarsi, and the long and dense pilosity on the sternites.

### **Hemipepsis mashonae** Arn.

1932, *Ann. Trans. Mus.* XIV, 331.

A series of 4 ♀♀ from East Surrey Estates, Kenya, 2 ♀♀ from Abercorn, Northern Rhodesia, and 1 ♀ from Nsama, Northern Rhodesia, agree in all particulars with the type of the species, except in the proportions of the joints of the flagellum, and consequently an apparent difference in the interocular width on the vertex compared with the length of the first two joints. Mr Benson of the British Museum has kindly examined the type and confirmed the statement in my description that the second joint is three times longer than wide at the apex. However, the statement that it is 'not quite one-third longer than the third joint' is incorrect, it being only one-fifth longer. In the series referred to above, the second joint varies from two and one-third to three times longer than wide at the apex, and correspondingly from one-fifth to one-third longer than the third joint. In the whole series the actual interocular width on the vertex is 2.5 mm. It should therefore be noted that this species is exceptional in the variability of the antennal joints. However, it is easily recognizable by the scales on the hind tibiae.

### Genus *Cyphononyx* Dhlb.

#### ***Cyphononyx purpureipennis* n.sp.**

♀. 31-33 mm. long. Black. Anterior third, more or less, of the clypeus, labrum and mandibles fusco-ferruginous. Scapes black above, ferruginous below, the flagellum black, somewhat rufescent below. Legs, including the underside of the coxae and trochanters, ferruginous. Pygidium densely covered with fulvous setae, on the rest of the body the pilosity and pubescence are black. Wings dark brown, with a strong purple lustre all over. Pilosity on the head and thorax fine and not dense, not obscuring the sculpture on the epinotum. Abdomen shining, the tergites with a sparse and shallow puncturation, closer at the base than at the apex and obscured by a microscopic decumbent pubescence. Anterior margin of the labrum straight. Clypeus very convex, twice as wide as long, the apical margin feebly concave. Inner orbits parallel over their lower three-fourths. Interocular distance on the vertex equal to four-fifths of the length of the second joint of the flagellum. The latter is five times longer than wide at the apex and about four-elevenths

longer than the third. Posterior ocelli a little more than twice as far from the eyes as from each other. Pronotum as in the *decipiens* group, short, not deeply depressed behind, about ten times wider between the posterior corners than long in the middle. Scutellum carinate lengthwise medially. Metanotum feebly convex. Postnotum dull, finely and closely striate, in the middle about one-third as long as the metanotum. Epinotum dull, finely, transversely and sparsely rugose, the rugae on the dorsum thickened at the lateral margins into costae. The dorsum is two-fifths wider at the base than long and its junction with the oblique declivity forms a low curve. The infrastigmal tubercles are fairly prominent. The anterior metatarsi have fourteen spines on the outer margin; the hind tibiae have a row of fourteen to sixteen scales on the upper side. Claws of all the legs dentate. First cubital cell twice as long as the second, second abscissa of the radius two and a half times longer than the first, and two-thirds longer than the third. The cubitus in the hind wing is emitted at the end of the submedial cell.

Abercorn, Northern Rhodesia, October, 2 ♀♀ (*H. J. Brédo*).

This species belongs to the *decipiens* group, allied to *anguliferus* Lucas, but clearly distinct by the narrower vertex, longer second joint of the flagellum and longer first cubital cell.

#### *Cyphonomyx umtaliensis* Arn.

1932, *Ann. Trans. Mus.* XIV, 304. ♂.

♀ (hitherto undescribed). 21 mm. long. Inner orbits parallel. Clypeus two and two-thirds wider than long, the apical margin concave. Interocular distance on the vertex equal to nine-tenths of the length of the second joint of the flagellum. The latter four and a third times longer than wide at the apex and very nearly one-fifth longer than the third joint. Posterior ocelli one and a half times farther from the eyes than from each other. Metanotum not transversely compressed as in the ♂, but nevertheless high and very convex. The rugae on the dorsum of the epinotum are stronger than in the ♂. Sternites 3 and 4, and the apical portion of the second, slightly shining, shallowly, finely and sparsely punctured. The four basal joints of the hind tarsi without the rows of fine hairs present in the ♂, but with two rows of spines. The hind tibiae with the usual row of oblique scales. Otherwise like the ♀.

Mlanje, Nyasaland, December, 1 ♀, 2 ♂♂; Lake Mweru, February, 1 ♀.

The latter has the hind tibiae and metatarsi ferruginous, except at the apex. Other localities are Buleya and Tapele, Lake Mweru district, and Khami, Southern Rhodesia.

#### Genus *Cryptocheilus* Panz.

##### *Cryptocheilus pictifrons* n.sp. (Fig. 18)

♀. 15 mm. long. Clypeus ferruginous. Mandibles black, fusco-ferruginous in the middle. Sides of the face reddish orange, narrowly so above and below, but extending inwards in the middle as far as the antennal sockets. Temples and vertex castaneous red, the rest of the

head black. Thorax and abdomen black. Coxae, trochanters and basal two-thirds of the femora black, the rest of the legs, and the antennae, pale ferruginous. Wings flavo-hyaline, the apex of the fore wing, beyond the cells, pale fuscous. Head and thorax, excepting the epinotal dorsum and declivity, and abdomen slightly shining. Clypeus closely and minutely punctured, with a few large punctures here and there. The rest of the head closely and microscopically punctured, as are also the pronotum, scutellum and metanotum. Mesosternum and metapleura obliquely striato-rugose, dorsum and declivity of the epinotum dull, transversely rugose, the rugae close together and small at the base, becoming gradually larger and more widely spaced caudad; the sides of the epinotum obliquely and strongly striato-rugose. Abdomen with a shallow, very sparse and large puncturation superimposed on a close and microscopic one. Setae and pubescence on the apical tergite dark brown. Anterior margin of the labrum transverse. Clypeus very convex transversely and lengthwise, and nearly two and a quarter times wider than long, the apical margin straight and twice as long as the lateral. Inner orbits parallel; an impressed line extends from the supra-antennal tubercles to the anterior ocellus. Interocular distance on the vertex equal to the length of the second joint of the flagellum plus twice the length of the first joint. The posterior ocelli are half as far again from the eyes as from each other. The vertex is somewhat flattened between the posterior ocelli and the inner orbits. Second joint of the flagellum nearly five times longer than wide at the apex, and very little longer than the third. Temples swollen, not much narrower than the eyes, and just visible from in front. Dorsum of the pronotum three times wider behind than long in the middle, the sides convex. Scutellum as wide at the base as long, about three times longer than the metanotum. Postnotum very short, deeply depressed. Dorsum of the epinotum one and a half times wider at the base than long, two-thirds longer than the declivity, not very convex lengthwise at the base. Second abscissa of the radius nearly three times longer than the first, one-sixth longer than the third, the apex of the radial cell rounded. Hind tibiae with a row of ten scales; apical joint of the tarsi spinose below. Groove on the second sternite placed close to the base.

Aliwal North, Cape Province, October, 1 ♀.

Allied to *C. impressiceps* Arn. and *C. Swierstrae* Arn., differing from both by the striato-rugose mesothoracic sternum. The vertex is less swollen and the pronotum shorter than in the former species, and from the latter it differs also by the thinner flagellum, and narrower vertex.

#### Genus *Priocnemis* Schiodte

##### *Priocnemis inermis brevicornis* n.var.

*Priocnemis inermis* Arn. 1932, *Ann. Trans. Mus.* xiv, 385.

♀. 9.5 mm. long. Joints of the flagellum shorter in proportion to the width than in the type of the species, the second joint being only three

times longer than wide at the apex. Consequently the width of the vertex, compared with the second joint, appears wider, but is no more so than in the type of the species when compared with the inferior interocular distance.

Abercorn, Northern Rhodesia, December, 1 ♀; Kalaba, Mweru, Northern Rhodesia, January, 1 ♀ (*H. J. Brédo*).

The typical form, originally from Uganda, also occurs in the Mweru district, being represented by one specimen from Kaputa.

### *Priocnemis implacabilis* n.sp.

♀. 14 mm. long. Black, the tarsi dark brown. Wings pale flavo-hyaline, the apex of both wings beyond the cells pale fuscous. A short, very sparse and blunt pilosity on the head and apical margins of the fourth to sixth sternites; the apical tergite with black setae. Clypeus closely and finely punctured and dull, except the apical third, which is shining and smooth; a row of large punctures between the smooth and finely punctured areas. Head, pro-mesonotum and sides of thorax dull, microscopically and closely punctured, the scutellum and metanotum nitidulous and a little more strongly punctured, the epinotum dull and very closely and finely rugulose transversely on the dorsum, slightly shining, finely and not very closely rugose on the declivity. Abdomen smooth and shining. Clypeus two and a half times wider than long, the apical margin feebly concave. Inner orbits moderately divergent below. Interocular distance on the vertex slightly less than the length of the first two joints of the flagellum. Posterior ocelli twice as far from the eyes as from each other. Flagellum slender, the second joint four times longer than wide at the apex and about one-eighth longer than the third. Dorsum of the pronotum short, seven times wider behind than long in the middle, the declivous anterior face steep. Scutellum moderately convex transversely, wider in the middle than long. Metanotum not quite half as long as the scutellum. Postnotum transversely striate, dorsum of the epinotum with a feeble median longitudinal impression, parallel-sided, two-thirds wider than long, nearly twice as long as the oblique declivity, the junction of the two faces forming a low arc. Posterior tibiae with a dorsal row of eleven scales, the inner spur of the calcaria of the middle and hind tibiae more than half as long as the basitarsus. Third abscissa of the radius one-fourth longer than the second, the latter four times longer than the first. The first recurrent vein meets the second cubital cell in the middle, the second recurrent meets the third cubital cell at the end of its basal third.

Woodbush, Transvaal, May, 2 ♀♀ (*G. van Son*). Type in Transvaal Museum.

Allied to *P. Braunsi* Arn. from which it may be distinguished by the greater length, entirely black antennae and tibiae and the much finer sculpture of the epinotum. In the paratype, the third abscissa of the radius is barely longer than the second.

**Priocnemis bidentatus** Arn. (Fig. 19)

1936, *Ann. Trans. Mus.* XVIII, 113, ♀.

♂. 9.5 mm. long. Antennae ochreous, the first four and the last three joints slightly fuscous. The very pale apical infuscation of the fore wing extends over the radial, second and third cubital and second discoidal cells, otherwise the colour is like that of the ♀. Clypeus much more convex than in the ♀, less strongly punctured in the apical half, the excision between the apical teeth arcuate and wider than in the ♀. The lateral depressions on the face behind the clypeus deeper. Inner orbits barely divergent below. Vertex much longer than in the ♀, its length in the middle, from the posterior ocelli to the occiput being equal to one and a half times the distance between the posterior ocellus and the eye. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus two-thirds of the third joint. All the joints of the flagellum, except the first, much longer than wide. Posterior ocelli twice as far from the eyes as from each other. Hind margin of the pronotum angular, postnotum as long as the metanotum. The profile of the epinotum forms a lower arc than in the ♀. First tergite nearly one-third longer than wide at the apex. Seventh tergite not much narrowed towards the apex, which is transverse. Hind tibiae with a row of nine scales. Otherwise like the ♀.

Vumba Mountains, Southern Rhodesia, January.

**Priocnemis peringueyi sylvaticus** n.subsp.

*Priocnemis peringueyi* Arn. 1932, *Ann. Trans. Mus.* XIV, 388.

♀. 9.5 mm. long. Antennae entirely black. Tibiae and tarsi brownish black. Flagellum more slender than in the type of the species, the second joint seven times longer than wide at the apex; the interocular distance on the vertex equal to the length of that joint. Posterior ocelli two and a half times farther from the eyes than from each other. The sixth tergite with four transverse rugae on the glabrous apical third. Otherwise like the type of the species.

Woodbush, Transvaal, May, 1 ♀ (*G. van Son*).

Type in the Transvaal Museum.

## Subfamily CTENOCERATINAE Dhlb.

**Marimba capensis** n.sp. (Figs. 20, 20a and 20b)

♀. 11.5 mm. long. Black. The underside of the head, clypeus, lower third of the face, a narrow line on the sides of the face adjacent to the inner orbits, the upper side of the coxae and all the rest of the legs, ferruginous. Fifth tergite brown, the sixth brown at the base, yellowish brown apically, and with a finer, decumbent and yellowish pubescence. Antennae ferruginous, becoming gradually darker towards the apex, so that the last five joints are almost black. Wings hyaline, with two dark

fuscous clouds (see Fig. 20b). Head, thorax, excepting the epinotum, very closely and finely punctured, the interspaces not larger than the punctures which are finest on the clypeus and temples, the latter shining, the rest of the head dull. On the sides of the pronotum and on the mesonotum a larger but sparse puncturation is superimposed. On the mesopleura the superimposed coarser puncturation is twice as large as that on the sides of the pronotum and much closer. Metapleura very finely and closely rugulose. Dorsum of the epinotum very coarsely reticulate-rugose, the meshes increasing gradually in width caudad, the spaces between shining, the sides rugose and dull, the declivity shining and with about ten transverse rugae. Excepting the epinotum, the thorax is dull. Abdomen shining, closely and microscopically punctured.

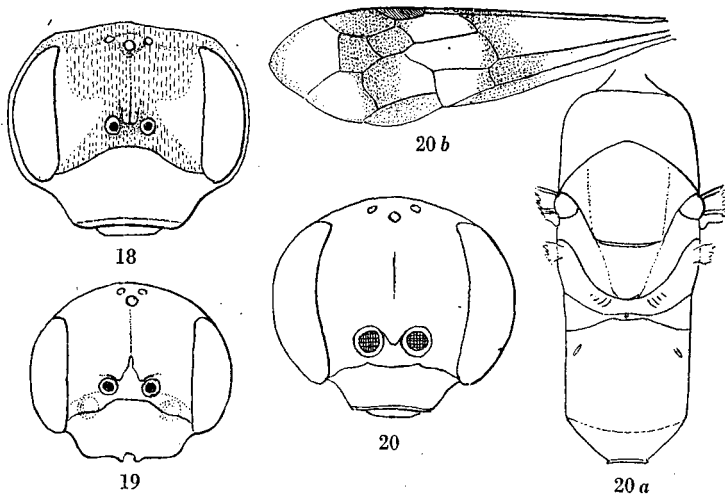


Fig. 18. *Cryptocheilus pictifrons* ♀, head,  $\times c. 10$ .  
 Fig. 19. *Priocnemis bidentatus* ♂, head,  $\times c. 14$ .  
 Fig. 20. *Marimba capensis* ♀, head,  $\times c. 14$ .  
 Fig. 20a. *Marimba capensis* ♀, thorax,  $c. 10$ .  
 Fig. 20b. *Marimba capensis* ♀, fore wing,  $\times 8$ .

The mesosternum, and apical angles of the mesopleura and epinotal declivity with a dense, decumbent and silvery pubescence. Clypeus slightly more than three times wider than long, the apical margin straight. Interocular distance on the vertex equal to slightly more than the length of the first two joints of the flagellum. Posterior ocelli as far from each other as from the eyes. Second joint of the flagellum three times longer than wide at the apex, the third joint one-seventh longer than the second. Pronotum not much narrowed cephalad, two and a half times wider behind than long in the middle. Mesonotum three-fourths longer than the pronotum measured in the middle. Scutellum feebly convex, not carinate. Postnotum very short in the middle. Dorsum of the epinotum parallel-sided, two-sevenths wider at the base than long, three-fourths longer than the oblique declivity, the junction of the two

faces forming a wide and obtuse angle. Second tergite five-sevenths wider at the apex than long. Second, third and fourth abscissae of the radius of about equal length. The first recurrent vein meets the second cubital cell at the end of its proximal third, the second recurrent meets the third cubital cell at the middle.

Addo Bush, Cape Province, April, 1 ♀ (*H. Brauns*). Type in the Transvaal Museum. Closely related to *M. perluctuosus* Turner.

In the description of that species, only the differences between it and *M. contristans* Turner are stated, and as no mention is made of the proportions of the epinotum, it may be assumed that they are the same as in *contristans*, in which the epinotum is 'much broader than long'. Apart from details of colour, and length of the radial abscissae, *capensis* differs from *contristans* and *perluctuosus* by the narrower epinotum.

***Marimba capensis rhodesiensis* n.subsp.**

♀. 11 mm. long. This differs from the type species as follows. Face entirely black, coxae ferruginous all over. Second joint of the flagellum nearly one-sixth longer than the third joint. Mesonotum one-third longer than the pronotum, measured in the middle. The pronotum is twice as wide behind as long in the middle. Dorsum of the epinotum only one-sixth wider at the base than long, the sides slightly convex. Abdomen much narrower than in the type of the species, the second tergite being only one-fourth wider behind than long.

Abercorn, Northern Rhodesia, August, 1 ♀ (*H. Brédo*).

**Genus *Ctenocerus* Dhlb.**

**Subgenus *Protoclavelia* Arn.**

1932, *Ann. Trans. Mus.* xv, 47.

In my diagnosis of the subgenus I omitted to mention a character which distinguishes it from *Ctenocerus* (*Clavelia*) s.str. In the ♀ the vertex, on each side of the posterior ocelli, is depressed and the depression together with the rest of the vertex up to the occipital margin is usually densely covered with a very fine and decumbent pubescence, making that part dull, in strong contrast with the rest of the head which is polished and shining. In both subgenera, the first tergite in the ♀ has a wide concave impression at the sides, the upper margin of which forms a distinct, although rounded, angle with the dorsal face of the segment. This feature is more strongly developed in *Protoclavelia* than in *Ctenocerus* s.str. Apart from rugae on the epinotum, and some scattered piligerous punctures on the sternites and a very fine puncturation on the face, the species are devoid of sculpture.

N.B. The measurements of the segments of the thorax are taken on the tangents of the curvatures. It is clearly apparent that if a segment, e.g. the pronotum, is measured with the mesonotum horizontal, it would appear much shorter than it really is.



**Ctenocerus (Protoclavelia) robusta kaputae** n.subsp.

*Ctenocerus robusta* Arn. 1932, *Ann. Trans. Mus.* xv, 49, ♀.

♀. 17–20 mm. long. Anterior tibiae and tarsi pale ferruginous, fifth abdominal segment black. Second joint of the flagellum a trifle less than three times longer than wide at the apex, and as long as the third. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus two-thirds of the third joint. The posterior tooth of the claws obliquely truncate, or almost acute. Otherwise like the type of the species.

Kaputa, Northern Rhodesia, January, 3 ♀♀ (*H. J. Brédo*).

**Ctenocerus (Protoclavelia) robusta vumbae** n.subsp.

♀. 19 mm. long. Scapes ferruginous, the flagellum reddish ochreous, becoming gradually darker from the fifth joint onwards, so that the last three joints are almost black. Head pale ferruginous, including the post-ocellar area, the latter without dense pubescence. Anterior tibiae and tarsi and apical third of the anterior femora, pale ferruginous. Fifth abdominal segment black, the sixth fusco-ferruginous. Clypeus slightly more than twice as wide as long; the apical margin as long as the lateral margins. Second joint of the flagellum as long as the third, and three and two-fifths longer than wide at the apex. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus one-fourth of the third joint. Pronotum, excluding the neck, two and two-thirds wider behind than long in the middle; the mesonotum only two-thirds longer than the pronotum. Otherwise like the type of the species.

Vumba Mountains, Southern Rhodesia, March, 1 ♀.

**Ctenocerus (Protoclavelia) amplicollis** n.sp.

(Figs. 21, 21*a* and 21*b*)

♀. 25 mm. long. Black. Head, antennae and legs, pale ferruginous, the apices of the mandibles fuscous, the last four joints of the flagellum brown, the coxae and trochanters fusco-ferruginous. The decumbent pubescence on the vertex and on the underside of the coxae and trochanters brownish ochreous, the decumbent pubescence on the legs dull golden. The mandibles, clypeus and lower third of the face have a decumbent yellowish pubescence. Sixth abdominal segment ferruginous, the pubescence on the tergite fulvous. The pubescence on the rest of the body if very fine, decumbent and black, but that of the pronotum is slightly rufescent. Wings short, not extending backwards beyond the third abdominal segment, pale brown and with a faint purplish lustre, the first discoidal cell with a proximal subhyaline spot. Thorax and tergites dull, owing to the dense, microscopic pubescence. Dorsum of the epinotum with about six rugae on its posterior half, which fade out

laterally and in the middle. Sternites shining, with a few large punctures. Clypeus short, two and a half times wider at the base than long, the apical margin straight and one-third longer than the lateral margins. The antennal fossettes are deep and extend over the lower third of the face and the basal half of the clypeus, the bridge between them very narrow. Inner orbits almost parallel, the face in the middle one and a half times wider than long, measured from the hind margin of the clypeus to the anterior ocellus.

The depressions on the vertex between the posterior ocelli and the eyes are shallow and linear, but the dull pubescent area of the vertex is fairly flat. Scapes compressed transversely, twice as long as wide. The second joint of the flagellum is as long as the third and three times longer than wide at the apex. Posterior ocelli fully one-third farther from the eyes than from each other. Temples as wide as the eyes, the junction of the vertex and occiput acute over the middle third. Pronotum very flat and broad, two-fifths wider than long in the middle, the lateral margins very convex. Mesonotum short, as long as the pronotum and one-third wider than long. Scutellum triangular, flat, slightly wider at the base than long. Metanotum short, about one-fifth as long as the scutellum. Postnotum linear in the middle. Dorsum of the epinotum about half as wide again at the base as long, not narrowed caudad, half as long again as the declivity, their junction widely rounded. Abdomen broad, the first tergite one and three-tenths wider behind than long, the second tergite seven-eighths wider than long. The groove on the second sternite deep, placed between the anterior and middle third of the segment. Hind tibiae with three rows of short and widely separated spines. The posterior tooth of the claws of all the legs obliquely truncate. The first recurrent vein meets the second cubital cell in the middle, the second meets the third cubital cell a little beyond the middle; transverse anal vein of the hind wing slightly postfurcal.

Lubombo, Belgian Congo, November, 1 ♀ (*C. Seydel*).

Allied to *robusta* but much larger, and with a shorter clypeus, longer pronotum and a much less strongly rugose epinotum.

#### ***Ctenocerus (Protoclavelia) bredoi* n.sp. (Figs. 22, 22a)**

♀. 23-27 mm. long. Black. The head, antennae and legs ferruginous, darker than in *amplicolis*, the apical joints of the middle and hind tarsi black; the pubescence like that of *amplicolis*. Clypeus and face smooth and shining as in that species. Inner orbits divergent below, the interocular distance at the bottom of the eyes about two-ninths greater than across the vertex, the width of the face, in the middle, one-seventh greater than the length measured from the anterior ocellus to the base of the clypeus. Labrum transversely ovoid, flat, with a few large punctures. Clypeus strongly convex lengthwise and transversely, two and a quarter times wider at the base than long in the middle, the anterior margin deeply concave. The antennal fossettes are wider than in *amplicolis*, the outer margin of the concavity reaching the inner orbits,

and extending below over the basal third of the clypeus; the bridge between the face and clypeus narrow. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus one-third of the third joint. Posterior ocelli one-third farther from the eyes than from each other. Second joint of the flagellum as long as the third, about three and a half times longer than wide at the apex. Junction of the vertex and occiput rounded. Pronotum convex transversely and lengthwise, much shorter than in *amplicollis*, only half as long as the mesonotum, about twice as wide behind as long in the middle. Mesonotum one-fourth wider than long. Scutellum as long as wide at the

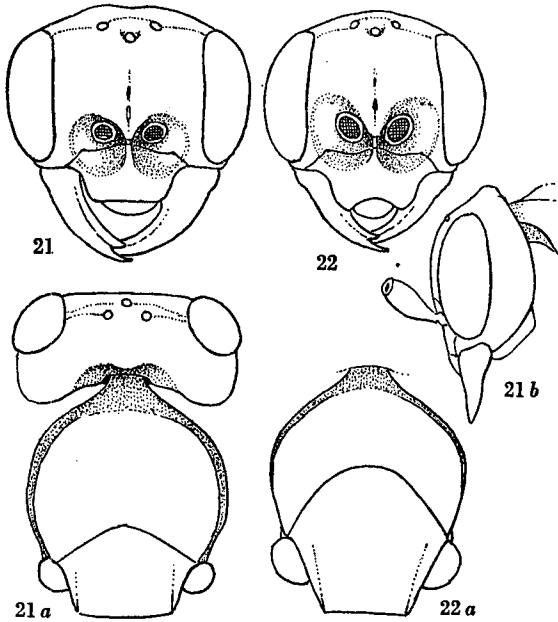


Fig. 21. *Ctenocerus amplicollis* ♀, head, × 6.  
 Fig. 21 a. *Ctenocerus amplicollis* ♀, head and pro-mesonotum, × 6.  
 Fig. 21 b. *Ctenocerus amplicollis* ♀, head, lateral view, × 6.  
 Fig. 22. *Ctenocerus bredoi* ♀, head, × 6.  
 Fig. 22 a. *Ctenocerus bredoi* ♀, pro-mesonotum, × 6.

base, and two and a half times longer than the metanotum. Postnotum short but not linear, shining and with one or two striae. Dorsum of the epinotum with about fourteen transverse rugae which fade out laterad, twice as wide at the base as long, the declivity steep, as long as the dorsum and with about eight transverse costae which curve forward at the sides, i.e. are concave cephalad, and are indistinct in the middle. First tergite broadly conical, one-fifth wider at the apex than long, the second tergite three-fifths wider at the apex than long. The hind tibiae more spinose than in *amplicollis*, the inmost row having ten spines (seven in *amplicollis*). The posterior tooth of the claws transversely truncate. Venation as in

*amplicollis*, but the first recurrent vein meets the second cubital cell nearer its distal margin.

Abercorn, Northern Rhodesia, October–December, 5 ♀♀ (*H. J. Brédo*). Allied to *amplicollis*.

**Ctenocerus (Protoclavelia) gracilis** n.sp.

♀. 11–14 mm. long. Black. Head, tibiae and tarsi ferruginous. The femora with the apex, or sometimes more or less of the apical half, ferruginous. Antennae ferruginous, becoming gradually darker from the eighth joint onwards, so that the last three joints are almost black. Sixth abdominal segment and apical half of the fifth, or sometimes the whole of the fifth, ferruginous. Wings pale fuscous, with a purplish lustre. In one specimen there are two black maculae above the antennal sockets. The vertex is only feebly impressed on each side of the posterior ocelli, and behind them is not densely pubescent and therefore only a little duller than the face. Inner orbits subparallel, the face in the middle very slightly wider than long. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus one-half of the third joint. The second joint of the flagellum is as long as the third and three times longer than wide at the apex. Clypeus twice as wide as long in the middle, the lateral margins half as long again as the anterior margin which is feebly concave, the antennal fosses extending over the basal half of the clypeus, the bridge between the clypeus and face linear. Pronotum convex transversely and lengthwise, two and a fifth times wider behind than long. Mesonotum two-fifths longer than the pronotum. Scutellum and metanotum convex, the former one-quarter wider at the base than long. Postnotum in the middle half as long as the metanotum, with two or three striae on each side. Epinotum transversely and fairly closely rugose, the rugae fading out laterad, and in one specimen almost obliterated on the dorsum. The latter is one and a half times wider at the base than long; and half as long again as the declivity. First tergite very distinctly subpetiolate, about one-fifth wider at the apex than long. The transverse anal vein of the hind wing interstitial with the cubital.

Abercorn, Northern Rhodesia, December, 4 ♀♀ (*H. J. Brédo*).

Allied to *C. flavicaudus* Arn. from which it differs by the darker ferruginous colour, the darker wings, the clypeus which is more narrowed anteriorly, and the greater interocular distance on the vertex.

**Paraclavelia katbergensis** n.sp. (Figs. 23, 23a–c)

♂. 9–11.5 mm. long. Black. Mandibles fusco-ferruginous. Seventh tergite ivory white. Wings pale fuscous, the apex beyond the cells a little darker. A fairly dense, decumbent and white pubescence covers the clypeus, bottom third of the sides of the face, underside of the mesothorax, and the coxae. The basal half of the first tergite with similar but scantier pubescence, the apical third of the first three tergites with silvery white pubescent fasciae. The exerted pilosity is black and dense on the scapes,

clypeus, temples and lower half of the face, yellowish white and less dense on the dorsum and sides of the thorax, white and dense on the sides of the epinotum. Head and thorax, excepting the middle of the face and anterior margin of the clypeus which are slightly shining and less closely punctured, reticulate-punctate and dull. The puncturation is largest on the mesonotum and dorsum of the epinotum and finest on the scutellum, mesopleura and sides of the epinotum. Postnotum feebly punctured and with a few striae in front. Abdomen dull, with a dense, decumbent, black and microscopic pubescence. Inner orbits convergent

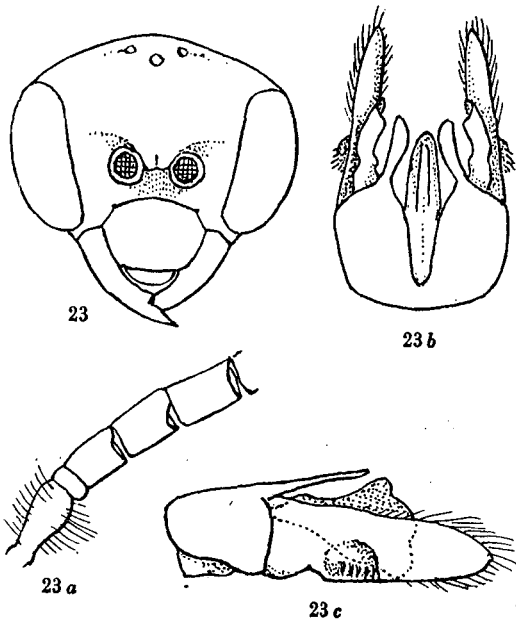


Fig. 23. *Paraclavelia katbergensis* ♂, head,  $\times 16$ .

Fig. 23a. *Paraclavelia katbergensis* ♂, basal joints of antenna,  $\times 16$ .

Fig. 23b, 23c. *Paraclavelia katbergensis* ♂, genitalia, dorsal and lateral views,  $\times 36$ .

below, face in the middle one-third wider than the length, measured from the anterior ocellus to the hind margin of the clypeus, and very convex. Clypeus two-thirds wider at the base than long, moderately convex, the anterior margin straight and longer than the lateral margins. Posterior ocelli five-eighths farther from the eyes than from each other; a narrow depressed line extends from the posterior ocelli to the eyes. Vertex wide, the interocular distance there being equal to the length of the first three joints of the flagellum, plus two-thirds of the fourth joint. All the joints of the flagellum, excepting the first, about one and a half times longer than wide, the joints separated below as in *P. punctipleura* Arn. Pronotum not much narrowed cephalad, three times wider behind than long. Mesonotum very little wider than long, and three times longer than the pronotum. As is usual in the ♂♂ of the genus, the

epinotum is nearly flat and there is no distinct separation of dorsum and epinotum; the whole segment is very little (one-tenth) wider at the base than long. First tergite one-fourth longer than wide at the apex, two and a half times wider there than at the base. Claws of the fore and middle tarsi bifid, those of the hind tarsi simple and rectangularly bent. Seventh sternite broadly ovate.

Katberg, Cape Province, February, numerous ♂♂ (*R. E. Turner*).

Allied to *paucipilosa*, from which it differs, *inter alia*, by the fuscous wings, much narrower pro-mesonotum, the straight anterior margin of the clypeus, and the silvery pubescent fasciae of the abdomen confined to the first three tergites.