

6917

Reprinted from
OCCASIONAL PAPERS OF THE NATIONAL MUSEUMS
OF SOUTHERN RHODESIA. No. 24B
30 DECEMBER 1960
PRINTED IN GREAT BRITAIN

1960b

NEW SPECIES OF AFRICAN
HYMENOPTERA No. 15

By G. ARNOLD

NEW SPECIES OF AFRICAN HYMENOPTERA No. 15

By G. ARNOLD

Unless stated otherwise, the types are in the National Museum of Southern Rhodesia. The least magnification required to resolve the puncturation, using a stereoscopic binocular microscope, is given in parenthesis (. . . diameters).

Bothroponera variolosa Arnold

1947, *Occ. Pap. Rhod. Mus.* XIII, 131.

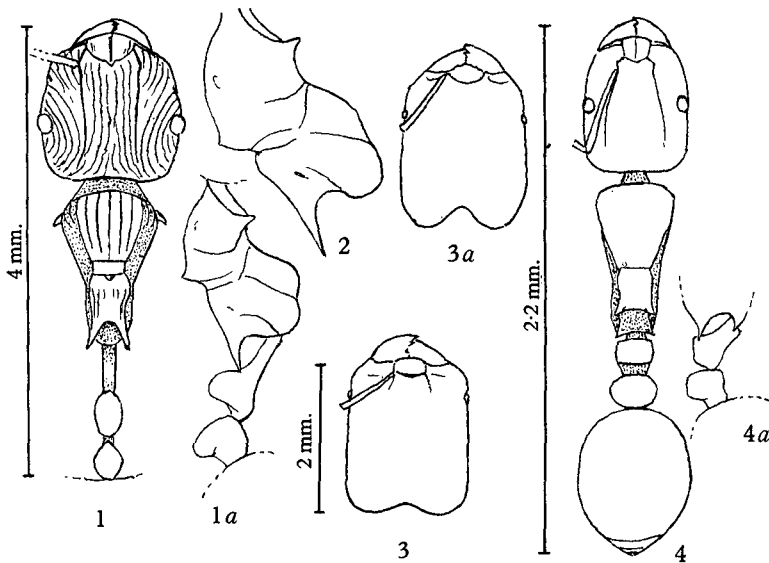
Dr Delfa Guiglia has kindly allowed me to see the type of *B. cariosa* Emery which is in the Museo Civico di Storia Naturale, Genoa. From a comparison of that specimen with the type of *variolosa* I now conclude that the latter must be regarded as a subspecies of *cariosa*. It differs from *cariosa* as follows: The pit-like punctures on the pronotum are smaller, more circular and less deep. Those on the epinotum dorsum and node are deeper and closer together than in *cariosa*. The median carina on the clypeus is not acute at the apex but flattened over the anterior half. The node of the petiole is not emarginate in the middle of the hind margin of the dorsum. In *cariosa* the emargination is not, as might be understood from Emery's words, of the posterior face, but of the hind margin of the dorsum, of which it occupies about one-third of the width. The first tergite is narrower cephalad, 1.4 mm. wide in front and 1.9 mm. wide behind, whereas in *cariosa* it is 1.5 mm. wide in front and 2 mm. wide behind. In both the segments are 1.5 mm. long. In *cariosa* the mandibles are striated, and the pubescence is not dense, as stated by Emery.

Subfamily MYRMICINAE

Myrmicaria basutorum n.sp. (Figs. 1, 1a)

♀. 5.6–6 mm. long, including the closed mandibles. Pitch black and very shining. The legs very dark brown. Pilosity on the whole body and on the legs black, erect and fairly abundant. Mandibles closely striated, with four teeth. Head longitudinally rugose, the rugae below the eyes close together, above them curved mesad posteriorly and separated by a space about equal to the width of the scape at its base, the rugae on top of the head divergent behind. Clypeus with a median carina and two or three thin rugae at the sides, longer than wide, the anterior margin straight. Pronotum and mesonotum longitudinally and sparsely rugose, the interspaces about two and a half times wider than the rugae, the pro-mesonotal suture faintly indicated at the sides, the anterior ventral corners of the sides of the pronotum produced into a sharp tooth, plainly

visible from above, the mesonotum subconical on each side in front of the meso-epinotal suture. Meso- and metapleura and sides of the epinotum finely, closely and longitudinally rugose. Dorsum of the epinotum marginate at the sides, widest in front, deeply concave, and in the majority of the specimens without rugae, in others with a thin ruga adjacent to the lateral margin, with a short and acute spine on each side behind, which extends back as far as the anterior face of the first node. The declivity of the epinotum smooth and concave. First node of the petiole a little shorter than its peduncle, wider than long, convex in front and above, vertical behind and not so high as the posterior node which is shorter on its dorsal face than the first. The eyes are a little behind the middle of the head, which is as wide as long, excluding the mandibles. The scapes extend beyond the hind margin by one-third of their length. Second joint of the flagellum three-fifths longer than the first joint, which is as long as the third.



Figs. 1, 1a. *Myrmicaria basutorum*.

Fig. 2. *Myrmicaria rhodesiae*.

Fig. 3. *Pheidole schultzei woodvalensis*, 2♀.

Fig. 3a. *Pheidole schultzei gwaaensis*, 2♀.

Fig. 4, 4a. *Tetramorium guillarmodi*.

Mamathes, Basutoland, October (C. Jacot-Guillarmod). Related to *M. faurei* Arnold from which it differs by the smaller size, the finer and more sparse rugosity of the head and thorax, the concave epinotal dorsum and the much shorter and less divergent spines.

On further consideration I think that *M. faurei*, var. *rhodesiae* Arnold (1958, *Occ. Pap. Rhod. Mus.* 22b, 119) should be given specific rank. In addition to the differences cited in the original description, the

posterior third of the mesonotum is more narrowed and higher caudad, and therefore slopes more steeply to the meso-epinotal suture. Compare Fig. 2 with Fig. 3a in the description of *faurei*.

***Pheidole schultzei woodvalensis* n.var. (Fig. 3, 3a)**

P. schultzei Forel, 1910, Schultze, *Reise Sud. Afr.* IV, 9.

♀. 6.5 mm. long, including the closed mandibles. This differs from the type of the species and the variety *gwaiensis* Forel in having the abdomen darker, dark brown, with the base of the first segment a little paler, or yellowish brown, and in the longer head, which is duller in the posterior half than in *gwaiensis*. It is 2.6×1.8 mm. long, whereas in *gwaiensis* it is 2.2×1.8 mm. long. The occipital emargination is also less deep.

♂. 2.2–3 mm. long. This is larger than in *gwaiensis* which is 2.4–2.6 mm. long and is darker, being dark brown, the antennae and legs pale brown. The reticulate-punctate sculpture of the mesopleura and epinotum is distinctly deeper.

Woodvale, about 12 miles north of Bulawayo, on Forest Sandstone formation (Triassic). The variety *gwaiensis* has hitherto not been found except on Kalahari Sand formation (Pleistocene). The nest is like that of *gwaiensis*.

***Tetramorium guillarmodi* n.sp. (Fig. 4, 4a)**

♀. 2.2 mm. long. Dark brown, the head and first tergite darker than the thorax, the second and following tergites and sternites pale brownish yellow. Mandibles, scapes, first eight joints of the flagellum and the legs, ochreous, the last three joints of the flagellum brown. Head and thorax dull, the abdomen shining. Pilosity yellow, short, oblique and very sparse. Clypeus with a few longitudinal rugae. The space between the frontal carinae closely and longitudinally rugose, the rugae extending back to the occipital margin. Scrobes absent. The sides of the head reticulate-punctate (40 diameters), in front of the eyes feebly rugose. Posterior two-thirds of the epinotal dorsum reticulate-punctate, the rest of the dorsum of the thorax finely and sparsely longitudinally rugose, with transverse anastomoses (40 diameters). The sides of the thorax reticulate, the reticulations wider on the mesopleura than elsewhere. Nodes of the petiole closely reticulate (50 diameters). Head slightly narrowed anteriorly, one-fourth longer than wide, not including the mandibles, which are shining and denticulate on the inner margin. Eyes at the middle of the sides, composed of many facets. Pro-mesonotum twice as wide in front as at the meso-epinotal suture. Dorsum of the epinotum nearly twice as long as wide behind, parallel-sided, the epinotal teeth triangular, as long as wide at their base and not longer than the episternal teeth. Dorsal face of the first node of the petiole half as wide again as long, the anterior margin almost straight. The second node transversely ovate, half as wide again as long. The scapes fall short of the

occipital margin by as much as the length of the first joint of the flagellum, which is nearly twice as long as wide.

♀. 3.3 mm. long. Brownish black, the legs and antennae reddish ochreous. Head as long as wide at its widest, which is in the middle; the longitudinal and fine rugae on the middle third of the dorsal surface curve outwards caudad, and the space between the frontal carinae and the eyes is closely and obliquely rugulose, the rugae directed forwards. Pronotum reticulate-rugose, only the shoulders visible from above. Mesonotum flat, a little wider than long, and like the transversely elliptical scutellum, closely and longitudinally rugulose. Dorsal face of the first node of the petiole twice as wide as long, the second node also, both closely reticulate. Otherwise like the ♂.

Mamathes, Basutoland (*C. Jacot-Guillarmod*). In my key to the genus (Arnold, 1926) this species runs down to segregate 124, which includes *T. incruentatum* Arnold, from which it differs in colour, the shape of the nodes and the sculpture of the head.

***Tetramorium agile* n.sp. (Figs. 5, 5a)**

♀. 3.8 mm. long. Head, thorax and petiole dark brown, the abdomen black. Mandibles and antennae pale flavo-ferruginous, the femora pale brown, the tibiae and tarsi pale ochreous. The whole body with a very sparse, short, exserted and pale yellow pilosity. Abdomen impunctate and shining, the rest of the body nitidulous between the rugae. The frontal carinae extend back to the occipital margin, forming a semiscrobe on each side. The space between the carinae has about six longitudinal rugae and is feebly reticulate on the posterior half. Mandibles shining, sparsely punctured. Clypeus with a carina on each side and one in the middle. Sides of the head longitudinally rugose, with a few reticulations. Thorax coarsely reticulate-rugose, except the mesopleura which are finely reticulate and the posterior half of the epinotal dorsum which is almost smooth. Dorsal face of the nodes of the petiole superficially and very finely reticulate-rugose. Head, excluding the mandibles, a little more than one-fourth longer than wide, almost parallel-sided, the eyes large and situated in the middle of the sides. The scapes extend back beyond the head as far as the anterior margin of the pronotum. Apical joint of the flagellum four times longer than wide and as long as the two preceding joints united. Dorsum of the epinotum twice as long as wide behind between the spines. The latter are acute, oblique and twice as long as wide at the base, and twice as long as the episternal teeth. Dorsal face of the first node of the petiole two-fifths wider than long, the second node transversely ovate, twice as wide as long and twice as wide as the first. Legs distinctly long, the hind femora two-sevenths longer than the head including the closed mandibles.

Woodvale, Southern Rhodesia. A very nimble insect, nesting in loose sand; the entrance to the nest about 3 mm. in diameter and with only a trace of a surrounding crater. Distantly related to *T. setigerum*, var. *amatongae* Arnold from which it differs by the colour, especially of the

tibiae, the much less divergent frontal carinae, the stronger rugose sculpture and the shape of the nodes. The long legs are probably related to the habitat, the loose sand. In the var. *amatongae* the head is one-sixth longer than the hind femora.

Subfamily CAMPONOTINAE

Camponotus (subgenus?) **vespertinus** sp.n. (Figs. 6, 6a)

♀. 7 mm. long, including the mandibles. Mandibles brownish black, shining, sparsely punctured, the inner margin sexdentate. Head, thorax and petiole dark reddish brown, the clypeus, the area between

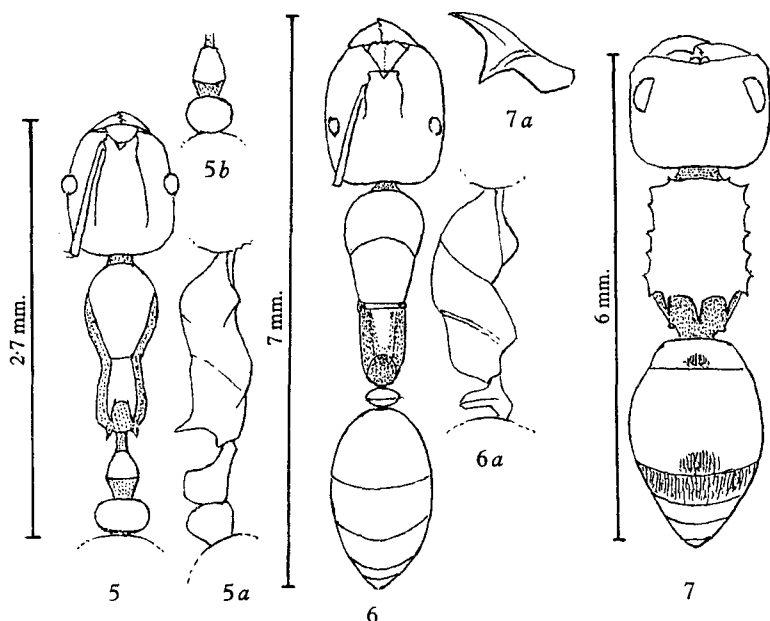


Fig. 5, 5a. *Tetramorium agile*.
 Fig. 5b. *Tetramorium setigerum amatongae*, nodes.
 Figs. 6, 6a. *Camponotus vespertinus*.
 Fig. 7. *Labidomilla maxillosa*.
 Fig. 7a. *Labidomilla maxillosa*, right mandible.

the frontal carinae and the sides of the head between them and the eyes, paler or burnt sienna; the lateral sclerites of the clypeus black. Antennae and legs dark red. Abdomen black and shining, the extreme apical margins of the first three segments translucent and whitish. Head and thorax dull, very finely and closely reticulate-punctate (20 diameters), covered with a fine, short, decumbent and grey pubescence, the hairs all directed cephalad. The tergites have a very fine and decumbent pubescence, yellowish on the dorsal surface and directed inwards on each half, at the sides more abundant and silvery. Hind tibiae compressed

and like the rest of the legs covered with a sparse and decumbent pubescence. Clypeus and scale of the petiole with a few long, exserted and pale yellowish hairs. Head one-third longer than wide, widest in middle, slightly narrowed in front of the eyes, which are situated a little behind the middle. The hind margin of the head is almost straight, the posterior corners convex. Clypeus barely longer than wide, hexagonal, with a strong median carina, the anterior margin denticulate and slightly produced forwards. The scapes extend back to the occipital margin. The thorax is not marginate in any part. Pronotum convex transversely and lengthwise, four-fifths longer than wide. Mesonotum convex, as long as wide. Mesometanotal and meta-epinotal sutures distinct. Dorsum of the epinotum narrow, convex transversely, two-sevenths longer than wide, the declivity flat and two-thirds the length of the dorsum. Anterior face of the scale of the petiole convex, the posterior face flat, the dorsal face convex and slightly impressed in the middle. The length of the thorax is three times the height.

Balla-Balla Southern Rhodesia, 24 December 1957, 3 ♀♀. These specimens were taken after sunset in a place in which I have frequently collected in the day time, without ever having seen them. A fortunate accident, dropping a killing-bottle on the ground, enabled me to see them, but the failing light prevented me from tracing them to their nest. It is without doubt a species with crepuscular habits, and these three specimens are probably worker media. They do not conform with the characters of any of the numerous subgenera erected by Forel, Emery and others. In the absence of the ♂♂ and ♀♀ minor I am averse to erecting another subgenus for their reception.

Family MUTILLIDAE

Labidomilla neavei ssp. **rhodesiae** **picipes** n.var.

rhodesiae Arnold 1956, *Occ. Pap. Rhod. Mus.* 21b, 59.

♀. 5 mm. long, not including the mandibles. This variety differs from the subspecies as follows: the occipital margin of the head less concave. Head and thorax darker red than in the subspecies, the head darker than the thorax. Abdomen brownish black, the apical margin of the first three segments pale yellowish grey. Antennae and legs dark reddish brown. The second to fourth abdominal segments with a sparse, decumbent and stramineous pubescence, not forming distinct fasciae. The first segment without pubescence.

Zawi, 15 miles north-west of Sinoia, Southern Rhodesia, 1 ♀.

Labidomilla maxillosa n.sp. (Fig. 7, 7a)

♀. 6 mm. long, not including the closed mandibles. Head and abdomen black, mandibles and thorax dark red, scapes and first joint of the flagellum fusco-ferruginous, the remaining joints black, the legs

fusco-ferruginous. Head, thorax and base of the abdomen with a sparse, long, erect and white pilosity. The first and second tergites with a very sparse yellowish pubescent spot in the middle of the apical margin, the third tergite with yellowish and sparse pubescence all over. Head longitudinally rugose, the rugae straight, the interspaces about twice as wide as the rugae and shallowly punctured. Dorsum of the thorax longitudinally rugose, the rugae thicker than those of the head, the interspaces punctured. Pleura dull, shallowly punctured, the sides of the epinotal area shining and reticulate, the declivity of the epinotum black, shining and with a few small prickles. The thorax is moderately widened caudad, its anterior corners rectangular, the sides with five teeth, the hind margin with three long teeth. Abdomen dull, the first three tergites longitudinally and closely rugose, the following tergites finely punctured. Mandibles triangular over the apical half, with a large apical tooth and a large one a little beyond the middle of the inner margin, from which a rounded ridge extends to the outer margin. Cheeks one-third as long as the eyes. The upper side of the antennal sockets bulbous but not dentate. The carina above them extends as far as the eyes. The second joint of the flagellum three times longer than wide at the apex. The head is one-and-a-quarter times wider than long, the sides moderately convex, the posterior corners rounded, the occipital margin carinate.

Mofwe, Mweru Northern Rhodesia, 1 ♀, type; Kaputa, Mweru, February 1 ♀ (*H. J. Bredo*). In the type the pubescent spots on the first two tergites are abraded.

***Labidomilla montana* n.sp. (Fig. 8)**

♀. 6 mm. long, including the closed mandibles. Head and abdomen black, thorax ferruginous, the sides and epinotal declivity blackish, antennae and mandibles fusco-ferruginous, the base of the mandibles on the inside, dull ochreous. Legs dark reddish brown. A sparse and long white pilosity on the whole body and legs. Second tergite with a median spot of white pubescence, the third and fourth with similar pubescence all over, somewhat sparse on the fourth. Head closely and longitudinally rugose, the rugae flattened, the interspaces wider than the rugae and with a single row of large and deep punctures. Dorsum of the thorax also with longitudinal rugae, less close than on the head and more wavy, the interspaces deeply punctured, the sides of the thorax smooth and shining, the declivity of the epinotum coarsely rugose lengthwise. Abdomen closely reticulate-punctate and dull, the sixth tergite closely punctured at the base and with a smooth and shining triangular area in the middle. Mandibles large and tridentate. Head fully one-third wider than long, the sides moderately convex, slightly convergent behind, the hind margin feebly carinate. Scapes strongly curved, the second joint of the flagellum two and a half times longer than wide at the apex and as long as the three following joints united. Dorsum of the thorax one-third longer than wide in the middle, the sides feebly concave over the

middle third, the lateral margins with five small teeth, the hind margin with three acute and large teeth. Middle and hind tibiae with four spines on the upper margin.

Vumba Mountains, Southern Rhodesia, 5500 ft. 1 ♀. In Bischoff's key to the species of this genus, this species runs down to segregate 7, which includes *L. convergens* and *L. tricuspidoides*. It differs from the first by its greater size and by the abdominal pubescence and the shape of the thorax; from *tricuspidoides* it differs by the shape of the thorax, by the antennal sockets which are not produced above into teeth and by the pattern of the white pubescence on the tergites.

***Myrmilla rhodesiana* n.sp. (Fig. 9)**

♂. 11 mm. long. Head, antennae, abdomen and legs black, the thorax ferruginous, the mesopleura black. Exserted pilosity on the whole body including the femora and tibiae, sparse, long and white. The first tergite with a narrow apical band of decumbent black pubescence, the third and fourth tergites covered with decumbent white pubescence except for a more or less triangular area in the middle. Head finely and closely punctured below the level of the antennal sockets, coarsely, closely and deeply elsewhere. Pronotum, mesonotum and scutellum coarsely reticulate-rugose, the rugae on the mesonotum emphasized lengthwise. Epinotum coarsely reticulate-rugose, the rugae prominent, the enclosed spaces wider than one of the ocelli. Sides of the thorax shallowly reticulate and dull. Abdomen dull, longitudinally rugulose and closely punctured (10 diameters). Head about one-fourth wider than long, the sides and posterior corners moderately convex. Mandibles narrow, the apex acute, the inner margin subdentate. Clypeus short, with a small, semicircular and porrect tooth in the middle. Second joint of the flagellum one-fourth longer than wide at the apex and as long as the third joint. The upperside of the antennal sockets not dentate. Posterior ocelli twice as far from the eyes as from each other. All the thoracic sutures defined. Pronotal shoulders very convex. Mesonotum two-thirds wider than long. Below the tegulae there is a short black stump of the aborted forewing. Scutellum a little wider in front than long. Dorsum of the epinotum widened caudad, its lateral margins convex, shorter than the vertical declivity.

Woodvale, Southern Rhodesia, November 1957, 2 ♂♂. The genus is chiefly Mediterranean, but Bischoff has recorded two species from the Transvaal, *feminaeformis* and *inalata*. This species differs from both by its greater size, from the first by the colour, the rounded antennal sockets and the immaculate first tergite. From *inalata* by the presence of white pubescence on the fourth tergite.

***Nanomutilla dentifera* n.sp. (Fig. 10)**

♀. 2.7 mm. long. Head, thorax and legs pale red, the eyes black, the scapes and first four joints of the flagellum pale red, the remaining joints brown. Tergites pale brown, the sternites pale reddish brown. Head

and thorax covered sparsely with a long, decumbent and silvery pubescence, that of the head directed inwards on each side, on the promesonotum lengthwise, on the epinotal area outwards. Abdomen with a long, decumbent and silvery pubescence, denser on the apical margins of the first four tergites but without forming distinct fasciae. The sculpture is somewhat obscured by the pubescence. Head, pronotum and mesonotum dull and closely punctured (50 diameters); the epinotum with a very wide reticulation, the tergites with a shallow, fine and close puncturation (50 diameters). Head, including the very large eyes, one-fifth wider than long, the hind margin convex, the temples feebly carinate, the cheeks half as long as the eyes. Mandibles acute at the apex, with a small tooth on the inner margin at about the middle.

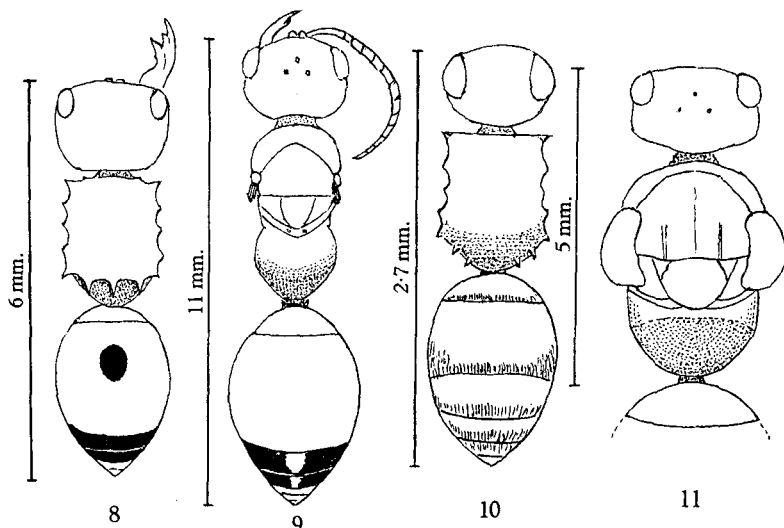


Fig. 8. *Labidomilla montana*.

Fig. 9. *Myrmilla rhodesiana*, ♂.

Fig. 10. *Nanomutilla dentifera*.

Fig. 11. *Hadrotilla helle monticola*, ♂.

Flagellum widest over the middle of its length, the second joint slightly shorter than the third, only the apical joint longer than wide. Thorax very little longer than wide behind, a little wider behind than in front, the lateral margins with four blunt teeth and moderately concave. The anterior margin of the pronotum straight, the anterior angles dentiform, the smooth and nearly vertical epinotal declivity with two acute and short teeth on each side. The thoracic sutures are obsolete. Hind tibiae with three spines on the upper margin. The pygidium is smooth.

Sawmills, Southern Rhodesia, 1 ♀. This differs from *N. nanula* Bischoff in its larger size, different colour and in the presence of short teeth on the margins of the dorsum and declivity. From *N. lissopyga* by the smaller size, the pubescence of the tergites and the teeth on the thorax.

***Hadrotilla helle monticola* n.ssp. (Fig. 11)**

H. helle Peringuey, 1898, *Ann. S. Afr. Mus.* 58.

Bischoff, 1920, *Monograph. Mutill. Afr.* 243.

In Bischoff's monograph there is a long and detailed description of this species and it is therefore necessary only to state in what way this subspecies differs from the type.

♂. 11 mm. long. Much smaller than the type of the species which is 15–17 mm. long. The posterior angles of the head are more rounded, the tegulae longer, extending back to the hind margin of the scutellum, their inner posterior corners convex, not ending in a point as in the allotype. I have seen the type which is in the South African Museum and therefore Bischoff's statement, that the epinotum falls vertically just behind the scutellum, needs correction. The metanotum is visible but short, and the epinotal dorsum, although very short and less than half the length of the scutellum is horizontal. The abdomen in this subspecies is plain black, without any violet reflexions.

Vumba Mountains, Southern Rhodesia 5500 ft. November 1956, 1 ♂.

***Smicromyrme (Viereckia) rufomaculata* n.sp. (Fig. 12)**

♀. 7 mm. long. Mandibles black, the head below the eyes fuscous-ferruginous, the temples and vertex ferruginous, like the thorax. Abdomen black, the second tergite with two large, subcircular and ferruginous maculae, the colour of the integument and not of pubescence, which is absent. Antennae and legs black. Head reticulate-rugose with deep punctures in between; the thorax also with such rugosity but the spaces between are at least twice as large as those on the head. On both, a curved white hair is emitted from all the spaces. Sides of the thorax with lower reticulations except the mesopleura which are smooth. First and second tergites finely and evenly rugose and punctured between the rugae, the pigmented maculae with decumbent and curved hairs like those on the thorax, the second tergite with black pubescence on the black parts. Third tergite punctured and with a sparse white pubescence. The fourth and fifth tergites sparsely punctured and with much scantier white pubescence. Sixth tergite scutate, smooth and shining. Head, including the eyes, one and a half times wider than long. Clypeus with a short and lamelliform tooth in the middle. Mandibles falcate. Antennal tubercles prominent and hemispherical. Second joint of the flagellum nearly twice as long as wide at the apex and nearly twice as long as the third. Thorax parallel-sided, two-thirds longer than wide, the shoulders of the pronotum rectangular.

On the Portuguese border, about 90 km. south-west of Marumbine, Southern Rhodesia. On Forest Sandstone formation, November, 1 ♀. This differs from the other four African species by the colour of the pigmented maculae on the second tergite, which in all of them is yellow. It differs from *V. acrisione* Peringuey by the smooth pygidial area and by the pleura which are not fuscous.

Family SAPYGIDAE

Sapyga lugens manicana n.subsp.

S. lugens Arnold, 1933, *Occ. Pap. Rhod. Mus.* II, 1.

♀. 10.5 mm. long. This subspecies differs from the type of the species, which is 7.5–8 mm. long, by its greater size, by the puncturation and by the ivory white apical bands on the first five tergites. In the type of the species the punctures on the head and thorax are separated by spaces as wide as the punctures, whereas in this race the sculpture is reticulate-punctate, i.e. the reticulations are narrower than the punctures. The pale apical bands on the tergites are more dilated at the sides than in the type of the species.

Cashel (Manicaland), Southern Rhodesia. 3 ♂♂ flying over thatch.

Family SPHECIDAE

Subfamily CERCERINAE

Cerceris vegeta Arnold (Fig. 13)

1940, *Ann. Transv. Mus.* XX, pt. 2, 108.

Specimens taken on the flowers of a small bush do not differ from the type of the species except in being distinctly smaller, 10–11 mm. long, and in the colour of the abdomen which is of a paler red, not becoming darker on the last two segments. They have, like the type, a peculiar structure on the hind coxae which I overlooked. They have on each side at the apex, on the upper face, a semicylindrical and transparent extension, the inner one larger than the outer.

Cashel, Southern Rhodesia. 7 ♂♂.

Subfamily BEMBECINAE

Bembex abercornensis n.sp. (Figs. 14, 14a–d)

♂. 17 mm. long. Black. The following parts pale lemon yellow: mandibles, excepting the black apical teeth, labrum, clypeus at the sides and on the apical margin, a small triangular spot above each antennal socket, a triangular spot below the ocellar area, and a very small spot close to the inner orbits, a streak, narrowed above on the temples and touching the outer orbits, the hind margin and sides of the pronotum, a large macula on the anterior fourth of the mesopleura, a very small spot on the same below the tegulae, the posterior corners of the epinotal declivity, narrow bands on the middle of the second to sixth tergites, widely interrupted in the middle, narrow triangular maculae on the second to fifth sternites, the legs excepting thin black streaks on the upperside of the tibiae and the underside of the hind femora. Hind margin of the scutellum dull ochreous. Wings hyaline and short. Head, thorax and base of the first tergite with a long white pilosity, dense on the mesopleura and underside of the head. Abdomen with a very short,

inconspicuous and yellowish grey pubescence. Head, thorax and tergites very closely and finely punctured, the seventh tergite shining and sparsely punctured, the sternites shining, sparsely punctured except the second which has a close and oblique puncturation. Clypeus very convex transversely and lengthwise, twice as wide as long. Second joint of the flagellum two and two-fifths longer than wide at the apex and longer by the same amount than the third joint, the seventh joint spinose below, the eighth to twelfth excavated below, the twelfth curved and acuminate and less than twice as long as wide at the base and shorter than the penultimate joint. Interocular distance on the vertex

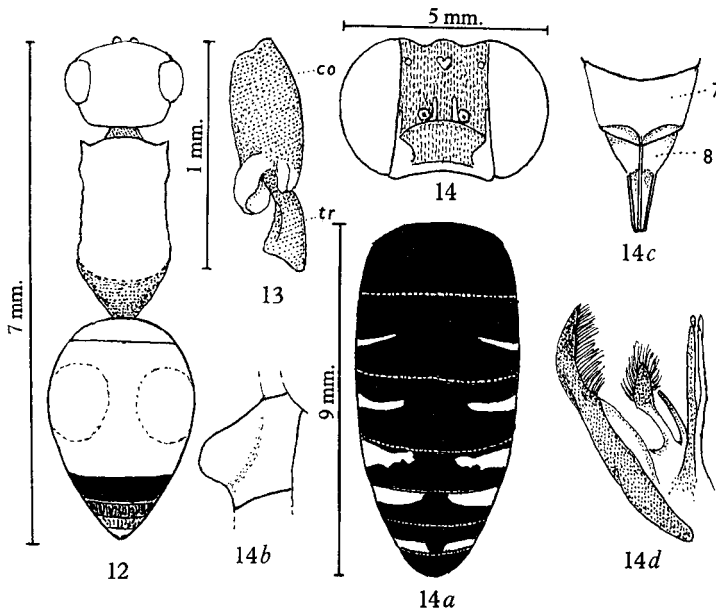


Fig. 12. *Viereckia rufomaculata*.
 Fig. 13. *Cerceris vegeta*, ♂, dorsal view of right coxa and trochanter.
 Fig. 14. *Bembix abercornensis*, ♂, head.
 Fig. 14a. *Bembix abercornensis*, abdomen.
 Fig. 14b. *Bembix abercornensis*, second sternite.
 Fig. 14c. *Bembix abercornensis*, seventh and eighth sternites.
 Fig. 14d. *Bembix abercornensis*, genitalia, right half.

equal to the length of the first six joints of the flagellum plus half of the seventh. The flagellum is black above and fusco-ferruginous below. Middle femora finely denticulate below along their whole length. Middle tibiae with one spur. Second sternite with a high, rounded and lamelli-form tooth. Eighth sternite considerably narrowed over its apical half which is carinate.

Abercorn, Northern Rhodesia (*H. f. Bredo*), 2 ♂♂. In the paratype the yellow bands on the fifth and sixth tergites are much reduced and

quite absent on the fourth. From the shape of the seventh and eighth sternites this species appears to belong to the *B. oculata* group, but the genitalia are unlike those of any of them.

***Bembix usheri* n.sp. (Figs. 15, 15a)**

♀. 16–17 mm. long. Black. The wings hyaline. The following parts pale lemon yellow: labrum, mandibles excepting the apex, clypeus excepting a reversed V-shaped black macula in the middle (in the paratype broken into two triangles with the apex upwards), the sides of the face nearly up to the level of the ocellar area, a broad sinuate line below the latter, the middle of the face between the antennal sockets, a line on the temples adjacent to the eyes, the scapes excepting a black streak on the upperside, the posterior margin of the pronotum, the anterior half of the tegulae, a macula longer than wide on the lateral margins of the mesonotum and adjacent to the tegulae and the hind margin of the mesonotum. The pale markings on the tergites are glaucous white and placed at the middle of their length; on the first tergite the fascia is short and attenuated mesad, on the second, third and fourth the fasciae are only narrowly interrupted in the middle, those on the second and third sinuate cephalad. Tibiae and tarsi yellow, the latter becoming reddish towards the apical joint, the tibiae with a black streak on the upperside. Femora in greater part black, yellow on the apical half of the upperside. The pilosity on the head and thorax is yellowish white, and the pubescence on the abdomen black. Labrum and clypeus not quite dull, very sparsely and finely punctured. Thorax and tergites dull, finely, obliquely and closely punctured. Sternites shining, the second coarsely and sparsely punctured, the rest closely and finely so. Clypeus very convex, a little more than twice as wide as long. Inner orbits divergent below. Interocular distance on the vertex nearly equal to the length of the first four joints of the flagellum. The second joint is a little more than four times longer than wide at the apex and nearly one and a half times longer than the third. Basal joint of the anterior tarsi with six spines on the outer margin.

Chinde, Portuguese East Africa, November, 2 ♀♀ (*P. Usher*). This species bears a close resemblance to the ♀ of *tenuifasciata* Parker, from Lagos, West Africa, from which it differs in the absence of pale fasciae on the epinotum and on the fifth and sixth tergites, the wings which are not infumated and the anterior metatarsus which has six instead of seven spines.

***Bembix refuscata* Parker**

1929, *Proc. U.S. Nat. Mus.* LXXV, 94, Pl. 12, fig. 170.

1942, *Proc. Ent. Soc. Wash.* XLIV, no. 9, 205.

1931, Arnold, *Ann. Transv. Mus.* XIV, pt. 2, 215.

In the work cited above I expressed the opinion that Parker's species should be sunk as a synonym of *B. diversipennis* Smith. Since that time I received from the Coryndon Museum, Nairobi, some specimens of

both sexes which agree in every particular with Parker's description in the text, but not with the figure of the genitalia in the Pl. 12. It is a valid species, closely related to *diversipennis*. My disagreement was due to his inaccurate figure of the genitalia. In Fig. 16 I give a corrected one, in which Parker's drawing of the outer paramera is shown by the dotted line.

Bembix tenebrosa Parker

1929, *Proc. U.S. Nat. Mus.* LXXV, 90.

1931, Arnold, *Ann. Transv. Mus.* XIV, pt. 2, 214.

1942, *Proc. Ent. Soc. Wash.* LIV, no. 9, 205.

The genitalia for this insect were shown in Parker's Pl. 14, but without any indication to that effect in the text. In the same work, p. 138, he described only 2 ♀♀ of *diversipennis*, but no mention was made of the other

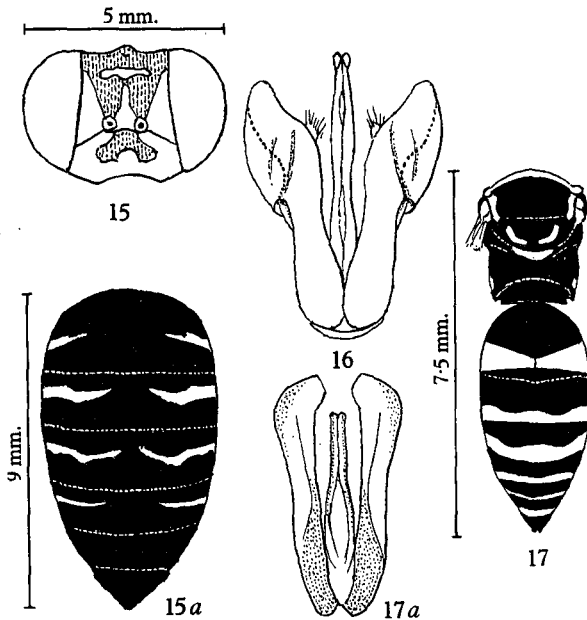


Fig. 15. *Bembix usheri*, ♀, head.

Fig. 15a. *Bembix usheri*, ♀, abdomen.

Fig. 16. *Bembix refuscata*, genitalia.

Fig. 17. *Stizus nemoralis*, ♂, abdomen.

Fig. 17a. *Stizus nemoralis*, ♂, genitalia.

sex, which he had evidently never seen. Had he done so, he would have seen that his *tenebrosa* is indistinguishable from *diversipennis*, the genitalia of the ♂♂ being exactly the same. I am therefore still of the opinion that *tenebrosa* is a synonym of *diversipennis*.

Subfamily STIZINAE

Stizus nemoralis n.sp. (Figs. 17, 17a)

♂. 8.5 mm. long. Black. The following parts are pale lemon yellow: labrum, clypeus, mandibles excepting the apex, the underside of the scapes and first joint of the flagellum, the hind margin and the tubercles of the pronotum, the lateral margins of the mesonotum, the tegulae, two spots on the mesopleura, large triangular maculae on the posterior corners of the scutellum, the metanotum, elongate spots on the lateral margins of the epinotal declivity, the underside of the coxae, the legs excepting black streaks on the upperside of the femora and apical fasciae, dilated at the sides, on the first six tergites and sternites. The underside of the flagellum, excepting the first joint, reddish yellow. Wings hyaline, the veins brown. Moderately shining, the clypeus with a few small punctures. Upper half of the face and the vertex with a very shallow puncturation, the interspaces wider than the punctures. The puncturation of the thorax and abdomen is oblique, fairly large and sparse, the interspaces for the greater part at least twice as wide as the punctures. The pubescence on the thorax and abdomen is short, yellowish white and decumbent, on the clypeus and face silvery. Clypeus two-thirds wider than long. Inner orbits strongly convergent below, the interocular distance on the vertex two and a half times greater than across the base of the clypeus, and equal to the length of the first seven joints of the flagellum. Posterior ocelli as far from the eyes as from each other. Second joint of the flagellum three-fifths longer than the first, twice as long as wide at the apex and one-third longer than the third joint. The tenth joint is spined below, the eleventh excised below and twice as long as the rostrate apical joint. Lateral margin of the epinotal declivity feebly excised below. Sides of the seventh tergite moderately sinuate near the apex, which is slightly excised. First and second transverse cubital veins contiguous on the radius.

♀. 9.5 mm. long. Clypeus with a triangular black spot at the base. The pronotum entirely black. The lateral margins of the mesonotum without long yellow maculae, the declivity of the epinotum immaculate. Otherwise the colour is as in the ♂, but the yellow fasciae on the tergites are narrower and less deeply sinuate cephalad. Clypeus a little more than twice as wide as long. Interocular distance on the vertex equal to the length of the first eight joints of the flagellum. The basal joint of the anterior tarsi with five ferruginous cilia.

Near the Insuza River, Victoria Falls Road in *Baikia* and *Pterocarpus* forest, on Kalahari Sand Formation, 2 ♂♂, 1 ♀. Closely related to *S. boer* Hndl. from which it differs in the arrangement of the yellow colour pattern and in the ♂ in the shape of the genitalia. The outer paramera are, in relation to their width, much longer. The genitalia of *boer* are figured in Fig. 4, Pl. v, *Ann. Transv. Mus.* xx, 1940.

Stizus buyssoni flavitarsis n.var.

S. buyssoni Arnold, 1929, *Ann. Transv. Mus.* XIII, pt. 4, 277.

♀. 9 mm. long. This variety differs from the type of the species as follows. Scapes and the underside of the flagellum, the legs excepting the ferruginous hind femora, pale chrome yellow. The metanotum is entirely black. The puncturation of the epinotum is very shallow and much smaller than in the type of the species.

Victoria Falls. Southern Rhodesia, December, 2 ♀♀.

Stizus kachelibae n.sp. (Figs. 18, 18a-c)

♂. 6.2-7.2 mm. long. Black. The following parts are pale chrome yellow. Mandibles excepting the apex, labrum, clypeus, face below the antennal sockets, the lower three-fourths of the sides of the face, the underside of the scapes and first joint of the flagellum, posterior margin of the pronotum including the tubercles, a streak of varying width on the lateral margins of the mesonotum, the posterior angles of the mesonotum, the posterior margin of the metanotum, a streak of varying width on the lateral margins of the epinotal dorsum and declivity, a wide transverse fascia on the posterior half of the first tergite, sinuate in front, not reaching the posterior margin, transverse apical fasciae widened laterad on tergites 2 and 5, and sternites 2-5. Flagellum black above, ochreous below. Legs pale chrome yellow, the upper side of the fore and middle femora, the whole of the hind femora and the apex of the hind tibiae and the extreme base of the hind metatarsi black. Wings hyaline, the veins black, the second cubital cell petiolate, i.e. with a short stalk on the radius. Clypeus and face with silvery pubescence, the rest of the body with a sparse, short and decumbent and yellowish pubescence. The puncturation is sparse, shallow and oblique. Clypeus twice as wide as long. Interocular distance on the vertex equal to the length of the first six joints of the flagellum, slightly more than two and a half times wider than across the base of the clypeus. The lateral margins of the epinotal declivity excised below. Penultimate joint of the flagellum twice as long as the apical, the tenth spined. Seventh tergite elongate triangular, the apex narrowly truncate.

♀. 6.2-7.2 mm. long. Clypeus with a median black spot at the base, the middle tibiae with a black streak on the apical half of the underside. Otherwise coloured as in the ♂, but the yellow maculae on the thorax are larger, and the yellow fascia on the first tergite is interrupted in the middle. Clypeus two and a half times wider than long. Inner orbits less convergent below than in the ♂, the interocular distance on the vertex two and a quarter times greater than across the base of the clypeus. Otherwise like the ♂ apart from the usual sexual differences.

Nesting in sandbanks of the River Suam, Kacheliba, Suk, Kenya, June 1952, 3 ♂♂, 4 ♀♀. Related nearer to *S. nemoralis* and *S. braunsi* than to other species of the *tridens* group, but differing in the genitalia.

Subfamily LARRINAE

Tachyspex venator n.sp. (Fig. 19)

♀. 7 mm. long. Black. Tibiae and metatarsi brownish black, the rest of the tarsal joints pale ferruginous. Tegulae dull ochreous. Wings hyaline, the veins brown. Head and thorax, excepting the epinotum, shining, the abdomen slightly shining. The lower corners of the face with a little silvery pubescence, the declivity of the epinotum with a very short, sparse and white pubescence. First three tergites with white, decumbent and short pubescence on the sides of the apical margin, not forming distinct fasciae. Clypeus nearly three times wider than long,

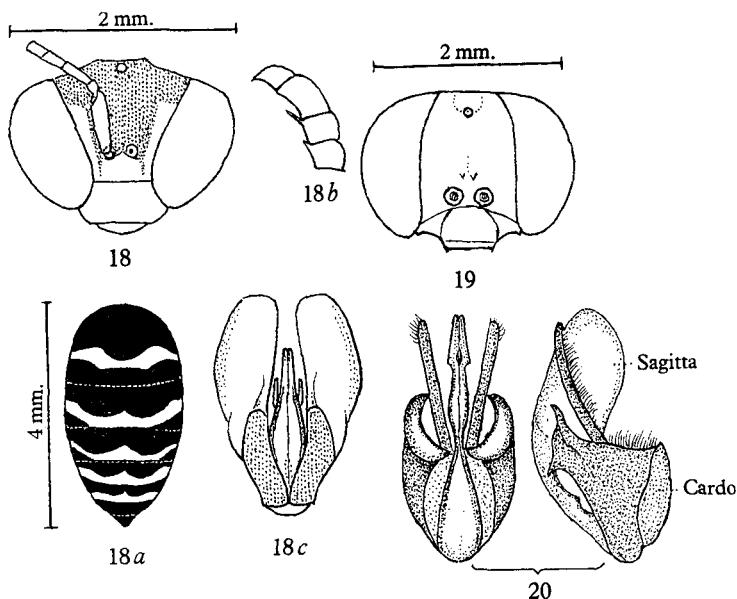


Fig. 18. *Stizus kachelibae*, ♂, head.

Fig. 18a. *Stizus kachelibae*, abdomen.

Fig. 18b. *Stizus kachelibae*, four apical joints of flagellum.

Fig. 18c. *Stizus kachelibae*, genitalia.

Fig. 19. *Tachyspex venator*, ♀.

Fig. 20. *Tachytes rara*, ♂, genitalia, dorsal and lateral view.

the median area with a few widely spaced and large punctures, its apical margin straight and edentate. Face and vertex very finely and closely punctured (30 diameters) the interspaces as wide as the punctures. The inner orbits widely divergent below, the interocular distance across the base of the clypeus very nearly twice as great as across the vertex, where it is equal to the length of the first two joints of the flagellum plus half of the third. The supra-antennal tubercles are well developed. Second joint of the flagellum twice as long as the first, the third a quarter longer than the second. Mesonotum twice as wide as long, with a puncturation

about twice as large as that of the face, the interspaces for the greater part three times wider than the punctures. The puncturation of the scutellum and metanotum is a little smaller than that of the face (30 diameters) and fairly sparse. The mesopleura punctured like the mesonotum. Dorsum of the epinotum moderately narrowed caudad, four-fifths wider at the base than long, longitudinally rugose over the basal half and reticulate-rugose over the apical half. Sides of the epinotum and the declivity transversely and strongly striate. Pygidial area elongate triangular, the apex acute. Claws of all the legs asymmetrical, as in *T. harpax* Arnold and *T. hippolyta* Arnold, the inner claw much shorter than the outer. The fourth joint of the anterior tarsi is very short and subconical. The comb of the anterior tarsi is composed of black cilia, two to each joint.

Abercorn, Northern Rhodesia, July 1945, 1 ♀ (*H. F. Bredo*). Related to *harpax* and *hippolyta* from which it differs by the puncturation of the head and thorax, and the shape of the clypeus. From *hippolyta* it also differs by the strong striation of the sides of the epinotum. The first three abscissae of the radius are of equal length.

***Tachytes rara* n.sp. (Fig. 20)**

♂. 13 mm. long. Black. The legs ferruginous, but with the following parts black; all the coxae, the upper side of the anterior femora excepting the extreme apex, the middle femora excepting the apical fourth, a streak on the upper side of the hind femora. Tegulae ochreous. Wings hyaline and slightly yellow, the veins pale ferruginous. Clypeus, face and temples and the thorax with a dense, decumbent and brassy golden pubescence, and also with a yellowish and erect pilosity. The apical margins of the abdominal segments are reddish brown. The first five segments have apical fasciae of decumbent yellowish grey pubescence, the sixth is densely clothed with reddish brown pubescence and the seventh tergite is covered with pale golden setae. Under the fourth tergite a part of a Stylops is visible. This may, perhaps, have affected the colour of the pubescence. Head and thorax dull, closely punctured (16 diameters). Sternites nearly dull, very shallowly, closely and finely punctured. Galea very little longer than the scape. Median area of the clypeus with three short teeth on each side. Interocular distance on the vertex equal to two-thirds of the length of the second joint of the flagellum. The latter is three times longer than wide at the apex and barely one-sixth longer than the third. Apex of the eighth sternite broad and convex. The genitalia are unlike those of any other species known to me. Stylopization affects the colour, pubescence and the soft internal organs, but it is improbable that the chitinized external parts can be altered. In my monograph of the African Sphecidae, 1929, *Ann. Transv. Mus.* XIII, pt. 4, I gave in Pl. VII figures of the genitalia of eighteen species. In all, the heavily chitinized basal part of the outer paramere is flat and lies in the same plane as the membranous apical part; only in *T. midas* Arn. is the inner margin of the basal part produced into a spine. In this species,

however, the outer paramera are short, without a membranous apical portion, and end in a spoon-shaped depression. The inner paramera and the sagittae are also unlike those of any other species.

Bulawayo, February 1947, 1 ♂.

***Tachytes alacris* n.sp. (Fig. 21)**

♂. 12.5–13 mm. long. Black. Tibiae and tarsi and palpi pale ferruginous. Wings hyaline, the veins flavo-ferruginous. Head, thorax and fore and middle femora with a pale brassy and golden decumbent pubescence and pilosity. First four tergites with apical fasciae of greyish silvery pubescence, the seventh tergite with setae of the same colour. Vertex and dorsum of the thorax very closely and finely punctured, almost reticulate-punctate. The pleura more finely punctured than the dorsum. Sternites shining, sparsely and coarsely punctured. Second joint of the flagellum two and a third times longer than wide at the apex, one-sixth longer than the third. The fourth to seventh joints moderately arcuately dilated below. Interocular distance on the vertex slightly shorter than the second joint of the flagellum. Dorsum of the epinotum nearly three times wider at the base than long, with a smooth median triangular area at the apical margin, continued as an impressed line down the declivity. Seventh tergite widely rounded at the apex. Basal joint of anterior tarsi with five white spines. The chitinated basal portion of the outer paramera is not pointed at the distal end, as in the majority of the species, but transverse. Galea shorter than the scapes.

Cashel, Southern Rhodesia, November, 3 ♂♂. Taking short and rapid flights on a hard footpath, and always settling to face the sun. Related to *T. opposita* Turner, but in that species the galea is much longer than the scapes. As a specific character very little reliance can be placed on the shape of the eighth sternite. Four specimens of a *Tachytes* from the Turk Mine area, Southern Rhodesia agree in every particular, including the genitalia, with *T. melancholica* Arnold except the eighth sternite in which the teeth of the emarginate apex are blunt instead of acute.

***Liris (Motes) tropicalis* n.sp. (Figs. 22, 22a)**

♀. 14.5 mm. long. Black. The following parts pale ferruginous: apical half of the mandibles, the first four joints of the anterior tarsus (the fifth brown) anterior tibiae, apical half of anterior femora, apical half of middle femora, middle tibiae, apical two-thirds of posterior femora and apex of posterior tibiae on the inside. Middle and posterior tarsi brown. Tegulae brownish red. Wings hyaline, strongly tinged with yellow, the veins brown. Pubescence of the clypeus and face greyish silvery. Underside of thorax and the epinotum with a microscopic greyish pubescence or bloom. First three tergites with apical fasciae, wider in the middle than at the sides, of silvery pubescence. Pygidium, excepting the shining basal part, covered with reddish brown pubescence and with six yellowish red spines at the apex. Head almost dull, mesonotum, scutellum and metanotum shining, the rest of the thorax dull. Last three

sternites shining. Head, mesonotum, scutellum and metanotum very finely punctured (32 diameters) the interspaces as large as the punctures. Dorsum of the epinotum about one-third wider at the base than long, slightly narrowed caudad, transversely and closely rugulose, with a median longitudinal raised line, the lateral margins of the dorsum and of the declivity with short transverse rugae. Apical margins of the clypeus moderately convex, shining, with a shallow median excision and a row of large punctures behind. Second joint of the flagellum three times longer than wide at the apex, barely longer than the third. Inter-ocular distance on the vertex equal to the length of the second joint of the flagellum. Mesonotum three-fifths wider than long. Pygidium

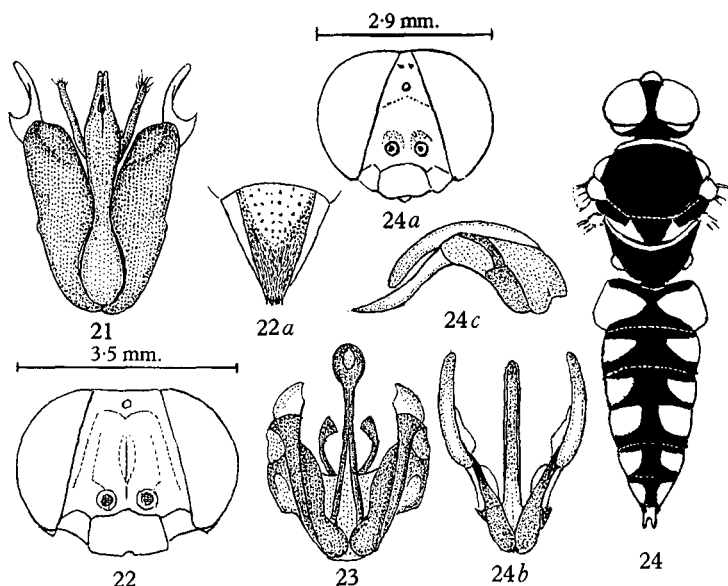


Fig. 21. *Tachytes alacris*, genitalia.
 Fig. 22. *Liris (Motes) tropicalis*, ♀, head.
 Fig. 22a. *Liris (Motes) tropicalis*, pygidium.
 Fig. 23. *Liris (Motes) wheeleri*, genitalia.
 Fig. 24. *Palarus multiguttatus*, ♂, \times ca. 8.
 Fig. 24a. *Palarus multiguttatus*, head.
 Figs. 24b and 24c. *Palarus multiguttatus*, genitalia, dorsal and lateral view.

nearly twice as long as wide at the base, elongate triangular, the apex narrowly rounded with a shining and sparsely punctured triangular area at the base, the rest of the surface finely and closely punctured. Sternites 1-3 dull, very closely and microscopically punctured, 4-6 shining, sparsely and more strongly punctured. The length of the first three abscissae of the radius are as 7:5:5.

Mabira Forest, Uganda, June, 1 ♀; Du River, Liberia and Coquilhatville, Belgian Congo (J. Bequaert). The last is a slight variety in which the hind tibiae are ferruginous and the apical spines of the pygidium are

black. Closely related to *L. (M.) Bredoi* Benoit from which it differs by the different puncturation of the pygidium, by the presence of spines at its apex and by the length of the abscissae of the radius.

***Liris (Motes) wheeleri* n.sp. (Fig. 23)**

♂. 9.5 mm. long. Black. Legs pale red, the extreme base of the middle femora black, the apical joint of the hind tarsi brown. Calcaria of the middle and hind tibiae black. Tegulae and base of the costa red, the wings hyaline, the veins and pterostigma brown. Clypeus and face with a dense silvery pubescence. Vertex and thorax with a very fine, grey and decumbent pubescence, abdominal segments with a decumbent, greyish pruinose pubescence on their apical halves. The whole body dull. Head and thorax, excepting the epinotum, closely and very finely punctured, the interspaces not wider than the punctures, almost reticulate-punctate (32 diameters). Dorsum of the epinotum closely and transversely rugulose, and with a close puncturation even smaller than that of the mesonotum, the sides and declivity with a stronger rugulosity than that of the dorsum. Apical margin of the clypeus feebly convex. Interocular distance across the base of the clypeus twice as wide as across the vertex, where it is equal to the length of the first and second joints of the flagellum. The second joint is nearly one and a half times longer than the first and one and a half times longer than wide at the apex, and slightly shorter than the third joint. Epinotal dorsum moderately narrowed caudad, and very little wider at the base than long. Seventh tergite with a wide and convex apex.

Turk Mine, Southern Rhodesia, 1 ♂, flying over the sandbanks of a stream (J. K. B. Wheeler).

This species belongs to the group with red legs, *thysanomera* Kohl, *dyscheira* Sauss and *erythropyga*, Arn, and differs from them distinctly by the genitalia.

***Palarus multiguttatus* n.sp. (Figs. 24, 24a-c)**

♂. 10.7-11 mm. long. Black. The following parts are pale lemon yellow: Clypeus and face up to the anterior ocellus, a broad streak on the temples, posterior margin of the pronotum and a wedge-shaped streak on its sides, pronotal tubercles, a quadrate macula on the mesopleura below the tegulae, a triangular macula on the anterior corners of the mesonotum, the tegulae, the posterior margin of the scutellum, the metanotum, the tubercles on the posterior corners of the epinotal dorsum, large transverse maculae, narrowed mesad, on each side of the first six tergites, small spots on the posterior corners of sternites 2-4, and the greater part of the legs. The upper side of the femora, excepting the base and apex, yellowish red. Seventh tergite ferruginous. Mandibles black at the apex, reddish in the middle and yellow at the base. Scapes yellow above, brownish black below, the flagellum reddish ochreous above and black below. Wings hyaline, the costa flavo-ferruginous, the veins brown. Clypeus and face with silvery pubescence.

Underside of the thorax with a short greyish pubescence, otherwise glabrous. Epinotum dull, the rest of the body shining. Clypeus, face and temples finely and sparsely punctured. Mesonotum in the middle and the scutellum sparsely and coarsely punctured, the punctures about one-third as wide as the anterior ocellus, the mesonotum more closely and more finely punctured at the sides. Epimerum of the mesothorax impunctate, the rest of the mesopleura much more shallowly and finely punctured than the sides of the mesonotum. Metapleura microscopically striate. Dorsum of the epinotum with a strong and close rugosity, the rugae curved outwards and backwards from the middle line, and with a deep round depression in the middle of the posterior margin. Tergites with a sparse puncturation on the yellow areas, which become progressively smaller on each succeeding segment, the black area very finely and much more closely punctured. Sternites impunctate. Median area of the clypeus almost semicircular, two-thirds wider than long, convex, the anterior margin straight. Face between the antennae and the anterior ocellus distinctly swollen in the middle. Interocular distance on the vertex equal to the length of the first joint of the flagellum. The second joint about twice as long as wide at the apex and half as long again as the third. Dorsum of the epinotum two and four-fifths wider at the base than long, the posterior margin strongly convex. First tergite like that of *P. O'Neili* Brauns, declivous and abruptly truncate at the base, the second sternite, as in that species, with a high transverse crest. Sixth sternite with a small tooth on each side near the base. The pygidial area of the seventh tergite is like that of *O'Neili* but shorter, flatter, dull and less sharply marginate at the sides.

Kacheliba, Suk, Kenya. 2 ♂♂, flying over a sandbank of the river Suam. June. Related to *O'Neili* Brauns, but smaller and of a different colour, and also to *P. rothschildi* Magretti, which is smaller and also differently coloured.

Subfamily PEMPHREDONINAE

***Stigmus barbatus* n.sp. (Figs. 25 and 25a)**

♂. 4.5 mm. long. Black. Mandibles ivory white, the apex ferruginous. Palpi pale yellow. Scapes ochreous, the first joint of the flagellum brownish ochreous, pronotal tubercles ivory white. Underside of the coxae, trochanters and face and middle tarsi yellowish white, the fore femora and tibiae pale brown. Wings hyaline, strongly iridescent, the second cubital cell faintly clouded, the veins and apterostigma brownish black. Mandibles on the underside densely fringed with white cilia, which are about half as long as the scapes. Clypeus shining, strongly convex transversely but not carinate, with a few large punctures (40 diameters), the apical margin straight. Face shining, transversely rugose, with a median carina extending from the clypeus to the anterior ocellus. Eyes margined all round by a carina, the space between it and the eyes transversely costate. Vertex and occiput shining, with traces of rugulosity near the ocelli (48 diameters). Thorax and abdomen shining.

Pronotum longitudinally rugose, the rugae on the dorsum divergent caudad, on the sides closer than on the dorsum, the dorsum three times wider behind than long in the middle, the anterior corners produced into triangular teeth. Mesonotum very convex, about one-fourth wider than long, with a transversely striate groove on each side of the middle, not extending back beyond the anterior half of the segment, the space between them with four longitudinal rugae, the anterior half outside the grooves longitudinally rugulose. Scutellum and metanotum closely and longitudinally rugulose (48 diameters). Mesopleura impunctate, the episternal suture and the longitudinal one emitted from it transversely costate, the upper corner, below the tegulae, longitudinally rugulose (48 diameters). Metapleura transversely rugulose. Epinotum with a wide and raised reticulation (Fig. 25). Abdomen impunctate and very shining. Inner orbits convergent below, the interocular distance on the vertex nearly twice as wide as across the base of the clypeus, and as long as the first three joints of the flagellum. The latter is very slender, the second joint two-fifths longer than the first, six times longer than wide at the apex, and as long as the third. Ocelli large, in an isosceles triangle, the posterior pair twice as far from the eyes as from each other. Petiole nearly eight times longer than wide at its posterior margin, and as long as the first two tergites, plus half of the third. The recurrent vein meets the cubitus a little before its middle. The proportions of the three abscissae of the radius are as 4:5:24.

Mt. Gorongoza. Portuguese East Africa, 840 m., September, 1957, 2 ♂♂. (R. Stukenberg). Clearly distinguished from the other African species by the beard on the mandibles.

Subfamily CRABRONINAE

Crabo (*Rhopalum*) *gorongozae* n.sp. (Fig. 26)

♀. 7.2 mm. long. Black. The following parts are yellowish white: the under side of the scapes, anterior and middle tarsi, the anterior tibiae on the upper side and the apex of the femora, the middle tibiae excepting a brownish streak on the upper side and the reddish brown under side, the posterior half of the tegulae. Posterior femora and tibiae brownish red, darker over the basal third, the posterior tarsi brown. Wings hyaline, the pterostigma and veins black. Clypeus, face, temples, thorax excepting the mesonotum, scutellum, metanotum and median area of the epinotal dorsum, with a short, decumbent and silvery pubescence. Abdomen and median area of the epinotal dorsum smooth and very shining, the rest of the body nitidulous, finely and closely punctured (32 diameters). Mandibles acute at the apex with a small tooth on the inner margin near the middle. Median area of the clypeus produced into a rectangular lobe, about twice as wide as long. Interocular distance on the vertex a little more than twice as great as across the base of the clypeus, and equal to the length of the first five joints of the flagellum. Vertex without lateral foveae, but with a feeble ridge near the inner orbits. Second joint of the flagellum as long as the first, and one-fifth shorter than the third.

Temples wide, about four-fifths the width of the eyes. Pronotal collar six times wider than long in the middle, the shoulders rounded, the anterior margin with a median depression. Mesonotum one-sixth wider than long, the scutellum nearly twice as wide as long. Median area of the epinotal dorsum semicircular, with a very shallow impressed line in the middle. First abdominal segment clavate, four times longer than wide across the swollen posterior part. Pygidial area marginate at the sides, flat, impunctate and elongate triangular. Hind tibiae clavate, as long as the second tergite plus half of the third. Second abscissa of the radius twice as long as the first; the recurrent vein meets the cubital cell beyond its middle.

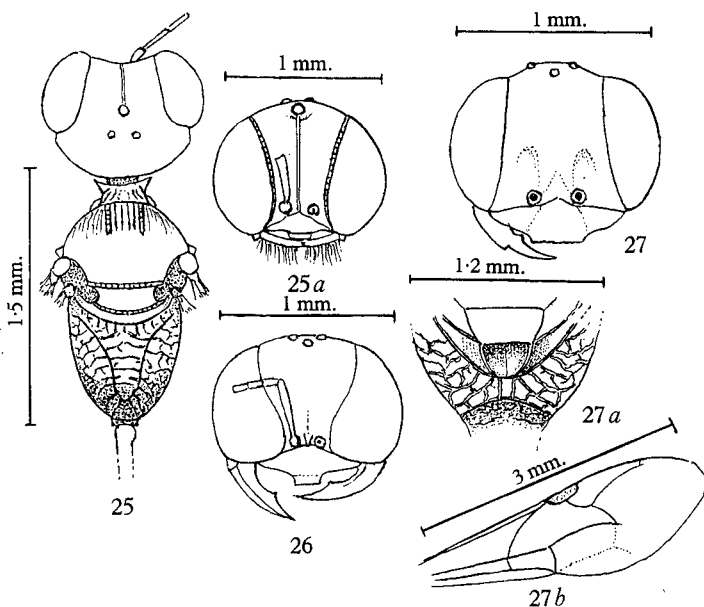


Fig. 25. *Stigmus barbatus*.
 Fig. 25a. *Stigmus barbatus*, head.
 Fig. 26. *Rhopalum gorongozae*, ♀.
 Fig. 27. *Belomicroides arenarius*, ♂.
 Fig. 27a. *Belomicroides arenarius*, posterior half of thorax.
 Fig. 27b. *Belomicroides arenarius*, forewing.

Mt. Gorongoza, Portuguese East Africa, September, 1 ♂ (R. Stukenberg). Related to *C. (Rhopalum) cruentatus* Arnold from which it differs by its smaller size, different colour, finer puncturation and the much narrower bottom of the face.

Crabro (Metacrabro) crippei mozambica n.subsp.

C. crippei Arnold, 1927, *Ann. Transv. Mus.* XII, pt. 2, 128.

♀. 12 mm. long. This race differs from the type of the species as follows: anterior tibiae and all the tarsi dark red, otherwise the legs are

black, with the apex of the anterior femora and the extreme base of the middle tibiae dark red. The veins of the wings are dark brown. The longitudinal striation of the mesonotum is stronger. The median area of the clypeus is longer and its apical margin is not convex as in *crippsi* but angulated on each side.

Mt. Gorongosa, Portuguese East Africa, September, 1 ♀ (R. Stukenberg).

Subfamily BELOMICROIDINAE

Belomicroides arenarius n.sp. (Figs. 27, 27*a*, *b*)

♂. 5 mm. long. Black. Mandibles pale ferruginous. Antennae dark brown. Tibiae brown, the anterior pair dull ochreous on the upper side, the tarsi brownish ochreous. Pronotal tubercles ivory white. Wings hyaline, iridescent, the pterostigma and veins pale ochreous. Clypeus and lower half of the face with silvery pubescence. There is a microscopic white pubescence on the pleura, femora and apical margin of the first four tergites and on the whole of the second, third and fourth sternites. Head nearly dull, closely punctured (50 diameters), the interspaces slightly larger than the punctures. Mesonotum and scutellum dull, reticulate-punctate (50 diameters), mesopleura dull, closely and transversely rugulose (32 diameters), sides of the epinotum dull, closely striolate (32 diameters). Abdomen fairly dull, the sculpture microscopic. Clypeus two and a quarter times wider than long in the middle, the median area feebly convex, its apical margin straight. Inner orbits equally divergent above and below. Lower half of the face slightly depressed on each side of the middle. Interocular distance on the vertex about equal to the length of the first nine joints of the flagellum. Posterior ocelli two-fifths farther from each other than from the eyes. Joints of the flagellum short, the first two a little longer than wide, the rest wider than long. Temples two-thirds as wide as the eye. Pronotum a little shorter in the middle than at the sides which are rounded and slightly swollen. Mesonotum three-fifths wider than long. Scutellum not quite twice as wide as long. Metanotal disk high, the lateral margins acute, concave cephalad and with a median longitudinal impressed line. Dorsum of the epinotum shorter than the vertical declivity, nearly four times wider at the base than long in the middle, coarsely rugose, the rugae (16 diameters) divergent outwards from the middle line, the declivity transversely rugose (Fig. 27*a*). Third and fourth tergites with a transverse and villose depression on each side at the base. Sixth and seventh tergites coarsely rugose, the seventh trapezoidal, the apical margin wide and straight. Posterior tibiae with two rows of five white spines on the upper side.

Sawmills, Southern Rhodesia, 25 December 1925, 1 ♂, on a sandbank of the Umgusa River. Larger than *B. pictus* Arn. and with different sculpture of the head and thorax. Evidently a very rare species, as during 14 years of collecting in the Sawmills district, at various times from July to February, this was the only specimen seen and collected.

Family POMPILIDAE

Subfamily CTENOCERATINAE

***Paraclavelia wheeleri* sp.n. (Fig. 28)**

♀. 15.5–18 mm. long. Black. Antennae reddish black, mandibles ferruginous. Wings fuscous. The abdomen with a steel-blue lustre. The clypeus, face, vertex and temples vary from yellow ochre to reddish ochre, the area round the ocelli darker or brown. Pronotum dark reddish brown, the mesonotum and scutellum rufescent in the middle, but in one specimen the mesonotum has the middle third pale yellow, like the scutellum. Vertex, pro-mesonotum and scutellum with a microscopic adpressed and brown pubescence. The sculpture of the epinotal dorsum resembles that of *P. opulenta* Arnold, consisting of about twelve transverse rugae which are thickest mesad and become progressively larger caudad. Median area of the clypeus one-third wider than long in the middle, the apical margin feebly convex, the base deeply recessed and forming, with the depressed bottom of the face, large antennal fossettes. Interocular distance on the vertex equal to the length of the second and third joints of the flagellum. Posterior ocelli as far from the eyes as from each other. The junction of the vertex with the occiput rounded, and the length of the vertex measured from the level of the posterior ocelli to its hind margin is equal to half the length of the second joint of the flagellum. The latter is slightly more than three times longer than wide at the apex, and about one-fifth longer than the third joint. Dorsum of the pronotum three-fifths wider than long in the middle. Dorsum of the epinotum one and a half times wider at the base than long, not narrowed caudad. Venation as in *P. opulenta*.

Turk Mine, Southern Rhodesia, 3 ♀♀, June, October and November (*D. K. B. Wheeler*). Closely related to *P. opulenta* Arn., but smaller, and differing in the proportions of the clypeus, pronotum and epinotum sufficiently to justify its separation as a distinct species. I have previously (Arnold, 1958) remarked on the nature of the pubescence which seems to be peculiar to this genus and to some species of *Ctenocerus*. In my description of *P. opulenta*, line 8, p. 139, this correction should be made. Last 'abdominal segment' should read 'last sternite'.

***Paraclavelia nigrifrons* n.sp. (Figs. 29, 29a)**

♀. 12 mm. long. Black. Wings fuscous, with a slight purplish reflexion. Mandibles and antennae fusco-ferruginous. A large sub-quadrate macula, with a narrow extension below, on each side of the face, orange. The occiput and the upper half of the temples also orange. The microscopic and adpressed pubescence on the vertex and on the pro-mesonotum, black. Clypeus and face shining, the rest of the head and the thorax dull. The puncturation of the vertex and of the pro-mesothorax microscopically reticulate punctate (36 diameters). Dorsum of the epinotum with about seven transverse rugae, increasing progres-

sively in thickness caudad, only the last two extending to the lateral margins, the basal corners in front of the stigmata with five oblique rugae, the declivity transversely rugose. Clypeus one-fourth wider than long in the middle, the apical margin feebly convex. Second joint of the flagellum very nearly three times longer than wide at the apex and one-eighth longer than the third joint. Posterior ocelli as far from the eyes as from each other. The junction of the vertex with the occiput subacute in the middle, rounded at the sides. Interocular distance on the vertex equal to the length of the first three joints of the flagellum. Pronotum twice as wide behind as long, including the neck. Mesonotum two-thirds wider than long. Postnotum about half as long as the metanotum.

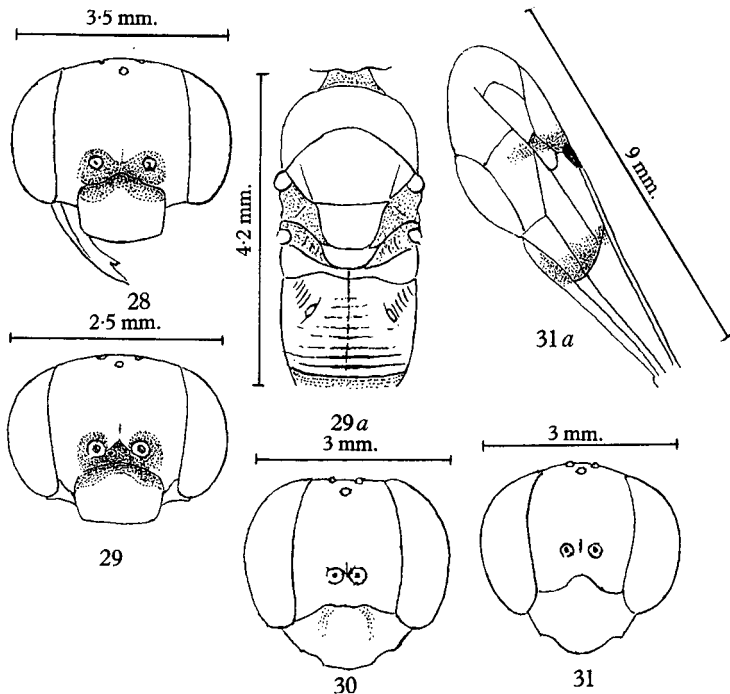


Fig. 28. *Paraclavelia wheeleri*, ♀.
 Fig. 29. *Paraclavelia nigrifrons*, ♀.
 Fig. 29a. *Paraclavelia nigrifrons*, ♀, thorax.
 Fig. 30. *Pseudagenia pinheyi*, ♀.
 Fig. 31. *Pseudagenia curvinervis*, ♀.
 Fig. 31a. *Pseudagenia curvinervis*, ♀, forewing.

Dorsum of the epinotum two-thirds wider at the base than long, slightly longer than the declivity. The proportions of the first three abscissae of the radius are as 5:15:18.

Balla Balla. Southern Rhodesia, December, 1 ♀. Distantly related to *P. rhodesiensis* Arn. but smaller and with a differently coloured head and longer epinotal dorsum.

Subfamily PSEUDAGENIINAE

Pseudagenia pinheyi n.sp. (Fig. 30)

♀. 15 mm. long. Black. Mandibles, excepting the black base and apex, and the palpi, yellowish red. Clypeus pale brown excepting the yellowish red apical third. Lower third of the face pale reddish brown, the upper part of the vertex black. Temples fuscoferruginous, becoming darker towards the vertex. Scapes and first joint of the flagellum ferruginous, the remaining joints black. Fifth tergite and sternite reddish brown, the apical segment pale ferruginous. Legs reddish yellow, the coxae darker above. The second to fourth tarsal joints of the hind legs black at the extreme base. Wings fuscous, the veins black. The whole body glabrous, apart from a few setae on the clypeus and a short red and yellowish pubescence on the apical tergite. Postnotum and abdomen nitidulous, the rest of the body dull. Postnotum transversely striate, epinotum closely and finely rugose, the rugae increasing in thickness caudad. The puncturation of the rest of the thorax, and of the head, microscopic and close. Abdomen impunctate, except the sixth tergite which is finely, very shallowly and sparsely punctured. Clypeus strongly convex, one-third wider than long, the apical margin convex and very feebly bisinuate on each side of the middle. Inner orbits convergent above, the interocular distance across the base of the clypeus very nearly half as great again as on the vertex. Flagellum slender, the second joint five times longer than wide at the apex and about one-sixth longer than the third joint. Posterior ocelli a little further from the eyes than from each other. Pronotum, excluding the neck, three times wider than long in the middle and with a shallow depression in front of the hind margin. Mesonotum not quite one and one half times wider than long. Postnotum nearly half as long as the metanotal disk. The whole epinotum is one-fourth wider at the base than long, forming a low arc in profile. First tergite subpetiolate, one-seventh longer than wide at the apical margin. The proportions of the first three abscissae of the radius are as 5:15:12. The first recurrent vein meets the second cubital cell a little beyond its middle, and the second recurrent meets the third cubital cell at its proximal third.

Mamfe, British Cameroons, February 1958, 1 ♀ (E. Pinhey). Related to *P. trisinuata* Arn. but with a differently shaped clypeus, and with different colour of the antennae and thorax.

Pseudagenia curvinervis n.sp. (Figs. 31, 31a)

♀. 14 mm. long. Black. Palpi and mandibles yellowish brown. Extreme apex of all the trochanters dull ochreous. The base of all the coxae on the under side ferruginous. The extreme apical margin of the abdominal segments brownish yellow. Sixth tergite brown, the apical third pale yellow. Wings hyaline, the veins and pterostigma black, and with two brown fasciae (Fig. 31a). Sternites nitidulous, the rest of the body, excepting the postnotum, dull, covered with a greyish microscopic

pubescence or pruinose bloom, the clypeus, temples and declivity of the epinotum with a thin, erect and white pilosity. Epinotum closely and transversely rugose, the rest of the thorax and the head with a close and microscopic puncturation (50 diameters). Clypeus very convex, about one and one half times wider than long, the apical margin convex. Flagellum slender, the second joint very nearly seven times longer than wide at the apex and not quite one and a half times longer than the third joint. Posterior ocelli one-third farther from the eyes than from each other. Interocular distance on the vertex equal to slightly more than nine-tenths of the length of the second joint of the flagellum. Dorsum of pronotum three and a half times wider than long in the middle, mesonotum four-fifths wider than long. Scutellum strongly convex lengthwise and transversely, about one and a half times wider than long. Postnotum transversely striate and shining, as long as the metanotum. The epinotum in profile forms a low arc and is one-fourth wider at the base than long. First tergite as long as wide at the hind margin. Sixth tergite with a shining, oval and impunctate area on the apical half. The proportions of the first three abscissae on the radius are as 2:6:7. The first transverse cubital vein is strongly curved inwards, and the third outwards. The inner fascia covers the proximal angle of the first cubital cell, the inner fourth of the first discoidal and nearly half of the submedial cell. The outer fascia covers the inner fourth of the radial, the outer half of the second cubital and extends into the second discoidal cell.

Duala, French Cameroons, February, 1 ♀ (E. Pinhey). Related to *P. aenescens* Arnold, but larger, with differently coloured pubescence, a longer clypeus and narrower fasciae on the forewing.

Subfamily POMPILINAE

Tribe TEINOTRACHELINI

Teinotrachelus nox n.sp. (Fig. 32)

♀. *ca.* 18.5 mm. long. Black. Mandibles ferruginous. Wings fuscous. The pubescence and pilosity is like that of *P. longicollis* Bischoff but entirely black, except on the clypeus and lower corners of the face where the pubescence is greyish silvery, and on the vertex and pro-mesothorax where the pubescence is dark brown. The abdominal segments are without apical fasciae. The sculpture is also like that of *longicollis*. Clypeus not as wide as the bottom of the face, three and a half times wider than long in the middle, the apical margin concave. The labrum wide, its apical margin also concave. Scapes thick, cylindrical, two and a half times longer than wide in the middle. Flagellum, as in the other three species, thickest in the middle joints, the second joint twice as long as the first and three-sevenths longer than wide, and as long as the third joint. Interocular distance on the vertex equal to the length of the first three joints of the flagellum plus half of the fourth. Posterior ocelli as far from the eyes as from each other. Pronotal dorsum flat, not convex transversely as in *T. longicollis*, very little wider behind than in front, as

long, excluding the neck, as wide behind, the lateral margins distinctly concave. Mesonotum two and a half times wider in front than long. Postnotum linear. Dorsum of the epinotum two-thirds wider at the base than long, as long as the declivity. Basal joint of the anterior tarsi with six spines on the outer margin. Wings much darker than in *T. longicollis* and *T. damarensis* Arnold. The proportions of the first three abscissae of the radius are as 3:7:9.

Woodvale, Southern Rhodesia, November, 1 ♀. More nearly related to *T. longicollis* than to *T. ruficollis* Arnold or *damarensis* but clearly distinct by the shape of the pronotum, the colour and pubescence.

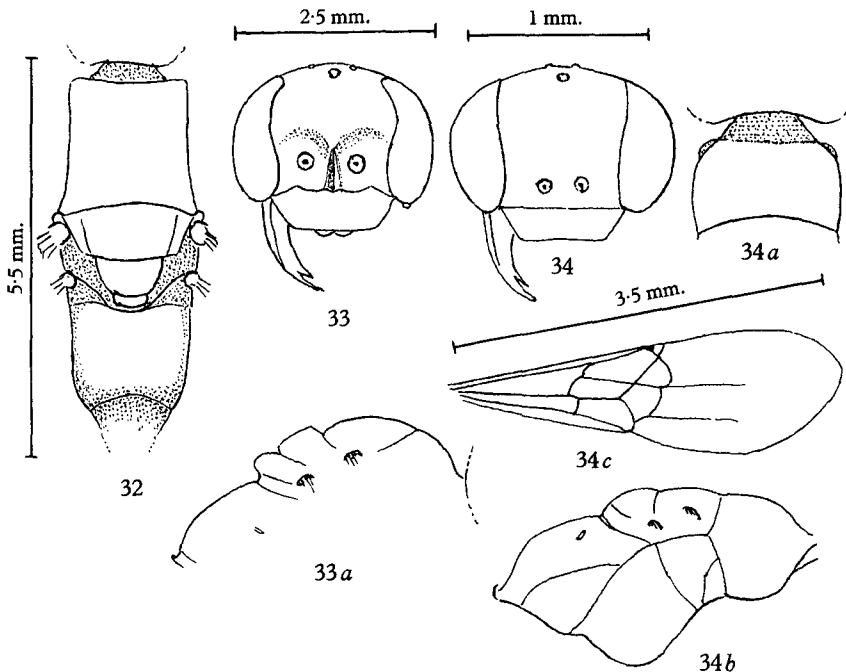


Fig. 32. *Teinotrachelus nox*, ♀.
 Fig. 33. *Kyphopompilus flavipes*, head, ♀.
 Fig. 33a. *Kyphopompilus flavipes*, dorsal profile of thorax.
 Fig. 34. *Idopompilus guillarmodi*, ♀, head.
 Fig. 34a. *Idopompilus guillarmodi*, pronotum.
 Fig. 34b. *Idopompilus guillarmodi*, thorax, lateral view.
 Fig. 34c. *Idopompilus guillarmodi*, forewing.

Tribe —?

***Kyphopompilus* nov.gen.**

Characters ♀.

Labrum excised in the middle. Mandibles with a small tooth on the inner margin near the acute apex. Clypeus as wide as the bottom of the face. An acute median carina extends from the hind margin of the clypeus to about the middle of the face. Junction of the vertex with the

occiput convex. Mesonotum without parapsidal sutures, the lateral margins reflexed. Pronotum as in *Pompilus*. Scutellum high and very convex transversely, its anterior fourth excavated. Metanotal disk swollen, slightly overhanging the postnotum which is well developed. Epinotum as in *Pompilus*. Middle and hind tibiae with three rows of long spines on the upper surface. Anterior tarsi without a comb. All the claws with a tooth near the middle, the pulvillus small and without cilia. Forewings with three cubital cells, second discoidal cell extended downwards at its lower proximal angle. Type of the genus, *K. flavipes*. In my key to the genera of the Pompilinae (Psammocharinae), Arnold (1937 pp. 75-81) the genus runs down to segregate (60) 67, but the epinotal dorsum is not subdentate and the second and third tergites are without dense pubescence.

***Kyphopompilus flavipes* n.sp. (Figs. 33, 33a)**

♀. 10.3 mm. long. Black. Basal half of the mandibles and the clypeus ochreous. The following parts are reddish yellow. Antennae, a small streak adjacent to the outer orbits on the top of the temples, promesonotum, scutellum and disk of metanotum, the fifth abdominal segment except at the base, the sixth entirely and all the legs. The fourth tergite has on each side near the apical margin a brownish ochreous semilunar streak. Wings flavohyaline, with a bronzy lustre, the rest of the body dull, closely and microscopically punctured. Clypeus nearly three times wider than long, the apical margin feebly convex. Inner margin of the eyes shallowly sinuate in the upper half. The median carina on the bottom of the face acute but short. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus half of the third. Posterior ocelli as far from the eyes as from each other. Scapes cylindrical. Second joint of the flagellum nearly four times longer than wide at the apex and two-ninths longer than the third. Temples about half as wide as the eye. Dorsum of the pronotum five times wider behind than long in the middle, moderately narrowed in front, the shoulders convex, the hind margin obtusely angular. Mesonotum about one-fifth wider than long. Scutellum two-fifths wider than long. Metanotum three times wider than long and very convex lengthwise. Epinotum only a little wider at the base than long, forming a low arc in profile. First tergite as long as wide at the posterior margin. Sixth tergite U-shaped. The proportions of the first three abscissae of the radius are as 3:7:7. The first recurrent vein meets the second cubital cell at its distal third, the second meets the third cubital cell a little beyond its middle. Nervulus postfurcal. The transverse anal vein of the hind wing is interstitial.

Salisbury, December 1938. 1 ♀ (A. Cuthbertson).

Tribe IDOPOMPILINI

Idopompilus guillarmodi n.sp. (Figs. 34, 34a-c)

♀. 4.8-5.2 mm. long. Black. The mandibles ferruginous, black at the apex. Wings pale fuscous, slightly darker beyond the cells. Sides of the thorax and the whole of the epinotum with a very fine, decumbent and silvery pubescence. The first three tergites with narrow apical fasciae of similar pubescence, narrowly interrupted in the middle. Abdomen nitidulous, the rest of the body dull. Head and thorax microscopically reticulate-punctate (48 diameters). Clypeus four times wider than long, feebly convex, the apical margin straight. Inner orbits convergent below, the interocular distance on the vertex one-fourth greater than across the base of the clypeus and equal to the length of the first three joints of the flagellum. Second joint of the flagellum not quite three times longer than wide at the apex and a trifle shorter than the third joint. Ocelli as far from the eyes as from each other. Dorsum of the pronotum, excluding the neck, two-thirds wider than long in the middle, the sides feebly convex. Mesonotum two and a half times wider than long. The scutellum as long as the mesonotum. Postnotum almost linear. Dorsum of the epinotum convex transversely, about one and a half times wider at the base than long in the middle, not narrowed caudad, a little longer than the transversely convex declivity, and with a short median impressed line at the base. First tergite one-fourth wider at the hind margin than long. The second and third transverse cubital veins are contiguous on the very short and triangular radial cell. The first recurrent vein is interstitial with the first transverse cubital vein.

Mamathes, Basutoland, October-January, 3 ♀♀ (C. Jacot-Guillarmod). Related more closely to *I. Kohli* Arnold than to others of the genus, but with shorter joints of the flagellum and much shorter epinotum. It is about the same size as *I. algoenses* Arn., but that species has a much more convex pronotum, slenderer antennal joints and a narrower face.

Idopompilus decipiens n.sp. (Figs. 35, 35a-c)

♀. 5.2-6.5 mm. long. Black. Apical half of mandibles ferruginous. Wings pale fuscous, darker beyond the cells. Head and thorax with a decumbent, grey and microscopic pubescence. The first three tergites with narrow apical fasciae of grey pubescence, interrupted in the middle. Clypeus nitidulous, the rest of the body dull. Head and thorax very closely and finely punctured (40 diameters), more strongly than in *I. guillarmodi*. Clypeus three and two-third times wider than long, the apical margin straight. Inner orbits slightly divergent above and below, the interocular distance across the base of the clypeus about one-sixth greater than on the vertex where it is equal to the length of the first two joints of the flagellum plus one-eighth of the third. Posterior ocelli a little nearer to the eyes than to each other. Face in the middle twice as wide as one eye. Second joint of the flagellum nearly five times longer than wide at the apex, and very little longer than the third joint. Dorsum

of pronotum, excluding the neck, three-eighths wider than long in the middle, the sides feebly convex. Mesonotum four-sevenths wider than long. Scutellum a little more than half as long as the mesonotum. Dorsum of the epinotum parallel-sided, very little shorter than wide at the base, twice as long as the oblique declivity into which it merges by a low arc. First tergite as long as wide at the apical margin. Second cubital cell with a short stalk on the radius. Both recurrent veins meet the second cubital cell.

♂. 4.5 mm. long. Clypeus a little more than twice as wide as long. Inner orbits convergent below, the interocular distance on the vertex nearly half as great again as across the base of the clypeus and equal to the length of the first two joints of the flagellum plus one-half of the third. The second joint is three times longer than wide at the apex. Dorsum of the pronotum, excluding the neck, narrower than in the ♀, not quite twice as wide behind as long in the middle. First tergite about one-sixth longer than wide at the apical margin. The stalk of the second cubital cell on the radius is longer than in the ♀. Otherwise like the ♀.

Mamathes, Basutoland. October–January, 3 ♀♀, 1 ♂ (P. Jacot-Guillarmod). Differs from *I. guillarmodi* by the longer pronotum and epinotum. More closely related to *I. brunnescens* Arn. than to that species.

Genus *Ferreoloides* Haupt.

1919, *Ferreoloides* Haupt. *Britt. Zool. Mus. Berlin*, xv, 149.

1929, *Pompiloides* Häupt. nec *Pompiloides* Rad.

1934, *Aporinellus* Banks. *Proc. Amer. Acad. Arts Sci.* LXIX, 106.

1935, Gussakovsky Konowia, XIV, 135–50.

1936, *Pompiloides* Arn. *Ann. Transv. Mus.* XVIII, 415.

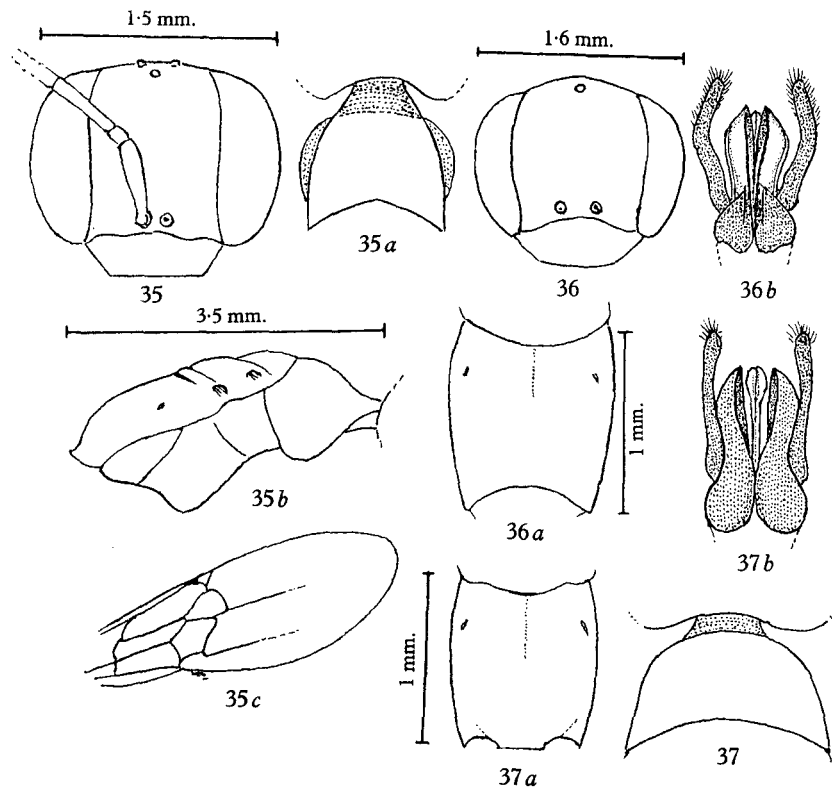
1944, Bradley Eos, xx, 93–100.

This name replaces *Pompiloides* Radoszkovsky, misspelt by me and other authors as *Pompiloides*, and *Aporinellus* Banks. I have copied the citations from Bradley's paper so that the reader can refer to them and to avoid a repetition of the arguments which show that *Pompiloides* Rad., with lectotype *unicolor* Ashmead, must be sunk as a synonym of *Anoplius* Dufour and replaced by *Ferreoloides* Haupt. Bradley has divided Haupt's genus into two subgenera, *Ferreoloides* Haupt, in which the claws of the female are bifid, and the seventh tergite of the male is white, and *Ceratopompilus* Bradley in which the claws of the female are toothed, and the seventh tergite of the male black. In my description of '*Pompiloides*' *decipiens* (Arnold, 1936) I remarked on the variability of the claws, and I am doubtful of the validity of the form of the claws as generic or even subgeneric value. I am therefore unable to accept *Ceratopompilus* as a subgenus, and therefore place all the species under *Ferreoloides*.

I also take this opportunity to say that, on a re-examination of the types of *decipiens* and *latifrons* Arn., the former must be considered a variety of *latifrons*.

Ferreoloides basutorum n.sp. (Figs. 36, 36a, b)

♂. 6.5–7 mm. long. Black, a narrow band behind the apex of the mandibles, ferruginous. Seventh tergite and the upper side of the hind tibiae ivory white, the spines on the tibiae black. Wings hyaline, the apex beyond the cells smoky, the veins black. Head and thorax with an exceedingly fine, decumbent and grey pubescence, the first three



- Fig. 35. *Idopompilus decipiens*, ♀, head.
 Fig. 35a. *Idopompilus decipiens*, pronotum.
 Fig. 35b. *Idopompilus decipiens*, lateral view of thorax.
 Fig. 35c. *Idopompilus decipiens*, forewing.
 Fig. 36. *Ferreoloides basutorum*, ♂, head.
 Fig. 36a. *Ferreoloides basutorum*, epinotum.
 Fig. 36b. *Ferreoloides basutorum*, genitalia.
 Fig. 37. *Ferreoloides versutus*, ♀, pronotum.
 Fig. 37a. *Ferreoloides versutus*, epinotum.
 Fig. 37b. *Ferreoloides versutus*, ♂, genitalia.

tergites and the second and third sternites with complete apical fasciae of grey pubescence, covering about one-third of the first and second tergites and about one-half of the third tergite. The whole body impunctate. Clypeus three times wider than long, the apical margin convex

Inner margins of the eyes convergent below, the face in the middle four times wider than one eye. First joint of the flagellum as long as wide, the second joint nearly twice as long as wide at the apex and very little shorter than the third joint. Interocular distance on the vertex equal to the length of the second to fourth joints of the flagellum plus a quarter of the fifth, and about one-third greater than across the base of the clypeus. Posterior ocelli two-sevenths farther from each other than from the eyes. Pronotum convex lengthwise and transversely, a little more than twice as wide behind as long. Mesonotum nearly one and a half times wider than long. Scutellum slightly longer than wide in front. Dorsum of the epinotum convex transversely, its posterior angles acute but not dentiform. First tergite three-fifths wider at the apical margin than long. Apical sternite elliptical. Inner calcar of the hind tibiae nearly as long as the basal joint of the tarsus. The proportions of the first three abscissae of the radius are as 3:7:6. Nervulus postfurcal.

Mamathes, Basutoland, December, 5 ♂♂ (C. Jacot-Guillarmod). Nearest to *F. trifasciatus* Arn. but larger and with pubescent fasciae on only the first three tergites.

***Ferreoloides versutus* n.sp (Figs. 37, 37a, b)**

♀. 7.5 mm. long. Black. A narrow band behind the apex of the mandibles ferruginous. Wings pale fuscous, darker beyond the cells. The clypeus and lower third of the face with a dense silvery pubescence. Thorax with a microscopic, decumbent and grey pubescence. First three tergites with apical fasciae of grey pubescence, covering about a third of the segments. The upperside of the tibiae also with grey pubescence. Clypeus three times wider than long, the apical margin straight. Face in the middle a little less than three times wider than one eye. Interocular distance on the vertex equal to the length of the first two joints of the flagellum plus one-third of the third joint, and a little less than the interocular distance across the base of the clypeus. Posterior ocelli nearly twice as far from each other as from the eyes. The occiput is not so concave as in the other species, so that the junction with the vertex is not acutely angular. Pronotum, excluding the neck, twice as wide behind as long in the middle. Mesonotum a little less than twice as wide as long. Dorsum of the epinotum with the posterior angles produced into triangular teeth and slightly longer than wide at the base. In the type the proportions of the first three abscissae of the radius are as 4:4:2, but in the ♀ paratype the second and third transverse cubital veins are contiguous on the radius. Comb of the anterior tarsi composed of long black spines, of which there are three on the first joint, two on the second and one on the third.

♂. 5.2 mm. long. Seventh tergite black. Clypeus twice as wide as long, the apical margin convex. Second joint of the flagellum not quite twice as long as wide at the apex. Interocular distance on the vertex equal to the length of the first three joints of the flagellum plus two-thirds of the fourth joint. Dorsum of the pronotum, excluding the neck,

twice as wide as long. Dorsum of the epinotum one-third wider at the base than long, the posterior corners bluntly angular and covered with white exerted pubescence which makes them appear dentiform. Otherwise like the ♀.

Mamathes, Basutoland, September–December, 2 ♀♀, 4 ♂♂ (C. Jacot-Guillarmod). Related to *F. trifasciatus* Arn. but with a wider vertex in the ♀, a longer pronotum and with more distinct teeth on the hind margin of the epinotal dorsum.

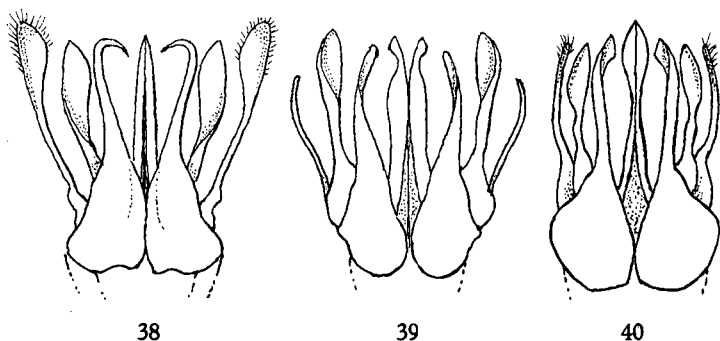


Fig. 38. *Tachypompilus praepotens*, ♂ genitalia.
Fig. 39. *Afropompilus ovambo*, ♂ genitalia.
Fig. 40. *Afropompilus vitripennis*, ♂ genitalia.

APPENDIX

Genus *Tachypompilus* Ashmead

Subgenus *Afropompilus*, Arnold, 1936, *Ann. Transv. Mus.* XVIII, 107.

Genus *Afropompilus*, Arnold, 1937, *Ann. Transv. Mus.* XIX, 71.

Evans, 1950, *Trans. Amer. Ent. Soc.* LXXV, 254.

The subgenus was sunk by Evans as synonymous with the genus. I can only conclude that he has not seen a specimen of any of the three species which I placed in *Afropompilus*, and furthermore has ignored not only the diagnosis of the subgenus but also the Text-figs. 26, 26*a* and 27*b* and *c*. In *Tachypompilus* 'the dorsum and declivity of the epinotum are sharply delimited; the dorsum is wider than long, its junction with the declivity almost rectangular; the declivity is vertical and concave and its lateral margins are produced into teeth, above and below'. In the subgenus, 'Declivity of the epinotum oblique, flat transversely, its lateral margins not produced into teeth, although the upper angles are slightly prominent.' If such great differences in the shape of the epinotum are of no importance, the number of the Pompilinae genera might well be reduced by 50%.

The figure of the genitalia of *T. praepotens* Kohl Fig. 27*c* did not show the inner paramera. I have relaxed the specimen and splayed the paramera apart and have given a better picture in Fig. 38. The opportunity has also been taken to give figures of the genitalia of *Afropompilus ovambo* Arn. Fig. 39, and of *A. vitripennis* Arn. Fig. 40.

REFERENCES

- ARNOLD, G. (1926). *Ann. S. Afr. Mus.* XXIII, pt. 2, 241-6.
ARNOLD, G. (1936). *Ann. Transv. Mus.* XVIII, 418.
ARNOLD, G. (1937). *Ann. Transv. Mus.* XIX, 75-81.
ARNOLD, G. (1958). *Occ. Pap. Rhod. Mus.* 22b, 138.
BISCHOFF, H. (1920). *Monograph. der Mutilliden Afrikas*, p. 62.