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NEW SPECIES OF AFRICAN HYMENOPTERA
NO. 12

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Family MUTILLIDAE

The foundation of our knowledge of African Mutillidae is Dr H. Bischoff's comprehensive *Monographie der Mutilliden Afrikas* (Bischoff, 1920-1). In that work the number of new genera was unnecessarily multiplied, and Bradley & Bequaert (1923, 1928) placed some in synonymy and reduced others to subgenera.

Bischoff's work would have been more valuable if so many of the descriptions had not been so brief, and very often based on comparisons with other species or subspecies. In the absence of these, or of adequate illustrations, such expressions as 'longer than in', 'darker than in' convey nothing to the reader. On this account I have been unable to identify a large number of undetermined species in the collection of the National Museum. In the following pages a few species and two genera are described which appear to be undoubtedly new, and reasons given for reducing *Ctenotilla* to a subgenus of *Smicromyrme*. The confusion in the classification of the Mutillidae is, I think, largely due to the different values given by authors to characters which they consider generic. Far too much emphasis has been given by both Bischoff and Bradley & Bequaert to differences in the shape and distribution of the pubescent spots and bands on the abdominal tergites. I have elsewhere (Arnold, 1946) given reasons for regarding some of these as pertaining to trophic varieties. The generic characters which seem to me to be of major importance are, in descending order of value, the following:

(1) ♂♂. Whether the mandibles are excised on the outer margin or entire.

(2) The proportions of the second joint of the flagellum and its length compared with that of the third joint.

(3) The shape of the first tergite, whether nodose and more or less petiolate, or transverse.

(3a) ♀♀. Whether the first tergite has a distinct dorsal face (e.g. as in *Mutilla*), or has not.

(4) Whether the posterior margin of the epinotal dorsum is armed or not.

(4a) If armed, whether with discrete triangular and acuminate teeth as in the tribe *Myrmillini*, or with cylindrical and blunt teeth which are merely prolongations of the longitudinal rugae of the thoracic dorsum (e.g. as in *Pristomutilla* and *Ctenotilla*).

(5) The shape of the scutellum, whether conically elevated or cushion-shaped.

(6) ♂♂. Whether the posterior angles of the mesonotum are simple or produced into curved lobes.

(7) Whether there are felted grooves on the second tergite or second sternite, or on both, or absent (*Rhopalomutilla*).

(8) ♀♀. Whether the apical tergite has a marginate median area or not.

(9) ♂♂. Whether the last sternite has lateral processes, ridges or tubercles.

(10) The shape and position of the pubescent spots and apical bands in the ♀♀.

Clinotilla n.gen.

CHARACTERS. ♀. Mandibles subtriangular, excised on the lower margin, the apical margin with three teeth, the middle one small. Clypeus strongly convex in the middle but not carinate, the apical margin arcuately excised in the middle, the angles of the emargination dentiform. A transverse carina extends from the antennal sockets on each side almost as far as the inner margin of the eyes. Vertex behind the eyes very long, as long as the eyes. Second joint of the flagellum long, two and a half times longer than wide at the apex and twice as long as the third. Occiput concave, its upper margin acute. Thorax slightly narrowed in the middle, the dorsum without sutures, its lateral margins multidentate from the anterior angles to the base. Epinotum without distinctly separate dorsal and declivous faces, the whole segment forming a continuous curve from base to apex. First tergite broad, convex lengthwise, not much narrower than the base of the second tergite. The latter with felted grooves on each side and with a longitudinal carina on each side, half-way between the middle and the sides, extending over the basal half of the segment. Apical tergite emarginate, without a pygidial area.

Type species of the genus, *C. multidentata* sp.n.

This genus differs from all the other genera of the family in the shape of the epinotum. In *Rhopalomutilla* ♀ the declivity of the epinotum is very oblique but its junction with the dorsum is not convex. Related remotely to *Labidomilla*, from which it differs by the mandibles, pygidium and clypeus.

Clinotilla multidentata n.sp. (Figs. 1 and 1a)*

♀. 10.5 mm. long. Head and abdomen black, thorax dark red. A long sparse, erect and greyish pilosity on the whole body and on the legs. Anterior tarsi without a distinct comb. Second tergite with a round pale golden pubescent spot in the middle, the third tergite with pale golden pubescence all over. Clypeus dull and impunctate. Vertex and temples dull, finely, closely and longitudinally rugose, punctured between the rugae. Occipital surface sparsely and coarsely punctured, its lower margin separated from the smooth and shining underside of the head by a transverse carina. Posterior half of the epinotum with a wide-meshed

* In the text-figures the pubescent bands and spots are shown black.

reticulation, the rest of the dorsum of the thorax with sculpture like that of the head. Pleura smooth, nitidulous and impunctate.

First, third and following tergites closely and finely punctured, the second a little more strongly punctured in the middle of the basal half, striato-punctate at the sides from the longitudinal carinae outwards. Second sternite shining, sparsely and coarsely punctured. Thorax one and two-thirds longer than wide across the anterior margin; the lateral margins have ten teeth, the anterior five blunt, the posterior five acute. Legs slender, the calcaria yellowish white.

Nsama, Mweru, Northern Rhodesia, 1 ♀ (*H. J. Bredo*). Type in the National Museum of Southern Rhodesia.

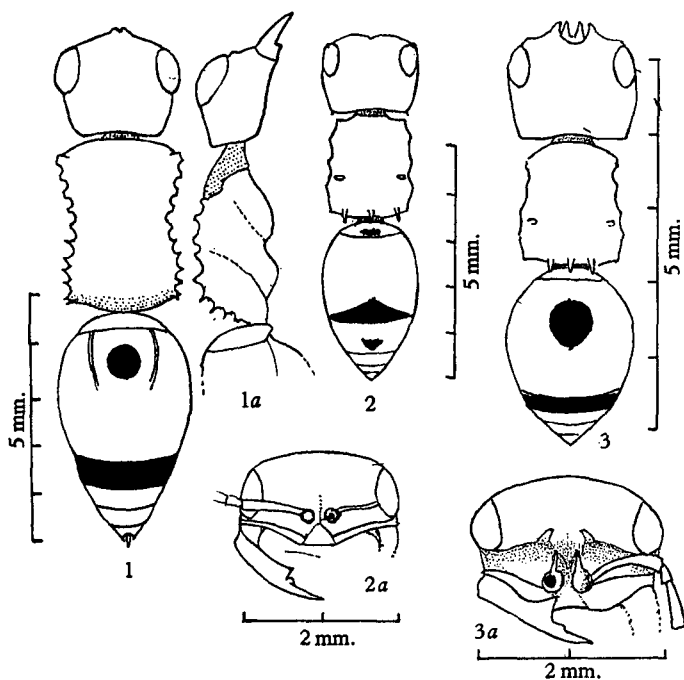


Fig. 1, 1a. *Clinotilla multidentata*, ♀.

Fig. 2, 2a. *Labidomilla bredoi*, ♀.

Fig. 3, 3a. *Labidomilla quadricornis*, ♀.

Labidomilla Bischoff

Bischoff, 1920, *Arch. Naturgesch.* LXXXVI, 60.

Bradley & Berquaet, 1928, *Bull. Amer. Mus. Nat. Hist.* LVIII, 72.

In Bischoff's diagnosis of the genus one character of the ♀ is stated to be the widening of the thorax posteriorly. This is not always the case, as may be seen from Figs. 2 and 6. In Bradley & Bequaert's paper another character is said to be the head being wider than the thorax and with a deeply incised hind margin. This is also incorrect, as shown by Figs. 2,

3, 4 and 6. The mandibles are not always long and falcate, being rather short in *L. tristis* and *L. matopoensis*.

In this genus there is no marginate pygidial area. The head is broad and the second joint of the flagellum is long. The sockets for the insertion of the scapes open ventrad and are swollen dorsad, thereby forming the antennal tubercles.

Labidomilla bredoi n.sp. (Figs. 2, 2a)

♀. 7 mm. long. Head and abdomen black, the thorax red, tibiae and tarsi dark brown. First tergite with a thin apical band of pale bronzy golden pubescence, the second with an apical band of the same colour, narrow and widest in the middle, the third tergite with a sparse pubescence of the same colour on its apical half. The extreme apical portion of the third tergite is testaceous. There is a sparse, long and erect pilosity of white and black hairs on the whole body. Vertex and temples closely, finely and longitudinally rugose, closely punctured between the rugae. The sculpture of the thoracic dorsum is similar, but the rugae are thicker and wider apart. Pleura concave, smooth and impunctate. Tergites quite dull, very closely and finely punctured, the apical tergite smooth and shining in the middle. Sternites shining, sparsely punctured. Mandibles long and falcate, the upper margin with a large tooth at about the apical third, and a very small tooth between it and the apex. Median area of the clypeus vertical, triangular, the apical margin smooth and shining, the posterior part dull and punctulate, the lateral sclerites very short. Second joint of the flagellum nearly three times longer than the third. A curved carina extends on each side from above the antennal sockets to the inner margin of the eyes. Dorsum of the thorax moderately widened caudad, the posterior margin with three acute and long teeth, the declivity shining and with a few rugae. Vertex convex lengthwise and transversely, about one-third wider than long, the lateral margins feebly convex, the portion behind the eyes nearly as long as the eyes, the hind margin feebly carinate. Middle and hind tibiae with two rows of three spines.

Abercorn, Northern Rhodesia, 1 ♀ (*H. J. Bredo*). Type in National Museum, Southern Rhodesia. Allied to *neavei* Bischoff, from which it differs by the colour of the thorax and the sculpture of the head and thorax. From *tauriceps* Kohl it differs by the sculpture, shape of the mandibles, the thorax much less widened posteriorly and the less globose abdomen.

Labidomilla quadricornis n.sp. (Figs. 3, 3a)

♀. 5.5 mm. long. Clypeus and mandibles reddish yellow, scapes and the rest of the head dark reddish brown, the centre of the vertex a little paler. Flagellum black. Thorax ferruginous, the pleura and declivity of the epinotum infuscated. Legs reddish brown. Abdomen black; a large median pubescent spot on the second tergite, a band of pubescence covering the greater part of the third tergite, and a narrow apical band of pubescence on the fourth tergite, yellowish white. Second tergite with

felted grooves. Exserted pilosity long and sparse, composed of black and white hairs intermixed. The sculpture of the head and thorax like that of the preceding species, *L. bredoi*, but the rugae on the vertex are less flattened. Face more strongly punctured than the vertex, without rugae, moderately shining. Tergites dull, finely and closely punctured, almost reticulate-punctate. Sixth tergite more strongly punctured, a small triangular area in the middle impunctate and shining. The mandibles have a large triangular tooth on the upper margin, its anterior edge vertical. Lateral sclerites of the clypeus not so short as in *L. bredoi*, the median triangular area impressed behind the apical margin. Scapes strongly curved. Second joint of the flagellum twice as long as the third. The upper side of the antennal sockets produced into an erect tooth, and the transverse carina which extends on each side to the inner margin of the eyes is produced at its inner end into a broader and inwardly curved tooth. Seen from above, the lower part of the face is therefore clearly quadridentate. Cheeks as long as the first joint of the flagellum. Head widest in the middle, barely narrowed posteriorly, the vertex two-sevenths wider than long, its hind margin carinate. Thorax slightly widened caudad, the lateral margins of the dorsum with six short and blunt projections on each side which are hardly long enough to be described as teeth, the posterior margin with three short teeth. Pleura impunctate. Middle and hind femora and tibiae with three spines on the upper margin.

Chirinda Forest, Southern Rhodesia, January 1948, 1 ♀. On a sandy path in a forest clearing. Type in National Museum, Southern Rhodesia. Clearly distinct from the other species of the genus by the four teeth on the lower face.

Two specimens from the same locality, November 1955, represent a variety, var. *brevicornis*, which differ from the type of the species as follows: 5 mm. long. Mandibles and scapes dark brown. The scapes are shorter and less curved, and the teeth on the inner end of the supra-antennal carinae are shorter. Type in National Museum, Southern Rhodesia.

***Labidomilla quadricornis rufescens* n.ssp.**

♀. 5.5 mm. long. This race differs from the typical form as follows. Head, including the mandibles, scapes and first two joints of the flagellum, yellowish red. The thorax also of that colour, therefore paler than in the type of the species. Femora and tibiae pale reddish brown, the basal thirds paler, tarsi ochreous. Decumbent pubescence on the head and thorax pale golden. The supra-antennal carinae are without an erect tooth at their inner end, merely raised into a broad and blunt angle. Longitudinal rugae on the head and thorax less distinct. Head not much wider than the thorax. Otherwise like the type of the species.

Sawmills, Southern Rhodesia, 26 December 1939, 2 ♀♀. Type in National Museum, Southern Rhodesia.

This locality on the Kalahari Sand formation, and of the savannah type, is separated from Chirinda by nearly 300 miles.

Labidomilla tristis n.sp.

♀. 4·7–5·6 mm. long. Mandibles, clypeus, scapes and first two joints of the flagellum, flavo-ferruginous, the rest of the head black. Dorsum of the thorax ferruginous, the pleura and declivity of the epinotum blackish. Abdomen black, the second tergite with a small, median apical patch of scanty yellowish white pubescence, the third tergite with similar pubescence on its apical half. Femora brown, tibiae and tarsi yellowish brown, the tibiae paler over the basal third. Head and thorax with a

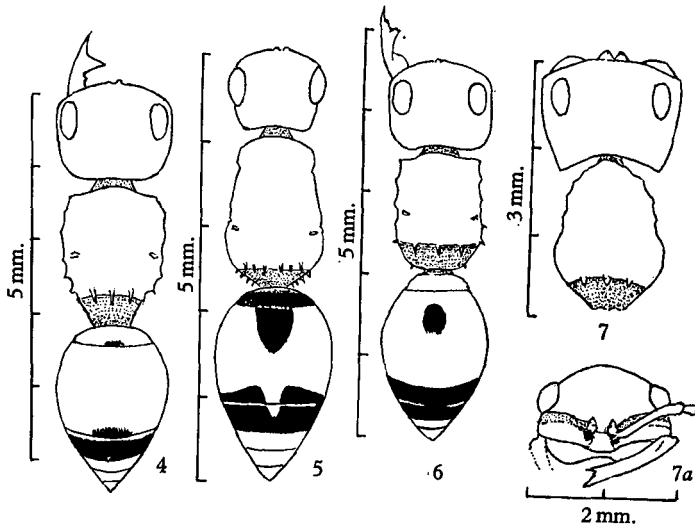


Fig. 4. *Labidomilla tristis*, ♀.
 Fig. 5. *Labidomilla cataractae*, ♀.
 Fig. 6. *Labidomilla matopoensis*, ♀.
 Figs. 7, 7a. *Labidomilla neavei rhodesiae*, ♀.

sparse and white pubescence, the whole body with a scanty white pilosity, long on the first tergite and directed cephalad. Head and dorsum of the thorax longitudinally rugose and strongly punctured between the rugae, the pleura dull and closely punctured, the declivity of the epinotum with a few large longitudinal rugae. Tergites closely punctured and dull. Median area of the clypeus nearly as long as wide, smooth and flat. Antennal carinae straight. Second joint of the flagellum nearly three times longer than wide at the apex and two and a half times longer than the third. Vertex one-fifth wider than long. Head behind the eyes as long as the eyes, the latter very convex and not close to the lateral margins. Dorsum of the thorax parallel-sided, as long as wide, the sides crenulate, in the posterior half almost dentate, the hind margin with three widely spaced teeth. Middle and hind femora and tibiae with four black spines on the upper margin.

Nsama, Mweru, Northern Rhodesia, January, 1 ♀ type; Kalungwishi River, Northern Rhodesia, 1 ♀. The smaller specimen from the latter locality has the hind margin of the head more concave than in the type. Not closely related to any other species of the genus. Type in National Museum, Southern Rhodesia.

***Labidomilla cataractae* n.sp. (Fig. 5)**

♀. 5 mm. long. Head, thorax, antennae and legs pale ferruginous, the face slightly infuscated. First and second tergites black, the third to sixth brown, the sternites pale ferruginous. Head and dorsum of the thorax with a decumbent and fairly long whitish pubescence, the pleura dull, with a finer and closer pubescence. The exerted pilosity on the whole body long and white. Head and dorsum of the thorax closely rugoso-punctate, the sculpture obscured by the pubescence. Declivity of the epinotum smooth and almost impunctate. Second tergite and the dorsal part of the first with close and elongate punctures, the remaining tergites more finely and more sparsely punctured. Second sternite shining, sparsely and coarsely punctured, the remaining sternites shining and impunctate except on the apical margins. First tergite with an apical band of white pubescence, the second also with an apical band which is narrowed laterad and widely interrupted in the middle, and with a median basal and subtriangular spot of pubescence, the third tergite with white pubescence all over but slightly interrupted in the middle. Mandibles bidentate. Median area of the clypeus raised in the middle but not distinctly carinate, its anterior margin concave. Head wider than long, the vertex behind the eyes shorter than the length of the eye, the posterior angles widely rounded, the hind margin feebly concave. Second joint of the flagellum twice as long as the third. Antennal tubercles large and convex, the antennal carinae thin. Dorsum of the thorax one-fifth wider behind than in front, the hind margin of the epinotum with six small teeth, the lateral margins of the declivity with four small teeth. Middle and hind femora and tibiae with three spines on the upper margin.

Victoria Falls, Southern Rhodesia, November, 1 ♀. Type in National Museum, Southern Rhodesia. Nearest to *L. ilgii* André from which it differs by the absence of pale pubescence on the fourth and fifth tergites and by the six small teeth on the hind margin of the epinotal dorsum.

***Labidomilla matopoensis* n.sp. (Fig. 6)**

♀. 4.5 mm. long. Head, thorax and legs pale ferruginous, the anterior half of the head and the declivity of the epinotum more or less fuscous. Scapes, first joint of the flagellum and the basal two-thirds of the second joint flavo-ferruginous, the remaining joints brown. Abdomen black, the apical tergite testaceous. Second tergite with a median spot of whitish pubescence in the basal half, the third and fourth tergites with similar pubescence all over. Head and dorsum of the thorax

rugoso-punctate, the pleura smooth, the declivity of the epinotum sparsely and longitudinally rugose. Dorsal face of the first tergite shining and sparsely punctured, the second tergite dull, closely and finely punctured. Sternites shining, impunctate. Vertex feebly narrowed caudad, one-third wider in the middle than long, the hind margin carinate and feebly concave. Mandibles tridentate, the basal tooth truncate. Second joint of the flagellum two and two-thirds longer than the third joint. Thorax very slightly widened caudad, the lateral margins crenulate in front, dentate in the posterior half, the hind margin of the dorsum with three teeth.

Matopos, Southern Rhodesia, November, 1 ♀. Type in National Museum, Southern Rhodesia. This species is related to *L. ilgii* André, from which it differs by the thorax being much less widened caudad, and by the absence of apical pubescent fringes on the first and second tergites and pubescent band on the fourth.

Labidomilla neavei rhodesiae n.ssp. (Figs. 7, 7a)

L. neavei Bischoff 1920, *Arch. Naturgesch.* LXXXVI, 66.

♀ 6.2 mm. long. Head and thorax pale brick red, the underside of the head flavo-ferruginous, the legs and antennae brownish red, first and second tergites black, the third to sixth dark brown with the apical margins dull ochreous, the sternites ferruginous. The pubescent markings on the tergite are as in the type of the species, except the fifth and sixth, which are without pubescence. Mandibles long, almost parallel-sided, the apex bidentate. The underside of the head is swollen anteriorly, so that the gular surface is plainly visible when the head is viewed from in front. Head rugoso-punctate, distinctly narrowed caudad, one-fourth wider across the middle than long. The eyes are situated some distance from the sides. Second joint of the flagellum fully three times longer than wide at the apex. Dorsum of the thorax reticulate-rugose, the anterior margin strongly convex, much widened behind, the hind margin being twice as wide as in front; the lateral margins are crenulate, and the hind margin has three small teeth. Second tergite nitidulous, closely and very finely punctured, the following tergites a little more strongly and less closely punctured.

Insuza River, Victoria Falls Road, November, 1 ♀. Type in National Museum, Southern Rhodesia.

Labidomilla langi Bradley & Bequaert

Ctenotilla langi, 1928, *Bull. Amer. Mus. Nat. Hist.* LVIII, 116.

A specimen before me, from Sambuwanga, Tanganyika, agrees in every respect with the description, but the species must be transferred to the genus *Labidomilla* for the following reasons. The second joint of the flagellum is very long as in *Labidomilla*, whereas in *Ctenotilla* they are only a little longer than the third joint; the mandibles have a shape quite different from those of *Ctenotilla* and the teeth on the hind margin

of the epinotal dorsum are not as in that genus horizontal extensions of the longitudinal rugae of the dorsum, but are erect, triangular and acuminate. The sixth tergite has no marginate pygidial area, there is merely a median and narrowly elliptical area which is impunctate and shining, contrasting with the closely punctured sides.

Odontotilla Bischoff

1920, *Arch. Naturgesch.* LXXXVI, 70

Odontilla (sic) Bradley & Bequaert, 1928, *Bull. Amer. Mus. Nat. Hist.* LVIII, 73.

The type species of this genus is *O. bidentata* André. The authors of the second work quoted above point out that Bischoff is incorrect in saying that there is no marginated pygidial area. However, in one out of twelve specimens in our collection, one ♀ which differs in no other respect from the rest, the pygidial area is not marginated. In the type species of the genus the hind margin of the epinotal dorsum has two large spines, but in other species there may be three or five, or several small teeth (denticulate). In the ♂♂ three ocelli are present.

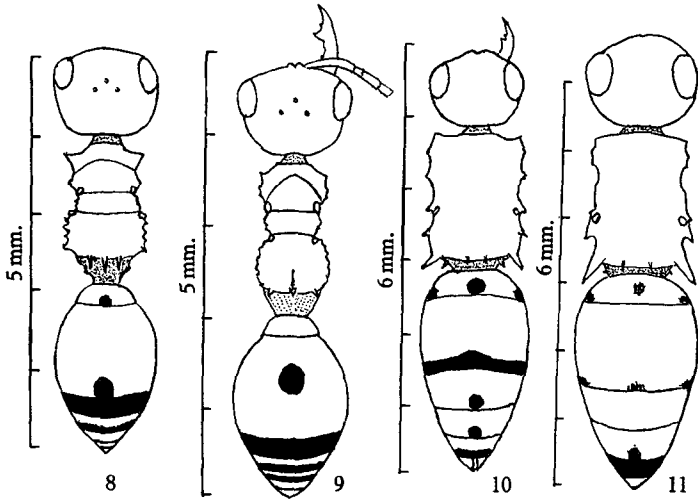


Fig. 8. *Odontotilla bischoffi*, ♂.
 Fig. 9. *Odontotilla silvestris*, ♂.
 Fig. 10. *Odontotilla perspicua*, ♀.
 Fig. 11. *Odontotilla depilata*, ♀.

Odontotilla bischoffi n.sp. (Fig. 8)

♂. 5-5.3 mm. long. Mandibles ferruginous, head and abdomen black, thorax dark red, the pleura and bottom half of the declivity black, antennae and legs brownish black. First and third tergites with yellowish white pubescence all over, the second tergite with a large

apical spot of similar pubescence, and the fourth with an apical band. The erect pilosity on the thorax and abdomen is white and long, abundant on the first tergite. On the head the pilosity is shorter, of black and white hairs intermixed. On the head and thorax there is a decumbent, sparse and yellowish pubescence. Head reticulate-punctate, more strongly on the vertex than on the temples. Dorsum of the thorax coarsely reticulate, the interspaces deeply punctured. Tergites dull, closely punctured and with fine rugae in between the punctures. Second sternite shining, strongly and closely punctured. Sides of the head behind the eyes feebly convex and strongly convergent caudad, the hind margin convex. Mandibles with a large tooth on the upper margin at about the second third of their length, the apex acute and with a small tooth behind it. Second joint of the flagellum twice as long as wide at the apex and three-fifths longer than the third joint. Three ocelli present. Anterior corners of the pronotum produced into a triangular tooth; the suture between the pronotum and the mesonotum defined by a thin raised line. Scutellar region lower and narrower than the pronotum and epinotum. Dorsum of the epinotum convex transversely, the sides convex with three or four teeth; the hind margin with three acute teeth which are longer than wide at the base.

Nsama, Mweru, Northern Rhodesia, type; Mofwe, Mweru, 2 ♂♂; Kaputa, Mweru, 1 ♂. In one of the specimens from Mofwe the anterior angles of the pronotum are not so sharply dentate and the teeth on the sides of the epinotum are short and blunt. In the specimen from Kaputa the first two teeth are short and blunt.

***Odontotilla silvestris* n.sp. (Fig. 9)**

♂. 5 mm. long. Head black, middle of the pronotum and mesonotum fusco-ferruginous, the rest of the thorax black. Mandibles black, the apex and the underside of the base ochreous. Legs black, the tarsi pale brown. First and second tergites and all the sternites black, the third and following tergites blackish at the base and brownish ochreous over the apical half. A median round spot on the second tergite and apical bands on the third to fifth tergites with yellowish pubescence. The exerted pilosity on the head and thorax short and black, on the abdomen, especially on the first tergite, long and white. Head reticulate-punctate and also with a fine longitudinal rugosity. Dorsum of the thorax more coarsely reticulate-punctate, especially on the epinotum. Tergites closely punctured, the sternites shining, sparsely and strongly punctured. Head widest across the middle, one-sixth wider there than long. Mandibles with a blunt tooth on the upper margin a little beyond the middle. Second joint of the flagellum only twice as long as wide at the apex and two-thirds longer than the third joint. Anterior corners of the pronotum rounded. Tegulae fairly large. Sides of the epinotal dorsum finely crenulate, the hind margin with three very short teeth, the median tooth being the raised apex of a short longitudinal carina. Felted grooves on the second tergite.

Chirinda Forest, Southern Rhodesia, October, 1 ♂. Type in National Museum, Southern Rhodesia. On a sandy path in the forest. Related to *O. bischoffi* from which it is easily distinguished by the shorter second joint of the flagellum, the rounded shoulders of the pronotum and the pattern of the yellowish pubescence markings on the abdomen.

***Odontotilla perspicua* n.sp. (Fig. 10)**

♀. 6 mm. long. Head, mandibles, first four joints of the antennae, thorax and legs bright ferruginous. Abdomen black, the apical margin of the second tergite ochreous. Head and thorax with a sparse, decumbent and pale yellowish pubescence. The vestiture of the pale golden pubescence on the abdomen is distributed as follows: on the first tergite a median apical spot and a smaller one on the sides, an apical fringe on the second tergite, slightly wider in the middle than at the sides, transverse median apical spots on the third and fourth tergites and a sparse apical fringe on the fifth. The erect pilosity on the whole body is white and sparse. The sculpture of the head and dorsum of the thorax consists of an irregular network, not much raised, and with a small pimple in the middle of the meshes. Tergites very finely, shallowly and closely punctured. Second sternite shining, closely punctured. Mandibles with two small teeth behind the apex. Head widest across the eyes, one-fifth wider than long, the vertex behind the eyes half the length of the eyes, the sides convex behind the eyes. Second joint of the flagellum short, only one-fourth longer than wide at the apex and one-fourth longer than the third joint. The antennal carinae almost obsolete. Dorsum of thorax about one-third longer than wide in front, only very slightly widened caudad, the lateral margins crenulate, the angles of the posterior crenulations distinctly dentate; the hind margin of the epinotal dorsum with a large tooth on each side, directed outwards. Second tergite with felted grooves. Sixth tergite with a marginate and shining pygidial area, barely widened towards the apex, nearly three times longer than wide.

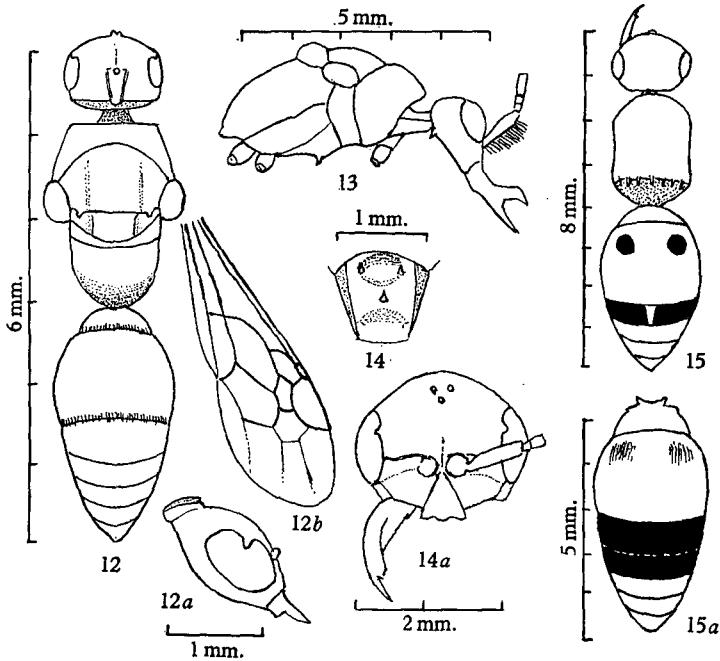
Victoria Falls, February, 1 ♀. Type in National Museum, Southern Rhodesia. This species and the one described hereunder differ from the type of the genus in the short second joint of the flagellum and in the peculiar sculpture of the head and thorax. These differences might justify placing them in a subgenus, but I am averse to multiplying the number of subgenera, many of which are based on insignificant differences. It is better in this case to enlarge the definition of the genus, to include species with both long and short second joints of the flagellum.

***Odontotilla depilata* n.sp. (Fig. 11)**

♀. 6.5 mm. long. Head, antennae, abdomen and legs black, the thorax dark brick red. The sculpture of the head and thorax is as in *O. perspicua*. The tergites are more finely punctured than in that species, but the second tergite has a few larger punctures interspersed. The golden pubescence on the first tergite is very sparse, the second and third have a fringe of decumbent black pubescence on the apical margin, the fourth

also with a black apical fringe and a few golden hairs in the middle of the margin, the fifth with golden pubescence all over. Antennae and mandibles as in *O. perspicua*. Anterior margin of the pronotum convex, not bi-emarginate as in *perspicua*; the crenulation of the lateral margins of the dorsum is quite different (see Figs. 10 and 11), and the teeth at the corners of the epinotal dorsum are much longer.

Mofwe, Mweru, Northern Rhodesia, 1 ♀ (*H. f. Bredo*). Type in National Museum, Southern Rhodesia.



Figs. 12, 12a and 12b. *Corytilla pallidipes*, ♂.
 Fig. 13. *Pseudocephalotilla armata*, ♂.
 Fig. 14. *Bisulcotilla quadrisulcata*, ♂, 7th sternite.
 Fig. 14a. *Bisulcotilla quadrisulcata*, ♂ head.
 Fig. 15. *Pristomutilla transversiceps*, ♀.
 Fig. 15a. *Pristomutilla transversiceps*, ♂.

Corytilla n.gen.

(*Kópv̄s* + *tilla*)

CHARACTERS. ♂. Mandibles excised on the outer margin, the apex acute and with a small tooth behind it. Median area of the clypeus broadly triangular, the apical margin feebly concave and projecting beyond the lateral sclerites. Second joint of the flagellum a little shorter than the third. Eyes deeply emarginate. Hind margin of the head transverse, the lateral angles slightly rounded. On the posterior half of the vertex there is a moderately raised and subtriangular platform, its lateral margins acutely carinate, the base directed forwards and enclosing the

anterior ocellus, the rounded apex directed caudad, and when viewed from the side is seen to overhang the vertical occiput. Temples very narrow. Mesonotum with distinct parapsidal furrows, the hind angles produced into short blunt teeth. Tegulae large. Scutellum convex. Dorsum of the epinotum moderately oblique, not much shorter than the declivity. First tergite broad, as wide as the base of the second tergite, and with a convex dorsal face. Second tergite with felted grooves. First sternite with a median longitudinal carina. Apical sternite flat, the lateral margins subcarinate, the apex roundly excised, the apical tergite oval. Tibiae without spines on the upper margin. Forewings with a very large radial cell and three cubital cells, the nervures of the third cell feebly chitinized. Hindwing without a basal lobe.

Type species of the genus *C. pallidipes* n.sp.

In Bischoff's key to the genera this genus runs down to *Rhopalomutilla*, from which it differs distinctly by the first tergite which is not nodose as in that genus, and by the presence of felted grooves on the second tergite. The type species of this genus resembles *Rhopalomutilla cristata* Bingham in having a raised platform on the vertex.

***Corytilla pallidipes* n.sp. (Figs. 12, 12a and 12b)**

♂. 6 mm. long. Black. Femora and tibiae reddish ochreous, the anterior pair somewhat darker, the tarsi brown. Mandibles dark brown, slightly ochreous in the middle. Wings hyaline, a little smoky beyond the cells, the pterostigma hyaline. Head and thorax with an abundant, decumbent and white pubescence. Erect pilosity white, long on the first tergite and the legs. First and second tergite with a very narrow apical fringe of white pubescence. Head and pronotum coarsely reticulate-punctate, the reticulations larger on the pronotum than on the head. Mesonotum and scutellum strongly punctured, the interspaces for the greater part as wide as the punctures and nitidulous. Mesopleura dull and shallowly reticulate. Tegulae closely punctured. Epinotum with wide reticulations. First tergite reticulate-punctate, the second tergite and sternite with deep punctures and interspaces wider than the punctures. On the following tergites the puncturation becomes progressively smaller. The whole abdomen somewhat shining. Head twice as wide across the middle of the eyes as long. Anterior corners of the pronotum angular. For the rest, see characters of the genus.

Khami, Southern Rhodesia, 30 October 1938, 1 ♂. Type in National Museum, Southern Rhodesia.

***Pseudocephalotilla armata* n.sp. (Fig. 13)**

♂. 13 mm. long. Dorsum of the thorax ferruginous, the rest of the body black. Mandibles brown, the upperside of the inner margin ochreous. Wings pale brown, the veins dark brown. Decumbent pubescence and pilosity on the head and thorax white. The tergites 1-4 with fringes of yellowish white pubescence on the apical margins. Sternites 2-5

with long pilosity on the apical margins. Head closely punctured and dull. Pronotum, mesonotum, scutellum and mesopleura closely reticulate-punctate, dull; the epinotum shining and with a wide reticulation. Abdomen moderately shining, the first tergite strongly punctured, the interspaces wider than the punctures; the punctures on the 2-6 tergites become progressively smaller caudad on each segment. First sternite with an acute tooth directed downwards, second sternite coarsely punctured, depressed on each side of the middle, the puncturation closer and smaller behind the depressed areas. Seventh sternite with a smooth and shining median longitudinal area, the sides dull and closely punctured, the hind margin produced on each side in a short and sharp tooth. Seventh tergite rounded at the apex. Clypeus concave, short, the apical margin of its median area straight. Mandibles not excised below, the upper margin produced some distance behind the acute apex into a very large, subrectangular and inwardly curved lamelliform tooth. The scapes are like those of *P. piliscapa* Bischoff, having a dense comb of long black hairs on the outside and long white hairs on the inside. Head, viewed from above, very short, measured across the eyes two and a third times wider than long. Temples with a large triangular tooth on the lower margin, plainly visible from above and from the side. Eyes feebly emarginate. Hind margin of the head slightly convex, the corners rounded. Mesosternum with an acute tooth, directed downwards on each side. Anterior margin of the pronotum very convex, the vertical anterior face concave, so that when viewed from the side, the anterior margin overhangs the neck. Tegulae densely punctured, the hind margin not reflected. First tergite as long as wide at the apex.

Sawmills, Southern Rhodesia, 27 December 1923, 1 ♂. Type in National Museum, Southern Rhodesia.

Bisulcotilla Bischoff

1920, *Arch. Naturgesch.* LXXXVI, 679.

In his definition of the genus the author was unable to describe the structure of the last sternite, as it was invaginated. In a specimen which I regard as only a slight and larger variety of the type species of the genus, *B. quadrisulcata*, the seventh sternite is concave at the base and over the apical two thirds, leaving a transverse and convex ridge in between, in the middle of which there is a small erect tooth. The margins of the basal concavity also have a small tooth (Fig. 14). The shape of the clypeus is distinctive, the median area being produced forwards and trilobed on the apical margin (Fig. 14a). The specimen differs from the type of the genus in being larger, 10.5 mm. long, and in having the anterior half of the epinotum red.

Zomba, Nyasaland, 12 November 1943. I am unable to discover any feature in Bischoff's description to explain his choice of the specific name.

Pristomutilla Ashmead

1903, *Canad. Ent.* p. 329.

This genus was reduced to a subgenus of *Smicromyrme* Thomson by Bradley & Bequaert (1928, p. 71), on the characters of the ♀, the ♂ being unknown to them and to Bischoff.

Of a pair taken in copula, referred to below, the ♂ runs down to *Spinulotilla* in the keys of Bischoff and of Bradley & Bequaert, but the ♀ differs from that subgenus in having the hind margin of the epinotal dorsum armed with horizontal teeth as in typical *Pristomutilla* species.

In Bischoff's key to the species, the ♂ runs down to *Spinulotilla transversiceps* Bischoff, and agrees in every particular with his description of that species, which must therefore be placed in the subgenus *Pristomutilla*. In so far as structural characters are concerned, there is no difference in the ♂♂ between *Pristomutilla* and *Spinulotilla*, and it is only the absence of teeth on the hind margin of the epinotal dorsum in the ♀ of *Spinulotilla* which prevents the latter from being placed in synonymy with *Pristomutilla*. The description of *P. transversiceps* ♀ is herewith appended.

Pristomutilla transversiceps Bischoff (Figs. 15, 15a)

♀. 8 mm. long. Head, abdomen antennae, and legs black. Thorax dark red. Pilosity on the head and thorax black and sparse, yellowish white on the epinotal declivity and on the abdomen, abundant on the latter at the apical margins of the segments and at the base of the pygidium. The clypeus and the outside of the mandibles with a sparse white pilosity. Pubescence absent on the head and thorax. Second tergite with a pale golden pubescent spot on each side in the anterior half, the third tergite with a dense apical band of similar pubescence, slightly interrupted in the middle. Head coarsely reticulate-rugose, with a small puncture in each mesh. Thorax longitudinally rugose, the rugae not reaching the anterior margin of the pronotum, parallel, straight and high over the middle third, wavy at the sides, prolonged at the posterior margin of the epinotal dorsum into seven transversely compressed spines, which are blunt at the apex. Second tergite finely and closely rugoso-punctate in the middle, more coarsely and shining at the sides. The third to fifth tergites very finely and closely punctured and dull. Pygidial area very evenly and strongly striate and dull, and with a short median lobe. First sternite with a short median carina, bifurcated caudad. The remaining sternites shining, the second with a large, sparse and shallow puncturation, the remaining sternites finely and closely punctured on the apical margin. Mandibles long and narrow, with a small tooth on the upper side a little distance from the apex. Clypeus with a small flat tubercle at the base of the median area. Scapes shining, with a few large punctured; second joint of the flagellum one and a half times longer than the third. Seen from in front the head is wide, and the face is three times wider than one eye. Dorsum of the thorax about one-fifth longer

than wide, the sides slightly concave, the pleura smooth and glabrous. Middle and hind tibiae with five ferruginous spines on the upper margin, the calcaria white, the basal joint of the hind tarsi with a dense brush of yellow hairs on the inside of the apical half.

Umtali, Southern Rhodesia, 9 March 1950. Taken in copula with the ♀. In the ♂ the spots of pubescence on the second tergite are neither dense nor sharply defined.

Genus *Ctenotilla* Bischoff

1920-21, *Arch. Naturgesch.* LXXXVI, 535.

Bradley & Bequaert, 1928, *Bull. Amer. Mus. Nat. Hist.* LVIII, 72, 116.

If a careful comparison be made of Bischoff's definitions of his genera *Pristomutilla* and *Ctenotilla* it will be seen that the only difference between them lies in the position and shape of the pubescent spots and bands on the abdominal segments. It is therefore remarkable that Bradley & Bequaert reduced *Pristomutilla* to a subgenus of *Smicromyrme* but left *Ctenotilla* as a valid genus. I think that the latter should also be regarded as a subgenus of *Smicromyrme*. In both subgenera the epinotal spines or teeth are, with a few exceptions such as *Pristomutilla* (*Ceratotilla* Bischoff) *ino* Per., prolongations, more or less horizontal, of the longitudinal rugae of the thoracic sculpture. There is, however, one difference, not mentioned by Bischoff. In *Pristomutilla* the second joint of the flagellum is nearly twice as long as the third, whereas in *Ctenotilla* it is only a little longer. K. Hammer, in his recently published paper (1955) on some Mutillidae of the Belgian Congo, expresses the opinion that both *Ctenotilla lobognatha* B. & B. and *Ctenotilla langi* B. & B., which are unknown to him in nature, should be placed in his new genus *Pygomilla*. I am unable to agree with him in respect to *Ctenotilla langi*, which is undoubtedly a *Labidomilla*, as I have said on a previous page of this paper.

Family Formicidae

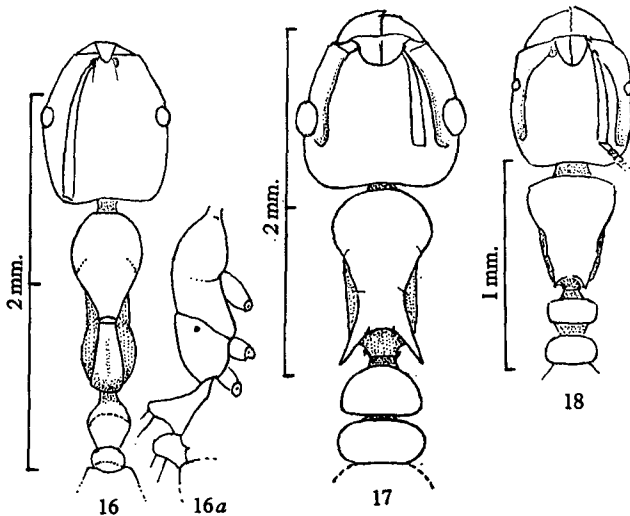
Subfamily MYRMICINAE

Monomorium Xeromyrmex orangiae n.sp. (Figs. 16, 16a)

♀, 3.5 mm. long. Black. Legs and scapes brownish black, the tarsi a little paler, the flagellum dark reddish brown, becoming gradually darker towards the apex which is dark brown. Mandibles brownish yellow, longitudinally striate, tridentate. The peduncle of the petiole and the underside of the first tergite, dull ochreous. Extreme apices of the femora brownish ochreous. Polished and very shining, but under a magnification of 50 diameters a microscopic reticulation is seen on the head and thorax, stronger on the pleura than elsewhere. The petiole and post-petiole with two yellowish hairs on the posterior face, the tergites with a few hairs of the same colour on the apical margins. Head one-sixth longer than wide, the sides fairly convex, the eyes situated just in front of the middle of the sides, and as long as the first joint of the flagellum. The scapes extend back as far as the hind margin of the head

which is feebly concave. Flagellum finely pubescent, the first joint as long as the second and third united, the three-jointed club as long as the rest of the flagellum. Median area of the clypeus a little longer than wide in front, triangular, feebly concave, the lateral margins slightly raised but not carinate, the anterior margin straight. Pro-mesonotal suture distinct on the pleura, obsolete on the dorsum. Pro-mesonotum, including the neck of the pronotum, nearly twice as long as wide at its widest, strongly narrowed posteriorly. Dorsum of the epinotum feebly impressed lengthwise in the middle, twice as wide behind as at the meso-epinotal suture, merging gradually into the declivity which is only half as long as the dorsum. Peduncle of the petiole shorter than the node, not dentate below; the node is cuneiform, convex transversely above, the anterior face convex, the posterior face flat. Postpetiole not quite so wide as the petiole, and a little shorter, elliptical when seen from above and convex transversely.

Kakamas, Orange River, 3 December 1953 (*R. H. N. Smithers*), 24 specimens, nesting in the ground. Related to *M. tchelihofti* Forel, from which it may be distinguished by the colour, the narrower head, the pro-mesonotum which is much more narrowed caudad and the very polished surface of the whole body. Type in National Museum, Southern Rhodesia; paratypes in South African Museum and British Museum.



Figs. 16, 16 a. *Monomorium (Xeromyrmex) orangiae*, ♀.
 Fig. 17. *Triglyphothrix longispinosa*, ♀.
 Fig. 18. *Triglyphothrix furtiva*, ♀.

***Triglyphothrix longispinosa* n.sp. (Fig. 17)**

♀. 4 mm. long. Brownish black, the antennae, mandibles and legs pale burnt umber brown, the tarsi paler than the rest of the legs. The whole body covered with white trifid hairs. Mandibles sparsely and

longitudinally striate. Clypeus with a median carina and a few rugae on each side, the anterior margin straight. Dorsal surface of the head longitudinally rugose, the posterior sixth also reticulate, moderately shining between the rugae. The sides of the head in front of the eyes rugose, behind them coarsely reticulate; the scrobe which is feebly rugose and shining reaches the posterior fifth of the head. Eyes very convex, as long as the first three joints of the flagellum, composed of at least fifty facets. Head one and a half times wider behind the eyes than across the base of the mandibles, a little longer than its greatest width. The first joint of the flagellum nearly as long as the three following joints united, the second to seventh wider than long, the three-jointed club is little longer than the rest of the flagellum. Thorax closely reticulate-rugose, the sutures obsolete on the dorsal surface, widest across the pronotum of which the shoulders are very convex. The length of the thorax from the anterior margin to the posterior margin of the epinotal dorsum is one-third greater than the width across the middle of the pronotum. Epinotal teeth acute, strongly divergent, fully three times longer than wide at the base, fully as long as the distance between their bases, the episternal teeth very small. First node of the petiole a little more than one and a half times wider than long, the anterior margin very convex; the second node is twice as wide as long, a little wider than the first, transversely oval. Both nodes are strongly reticulate. First segment of the abdomen as long as wide.

Chirinda Forest, Southern Rhodesia. On a forest path; the entrance to the nest is a small hole, without a surrounding crater. Related to *T. constanciae* Arn., from which it differs by the colour, greater size, longer epinotal teeth and wider second node of the petiole. With the exception of *T. rothschildi* Forel this is the largest of the African species of the genus. Type in National Museum, Southern Rhodesia; paratypes in South African Museum and British Museum.

Triglyphothrix furtiva n.sp. (Fig. 18)

♂. 2.2 mm. long. Blackish brown, the mandibles, flagellum, neck of the pronotum and the legs brownish red (burnt umber brown). The pubescence consists of whitish hairs, bifid and trifid, very scanty on the head and thorax, a little more abundant on the petiole and abdomen. Mandibles closely striate, the masticatory margin denticulate. Head longitudinally rugose, becoming reticulate-rugose on the sides and behind. The scrobe shining, smooth except for a few rugae at the anterior end. Thorax and petiole strongly reticulate, the spaces between the network shining. Abdomen shining and smooth, the anterior half of the first segment with a sparse but fairly large puncturation. Second to sixth joints of the flagellum twice as wide as long, the apical joint a little longer than the three preceding joints united. Head, excluding the mandibles, one-fifth longer than wide, the sides nearly straight, converging only a little anteriorly. The eyes are nearly flat, situated in front of the middle of the sides and consisting of about twenty facets.

Promesonotum as long as wide, the pronotum with a short anterior face and slightly rounded shoulders, the meso-epinotal suture faintly indicated, the dorsum of the epinotum wider than long, the epinotal teeth short, barely divergent, not longer than wide at the base. First node of the petiole one and a half times wider than long, convex transversely above, the sides only very slightly convex, so that the node may be described as subrectangular. The second node transversely oval, about one-third wider than long. First segment of the abdomen one-fourth longer than wide, the sides not very convex.

♀. 3.1 mm. long. Colour as in the ♂. The sculpture of the head, pronotum and nodes of the petiole as in the ♂. Mesonotum longitudinally rugose, the anterior corners reticulate. Metanotum and epinotum, reticulate-rugose, the dorsum of the epinotum short and very steep, a little longer than the declivity. Epinotal teeth barely longer than wide at the base, not much longer than the episternal teeth. First node of the petiole twice as wide as long, the lateral margins feebly convex, the anterior and posterior faces flat, the dorsum convex transversely and lengthwise. The second node transversely oval, barely wider than the first and not quite twice as wide as long. First tergite one-sixth longer than wide.

Vumba Mountains, Southern Rhodesia, under dead leaves in damp ground in a forest, 9 November 1953, 2 ♂♂, 1 ♀. Type in National Museum, Southern Rhodesia. Clearly distinguished from the other African species by the subrectangular first node of the petiole.

Family Sphecidae

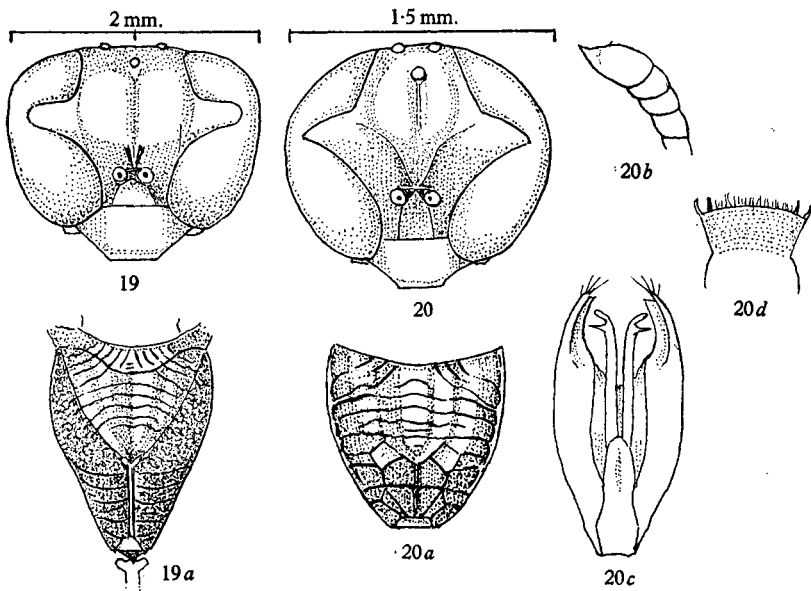
Subfamily TRYPOXYLONINAE

Trypoxylon elgonensis n.sp. (Figs. 19, 19a)

♀. 10.5 mm. long. Black. Palpi brown. Wings hyaline, tinged with brownish yellow, the apical part beyond the cells a little darker, the veins brown. The head and thorax with short and erect pubescence, partly white and partly black. Clypeus closely and microscopically punctured (30 diameters), two-thirds wider in front than long, the middle of the apical margin straight. There is a supra-antennal cuneiform keel above the antennal sockets, joining the transverse lamella between them. Behind it and as far as the anterior ocellus, the face is moderately swollen, except at the sides and in the ocular sinuses, shallowly reticulate-punctate and impressed lengthwise medially. The ocular sinuses are deeper than wide. Vertex behind the ocelli finely punctured, occiput and temples shining and impunctate. The distance of the posterior ocelli from the eyes is equal to half the diameter of an ocellus. Second joint of the flagellum one-fourth longer than the third. Thorax nitidulous. The pronotal dorsum, in front of the transverse groove, sparsely and finely punctured, the posterior part black and impunctate. Mesonotum with a close and fairly deep puncturation, the interspaces for the greater part a little wider than the punc-

tures, the scutellum and metanotum with a puncturation half as large as that of the mesonotum, and closer. Meso- and metapleura punctured like the mesonotum, but the episternum of the mesopleura more coarsely. Median area of the epinotal dorsum V-shaped, longer than wide at the base which has about six oblique rugae on each side, and with six transverse rugae beyond the base which do not extend beyond the lateral grooves. The sides of the dorsum and the declivity are closely, transversely rugose and punctured in the interspaces. The median sulcus of the declivity is deep and bifid at its upper end. Sides of the epinotum closely and obliquely striate and fairly dull. Petiole fully six times longer than wide across the node and one-third longer than the second and third tergites united. The junction of the transverse cubital vein with the cubitus is obtusely angular.

Mt Elgon, Kenya, 8800 ft., 6 June 1952, 5 ♀♀, collecting mud on the bank of a small stream. Type in National Museum, Southern Rhodesia. Related to *T. cataractae* Arn., from which it is distinguished by the larger and denser puncturation of the face, mesonotum and scutellum, the wider and more coarsely rugose median area of the epinotum.



Figs. 19, 19a. *Trypoxylon elgonensis*, ♀.
 Figs. 20, 20a. *Trypoxylon volitans*, ♂.
 Fig. 20b. *Trypoxylon volitans*, ♂, last four joints of the flagellum, $\times c. 30$.
 Fig. 20c. *Trypoxylon volitans* ♂, genitalia, $\times 42$.
 Fig. 20d. *Trypoxylon volitans*, ♂, 8th sternite, $\times 42$.

***Trypoxylon volitans* n.sp. (Figs. 20, 20a-d)**

♂. 9.3 mm. long. Black, palpi ochreous, mandibles flavo-ferruginous. Wings hyaline, the apex slightly smoky, the veins black. Clypeus and face below the antennal sockets with a dense silvery pubescence which

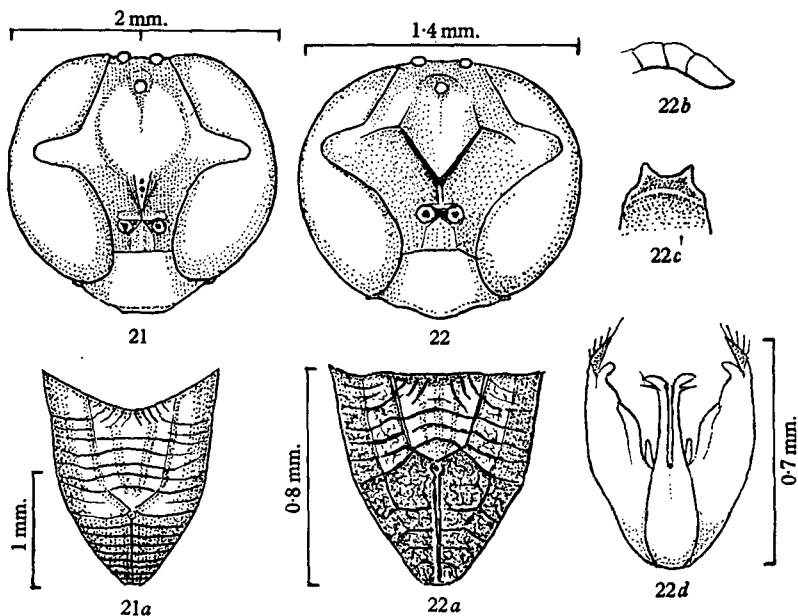
obscures the sculpture. Face tumid, dull, reticulate, with a fairly deep longitudinal impressed line in its upper half. The median supra-antennal keel is subacute and joins the short transverse lamella. Ocular sinuses smooth and shining, as deep as wide, the apex angular. The vertex behind the anterior ocellus and the occiput are shining, finely and sparsely punctured. Clypeus twice as wide as long. Interocular distance on the vertex one and a half times wider than across the base of the clypeus. Posterior ocelli separated from the eyes by a distance equal to two-thirds of their own diameter. Fifth joint of the flagellum not excised below, the apical joint acuminate, twice as long as wide, as long as the three preceding joints united. Pronotum entirely black. The whole thorax, excepting the sides of the epinotum, very shining, the promesonotum, scutellum and metanotum finely and sparsely punctured, the interspaces between three and four times wider than the punctures. Pleura punctured like the dorsum, the sides of the epinotum dull, closely, obliquely and finely rugose. The median area of the epinotal dorsum is U-shaped, with a shallow median groove and deep lateral grooves. It is traversed by six rugae which extend to the carinate lateral margins of the dorsum and become thicker and higher laterad. The declivity has a deep median sulcus and three strong transverse carinae which extend to the lateral margins. Petiole six times longer than wide across the node, one-third longer than the second and third tergites united. Apical margin of the eighth sternite convex, with a curved seta at each corner and a short tooth close to it on the inner side.

Jinja, Uganda, 7 May 1952, 1 ♂, flitting from leaf to leaf on aphid-infested garden beans. Type in National Museum, Southern Rhodesia. Related to *T. flavimanum* Arn., from which it may be distinguished by the colour of the anterior tibiae and tarsi, the more coarse sculpture of the tumid area of the face, the much shining and more strongly punctured mesonotum and the sculpture of the epinotal dorsum.

***Trypoxylon zikae* n.sp. (Figs. 21, 21a)**

♀. 14.5 mm. long. Black, palpi ochreous, mandibles ferruginous, anterior tibiae and tarsi fusco-ferruginous. Wings hyaline, slightly smoky, strongly iridescent, the veins black. Clypeus, lower half of the face and the temples with dense silvery pubescence, the pleura and sides of the epinotum with sparse, fairly long and silvery pubescence. The supra-antennal keel is cuneiform, with three punctures on its upper side; the large transverse lamella below it is convex at the sides. The face above the keel is dull, feebly tumid, very shallowly impressed lengthwise in the middle, very shallowly and finely punctured, the interspaces about twice as wide as the punctures and microscopically reticulate (35 diameters). Clypeus not quite as wide as long, the apical margin smooth. Second joint of the flagellum two and a quarter times longer than wide and as long as the third joint. Interocular distance on the vertex nearly one and a half times wider than across the base of the clypeus. Posterior ocelli separated from the eyes by a distance equal to

one-third of their own diameter. Pronotum entirely black, shining, very finely and sparsely punctured. Mesonotum shining, sparsely punctured in the middle, more strongly and more closely at the sides, where the interspaces are about three times wider than the punctures. Scutellum and metanotum more finely punctured than the mesonotum. Pleura shining, very finely and sparsely punctured. Sides of the epinotum shining, more closely punctured, the posterior fourth striolate. Dorsum of the epinotum sparsely and very finely punctured, with five oblique carinae on each side at the base. The median area is U-shaped, and the



Figs. 21, 21a. *Trypoxylon zikae*, ♀.
 Figs. 22, 22a. *Trypoxylon lacustris*, ♂.
 Fig. 22b. *Trypoxylon lacustris*, ♂, apical joints of flagellum.
 Fig. 22c. *Trypoxylon lacustris*, ♂, 8th sternite, ventral aspect.
 Fig. 22d. *Trypoxylon lacustris*, ♂ genitalia.

median and lateral grooves are shallow, with about six transverse carinae which extend to the lateral margins of the dorsum. The declivity has nine transverse rugae and a narrow median sulcus which ends dorsad in a deep pit. Petiole nearly six times longer than wide across the node, one-seventh longer than the second and third tergites united. Second tergite four-fifths longer than wide at the apex. Posterior coxae without a triangular tooth on the dorsal keel.

Zika Forest, 6 miles north of Entebbe, Uganda, 15 May 1952, 1 ♀. Type in National Museum, Southern Rhodesia. This species differs, *inter alia*, from *T. carpenteri* Richards by the length of the third antennal joint (second joint of the flagellum) which in that species is four times

longer than wide and by the simple posterior coxae. It cannot be the ♀ of the preceding species, *volitans*, on account of the great difference in size and by the sculpture of the epinotum.

***Trypoxylon lacustris* n.sp. (Figs. 22, 22 a-d)**

♂. 8.5 mm. long. Black, the posterior half of the pronotum testaceous. Anterior tibiae and tarsi dark brown, palpi brown. Wings hyaline, the apical part beyond the cells faintly smoky. Clypeus and lower half of the face with decumbent silvery pubescence, the thorax also with silvery pubescence, exerted and sparse. Facial shield one and a half times longer than wide across the lateral angles, dull, closely and very finely punctured (45 diameters) and microscopically aciculate between the punctures. The lateral angles emit a curved carina into the ocular sinuses and a shorter one towards the middle of the shield. The arcuate upper margin of the shield is ill-defined and not carinate. The space between the shield and the eyes, and the vertex, have a larger puncturation. Clypeus twice as wide as long, the anterior margin feebly bisinuate. Second joint of the flagellum twice as long as wide, barely longer than the third, the fifth joint not excised below, the apical joint distinctly shorter than the two preceding joints united, curved and acuminate. Anterior half of the pronotal dorsum reticulate punctate. Mesonotum almost dull, strongly punctured, the interspaces microscopically reticulate (50 diameters) and about three times wider than the punctures. Scutellum and metanotum more finely and less closely punctured than the mesonotum, the mesopleura more shallowly punctured than the mesonotum and slightly shining. Sides of the epinotum dull, obliquely and closely rugose, the anterior third also reticulate. The median U-shaped area of the epinotal dorsum is raised above the lateral areas and has three oblique rugae on each side at the base, and three transverse ones on the apical half. The lateral areas have seven thick rugae which extend as far as the lateral margins; the declivity is irregularly and coarsely reticulate-rugose, the median sulcus narrow and deep. Petiole not quite six times longer than wide across the node, a little longer than the second and third tergites united. Genitalia not unlike those of *T. volitans*, but the outer paramera are much wider; the eighth sternite is quite different, the apical margin having two large, triangular and blunt teeth, directed upwards.

Jinja, Lake Victoria. 2 ♂♂, on leaves of aphid-infested garden beans. Type in National Museum, Southern Rhodesia. Related to *T. turbulentum* Arn., from which it is clearly distinguished by the shape of the facial shield, the stronger puncturation of the mesonotum, the very coarse sculpture of the epinotal dorsum and by the genitalia.

***Trypoxylon pan* n.sp. (Figs. 23, 23 a)**

♀. 14-15 mm. long. Black. Palpi and calcaria ochreous, mandibles fusco-ferruginous, apical joint of the anterior tarsi reddish yellow. Wings hyaline. Clypeus and lower half of the face with decumbent silvery

pubescence. The erect whitish or silvery pubescence on the temples and thorax scanty. Clypeus five-sixths wider than long, the apical margin convex. Facial shield dull, aciculate, with a small and shallow puncturation superimposed. It is one-third longer than wide between the lateral angles, which emit a short carina into the ocular sinuses, and is acute below and rounded above. The ocular sinuses are about as long as wide, dull, finely and sparsely punctured. The upper part of the face between the shield and the inner orbits is dull, sparsely and fairly strongly punctured. Second joint of the flagellum fully three times longer than wide and about one-fifth longer than the third joint. Posterior ocelli separated from the eyes by a distance equal to half their own diameter. Interocular distance on the vertex one-sixth greater than across the base of the clypeus. Pronotum sparsely and finely punctured. Mesonotum nitidulous, the puncturation shallow, much smaller in the posterior half than in front, the interspaces about three times wider than the punctures. Scutellum and metanotum with a puncturation like that of the posterior half of the mesonotum. Mesopleura shining, more sparsely punctured than the mesonotum. Sides of the epinotum closely and obliquely striate. Median area of the epinotal dorsum U-shaped, as long as wide at the base, with about twelve transverse rugae which extend over the lateral grooves to the lateral margins. The median groove is shallow, the lateral ones narrow and deep. Declivity steep, closely, transversely and finely rugose, the interspaces reticulate-rugose. Petiole five times longer than wide across the node, slightly shorter than the second and third tergites united. Junction of the transverse cubital vein with the cubitus angular.

Chirinda Forest, Southern Rhodesia, 2 November 1955, 4 ♀♀, collecting mud at a rain puddle. Type in National Museum, Southern Rhodesia. Related to *T. stroudi* Grib., from which it is distinguished by the greater size, the longer facial shield and its denser puncturation, the entirely black pronotum and the more abundant transverse rugae of the epinotal dorsum.

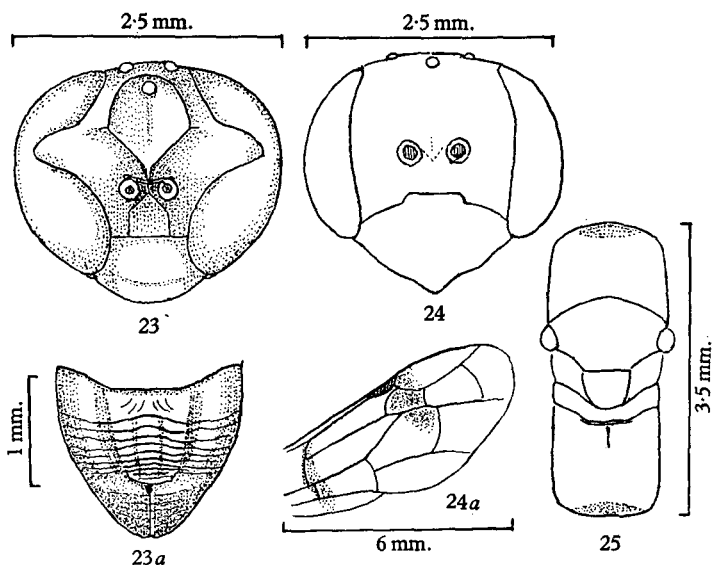
Family POMPILIDAE

Subfam. PSEUDAGENIINAE

***Pseudagenia chirindensis* n.sp. (Figs. 24, 24a)**

♀. 10.3 mm. long. Black. The following parts dull red (Seguy, Code Univ. des Couleurs; rouge no. 127): mandibles, excepting the extreme base, palpi, apical margin of the clypeus, antennae, the pleura and sides of the epinotum and the legs. Dorsum of the pronotum and the tegulae fusco-ferruginous, the rest of the dorsum of the thorax black. Abdomen black, the apical tergite pale brown. Wings hyaline, bifasciated, the fasciae dark brown. The outer fascia covers the inner third of the radial cell, the second cubital and the upper half of the anterior third of the second discoidal; the inner fascia, slightly narrower above than below, covers the basal vein on each side, the basal sixth of the first discoidal cell and the basal third of the second submedian.

Head and thorax dull, closely and microscopically punctured (50 diameters), the postnotum shining and transversely striate, abdomen dull, covered with a pruinose pile; there is silvery pubescence on the apex of the epinotum and on the hind coxae. Clypeus convex lengthwise and transversely, one and a half times wider than long, the middle third of the apical margin slightly produced. Interocular distance on the vertex very nearly as great as across the base of the clypeus and one-seventh longer than the second joint of the flagellum. Antennae long and slender,



Figs. 23, 23a. *Trypoxylon pan*, ♀.
 Figs. 24, 24a. *Pseudagenia chirindensis*, ♀.
 Fig. 25. *Idopompilus fuliginosus*, ♀.

the second joint five and three-fifths longer than wide and about one-sixth longer than the third joint. Posterior ocelli a little farther from the eyes than from each other. Dorsum of the pronotum five times wider behind than long in the middle, the shoulders widely rounded. Mesonotum two-thirds wider than long, the scutellum feebly convex, two-thirds as long as the mesonotum. Postnotum as long as the metanotum. The profile of the epinotum forms a low and unbroken arc; the declivity with a few very thin transverse rugae. Basitarsus of the hind legs fully three-fifths the length of the tibia.

Chirinda Forest, Southern Rhodesia, November 1955, 1 ♀. Collecting mud at a rain puddle; Vurnba Mountains, Southern Rhodesia, 1 ♀, March. Type in National Museum, Southern Rhodesia. Clearly distinct from the other African species with bifasciated wings on account of the colour of the sides of the thorax.

Subfamily POMPILINAE

Tribe IDOPMILINI

Idopompilus fuliginosus n.sp. (Fig. 25)

♀. 8-9 mm. long. Black. The bottom corners of the face, the posterior third of the mesopleura and the coxae with a decumbent silvery pubescence. First three tergites with apical fasciae of silvery pubescence, widely interrupted in the middle. Forewing dark brown, the second cubital and both discoidal cells paler, the hind wing very slightly yellowish, the veins dark brown. The whole body dull, with a microscopic reticulation on the head and thorax. Clypeus three times wider than long, the anterior margin feebly concave. Interocular distance on the vertex equal to the length of the second joint of the flagellum plus three-fourths of the third, and equal to the inferior interocular distance across the base of the clypeus. Posterior ocelli two-sevenths farther from the eyes than from each other. Second joint of the flagellum about three and a half times longer than wide, and not quite as long as the third. Dorsum of the pronotum parallel-sided, one and a half times wider behind than long in the middle, the shoulders narrowly rounded, the hind margin feebly arcuate. Mesonotum three-fourths wider than long. Postnotum almost linear; dorsum of the epinotum widest in the middle, three-fourths wider than long, with a deep median sulcus at the base which nearly reaches the middle of the segment. Declivity vertical, slightly concave. Forewing with two discoidal cells, and with the venation like that of *I. krugeri* Kohl.

Mamathes, Basutoland, October-January, 5 ♀♀ (*C. Jacot-Guillarmod*). Type in National Museum, Southern Rhodesia. Related to *I. handlirschi* Arn., from which it is distinguished by its greater size, thicker flagellum, shorter clypeus and shorter epinotum.

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