

# NEW SPECIES OF AFRICAN HYMENOPTERA

## No. 10

BY DR GEORGE ARNOLD

### FORMICIDAE

Before describing a few new species of this family some observations on synonymy are called for. Mr William J. Brown (Harvard University) has drawn my attention to the close similarity between *Sporocleptes nicotianae* Arn., and *Aneleus politus* Sant., and between the genus *Limnomyrmex* Arn. and *Leptothorax*, subgenus *Nesomyrmex* Wheeler, and has suggested that there is probably a synonymy. He also kindly sent me a specimen of *Aneleus politus*, collected at Blue Post Hotel, Kenya, and determined by Menozzi.

A comparison of this specimen with *Sporocleptes nicotianae* proves that *Sporocleptes* must be placed in synonymy with *Aneleus*, and that *nicotianae* may be regarded as a race of *politus*, from which it differs as follows. The head is much less convex transversely, the epinotal teeth are longer, the sides of the epinotum are reticulate, the apex of the node of the petiole is wider, and the colour is much paler. Santschi's figure is inaccurate, as the membranous extension ventrad of the epinotal spines has been omitted.

In regard to the genus *Limnomyrmex* I am unable to agree with Mr Brown that it is synonymous with *Nesomyrmex* Wheeler (= *Goniothorax* Emery 1896, nec Milne-Edwards, 1879). In the shape of the post-petiole there is undoubtedly a similarity to that of *Limnomyrmex* (*Nesomyrmex*) *pulcher* Em., as figured by Emery in *Gen. Insectorum*, Pl. 5, fig. 9, but the petiole is quite different. Moreover, in *Limnomyrmex* the epinotal dorsum, widely dilated in the middle, the shape of the epinotal spines, and the exceedingly fine sculpture of the whole body are unlike that of any of the South African species of the subgenus, and of the American species *pulcher* Em. and *schwebeli* Forel. The frontal carinae and the scapes are also much shorter than in those species. On the other hand, the genus is perhaps more closely related to *Leptothorax* than to either *Atopula* or *Atopomyrmex*.

#### ***Bothroponera pumicosa* Rog. race *berthoudi* For.**

1901, *Rev. Suisse Zool.* IX, 344.

1913, *Ann. Soc. ent. Belg.* LVII, 109.

Forel's *berthoudi* is indistinguishable from *strigulosa* Em. and must sink as a synonym. The sculpture is the same, consisting of large, shallow and round pits, almost contiguous on the head and pronotum, and of very large and deep pits on the first tergite and basal half of the

second. These pits are longer than wide, almost contiguous or at least much wider than the intervening spaces, and deepest cephalad. In *pumicosa* the head and pronotum have smaller but deeper punctures which, like the pits on the first tergite, are more widely separated, the interspaces being at least as wide as the punctures, or on the head, even wider. Additional localities for *strigulosa*, originally from Kimberley, are Nordhoek, Cape Peninsula and between Mount Ayliffe and Mount Frere, c. 4500 ft., in East Griqualand. The specimens from Nordhoek are slightly larger than the type, 10.5-11 mm. long, and in both the pits on the tergites are a little larger and shallower.

The South African species of the genus may be separated into three groups, as follows, and of which those of the first group are very closely related and are perhaps hardly more than races of one or two species.

*First group.* Sculpture coarse, or very coarse, arranged hereunder in descending order of coarseness:

<i>variolosa</i> Arn.	<i>pumicosa</i> Roger
<i>cariosa</i> Em.?	<i>granosa</i> Roger
<i>strigulosa</i> Em.	<i>cavernosa</i> Rog. race <i>montivaga</i> Arn.
<i>mlanjensis</i> Arn.	<i>cavernosa</i> Rog.

*Second group.* Whole surface, or at least the head and thorax, dull, very finely reticulate-punctate or rugulose, and with a sparse, shallow and larger puncturation superimposed:

<i>kruegeri</i> Forel	<i>soror</i> Eméry	<i>crassa</i> Emery
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*Third group.* Whole body smooth and very shining, and with a sparse, fine and shallow puncturation:

*laevissima* Arn.

The key to the species in my monograph of the South African Formicidae was based partially on the original descriptions of three species not known to me in nature. I have now seen all of them except *cariosa* Em. and append herewith a new key.

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|------|----|--|-------------------------|
| (12) | 1. | Sculpture of thorax, petiole and first or first two tergites very coarse, composed of large and deep pits, those of the second tergite usually oblique, i.e. deeper in front than behind.    |                         |
| (7)  | 2. | Second, and sometimes also the third joint of the flagellum, longer than wide.   |                         |
| (4)  | 3. | Second joint of the flagellum four-fifths longer than wide; second tergite almost smooth, with a shallow and sparse puncturation; tibiae and tarsi ferruginous.                              | <b>cavernosa</b> Roger  |
| (3)  | 4. | Second joint of the flagellum shorter, from one-fifth to one-third longer than wide.   |                         |
| (6)  | 5. | Second joint one-fifth longer than wide; second tergite nearly as coarsely pitted as the first; puncturation of the thorax round and deep; node of the petiole about as long as wide behind. | <b>strigulosa</b> Emery |

- (5) 6. Second joint of the flagellum one-third longer than wide; second tergite much less coarsely sculptured than the first, with widely spaced, shallow and elongated punctures; punctuation of the thorax shallow and oblique; node of the petiole about one-sixth wider behind than long, concave over the middle third behind. **granosa** Rog.
- (2) 7. Second joint of the flagellum as long as wide, or shorter.
- (11) 8. Second joint of the flagellum as long as wide.
- (10) 9. Sculpture of the thorax, petiole and first two tergites very coarse, consisting of deep, large and adjacent pits, those of the first two tergites elongated, deeper in front than behind, those on the second tergite not continuous; the punctures on the head, large, round and almost contiguous; anterior margin of the node of the petiole convex. **variolosa** Arn.
- (9) 10a. Sculpture not very coarse, that of the head and thorax consisting of round punctures and with interspaces about twice as wide as the punctures; the punctures on the second tergite shallow, smaller than those of the first and more widely spaced; anterior margin of the node of the petiole straight; petiole not more coarsely sculptured than the first tergite. **pumicosa** Rog.
- b. Petiole more coarsely sculptured than the first tergite; tibiae and tarsi reddish black. **pumicosa** race **montivaga** Arn.
- (8) 11. Second and third joints of the flagellum two-thirds wider than long; node of the petiole half as wide again behind as long, the anterior margin almost straight; mandibles dull, longitudinally striolate; legs fusco-ferruginous **mlanjiensis** Arn.
- (1) 12. Sculpture not coarse.
- (18) 13. Head, thorax, petiole and first two tergites dull, very finely and closely punctured or reticulate-punctate or regulose.
- (15) 14. 11-13 mm. long. Second joint of the flagellum one-third longer than wide; node of the petiole nearly one and a half times wider behind than long; mandible closely striate and dull. **kruegeri** Forel
- (14) 15. Not more than 8.5 mm. long; second joint of the flagellum as long as wide or very slightly longer; mandibles not striate.
- (17) 16. 7.5-8 mm. long; node of the petiole nearly one and a half times wider behind than long. **soror** Em.
- (16) 17. 8-8.4 mm. long; node of the petiole very slightly, one-tenth, wider behind than long. **crassa** Em. var. **crassior** Sant.
- (13) 18. The whole body shining, very shallowly punctured and with a few larger punctures superimposed; node of the petiole one-fourth wider behind than long. **laevissima** Arn.

#### **Pheidole hewitti** Sant.

1932, *Livre centenaire, Ann. Soc. ent. Fr.*, p. 382.

*P. capensis* Mayr, var. *hewitti* Arn. 1944, *Occ. Pap. Rhod. Mus.* II, no. 11, p. 6.

At the time I described this variety I was not aware that Santschi had described it as a species, from material sent to him many years previously, because the publication containing his paper was not available until many years later. Santschi was in error in describing this ant as a new species, and also in placing it in relationship to *P. xocensis* For. The sculpture on the head and shape of the clypeus in the ♀, and the shape of the post-petiole in the ♀ and ♂ are like that of *capensis*. The proper designation should be *P. capensis* Mayr, var. *hewitti* Sant.

**Tetramorium latens** Arn.

1948, *Occ. Pap. Rhod. Mus.* II, no. 14, p. 225.

This is not more than a race of *T. jauresi* For., distinguished by its smaller size, shorter epinotal dorsum and the absence of the large and round reticulations on the upper half of the sides of the epinotum which are present in *jauresi* i.sp.

Unless otherwise stated, the types of new species described in the following pages are in the National Museum, Southern Rhodesia; those from the Coryndon Museum, Nairobi, will be deposited in the British Museum. The location of paratypes is indicated by the letters B.M. (British Museum), N.M.S.R. (National Museum Southern Rhodesia).

## Subfamily MYRMICINAE Lep.

**Oligomyrmex (Aeromyrma) khamiensis** n.sp. (Figs. 1, 1a)

♀. 1.1–1.2 mm. long. Pale yellowish brown, the antennae and legs ochreous. Head with a very sparse, microscopic and yellow pubescence. Eyes composed of a single facet, situated a little in front of the middle of the sides. The anterior corners of the head with a few striae (50 diameters), the inner ones curving mesad. The rest of the head polished and impunctate. Epinotum dull, very shallowly reticulate-punctate (75 diameters), the rest of the thorax and the abdomen shining and impunctate. Head, excluding the mandibles, one-seventh longer than wide, the sides very convex, the occipital margin straight. Mandibles quadridentate. Median area of the clypeus with the lateral margins swollen, convergent caudad, the anterior margin feebly concave. Antennae 10-jointed; the scapes fall short of the posterior margin of the head by a length equal to the first two joints of the flagellum, the first joint is a little more than twice as long as wide, the second to seventh joints are wider than long, the club is 2-jointed, the apical joint three times longer than the penultimate and very nearly as long as the rest of the flagellum. Frontal carinae widely divergent, extending back as far as the end of the anterior half of the head. Promesonotum as long as wide, widest in front, the sides and anterior margin convex, the suture obsolete. Meta-epinotal suture deep. Dorsum of the epinotum flat, as long as wide in front, slightly narrowed caudad, the declivity oblique and a little longer than the dorsum and margined on each side by a fine lamella.

Peduncle of the petiole very short, the node subquadrangular, about as long as wide, the angles rounded. Post-petiole almost semicircular, not quite twice as wide as the petiole, twice as wide behind as long. First tergite a little longer than wide.

Khami, Southern Rhodesia. The nest in granite sand and about 2 inches below the surface, and not in proximity to any termitarium. No specimens of the ♂ caste were found.

This species is nearest to *O. (Aeromyrma) nanus* Sant. from which it differs by the darker colour, absence of puncturation on the head, the longer frontal carinae and by the shape of the narrower postpetiole.

**Monomorium (Syllophopsis) modestum** Sant.

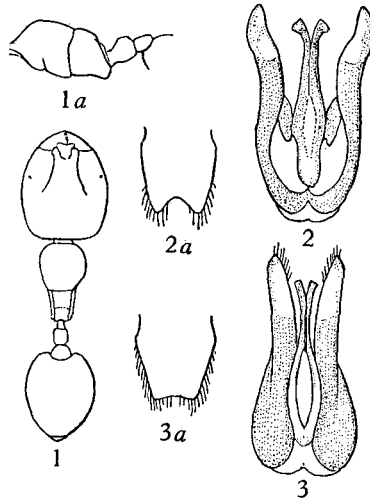
1914, *Meddl. Göteborg Mus. Zool.* III, 1914.

1915, *Ann. Soc. ent. Fr.* LXXXIV, 259, fig. 8.

1921, *Ann. Soc. ent. Belg.* LXI, 120.

1922, Emery, *Gen. Insectorum Formicidae*, p. 167.

Two specimens from Sordwana, Zululand (leg. J. C. Faure) agree closely with Santschi's description except in the length of the apical joint of the flagellum. Santschi says it is as long as the four preceding joints united, which is contradicted by the text-fig. 8*a*, which shows that it is much longer, or equal to the length of the rest of the flagellum less the first joint, as in these two specimens.



Figs. 1, 1*a*. *Aeromyrma khamiensis*, × 25.

Figs. 2, 2*a*. *Philanthus adamsoni*, ♂, genitalia and eighth sternite, × 15.

Figs. 3, 3*a*. *P. limatus*, ♂, genitalia and eighth sternite, × 15.

I think that Emery, in his key to the subgenera of *Monomorium*, is incorrect in placing *Syllophopsis* under segregate 4, in which the first joint of the club of the flagellum is noticeably shorter than the second, and also in the statement that the anterior margin of the clypeus is angular. It is evident that he was deceived by the fig. 8*c* in Santschi's original description (1915), in which the mandibles, closed over the clypeus, make the anterior margin appear angular, and also in the statement in Santschi's diagnosis of the subgenus (1915) that the 'clypeus is angular but unarmed'. Those words refer to the angle formed by the carina of the median area, and not to its anterior margin.

In fig. 8*d*, with the mandibles open, it is clearly apparent that the anterior margin is very feebly convex. Furthermore, of the antennal club Santschi says that the first and second joints are subequal, but with the second slightly wider than the first. Santschi (1921) raises the subgenus to generic rank, 'en raison de ses caractères constants et qui fait

transition au genus *Diplomorium*'. In my opinion the differences are so slight that *Syllophopsis* cannot be regarded as anything more than a subgenus. Therefore the name *M. (Syllophopsis) arnoldi* Sant. 1921, nec *M. arnoldi* Forel, 1912, should be altered, and for which I propose the name *jonesi*, after the collector, Mr W. E. Jones.

## Subfamily FORMICINAE

**Camponotus (Myrmespera) transvaalensis** Arn. **griquan**.subsp.

1948, *Occ. Pap. Rhod. Mus.* II, 14, p. 228, figs. 14, 14a, b. ← *h. 262110*

♀. 10.5 mm. long. This differs from the type of the species as follows. Thorax and abdomen paler, or reddish ochreous, the apical half of the abdomen a little darker or brownish yellow. The reticulate fundamental sculpture of the head is not so sharp and extends almost to the occipital margin, so that the whole head is duller. The excision of the anterior margin of the clypeus is wider and arcuate, not angular as in the type of the species. The eyes are oval, not round. Head wider behind, only one-tenth wider behind than long, measured from the apex of the clypeus to the level of the occipital angles; in the type of the species, one-third longer.

♂. 5-6 mm. long. Head reddish ochreous, the rest of the body pale ochreous. Clypeus subcarinate, the carina more distinct than in the type of the species.

♀. 10.5 mm. long. Head and thorax black, petiole and abdomen brown, antennae ferruginous, mandibles fusco-ferruginous, legs reddish yellow, the tibiae and tarsi somewhat darker. Wings hyaline, the veins pale yellow. Mandibles with seven teeth. The space between the frontal carinae with a few large setigerous punctures. Pro-mesonotum, and scutellum smooth and shining, epinotum fairly dull and with a microscopic reticulation like that of the head, abdomen smooth and shining, the tergites with a pre-apical row of setigerous punctures. Head not much narrower across the cheeks than at the posterior margin, the sides feebly convex. Clypeus feebly convex, one-ninth wider than long, the apical margin shallowly concave. The scapes extend beyond the hind margin of the head by as much as the length of the first joint of the flagellum. Mesonotum very nearly as wide as long, and twice as long as the scutellum. Declivity of the epinotum twice as long as the dorsum and subvertical, the junction of the two faces narrowly rounded.

♂. 6 mm. long. Black, the flagellum and tarsi pale brown. Head and abdomen with a few erect and white hairs. Head dull, the rest of the body shining, the mesonotum with a row of about six setigerous punctures on each side and with a median impressed line on its anterior fourth, ending caudad in a fork. Anterior margin of the clypeus convex. Scape three-quarters the length of the flagellum. Eyes very prominent, a little longer than their distance from the base of the mandibles. Node of the petiole one-third wider than long.

Near Mount Frere, 4500 ft., East Griqualand.

The entrance to the nest, in rather rocky soil, was surmounted by an earthen tube about 25 mm. high and 7 mm. wide, not unlike the tubes made by species of *Odynerus* wasps, but not curved at the end. A small colony consisting of a winged ♂ and a ♀, four ♀♀ and a dozen ♂♂. This is a high veld insect; the type of the species was taken at Standerton, Transvaal, which is 5022 ft. above sea-level. Paratype in B.M.

Family SPHECIDAE

Subfamily TRYPOXYLONINAE

*Trypoxylon gracilicorne* Arn.

1946, *Occ. Pap. Rhod. Mus.* II, no. 12, p. 68, ♂.

♀. 10.8–12 mm. long (hitherto undescribed). The sculpture of the epinotal dorsum of the ♀ differs from that of the ♂, as is usual in this genus. The median area, in addition to the oblique rugae at the base, has eight strong transverse rugae which extend to the outer margins of the lateral areas. The sculpture of the head and thorax is like that of the ♂, but the puncturation of the face is a little larger and deeper. The junction of the vertex with the occiput is not rounded as in the ♂ but obtusely angular and subcarinate. Interocular distance on the vertex equal to the length of the first two joints of the flagellum. Posterior ocelli twice as far from each other as from the eyes. Second joint of the flagellum one-third longer than the third joint. First tergite very nearly six times longer than wide behind, and two and a half times longer than the second. Tarsi a little darker than in the other sex. Otherwise like the ♂.

Mlanje, Nyasaland. January. 2 ♀♀.

Subfamily PHILANTHINAE

*Philanthus adamsoni* n.sp. (Figs. 2, 2a)

♂. 13 mm. long. Head, thorax and first abdominal segment black, the rest of the abdomen ferruginous and becoming gradually paler caudad, the middle of the second sternite black. Clypeus, sides of the face nearly up to the ocular sinuses, a bicornuate macula between the antennal sockets and a lanceolate macula on the temples, pale whitish yellow. Mandibles and beard black. The dorsum of the pronotum except in the middle, the tegulae and an ovoid spot below them, a large macula on the middle of the scutellum and the metanotum, pale yellow. The first tergite has a small ochreous spot on each side near the hind margin. Antennae black. The fore and middle femora with an oblong, pale yellow macula on the underside near the apex. Tibiae and tarsi ferruginous, the tibiae blackish on the underside. Wings hyaline, slightly yellowish, the veins brown. Head thorax and sternites with a long fairly dense and brownish yellow pilosity. Clypeus and yellow areas of the face shining, finely and sparsely punctured. The upper part of the face as far as the posterior ocelli dull, reticulate-punctate, the

vertex and temples nitidulous, shallowly punctured, the interspaces as large as the punctures. Dorsal face of the pronotum smooth and shining, the vertical face and the neck transversely rugulose and dull. Scutellum and metanotum shining, sparsely punctured, the triangular area of the epinotum dull, microscopically striolate, with a median fovea which is rugose and twice as long as wide. The rest of the thorax dull, reticulate-punctate. Abdomen shining, microscopically rugulose, the first tergite with a few large punctures at the sides and in front of the hind-margin. Sternites sparsely punctured. The inferior interocular distance is twice as great as on the vertex, where it is equal to the length of the first four joints of the flagellum. Posterior ocelli one and a half times farther from the eyes as from each other. Second joint of the flagellum a little more than twice as long as wide at the apex and nearly twice as long as the third, the latter a trifle longer than wide, the fourth to eleventh wider than long. First tergite as long as wide behind. Apex of eighth sternite shallowly and obtusely emarginate.

South Kulal, Kenya, September, 1 ♂ (*f. Adamson*).

Closely related to *P. limatus* Bingh., from which it differs by the colour of the abdomen, the weaker puncturation of the vertex and thorax, the wider vertex, thicker flagellum and the emarginate eighth sternite (Figs. 3 and 3*a*). In *limatus* the inferior interocular distance is a little more than two and a third times greater than on the vertex, where it is equal to the length of the first three joints of the flagellum; the second joint of the latter is four times longer than wide at the apex and two and a half times longer than the third.

#### Subfamily CERCERINAE

##### *Cerceris pseudoproteles* n.sp. (Figs. 4, 4*a*)

♀. 16 mm. long. Head, thorax and first abdominal segment, excepting the hind margin, black. Second to sixth abdominal segments and the upperside of the fore and middle femora, the hind femora and tibiae and all the tarsi, ferruginous. Antennae ferruginous below, brown above. Mandibles flavo-ferruginous, blackish at the apex. Lateral sclerites of the clypeus, a semicircular macula on the free lamina of its median area, and the sides of the face up to the middle, yellowish white. Wings fuscous. Lateral sclerites of the clypeus, the yellow areas of the face, the temples, mesopleura and pectus with a sparse, white pubescence. Sternites 4 and 5 with a long, dense exserted and yellow pubescence. Head and thorax dull. The face up to the ocellar area closely and finely rugose, the rugae curved outwards from the middle towards the inner orbits. Vertex closely punctured. Pronotum and metanotum very finely and closely punctured, the mesonotum fairly closely rugose, the rugae thin and almost obliterated, the interspaces shallowly punctured; in the middle and adjacent to the anterior margin there is a rectangular area which is smooth and twice as long as wide. Mesopleura reticulate rugose, and with a small triangular tooth below. Scutellum very shallowly



punctured, the interspaces wider than the punctures. Metapleura transversely and sharply striate. Triangular area of the epinotum closely and longitudinally striato-rugose, the rest of the segment with large rugae curved laterad from the middle line, the bottom of the declivity with a triangular area which is irregularly rugose. Abdomen moderately shining, the sternites and the fifth tergite with a sparse puncturation at the sides. Pygidial area finely reticulate-punctate, one and a half times

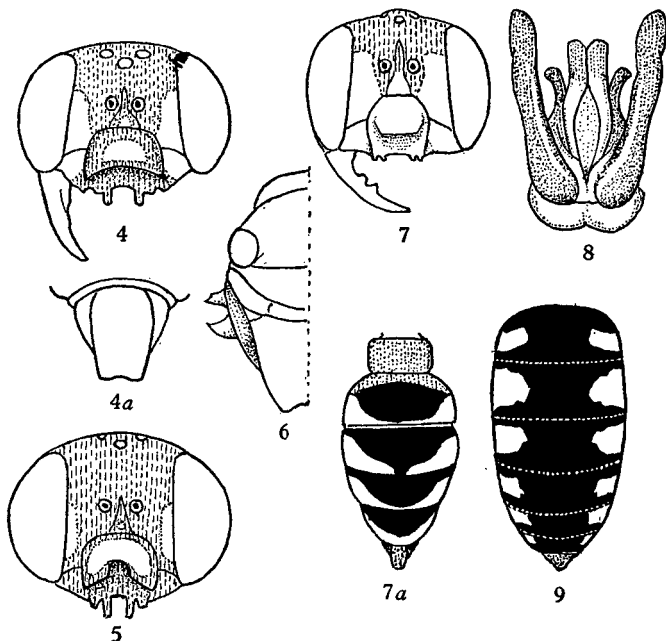


Fig. 4. *Cerceris pseudoproteles*, ♀, × c. 6½.

Fig. 4a. *C. pseudoproteles*, pygidium, × c. 6½.

Fig. 5. *C. proteles*, ♀, × c. 10½.

Fig. 6. *C. albispinosa*, ♀, left half of thorax, × c. 10½.

Fig. 7. *C. manifesta*, ♀, × 8.

Fig. 7a. *C. manifesta*, ♀, × 6.

Fig. 8. *Astata tropicalis*, ♂, genitalia, × 32.

Fig. 9. *Stizus imperialis conspicuus*, ♂, abdomen, × c. 3½.

longer than wide, almost parallel-sided, the apical margin arcuately emarginate. Median area of the clypeus with a semi-cylindrical lamina, free to its base, one-fourth wider in front than long at the sides, its anterior margin arcuate; the apical margin has two long blunt teeth, and laterad of them two short angular teeth. Interocular distance on the vertex equal to the length of the first five joints of the flagellum plus half of the sixth; the inner orbits slightly divergent below. Second joint of the flagellum three times longer than wide at the apex and nearly twice as long as the following joint. Posterior ocelli one-third farther from the eyes than from each other. First tergite feebly convex, one-third wider

at the apex than long, with a feeble median carina and a wide, transverse and pre-apical groove which has a pit in the middle. Posterior tibiae with seven or eight spines.

Makindu, Kenya, February, 1 ♀ (*Calangire*); Olgasalic, Kenya, May, 1 ♀ (paratype). Type in the B.M. (ex Coryndon Museum).

In my key to the species (1931, *Ann. Transv. Mus.* xiv) this species runs down to section B, paragraph 12. It is related to *proteles* Brauns, from which it differs by its larger size, the shape of the clypeus and the yellow markings on the head (fig. 5). In Brauns's description of *proteles* there is an error to be corrected: the type measures 9 mm. in length, not 16 mm.

### *Cerceris albispinosa* n.sp. (Fig. 6)

♀. 9.3 mm. long. Black. The following parts are yellowish white: mandibles excepting the fuscous apical third, clypeus, lower half of the face except in the middle, frontal triangle and carina, underside of the scapes, a transverse macula on each side of the pronotal dorsum, a small round spot on each side of the scutellum, the two mesopleural teeth, the metanotum, a vertical streak on each side of the epinotal declivity, two small pre-apical spots on the first tergite, a narrow apical band abruptly dilated laterad on the second tergite, the basal half of the second sternite, a narrow apical band on the fourth tergite, the fifth tergite excepting the extreme base, the tibiae and the tarsi. The hind tibiae are blackish on the inside. The following parts are pale ferruginous; antennae, femora, first tergite and basal third of the second tergite. The femora have a small white spot on the underside at the apex. Wings hyaline, tegulae yellowish white, the inner third ferruginous. Pygidium fusco-ferruginous. The whole body fairly dull. Clypeus and lower half of the face with decumbent silvery pubescence. Clypeus and yellow areas of the face punctured, the interspaces about twice as wide as the punctures; the rest of the face reticulate-punctate. Vertex and temples with a larger puncturation, the interspaces twice as wide as the punctures, or three times just behind the ocellar area. Pronotal dorsum impunctate, the sides sparsely and coarsely punctured. Mesonotum and dorsum of the epinotum sparsely and irregularly punctured, the interspaces on the latter at least three times wider than the punctures; the median triangular area is grooved lengthwise in the middle and has three punctures on each side near the base. Scutellum and metanotum impunctate. Mesopleura coarsely reticulate-punctate, armed below with two large, prominent and acute teeth. Tergites 1-5 strongly reticulate-punctate, the punctures larger than those of the mesonotum. Pygidial area ovate, twice as long as wide, sparsely punctured. Puncturation of the sternites less close and smaller than that of the tergites. Mandibles with two teeth on the upper inner margin. Median area of the clypeus simple, the anterior half slightly concave, hexagonal, as long as wide at its widest. Inner orbits divergent below. Interocular distance on the vertex equal to the length of the first six joints of the flagellum. Posterior ocelli one-third farther from the eyes than from each other. The yellow areas of the pronotal dorsum tumid.

The mesopleura are swollen so that the large teeth on them are plainly visible from above. First tergite as long as wide behind, the sides feebly convex. Hind tibiae with four serrations.

Olgasalic, Kenya, April (*S. Patrizi*). Type in the B.M. (ex Coryndon Museum).

Related to *C. curvitaris* Schlett. and *C. uncta* Arn. differing from both by size, colour and sculpture, from the former also by the mesopleural teeth, and from *uncta* by the shape of the pygidial area, the presence of two mesopleural teeth and the shape of the petiole.

***Cerceris manifesta* n.sp. (Figs. 7, 7a)**

♀. 10 mm. long. Black. Antennae, legs, first tergite, base of the second tergite, sixth tergite, anterior corners of the second, third and fourth tergites, and the sternites, ferruginous. The ninth and tenth joints of the flagellum on the upperside slightly fuscous. The lateral sclerites of the clypeus and the sides of the face, ochreous. Mandibles flavo-ferruginous, the apices fuscous. The following parts are pale yellow: median area of the clypeus, frontal triangle, a round spot on the upper part of the temples, pronotal dorsum, metanotum and narrow apical bands, widely dilated laterad, on the second to fifth tergites. Tegulae yellow in front, ferruginous behind. Wings hyaline, tinged with brown, the pterostigma and veins reddish brown. Clypeus, temples and abdomen with a white pubescence, fairly long on the sternites. Median area of the clypeus shining, the raised basal portion sparsely punctured, the rest of the clypeus and the pale areas of the face as finely but closely punctured. The rest of the head reticulate-punctate, the punctures increasing in size dorsad. Pronotum dull, obliquely rugose at the sides, elsewhere finely and closely punctured, the metapleura and the anterior half of the sides of the epinotum closely and transversely costate, the median triangular area of the epinotum very coarsely and obliquely rugose, the rest of the thorax deeply reticulate-punctate, the punctures a little larger than those on the vertex. Abdomen shining, the tergites 1-5 with punctures as large as those on the vertex, except in the middle of the basal halves where they are much smaller, the interspaces for the greater part three times wider than the punctures. Pygidial area dull, narrow, barrel-shaped, closely wrinkled, the apical margin straight. Sternites punctured at the sides. Mandibles with two teeth on the upper inner margin. Median area of the clypeus one-sixth wider than long, its basal half raised and feebly convex transversely, its pre-apical margin straight, the anterior margin concave and with two blunt teeth on each side. Inner orbits feebly divergent above and below. Interocular distance on the vertex equal to the length of the first six joints of the flagellum plus half of the seventh. Second joint of the flagellum two-thirds longer than the third. Dorsum of the epinotum much shorter than the declivity and convex lengthwise. Petiole broad, half as wide again as long (measured on the tangent), and three-fourths as long as the second tergite. The latter is twice as wide at the hind margin as long. Hind tibiae with five spiniferous serrations.

Olgasalic, Kenya, May (— *Toschi*). Type in the B.M., ex Coryndon Museum.

Related to *C. ruficauda* Cam. from which it differs by the colour of the head and of the much wider abdominal segments, the shape of the median area of the clypeus and the sculpture of the median area of the epinotum. The insect is too small to be the ♀ of *C. insignis* Arn. from which it differs, *inter alia*, by the sculpture and by the different shape of the transverse yellow bands on the tergites.

#### Subfamily ASTATINAE

#### *Astata tropicalis* Arn. (Fig. 8)

1924, *Ann. Transv. Mus.* XI, 31, ♀.

♂. 11 mm. long (hitherto undescribed). Mandibles entirely black, legs black, the tarsi ferruginous, base of the first tergite and the second and third sternites black, otherwise like the ♀ in colour. The swollen area just below the anterior ocelli smooth and shining, the rest of the face dull and finely, closely sculptured. Mesonotum dull, reticulate-punctate and with an indistinct transverse rugulosity. Scutellum closely and strongly punctured at the sides and behind, shining and very sparsely punctured in front and in the middle. Mesopleura, metanotum, metapleura and sides of the epinotum strongly reticulate-punctate and dull. Dorsum of the epinotum reticulate, the meshes wide apart and with the threads stronger longitudinally than transversely. First tergite and the base of the second at the sides closely punctured and dull. Seventh tergite triangular, with a few longitudinal striae, the apex widely rounded. Sternites with a long but not dense yellowish and exerted pubescence. Second joint of the flagellum three and three-fifths longer than wide at the apex and half as long again as the third. Anterior tarsi without a comb. Otherwise like the ♀.

Abercorn, Northern Rhodesia, July, 2 ♂♂, 2 ♀♀ (*H. J. Bredo*). Allotypes in N.M.S.R. and B.M.

#### Subfamily NYSSONINAE

#### *Gorytes mweruensis* n.sp.

♀. 9.5 mm. long. Black. The underside of the scapes, a thin line margining the lower half of the inner orbits and apical bands, moderately dilated laterad, on the second to fourth tergites, yellow. The following parts are ferruginous: mandibles, clypeus, pronotal dorsum and tubercles, tegulae, posterior corners of the mesonotum, sides of the first tergite and sternite, and the fifth and sixth tergites. Flagellum ferruginous below, dark brown above. Middle tarsi dark ochreous, the rest of the legs reddish brown to black, the anterior tibiae reddish on the upperside. Wings hyaline, the pterostigma ochreous, the radial, second cubital and upper half of the third cubital cells, and the distal upper angle of the medial cell, dark brown; the veins blackish. Head with a very

fine, decumbent and grey pubescence, the abdomen with a microscopic, yellow and decumbent pubescence. The whole body, excepting the clypeus and first two tergites, dull. Clypeus slightly shining, with an impressed line behind the convex anterior margin and a row of punctures behind the impressed line, at the base with a few transverse striae on each side of the middle. Lower half of the face almost impunctate, the upper half and the vertex closely punctured, the interspaces a little wider than the punctures, the puncturation of the temples fine, shallow and sparse. Pronotal dorsum transversely striolate. Mesonotum and scutellum with a puncturation about twice as large as that of the vertex, almost reticulate-punctate on the mesonotum, sparse on the scutellum, the interspaces on both punctulate. Metanotum longitudinally rugose and punctured. Mesopleura with punctures a little smaller than those of the mesonotum, the interspaces four times wider than the punctures. Metapleura transversely rugose. Triangular area of the epinotum with about eight longitudinal costae, and with a few transverse rugae, the middle of the declivity transversely rugose, the rest of the epinotum coarsely reticulate-punctate, the punctures larger than on the mesonotum. Tergites 1-5 very sparsely, finely and shallowly punctured, the pygidial area sparsely and coarsely so. Second sternite closely and strongly punctured. Clypeus three and a half times wider than long. Interocular distance on the vertex equal to the length of the first seven joints of the flagellum, or a little more. Inner orbits less convergent below than in *G. schubotzii* Arn. Second joint of the flagellum twice as long as wide at the apex and not quite twice as long as the third joint. Thorax broad, the mesonotum in the middle half as wide again as long.

Lake Mweru, Northern Rhodesia, February, 2 ♀♀; Musosa, Belgian Congo, 1 ♀ (*H. J. Bredo*).

This insect is undoubtedly closely related to *G. schubotzii* Arn. from which it differs in the wider clypeus which is not inflected over the anterior third, and by the colour of the thorax and abdomen, and the larger puncturation of the tergites. Paratype in B.M.

#### Subfamily STIZINAE

#### *Stizus imperialis conspicuus* n.subsp. (fig. 9)

*S. imperialis* Hndl. 1892, *S.B. Akad. Wiss. Wien.* CI, 141.

Race *tulbaghensis* Arn. 1936, *Occ. Pap. Rhod. Mus.* II, no. 3, p. 17.

♂. 21. mm. long. Related to the race *tulbaghensis*, from which it differs as follows. The labrum, clypeus and sides of the face pale yellow as in that race, but the rest of the head is ferruginous, somewhat infuscated in the middle on the vertex behind the ocelli, and on the occipital surface. Flagellum flavo-ferruginous. Pronotal dorsum and lateral margins of the mesonotum ferruginous, the rest of the thorax black. Sternites entirely black, tergites 1-6 black, with sharply defined pale yellow maculae, the seventh tergite fusco-ferruginous. Legs ferruginous, the femora more or less black on the basal half. Fore-wings

fuscous, the apical part beyond the cells and the hind-wing faintly so. Second joint of the flagellum very nearly four times longer than wide at the apex, and a little more than two-thirds longer than the third joint. Genitalia indistinguishable from those of the type of the species and of the race *tulbaghensis*.

Makindu, Kenya, February, 1 ♂ (Calangiri). Type in the B.M. (ex Coryndon Museum).

As the type of the species is mainly pale yellow, this is a remarkable subspecies, since one would not, judging by the colour alone, suspect any relationship. This case provides a striking proof of the taxonomic value of the genitalia.

#### Subfamily BEMBICINAE

#### *Bembix notabilis* n.sp. (Figs. 10, 10 a-d)

♂. 20 mm. long. Black. The following parts are very pale yellow or yellowish white: labrum, mandibles excepting the black apical third,

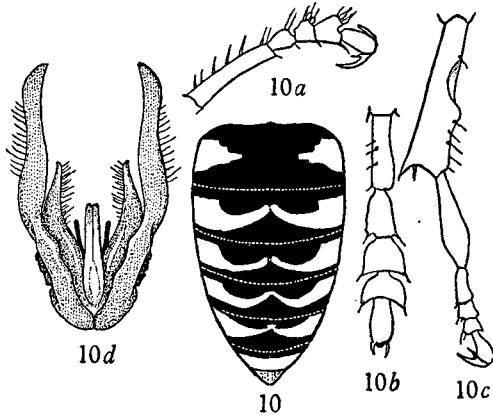


Fig. 10. *Bembix notabilis*, ♂, abdomen,  $\times 3$ .  
 Fig. 10a. *B. notabilis*, ♂, hind tarsus,  $\times c. 7\frac{1}{2}$ .  
 Fig. 10b. *B. notabilis*, ♂, left anterior tarsus,  $\times 8$ .  
 Fig. 10c. *B. notabilis*, ♂, middle tibia and tarsus,  $\times 8$ .  
 Fig. 10d. *B. notabilis*, ♂, genitalia,  $\times 8$ .

anterior half of the clypeus (the basal half fuscous and tinged with brown anteriorly), the frontal triangle, underside of the scapes, the inner and outer orbits on the face and temples, underside of the anterior coxae, pronotal dorsum and sides of the pronotum, prosternum, anterior margin of the mesosternum, apical half of the middle coxae and the extreme base of the hind coxae on the outside. Tergites 1-5, with curved glaucous white transverse fasciae, those of the second to fourth abruptly dilated laterad, of the first narrowly interrupted in the middle, the sixth with a very pale yellow fascia, the seventh reddish yellow but fuscous at the base. Sternites black, the second to sixth with pale yellow triangular maculae at the posterior corners. Posterior half of the sides of the

mesonotum, tegulae, posterior third of the scutellum and apical margin of the metanotum pale ferruginous. Legs flavo-ferruginous, the underside of the fore and middle tibiae pale yellow, the anterior tarsus, excepting the basal joint, dull white, their apices with a black spot below. Flagellum and upperside of the scape pale ferruginous. Wings hyaline, the veins dark brown. Vertex, temples, occiput, mesopleura, epinotum and base of the first tergite with a long, white pilosity; mesonotum and tergites 1-6 with a decumbent pubescence, grey on the mesonotum, black on the tergites. Thorax and tergites 1-6 with a fine, shallow and close puncturation, the seventh with a sparse and coarse one. Sternites moderately shining, closely and obliquely punctured, the punctures largest on the second sternite. Clypeus convex transversely, slightly flattened in the middle, twice as wide as long. Inner orbits moderately divergent below. Interocular distance on the vertex equal to the length of the first four joints of the flagellum. The second joint is three times longer than wide at the apex, the seventh, eighth and ninth finely spinose at the base, the tenth, eleventh and twelfth excavated below, the apical joint two and two-fifths longer than wide at the base. Second sternite with a high, transversely compressed tooth, rounded at its apex. Sixth sternite with a slightly raised semicircular platform, the seventh subcarinate on each side, widely rounded at the apex and like the posterior half of the sixth with a long and dense brown pilosity. Basal joint of the anterior tarsi with seven spines on the outside, the second to fourth joints asymmetrical, the second with two spines at the apex, the third and fourth with three each, of which the two apical ones are flattened at the base. Middle femora with nine teeth on the inferior margin; middle tibiae produced into a point on the outside and with one calcar, dilated in the middle and concave lengthwise between the point and the base. The middle metatarsus gradually widened caudad and acuminate at the apex; the metatarsus of the hind leg curved, the second joint slightly, the third and fourth strongly dilated. Outer paramera of the genitalia narrow and remarkably long, two and a half times longer than the sagittae.

Olgasalic, Kenya, May. 3 ♂♂ (*Meneghetti*). Type in B.M. (ex Coryndon Museum), paratypes in Coryndon and National Museums.

This species cannot be placed in any of the known groups, but forms a group of its own. Easily distinguished from all other Ethiopian species by the genitalia and the dilated hind tarsi.

#### ***Bembix rava* n.sp. (figs. 11, 11a-c)**

♂. 16-17 mm. long. Black. Labrum, mandibles excepting the fuscous apex, clypeus excepting a transverse, bidentate basal band, sides of the face, a V-shaped macula below the anterior ocellus, inner margin of the temples, sides of the pronotum and the hind margin of the pronotal tubercles, pale lemon yellow. First five tergites with transverse glaucous white bands, interrupted on the first, widely dilated

laterad on the second, and all becoming yellow on the margins ventrad; sixth and seventh tergites flavo-ferruginous. First sternite black, excepting the lateral and posterior margins, the second black on the basal half, the second to fifth yellow at the sides, pale ferruginous in the middle and with blackish margins at the base and apex; sixth sternite pale yellow, the median platform pale red. Scapes pale yellow below, black above, the flagellum black. Legs pale lemon yellow with black streaks on the underside of the femora, not reaching the apex on the hind pair; the tibiae also with black streaks below, the anterior tibiae black on

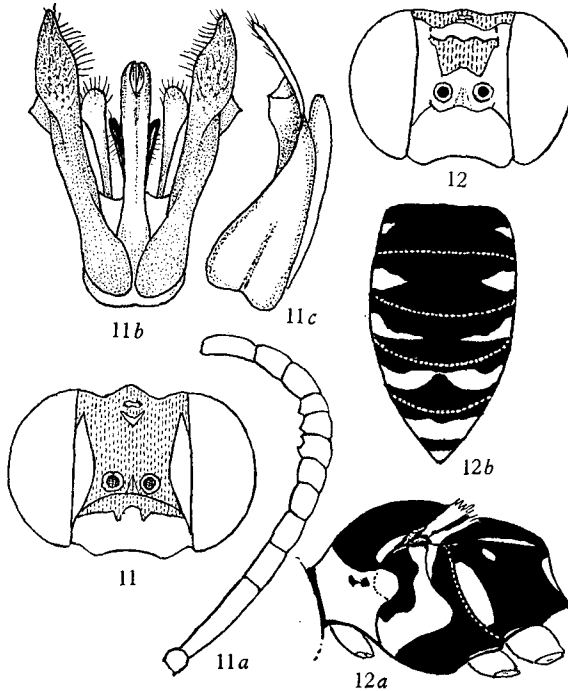


Fig. 11. *Bembix rava*, ♂, head,  $\times c. 6$ .  
 Fig. 11a. *B. rava*, ♂, flagellum,  $\times c. 14$ .  
 Figs. 11b, c. *B. rava*, ♂, genitalia,  $\times c. 6$ .  
 Fig. 12. *B. brachyptera*, ♀, head,  $\times c. 6$ .  
 Fig. 12a. *B. brachyptera*, ♀, thorax,  $\times c. 2\frac{1}{2}$ .  
 Fig. 12b. *B. brachyptera*, ♀, abdomen,  $\times 3$ .

the upperside excepting at the apex. Wings hyaline, the veins dark brown. Head and thorax with a long, erect and white pilosity, the clypeus with decumbent silvery pubescence. Abdomen with a decumbent, white and inconspicuous pubescence. Thorax dull, finely, shallowly and obliquely reticulate-punctate, the sides of the epinotum not so closely reticulate and with a larger puncturation. Tergites 1-6 not quite dull, closely and obliquely punctured, the seventh shining and sparsely punctured. Strenites shining, the first and second with large shallow punctures, the



third to sixth closely punctured at the base and sides, sparsely elsewhere. Clypeus strongly convex transversely, twice as wide as long. Second joint of the flagellum very nearly four times longer than wide at the apex and two and three-tenths longer than the third, the seventh, eighth and ninth dentate on the inner margin. Vertex deeply depressed on each side of the ocellar area. Second sternite with a large compressed tooth, its apex rounded, the sixth with a subtriangular platform, the seventh with a median longitudinal carina; the seventh tergite broadly semi-elliptical, the sides feebly sinuate near the apex. Middle femora edentate on the lower margin, the middle basitarsus moderately dilated in the middle. Outer paramera of the genitalia with a prominent expansion on the outside between the middle and the apical third, clearly visible from above.

♀. 13.5 mm. long. Apical half of the mandibles black, clypeus entirely yellow. The yellow areas on the sides of the face have an angular expansion mesad surrounding the antennal sockets. Hind margin of the mesonotum very narrowly dull yellow. Sides of the epinotum with an ovoid yellow macula. Sixth tergite flavo-ferruginous, shining sparsely and coarsely punctured. Hind tibiae entirely yellow. Otherwise like the ♂ in colour and sculpture, but the mesonotum is nitidulous. Second joint of the flagellum twice as long as the third and nearly five times longer than wide at the apex.

Naivasha, Kenya, September, 3 ♂♂, 1 ♀ (*H. J. A. Turner*). Type and allotypes in the B.M. (ex Coryndon Museum), ♂ paratypes in the Coryndon Museum and the N.M.S.R.

Allied to *B. fuscipennis* and easily distinguished from all other African species by the lateral and ventrad expansion of the outer paramera of the genitalia. The shape of the pale bands on the abdomen is very similar to that of *B. sibilans* Hndl.

#### ***Bembix brachyptera* n.sp. (figs. 12, 12a, b)**

♀. 19–20 mm. long. Black. Labrum, mandibles excepting the apex, clypeus, lower half of the sides of the face, a transverse bar below the ocelli, the temples more widely below than above, pronotum, a large macula on the mesonotum, smaller maculae on the sides of the epinotum, the posterior corners of the scutellum, a V-shaped mark below the epinotal dorsum and the lateral margins of the epinotal declivity, pale lemon yellow. Angular lateral maculae on the first three tergites, a sinuate band, interrupted in the middle, on the fourth tergite, the fifth tergite except at the base and the apical half of the sixth tergite, pale chrome yellow. Sternites 2–5 with triangular pale yellow maculae on each side. Anterior coxae and trochanters, a spot on the middle coxae and the legs, pale chrome yellow; the femora with narrow black streaks below, the fore and middle tibiae with small black spots near the base on the upper side. Flagellum reddish brown above, reddish ochreous below, the first and second joints black above, the scapes entirely yellow. Wings hyaline, tinged with yellow, short or not extending back beyond the hind

margin of the third tergite, the veins brown. Pilosity and pubescence yellowish, the pilosity long on the head and thorax, the sides of the sixth abdominal segment densely spinose. Dull. Clypeus sparsely punctured. Thorax very closely and finely punctured, the punctures round. Tergites 1-5 closely, the sixth fairly coarsely punctured. Sternites slightly shining, the second in the middle and the sixth with a large and scanty puncturation, the rest of the sternites closely punctured. Clypeus two and a quarter times wider than long, the anterior half flattened in the middle. Inner orbits moderately divergent below. Second joint of the flagellum nearly five times longer than wide at the apex, and twice as long as the third, the apical joint a little more than twice as long as wide. Comb of the anterior tarsi long, the basal joint with eight spines on the outer margin.

Abercorn, Northern Rhodesia, October, 4 ♀♀ (*H. J. Bredo*).

Related to *B. cultrifera* Arn. from which it differs by the colour and shape of the abdominal fasciae, the round and much less close puncturation of the mesonotum, the larger, sparser puncturation of the sternites which are not dull as in *cultrifera*, and the shorter wings. Type in the N.M.S.R. and paratype in B.M.

#### Subfamily AMPULICINAE

##### ***Dolichurus guillarmodi* n.sp.** (Figs. 13, 13a, b)

♀. 5.8-7 mm. long. Black. Wings hyaline, strongly iridescent, the veins black. The number and position of the black macrochaetae on the clypeus, face and scutellum are the same as in *D. ignitus* Smith, but there are also two on the pronotum which are not present in that species. The head and thorax have in addition a very sparse, exerted and white pubescence. The whole body is very shining. Clypeus twice as wide as long in the middle, the middle third produced, its apical margin convex; the basal half with a longitudinal carina. Sides of the face closely reticulate, the lower half in the middle up to the antennal plate with longitudinal rugae, the upper half and the vertex and temples with a large and sparse puncturation, the interspaces at least twice as wide as the punctures. Pronotal dorsum finely, irregularly and sparsely punctured and with two large punctures bearing the macrochaetae, the vertical anterior face transversely rugulose, the posterior half of the sides with a few transverse rugae. Mesonotum and scutellum as sparsely punctured as the pronotal dorsum. Mesopleura strongly and transversely rugose, the metapleura impunctate, the metanotum closely, finely and longitudinally rugulose. Dorsum of the epinotum irregularly reticulate-rugose, a narrow border at the sides and at the posterior margin with transverse rugae only, the declivity closely rugose, the sides transversely and closely striate. Abdomen almost impunctate, only the third tergite with a microscopic puncturation at the sides. Clypeus twice as wide as long. The antennal plate concave transversely, half as long again as wide, the sides raised. Interocular distance across the base of the clypeus

one-fifth greater than on the vertex, where it is equal to the length of the first two joints of the flagellum. Posterior ocelli as far from the eyes as from each other. Second joint of the flagellum fully five times longer than wide at the apex and one-third longer than the third joint. Dorsum of the pronotum narrowed cephalad, swollen but not tuberculate on each side, impressed lengthwise in the middle, three times wider behind than long in the middle; the whole segment, including the neck, as long

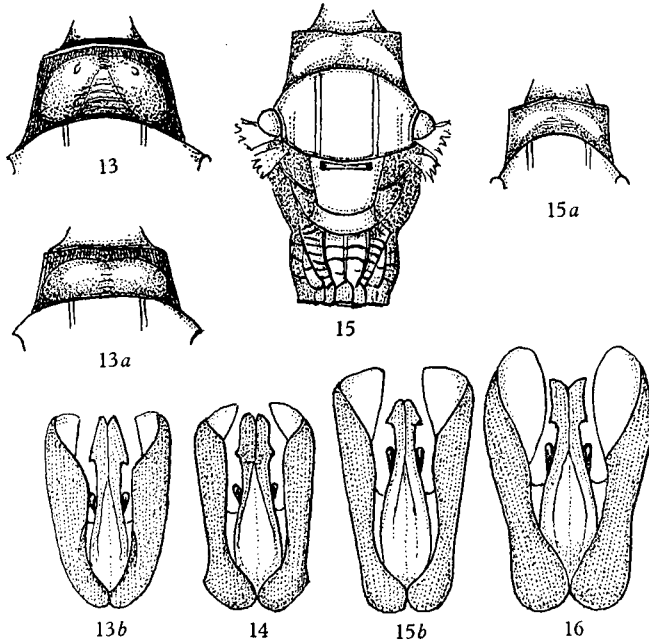


Fig. 13. *Dolichurus guillarmodi*, ♀, pronotum, × 21.

Fig. 13a. *D. guillarmodi*, ♂, pronotum, × 21.

Fig. 13b. *D. guillarmodi*, ♂, genitalia, × 45.

Fig. 14. *D. venator*, ♂, genitalia, × 45.

Fig. 15. *D. basuto*, ♀, thorax, × 16½.

Fig. 15a. *D. basuto*, ♂, pronotum, × 16½.

Fig. 15b. *D. basuto*, ♂, genitalia, × 45.

Fig. 16. *D. ignitus*, ♂, genitalia, × 45.

as the mesonotum. Dorsum of the epinotum slightly narrowed caudad, twice as wide at the base as long, the lateral margins of the declivity with a short tooth below the middle. First tergite one-third wider behind than long.

♂. 5.3–6 mm. long. The sculpture stronger than in the ♀. The face, almost up to the anterior ocellus is reticulate-rugose, the vertex sparsely and coarsely punctured, the punctures nearly half as wide as the posterior ocelli, the interspaces about three times wider than the punctures. Punctuation of the pronotum and mesonotum and scutellum closer and larger than in the ♀, the interspaces on the mesonotum and scutellum not much wider than the punctures. The reticulate rugosity of

the epinotum closer than in the ♀. First two tergites very sparsely, the third fairly densely and finely punctured. Clypeus less produced in the middle than in the ♀, the carina on the basal half thicker. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus three-fifths of the third. The second joint four times longer than wide and as long as the third. Dorsum of the pronotum less narrowed cephalad than in the ♀, three times wider behind than long. The antennal plate is a little shorter than in the ♀.

Mamathes, Basutoland, December, 3 ♀♀, 3 ♂♂ (*C. Jacot-Guillarmod*). Paratype in the B.M.

Nearest to *D. venator* Arn. from which it differs in the ♀ by the entirely black abdomen, the more tumid pronotal dorsum, and the wider vertex. In *venator* the interocular distance across the base of the clypeus is one-fourth greater than on the vertex. The ♂ differs from that of *venator* by the stronger and denser puncturation of the head and thorax, the sculpture of the epinotum and the much shorter pronotal dorsum. The genitalia are very much alike, but the sagittae are lamelliform and subacute at the apex, not bulbous as in *venator*.

#### ***Dolichurus basuto* n.sp. (Figs. 15, 15a, b)**

♀. 8.5 mm. long. Black. Apical third of the fourth, and the whole of the fifth and sixth abdominal segments, pale ferruginous. Mandibles, scapes, anterior tibiae and tarsi ferruginous, the middle and hind tibiae fusco-ferruginous. Flagellum brown above, reddish brown below. Wings clear hyaline, the veins brown. Face and mandibles with a thin whitish pubescence, elsewhere almost glabrous excepting the usual macrochaetae. The whole body shining. Clypeus produced into a median lobe, its apical margin ferruginous, the basal half with a longitudinal carina. Lower half of the sides of the face finely and closely punctured, the upper half longitudinally rugose and punctured, the rugae not reaching the level of the anterior ocellus. Vertex and temples finely, sparsely punctured. The pronotum, mesonotum and scutellum very sparsely punctured, more finely so than the vertex, the sides of the pronotum with some oblique costae. Mesopleura transversely rugose and strongly punctured in between. Metapleura smooth, metanotum longitudinally rugose. Epinotal dorsum with widely spaced rugae and in part reticulate (Fig. 15), the sides with a few transverse rugae, the declivity reticulate-rugose. Abdomen smooth and impunctate. Clypeus twice as wide as long. Inter-antennal plate half as long again as wide, the sides tumid. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus one-third of the third joint; the interocular distance at the base of the eyes one-fifth greater than on the vertex. Second joint of the flagellum four and a half times longer than wide at the apex and one-fifth longer than the third. Pronotal dorsum two and a third times wider behind than long in the middle, marginate in front, on each side with a flattened tubercle the apex of which is directed caudad and laterad; the superior lateral corners in

front of the dorsum are prominent and rectangular. Mesonotum two-thirds longer than the pronotal dorsum. Dorsum of the epinotum twice as wide at the base as long. First tergite one and a half times wider behind than long.

♂. 5-7 mm. long. Apical third of the femora as well as the tibiae and tarsi ferruginous. Flagellum ferruginous above and below. The tubercles of the pronotal dorsum ivory white at the apex. Abdomen entirely black, otherwise like the ♀ in colour. As is the rule in this genus, the sculpture in this sex is stronger and denser than in the ♀. The rugae on the face extend up to the anterior ocellus, and the puncturation of the vertex is closer than in the ♀. Puncturation of the mesonotum and scutellum shallow, the interspaces about three to four times wider than the punctures. Metanotum closely punctulate. Mesopleura not so closely rugose as in the ♀. Tergites 1-3, and sternites two and three deeply, fairly closely and evenly punctured, the interspaces about twice as wide as the punctures. Clypeus two and four-fifths wider than long in the middle, the apical margin arcuately excised in the middle, strongly carinate lengthwise. Interocular distance at the base of the eyes barely greater than on the vertex, where it is equal to the length of the second and third joints of the flagellum. The second joint four times longer than wide and very little longer than the third. Dorsum of the pronotum two and two-thirds wider behind than long in the middle. First tergite three-fifths wider behind than long. The fourth and following abdominal segments are invaginated and concealed under the third sternite, which is strongly chitinized and convex.

Mamathes, Basutoland, January, 2 ♀♀, 2 ♂♂ (*A. Jacot-Guillarmod*).

The ♀ resembles superficially *D. ignitus* (Fig. 16), but the shape of the pronotum and the sculpture are different. The ♂ differs from that of *ignitus* by the sculpture, the shape of the pronotum, the genitalia and the apical segments of the abdomen concealed under the third sternite.

The African and Madagascan species can be separated into two groups which may be worthy of subgeneric rank. In the first group the sternites are not heavily chitinized, the third is only moderately convex transversely, and the apical segments are more or less exposed. This group includes *ignitus* Smith, *venator* Arn., *bimaculatus* Arn. and *guillarmodi* Arn. In the second group the sternites are strongly chitinized, the third is patelliform, as in *Ampulex* males, and the apical segments are not exposed, being invaginated and concealed within the third. This group includes *basuto* Arn. and *secundus* Sauss.

#### Subfamily SPHECINAE

#### **Sceliphron (Pelopoeus) fossuliferum** Grib. (Figs. 17, 17a)

1895, *Mem. R. Accad. Bologna*, v, 110, ♀.

Kohl, 1918, *Ann. naturh. (Mus.) Hofmus. Wien*, xxxii, 106.

Kohl expressed the opinion that this insect was only a variety of *quartinae* Grib. However, a ♂ from Masappa River, Portuguese East

Africa (about 10 miles north-east of Melsetter, Southern Rhodesia), which is undoubtedly conspecific, supports the validity of *fossuliferum*. Gribodo emphasizes the distinctive character of the scutiform median area of the epinotum. In the specimen under consideration, 18 mm. long, the median groove of the scutate area is forked cephalad, and the arms of the fork are as deep as the median groove. In *quartinae* there is no distinct forking. Other differences are as follows. Scapes fusco-

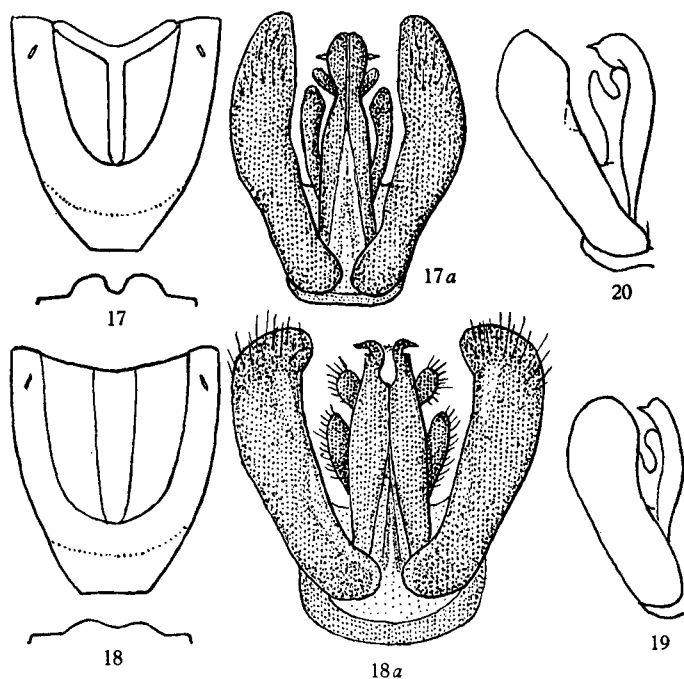


Fig. 17. *Sceliphron fossuliferum*, ♂, epinotum, and below, transverse section through the middle,  $\times 12$ .  
 Fig. 17a. *S. fossuliferum*, ♂, genitalia,  $\times 27$ .  
 Fig. 18. *S. spirifex*, ♂, epinotum,  $\times 12$ .  
 Fig. 18a. *S. spirifex*, ♂, genitalia,  $\times 27$ .  
 Fig. 19. *S. quartinae*, ♂, right half of the genitalia,  $\times 27$ .  
 Fig. 20. *S. fulvohirtum*, ♂, right half of the genitalia,  $\times 27$ .

ferruginous below. Fore and middle legs black, the apex of the femora and the inside of the tibiae slightly rufescent. Tegulae pale reddish brown. Interocular distance on the vertex equal to the length of the second joint of the flagellum plus twice the length of the first. Second joint of the flagellum one-third longer than the third joint. Dorsum of the pronotum distinctly grooved lengthwise in the middle. The genitalia are very similar to those of *fulvohirtum*, but the outer paramera are longer and less rounded at the apex; they differ considerably from those of *spirifex* (Figs. 18 and 18a).

**Sceliphron (Pelopoeus) quartinae** Grib. (Fig. 19)

Gribodo, 1884, *Ann. Mus. Stor. nat. Genova*, p. 298, ♂, ♀.  
 Kohl, 1918, *Ann. naturh. (Mus.) Hofmus. Wien*, xxxii, 105.  
 Arnold, 1928, *Ann. Transv. Mus.* xii, 245.

My description of this species needs correction, as it was based for the ♀ on specimens erroneously determined as this species by the late R. E. Turner, and for both sexes by Kohl's monograph. Thanks to the courtesy of Dottorressa Delfa Guiglia, I have now cotypes of Gribodo's species before me.

Gribodo gives the length as from 13 to 18 mm., the smaller figure evidently the minimum for the ♂♂. Kohl gives the length as 15–22 mm. for the ♀ and 12–21 mm. for the ♂, and the colour of the pilosity as castaneous brown to black. As the colour of the pilosity in the cotypes is pale reddish ochreous, and of the wings flavohyaline, it is evident that the species described by Kohl is not *quartinae* Grib. In the ♀ of the latter the clypeus is two-thirds wider than long, the inferior interocular distance is equal to the superior, which is equal to the length of the first two joints of the flagellum plus five-twelfths of the third; the second joint is six times longer than wide at the apex and half as long again as the third. The median scutiform area of the epinotum is transversely and closely striate and only shallowly grooved lengthwise. A little more than the apical half of the hind femora and a little less than the apical half of the hind tibiae, black. Petiole almost straight, as long as the thorax less half of the epinotum.

♂. Clypeus one and a half times wider than long. Interocular distance across the clypeus a trifle more than one-fifth greater than on the vertex, where it is equal to the length of the first two joints of the flagellum. Second joint of the flagellum about seven times longer than wide at the apex, and two-sevenths longer than the third. Petiole very little shorter than the whole thorax.

*S. fulvohirtum* Arn. (Fig. 20) is closely related to this species, but is larger and has a longer and more oblique pronotum. The genitalia, although similar, have the outer paramera narrower apically and the sagittae are of a different shape. For the species erroneously determined as *quartinae* by Turner, and which I described as the ♀ of that species, I propose the name *decipiens*; the type from Unyoro, Uganda, is in the N.M.S.R.

## Subfamily LARRINAE

**Miscophoides minutus** n.sp. (Fig. 21)

♀. 2.2 mm. long. Head blackish brown, thorax burnt umber brown, the sides of the pronotum raw sienna yellow, the tergites pale burnt umber brown, the sternites pale reddish brown. Pronotal tubercles, tegulae and apex of the anterior femora, yellowish white. Femora and tibiae pale brown, the tarsi reddish ochreous. Wings very pale brown, nearly hyaline in the middle. The whole body moderately shining,

microscopically and widely reticulate (50 diameters). Head with a decumbent greyish pubescence, the mesopleura just below the tegulae with a patch of silvery pubescence, and the upperside of the hind coxae with similar pubescence. Clypeus very short, the anterior margin widely and arcuately excised in the middle. Face convex, in the middle four times wider than one eye. Eyes considerably narrowed ventrad and slightly divergent below, the cheeks long, as long as the scapes. Temples in the middle as wide as the eyes. All the joints of the flagellum a little longer than wide, the second not much longer than the first. Posterior ocelli three and a half times farther from each other than from the eyes. Interocular distance on the vertex nearly equal to the length of the first four joints of the flagellum. Pronotum, including the neck, three-fifths wider behind than long, the dorsal face merging gradually into the anterior face, narrowed cephalad, strongly convex lengthwise and

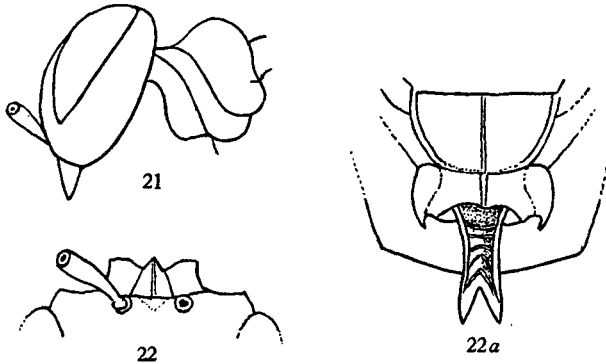


Fig. 21. *Miscophoides minutus*, ♀, × 45.

Fig. 22. *Oxybelus eburneoguttatus*, ♂, clypeus seen from above, × c. 27.

Fig. 22a. *O. eburneoguttatus*, ♂, posterior half of thorax, × c. 27.

moderately so transversely, not subtuberculate in the middle as in *M. handlirschi* Brauns. Mesonotum twice as wide as long, nearly twice as long as the scutellum, which is twice as wide as long. Dorsum of the epinotum as long as the declivity, considerably narrowed caudad, with a feebly impressed longitudinal line in the middle. First tergite subtriangular or much narrowed towards the base, one-third wider behind than long. Apical tergite broadly triangular. Venation of the forewing as in *M. handlirschi*, consisting only of the costal, subcostal, median and anal veins and a triangular pterostigma; the distance of the latter from the apex of the wing is three-fourths greater than its distance from the base.

♂. 2.1 mm. long. Black. Mandibles ochreous. Underside of the scapes and their apex above, the upperside of the first two joints of the flagellum, tibiae and apical fourth of the fore and middle femora and the basitarsi of all the legs, yellowish white, the remaining tarsal joints pale fuscous. The femora brown. Hind margin of the pronotal tubercles yellowish. Wings hyaline, the veins pale ochreous. Sculpture and pubescence as in the ♀, but there is a little silvery pubescence on the hind



margin of the mesonotum and on the epinotal dorsum. Clypeus not emarginate in the middle as in the ♀ but slightly produced there, and about three and a half times wider than long. Cheeks shorter than in the ♀, half as long as the scapes. Inner orbits parallel over their lower half. A fine impressed line extends from the bottom of the face to the anterior ocellus. Posterior ocelli twice as far from each other as from the eyes. Interocular distance on the vertex equal to a little more than the length of the first five joints of the flagellum. Pronotum barely one and a half times wider behind than long, very feebly gibbous in the middle. Mesonotum longer than in the ♀, a little less than twice as wide as long. Seventh tergite widely rounded at the apex. Otherwise like the ♀.

Algoa Bay, December (*H. Brauns*). Types in the Transvaal Museum.

Easily distinguished from *M. handlirschi* Brauns and *M. formosus* Arn. by the much smaller size and by the colour.

#### Subfamily CRABRONINAE

##### **Crabro** (species-group **Dasyproctus**) **barkeri nyholmi** n.subsp.

*C. barkeri* Arnold 1927, *Ann. Transv. Mus.* XII, 127, ♀.

♀. 9 mm. long. The yellow markings are brighter, chrome yellow, and more extensive than in the type of the species. The pronotal collar, except for a small part in the middle, is yellow. The scutellum is yellow excepting a black line in the middle, and the cuneoli are also yellow. First tergite with two ovoid yellow spots at about the posterior third. Apical margins of the second to fifth tergites not translucent, the transverse yellow bands on the second tergite narrowly interrupted in the middle, that of the third more widely, the fourth and fifth with lateral yellow maculae, the sixth orange yellow. The rugose sculpture of the epinotal dorsum is much finer and closer, the interspaces dull, and the median part is without a clearly defined triangular area. The middle femora are yellow on the underside, and the anterior femora have a small spot of that colour on the underside near the apex.

Jinja, Uganda, October, 1 ♀ (*V. G. Nyholm*). Type in the B.M. (ex Coryndon Museum).

#### Subfamily OXYBELINAE

##### **Oxybelus eburneoguttatus** n.sp. (Fig. 22)

♂. 5.5 mm. long. Black. The following parts ivory white: basal two-thirds of the mandibles, dorsum and tubercles of the pronotum, two large subquadrangular spots on the scutellum, the metanotum excepting the base, narrow pre-apical bands on the outer thirds of the first and second tergites, fore and middle tibiae excepting a brown streak on the underside, the basitarsi, the apical fourth of the underside of the fore and middle femora, and spots on the hind tibiae at the base and apex. Last four joints of the tarsi ochreous, their apices more or less fuscous. Wings hyaline, the veins ochreous. Lower half of the face with coarse silvery pubescence. On the rest of the body the pubescence is greyish white,

decumbent and inconspicuous. Middle third of the lower half of the face glabrous and shining, the rest of the head closely and finely punctured, the interspaces as wide as the punctures. Mesonotum reticulate-punctate, the punctures twice as large as those on the vertex. Mesopleura transversely rugose. Scutellum longitudinally striate, sparsely punctured and sharply carinate in the middle. Median area of the epinotum with six transverse costae, the lateral areas transversely rugose, the sides and declivity, excepting the middle, closely and transversely rugose. Tergites closely punctured, the punctures decreasing in size on each succeeding segment, the interspaces as wide as the punctures; on the first tergite the punctures are about as large as those on the vertex. Sternites nitidulous, the second with a sparse and large puncturation, the rest with a very shallow and fine one. The last six joints of the flagellum are ochreous on the underside. Median area of the clypeus produced into a suborrect plate, the anterior margin of which is shallowly excised in the middle and convex on each side; a median carina extends to the anterior margin. Posterior ocelli twice as far from each other as from the eyes. Outer half of the uncinata metanotal squamae translucent. Epinotal process canaliculate, nearly three times longer than wide at the apex, obliquely rugose, the apex with a deep and angular excision. Seventh tergite widely and transversely truncate. Anterior basitarsi with six spines on the outer margin.

Igusi, Southern Rhodesia, November, 1 ♂.

The species nearest to this one is *O. solitarius* Arn. from which it may be distinguished by the colour of the pale markings, the clypeus and the longer and more deeply excised epinotal process.

## Family POMPILIDAE

### Subfamily CTENOCERATINAE

#### Tribe PSILOTELINI

#### **Pezopompilus** n.gen.

#### Characters, ♀.

Mandibles with a small tooth near the apex. Last three maxillary palpi at least ten times longer than thick, and united longer than the first three joints of the flagellum. Face not much swollen below and between the antennal sockets overhanging the strap-like clypeus, which is as wide as face. Cheeks very short. Junction of the vertex and occiput rounded. Scapes thick, all the joints of the flagellum longer than wide. All the segments of the thorax clearly defined, the episternal suture distinct, the metapleural-epinotal suture meeting the hind margin of the epinotum at an acute angle. Pronotum much longer than the mesonotum and as long as wide; scutellum flat. Wings not functional, obliquely truncate, not extending back beyond the basal fourth of the epinotum and with three longitudinal veins which are joined together apically. Postnotum short; epinotum widened caudad, the epinotum feebly convex lengthwise, the declivity steep. Anterior coxae very large.

Anterior tibiae with one calcar, the middle and hind tibiae with two; anterior femora slightly swollen, apex of anterior tibiae with seven short spines, the anterior basitarsus with five very short spines on the outer margin. Hind femora of the lissoscelid type, without a trace of spines; hind tibiae with three very small spines on the upperside of the apex. All the claws with a tooth between the middle and the apex.

Genotype *P. truncatipennis* Arn.

In the shape of the thorax, the wings and the number of calcariae of the tibiae this genus closely resembles *Pseudopedinaspis* Brauns, but the shape of the clypeus is quite different, resembling that of *Psilotelus* Arn.,

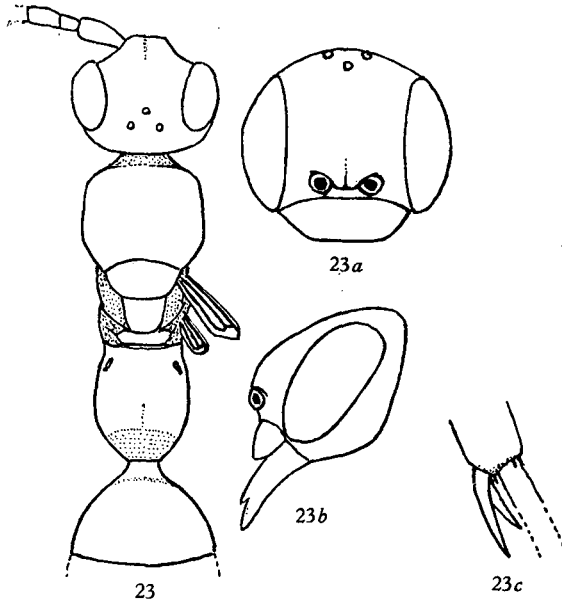


Fig. 23. *Pezopompilus truncatipennis*, ♀, × 12.

Fig. 23a, b. *P. truncatipennis*, head, × 15.

Fig. 23c. *P. truncatipennis*, apex of right hind tibia, × 13½.

and the junction of the vertex with the occiput is not acute or subcarinate as in the former genus, but is like that of *Psilotelus*. In the latter genus the wings are complete and functional.

***Pezopompilus truncatipennis* n.sp. (Figs. 23, 23a-c)**

♀. 10 mm. long. Black. Mandibles, palpi, first five joints of the antennae, the legs, excepting the coxae and trochanters, pale ferruginous. The whole body dull, and excepting the epinotum, with a fine, adpressed and black pubescence. Head and thorax finely reticulate-punctate, the tergites 1-5 with a finer puncturation, the interspaces wider than the punctures, the sixth tergite and sternite with a sparse and large puncturation, sternites 1-5 shining and almost impunctate, the second sternite without an impressed transverse line. Clypeus

feebly convex, three times wider than long, the anterior margin straight. Scapes not compressed, cylindrical, twice as long as thick. First joint of the flagellum a trifle longer than wide at the apex, the second joint twice as long as the first, and like the succeeding joints longer than wide. Interocular distance at the base of the eyes very little greater than on the vertex, where it is equal to the length of the first three joints of the flagellum plus a quarter of the fourth joint. Posterior ocelli slightly nearer to each other than they are to the eyes. Pronotum nearly one-sixth wider than long, widest behind, the shoulders and anterior margin feebly convex, a little more than twice as long as the mesonotum. The latter is as long as the scutellum. Epinotum moderately widened caudad, two-fifths wider than long. Middle tibiae with a few very short spines on the outside and three on the upperside at the base. Sixth tergite and sternite with long, exserted black setae.

Mount Kenya, 10,500 ft., January, 1 ♀ (*Mrs Bally*). Type in the B.M. (ex Coryndon Museum).

#### Subfamily PSEUDAGENIINAE

##### *Pseudagenia imperfecta* n.sp. (Figs. 24, 24a)

♀. 10.5 mm. long. Black. Palpi, mandibles, clypeus, antennae, tegulae and legs, excepting the coxae, ferruginous. Clypeus and face with a thin, yellowish grey pubescence. Middle of the sixth tergite shining and sparsely punctured, the rest of the body dull and with a microscopic, adpressed and black pubescence. Clypeus a little less than four-fifths wider than long, somewhat produced, the apical margin broadly angular with the apex widely rounded, strongly gibbous at the base. Interocular distance at the base of the clypeus one-sixth greater than on the vertex, where it is equal to the length of the second joint of the flagellum. Face in the middle two and two-thirds wider than one eye. Posterior ocelli barely farther from the eyes than from each other. Antennae long and slender, the second joint five times longer than wide and fully four-fifths longer than the third. Dorsum of the pronotum two and a third times wider behind than long, the shoulders slightly swollen and rounded. Mesonotum four-sevenths wider than long, the scutellum moderately convex and twice as long as the metanotum. Postnotum not distinctly defined in the middle, being expanded there into a triangular area which is shallowly impressed lengthwise in the middle. The dorsum and declivity of the epinotum, seen in profile, form a low and unbroken arc. First tergite subpetiolate, measured tangentially one-fifth longer than wide behind. Third cubital cell four-fifths longer on the cubitus than the second cubital cell; the first recurrent vein meets the second cubital cell slightly beyond its middle, the third meets the third cubital cell at the second ninth of its length from the inner angle. Nervulus slightly postfurcal.

Malonge, Tanganyika, August, 2 ♀♀ (*H. J. Bredo*).

This belongs to section III of the genus in my monograph (*Ann. Transv. Mus.*), in which the wings are hyaline and the last three joints

of the maxillary palpi are long. It can be distinguished from all the other species in that section by the character of the postnotum.

***Pseudagenia abercornensis* n.sp. (Figs. 25, 25a)**

♀. 9.5 mm. long. Closely related to *P. nigro-aurantiaca* var. *gribodoi* Magr. having more or less the same coloration, a transversely rugose epinotum and the apical margin of the clypeus produced into a tooth. However, the forewing is bifasciated and the venation clearly different,

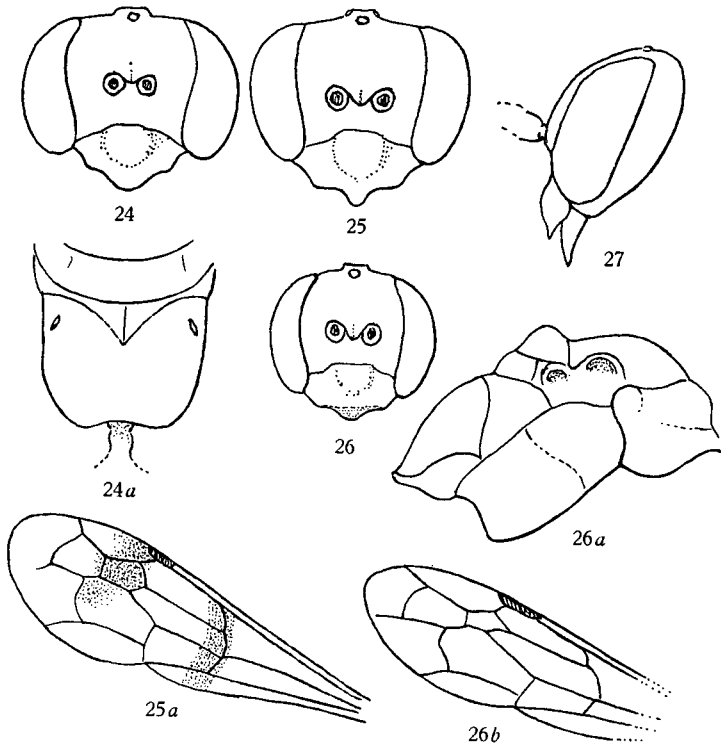


Fig. 24. *Pseudagenia imperfecta*, ♀, head,  $\times 12$ .  
 Fig. 24a. *P. imperfecta*, ♀, metanotum and epinotum,  $\times 12$ .  
 Fig. 25. *P. abercornensis*, ♀, head,  $\times 12$ .  
 Fig. 25a. *P. abercornensis*, ♀, forewing,  $\times 7\frac{1}{2}$ .  
 Fig. 26. *P. anomala*, ♀, head,  $\times 9$ .  
 Fig. 26a. *P. anomala*, ♀, thorax, lateral view,  $\times 9$ .  
 Fig. 26b. *P. anomala*, ♀, forewing,  $\times 9$ .  
 Fig. 27. *P. carbonaria*, ♀, head,  $\times 15$ .

and the face is wider. Head, pro-mesonotum, scutellum and the greater part of the pro- and mesosternum, red, darker than in *gribodoi*, the sixth tergite brown, the rest of the body black. First three joints of the flagellum ferruginous, the anterior femora reddish brown below. Wings hyaline, the veins brown, the forewing with a brown cloud covering the proximal half of the radial cell, the whole of the first cubital and the

outer third of the second discoidal; another broad cloud covers the basal vein and the proximal parts of the adjacent cells. Sculpture like that of *nigro-aurantiaca* and the variety *gribodoi*. Clypeus, not including the tooth, four-fifths wider than long, swollen in the middle, the tooth not so discrete as in *gribodoi*, wider at the base than long. Face in the middle two and five-sevenths wider than one eye. Interocular distance on the vertex very nearly equal to the length of the first two joints of the flagellum and equal to the inferior interocular distance (in *gribodoi* the inferior interocular distance is one-fifth greater than that of the vertex). Second joint of the flagellum five and two-fifth times longer than wide at the apex (in *gribodoi* four and two-fifth times). Posterior ocelli two-thirds farther from the eyes than from each other (in *gribodoi* one-seventh). Scutellum gibbous, much more convex than in *gribodoi*. For the venation see Fig. 25 a.

Abercorn, Northern Rhodesia, July, 4 ♀♀ (*H. ♂. Bredo*).

In one of the specimens there is a blackish macula below the anterior ocellus and one on each side of the vertex contiguous to the eyes. In the fourth specimen only the clypeus and first four joints of the flagellum are ferruginous.

#### ***Pseudagenia anomala* n.sp. (Figs. 26, 26a, b)**

♀. 11.5 mm. long. Head and abdomen black, thorax ferruginous, the pro- and mesosternum and a triangular macula in the middle of the epinotal dorsum black. Antennae and legs dark brown. Wings hyaline, the pterostigma and veins pale brown. Clypeus, face, vertex and temples with a sparse greyish pubescence. The temples, mandibles and the posterior half of the epinotum with a very sparse whitish pilosity. Face and clypeus dull, microscopically reticulate-punctate, the temples and occiput smooth and nitidulous. Thorax not quite dull, the pronotum finely, transversely and not closely rugulose; mesonotum finely and closely striate, transversely so in front and in the middle, obliquely at the sides and transversely posteriorly. Mesopleura shallowly, closely and finely striato-punctate, the mesosternum finely and closely punctured, the scutellum longitudinally and closely rugulose. Metanotum finely rugulose in the middle, more coarsely at the sides, the metapleura finely and evenly costate. Postnotum with three transverse rugae. Epinotum transversely rugulose, finely so in the middle, more coarsely and less closely at the sides. In the middle there is a shallow but wide groove extending over the whole length of the segment. Abdomen narrow, lanceolate, smooth and with a microscopic black pubescence, the first segment distinctly subpetiolate, as long as wide behind. The beard on the mentum is composed of four long and thick bristles. Clypeus nearly twice as wide as long, the anterior margin slightly depressed and obtusely angular. Inferior interocular distance one-fifth greater than on the vertex, where it is equal to slightly less than the length of the second joint of the flagellum. The flagellum is long and slender, the second joint six and a half times longer than wide at the apex and fully one-third

longer than the third joint. Posterior ocelli very little farther from the eyes than from each other. Pronotum with a short, vertical anterior face, the dorsum five and a half times wider than long, the mesonotum three-fifths wider than long. Scutellum very gibbous, twice as long as the metanotum, the latter shallowly grooved lengthwise in the middle. Postnotum shining, hardly half as long as the metanotum. The profile of the epinotum forms a low and unbroken arc. Legs long and slender, the basitarsus of the hind legs three-fifths as long as the tibia. For the venation see Fig. 26*b*.

Malonge, Tanganyika, August, 1 ♀ (*H. J. Bredo*).

Related to *P. cameruna* Kohl, the only other African species with a striate sculpture of the pro-mesonotum and scutellum, and from which it differs, *inter alia*, by the colour of the head and the shape of the clypeus.

### ***Pseudagenia kilimandjaroensis* Cam.**

1910, Sjoestedt's *Kilimandjaro-Meru Exp.* VIII, 258.

1934, Arnold, *Ann. Transv. Mus.* xv, 301.

1950, *Taeniagenia* Haupt, *Explor. Parc. Nat. Albert*, LXIX, fig. 8.

On a specimen which he identifies as Cameron's species, Haupt has erected the genus *Taeniagenia*. His text-fig. 8 shows that the specimen has a long and angular clypeus, with the extreme apex rounded. Nowhere in his description does that author say that he has seen the type, which is presumably in the Riks Museum, Stockholm, or the specimen in the British Museum which was determined by me as *kilimandjaroensis* Cam. and on which I based my drawing of the head and wings. Furthermore, Haupt has ignored the statement in Cameron's description that 'the apex of clypeus (is) broadly rounded'. These facts notwithstanding, Haupt asserts pontifically that my drawing of the clypeus is not correct. Mr Yarrow, of the Department of Entomology, British Museum, has kindly examined the specimen determined by me and confirms the correctness of my drawing of the clypeus. Another character in which Haupt's specimen does not conform with Cameron's description is the distance of the posterior ocelli from each other and from the eyes, the latter distance being twice as great as that of the posterior ocelli. However, the main character on which Haupt bases his new genus is the position of the mandibles, which lie directly under the eyes and are not pushed towards the temples as in *P. carbonaria* Scop. In Fig. 27 I give a drawing of the head of *carbonaria* ♀, a specimen from Breslau, from which it can be seen that the mandibles are not more 'nach rückwärts gegen die Schläfen verschoben' than in other species of the genus.

### ***Poecilagenia major* n.sp. (Figs. 28, 28*a*, *b*)**

♀. 11.5 mm. long. Head and thorax burnt sienna red, the middle of the mesosternum and the inferior anterior corners of the mesopleura black, the antennae red, but slightly darker towards the apex, the legs reddish brown, the forelegs paler than the others. Wings hyaline, the

veins brown, a very faint brown cloud covers the inner angle of the radial cell, the outer half of the second cubital cell, the proximal third of the third cubital and the upper outer corner of the second discoidal cell. A slightly darker cloud lies on each side of the basal vein and nervulus. Clypeus, underside of the coxae, mesosternum and the posterior corners of the epinotum with silvery pubescence, the abdomen with a grey and decumbent pubescence. Clypeus very finely coriaceous, temples smooth and shining. Face and vertex dull, closely reticulate-punctate. Thorax nitidulous, the pronotal dorsum very shallowly and

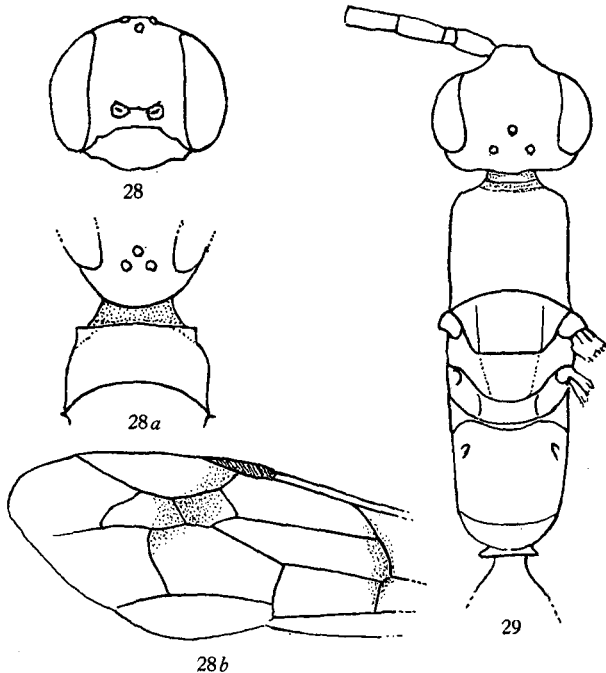


Fig. 28. *Poecilagenia major*, ♀, head,  $\times 12$ .  
 Fig. 28a. *P. major*, ♀, pronotum,  $\times 12$ .  
 Fig. 28b. *P. major*, ♀, forewing,  $\times 12$ .  
 Fig. 29. *Cordylosceltis parallelus*, ♀,  $\times 9$ .

transversely striate, the mesonotum transversely rugulose and feebly reticulate in the anterior corners, the scutellum with a longitudinal rugosity almost obliterated, the postnotum depressed in the middle and with three curved costae on each side. Mesopleura sparsely and shallowly punctured, the mesosternum dull and closely punctured. Epinotum strongly reticulate-rugose, the transverse rugae largest. Abdomen impunctate. Last three joints of the maxillary palpi long, united as long as the first three joints of the flagellum. Clypeus nearly two and a half times wider than long, the anterior margin convex. Inferior interocular distance one-fifth greater than on the vertex, where it is equal to the length of the second joint of the flagellum plus half of the first. Face



between the antennal sockets moderately gibbous. Posterior ocelli half as far again from the eyes as from each other. All the joints of the flagellum longer than wide, the second joint four and a half times longer than wide at the apex and one and a half times longer than the third. Head considerably narrowed behind the eyes. Pronotal dorsum fully twice as wide behind as long, very convex transversely, its junction with the vertical anterior face rectangular, the anterior angles prominent and rectangular; mesonotum half as long as the pronotal dorsum. Scutellum feebly convex, a little wider at the base than long. Metanotum one-third as long as the scutellum and a little longer than the middle of the postnotum. Epinotal dorsum parallel-sided, one-third wider at the base than long. First tergite subpetiolate, a little wider behind than long. For the venation see Fig. 28*b*.

Mlanje, Nyasaland, 2000 ft., January, 1 ♀.

Related to *P. braunsi* Arn. but larger, with a more strongly punctured face, less strongly sculptured thorax, a longer epinotum and longer antennal joints.

#### Subfamily POMPILINAE

#### Tribe CORDYLOSCELINI Arn.

#### *Cordyloscelis parallelus* n.sp. (Fig. 29)

♀. 13 mm. long. Black. Legs, excepting the coxae and trochanters, pale ferruginous. Palpi brownish yellow, apical half of the mandibles fusco-ferruginous. Wings fuscous. Dorsum of the epinotum dull, the rest of the body shining. Mandibles, temples and clypeus with a dark brown pilosity, the face with dark fulvous, short and decumbent pubescence, and at the sides with erect, stout, black hairs. Pronotum, mesonotum and scutellum with black decumbent pubescence, the sixth tergite and the last three sternites with long black setae. Clypeus smooth. Face, pronotum, mesonotum and scutellum with a small and oblique puncturation, the interspaces for the greater part wider than the punctures. Sides of the pronotum and the metapleura smooth and impunctate, the mesopleura with a microscopic and fairly close puncturation. Dorsum of the epinotum strongly and closely punctured, the interspaces, except over the posterior third, not larger than the punctures; the declivity closely and transversely rugose. Puncturation of the abdomen close and microscopic except on the apical segment and on the fifth sternite which are coarsely punctured. Mandibles bluntly bidentate. Clypeus four times wider than long, the anterior margin shallowly concave over its middle third. Face in the middle three times wider than one eye; the supra-antennal tubercle wide. The interocular distance at the base of the eyes nearly one-fifth greater than on the vertex, where it is nearly equal to the length of the second and third joints of the flagellum. Posterior ocelli nearly as far from the eyes as from each other. First six joints of the antennae with a short and dense pubescence, the second joint a little shorter than the third and two and a half times longer than wide. Eyes pubescent. Dorsum of the pronotum flat lengthwise,

not sloping cephalad as in *C. nigerrimus* Arn., the lateral margins parallel-sided, two-sevenths wider behind than long, the sides concave. Postnotum one-third as long as the metanotum, striolate. Dorsum of the epinotum horizontal, barely narrowed caudad, about one-third wider at the base than long, the posterior corners rounded. Abdomen two and two-thirds longer than wide in the middle, lanceolate, the first tergite as long as wide behind. Anterior femora swollen as in *C. nigerrimus*, the legs as in that species. Venation like that of that species, but the first recurrent vein meets the second cubital cell before the middle.

Tupale, Mweru, Northern Rhodesia, January, 1 ♀ (*H. f. Bredo*).

Related to *C. nigerrimus* Arn. from which it can be distinguished by the colour of the legs, the parallel-sided and wider pronotal dorsum, and the sculpture of the head and thorax. *C. bequaerti* Arn. also has the pronotal dorsum parallel-sided, but that species has the legs of a different colour, paler wings and a shorter epinotum, of which the declivity is punctured and not rugose as in this species.

#### POSTSCRIPT

*Anoplius morosus* Smith, 1855, *Cat. Hymen. B.M.* p. 140.

Arnold, 1937, *Ann. Transv. Mus.* xix, 64.

Haupt (*loc. cit. supra*, pp. 43-46) has not only transferred the ♂ of this species to a new genus *Africanoplius*, but also, owing to a gross misconception, made it the type of a new species, *A. aciculatus* Haupt. This is based on an entirely erroneous interpretation of my description of that sex. He says: 'Dass nun Arnold ein ♂, dessen Propodeum quer nadelrissig skulptiert ("transversely aciculate") ist dem ♀ von *morosus* zugestellt, dessen Propodeum ("postnotum" nach seiner Schreibweise) skulpturlos ist, gereicht seiner Diagnose nicht gerade zum Vorteil.' Nowhere in my numerous descriptions of the Pompilidae has the term 'postnotum' ever been applied to the last segment of the thorax. It has been employed, exactly as in Haupt's writings, to indicate that narrow dorsal portion of the thorax which lies between the metanotum and the anterior margin of the epinotum (epinotum = 'propodeum' Haupt, 'Mittel-segment' Kohl *et al.*). Haupt's statement cannot be excused as a mistranslation of the English text. It is evidence of superficial attention or carelessness, for if his assertion were correct, he or any other reader must ask 'what part of the thorax is this "epinotum" mentioned or described in Arnold's descriptions'?

It follows, therefore, that *A. aciculatus* Haupt must be sunk as a synonym of *A. morosus* Smith ♂. Furthermore, I am unable to recognize the validity of his new genus *Africanoplius* which is diagnosed only in his key to the genera of the subtribe *Anopliina* (p. 40), and which according to that key appears to differ from *Anoplius* Dufour mainly in having the wings yellow with an apical infuscation, and the claws in the ♂ not fully bifid. In the opinion of the writer these are not generic, but specific characters, and it is on such characters that a number of Haupt's recent new genera have been based.