

convex, more strongly and widely punctured than the front; its apex in the centre slightly roundly incised at the apex, which is raised, rounded above. Temples roundly narrowed, as long as the part of the top of the eyes behind the incision. Hinder ocelli separated from each other by a distinctly greater distance than they are from the eyes. Scutellums slightly depressed in the middle. Metanotum with a narrow, clearly defined furrow down the middle; the metapleuræ bordered above by a fine keel and below the middle by a furrow; the part between these is closely, irregularly striated; the part below the furrow is strongly striated at the base, the rest finely, closely, obliquely striated; this part below is bounded by a distinct keel. Mandibles short, broad, bidentate, the lower tooth the larger.

Belonogaster appears to be the predominant wasp Genus in Tropical Afrika, almost equalling *Polistes* in the abundance of specimens. *B. rufipennis* D. G. (Ent. News II, p. 42) has been recorded by Fox from Kilimandjaro, but this a species or name, which is difficult to trace, and is included by Mr. F. F. KOHL in his Monograph in the form he has described under the name of *pictus*, and by other authors is regarded as a synonym of *griseus* F.

September 1908.

List of Vespidae hitherto recorded from the Kilimandjaro and Meru district.

Vespinae.

- | | |
|---|---|
| 1. <i>Polistes marginalis</i> FAB. | 5. <i>Belonogaster erythrospilus</i> n. sp. |
| 2. » <i>Smithii</i> SAUSS. | 6. » <i>gracilis</i> n. sp. |
| 3. <i>Icaria africana</i> n. sp. | 7. » <i>sexmaculatus</i> n. sp. |
| 4. <i>Belonogaster massaicus</i> n. sp. | |

Eumeninae.

- | | |
|---------------------------------------|--|
| 8. <i>Eumenes xanthaspis</i> n. sp. | 23. <i>Odynerus meruensis</i> n. sp. |
| 9. » <i>meruensis</i> n. sp. | 24. » <i>stiraspis</i> n. sp. |
| 10. » <i>macillosa</i> D. G. | 25. » <i>Yngvei</i> n. sp. |
| 11. » <i>erythrospila</i> n. sp. | 26. » <i>kilimandjaroensis</i> n. sp. |
| 12. » <i>lucasia</i> SAUSS. | 27. » <i>rufoqueadripustulatus</i> n. sp. |
| 13. » <i>erythraspis</i> n. sp. | 28. » <i>silensis</i> SAUSS. |
| 14. » <i>variventris</i> n. sp. | 29. » <i>armatiscutis</i> n. sp. |
| 15. » <i>crassinoda</i> n. sp. | 30. » <i>cncmophilus</i> n. sp. |
| 16. <i>Labus maculicollis</i> n. sp. | 31. » <i>curvifurcatus</i> n. sp. |
| 17. » <i>annulipes</i> n. sp. | 32. » <i>kibonotensis</i> n. sp. |
| 18. <i>Synagris xanthura</i> SAUSS. | 33. <i>Ancistrocerus (Nortonia) lineaticollis</i> n. sp. |
| 19. <i>Rhynchium Thomsoni</i> n. sp. | 34. <i>Odynerus</i> » <i>massaicus</i> n. sp. |
| 20. <i>Odynerus Meyeri</i> n. sp. | 35. » » <i>maculiscapus</i> n. sp. |
| 21. » <i>rotundiscutis</i> n. sp. | 36. <i>Nortonia striativentris</i> n. sp. |
| 22. » <i>pulchripilocellus</i> n. sp. | 37. <i>Tanyzethus africanus</i> n. sp. |

8. HYMENOPTERA.

7. Fossores

by

P. CAMERON.

The Fossorial Hymenoptera (*Mutillidæ*, *Tiphiidæ* and *Sphegidæ*) collected by Prof. Dr. SJÖSTEDT (177 species, 146 new species, 862 specimens) form a very valuable addition to our knowledge of the Hymenoptera inhabiting German East Tropical Africa (Massai Land). Most of the species were taken on the Mountains Kilimandjaro and Meru. The Geographical relations of the species I purpose discussing, along with the *Sphegidæ*, at the end of this paper.

Mutillidæ.

A. Females gen. *Mutilla* L.

The species of *Mutilla*, *sensu str.*, in the collection may be grouped as follows:

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|----|------|---|--|
| 1 | (2) | Sides of thorax with a row of spines and one on the top of the apex of the metanotum. | <i>monochroma</i> and <i>fuscipalpis</i> . |
| 2 | (1) | Sides of thorax without a row of spines. | |
| 3 | (4) | Apex of metanotum with a row of spines. | <i>leptacantha</i> . |
| 4 | (3) | Apex of metanotum not spined. | |
| 5 | (6) | 2nd abdominal segment with 2 large spots of orange pubescence. | <i>Yngrei</i> . |
| 6 | (5) | 2nd abdominal segment without orange spots. | |
| 7 | (8) | Basal segment of abdomen unspotted. | <i>basimarginata</i> and <i>leucospila</i> . |
| 8 | (9) | Basal segment of abdomen with one broad band. | <i>grantella</i> . |
| 9 | (10) | Basal segment of abdomen with one central spot. | <i>fortistriolata</i> , <i>4-ornata</i> . |
| 10 | (9) | Basal segment of abdomen with 2 apical spots. | |
| 11 | (14) | The apex of 2nd abdominal segments unspotted. | |
| 12 | (13) | Large species. | <i>zimirula</i> and <i>ormarna</i> . |
| 13 | (12) | Small or medium sized species. | <i>Mackayi</i> , <i>rotundicollis</i> . |
| 14 | (11) | The apex of 2nd abdominal segment with 2 spots. | |
| 15 | (16) | Large species. | <i>Parki</i> , <i>transversonotata</i> . |
| 16 | (15) | Small or medium sized species. | <i>basiornata</i> , <i>spekii</i> , <i>albicauda</i> , <i>leucoura</i> . |

Mutilla leptacantha, sp. nov.

Black, the upper part of the thorax, except the centre of the apical slope below, the upper half of the mesopleuræ (more broadly on the basal half) and the upper third of the metapleuræ, red; a spot on the centre of the apex of the 1st abdominal segment, extending on to the base of the 2nd, a band on the centre of its apex, not extending to the outer edges, and the whole of the 3rd, covered with pale golden pubescence; the sides of the head, base of abdomen, the apices of its ventral segments and the sides of the pygidium, much more densely, covered with white hair, as are also the legs, which have the tibial spurs white, and their spines black, longish and 8 in number in a double row. Head a little wider than the thorax, the temples not much longer than the eyes, broadly rounded behind. The apex of the antennal scape and the pedicle dark red; the 3rd joint is not quite so long as the following 2 united, the scape shining, sparsely covered with white hair; the flagellum thick. Basal half of mandibles red, the apex becoming gradually narrowed. Palpi dark fuscous, almost black. Head closely rugosely punctured, the punctures interlacing. Thorax not quite twice longer than wide, the sides above straight, crenulated, the meso- and upper part of metanotum somewhat strongly rugosely reticulated-punctured, the apical half more strongly than the basal; the apex above ends in 5 longish spines, the outer distant from the outer edge. Pleuræ and apical slope smooth, the latter obscurely punctured round the edges. Base of abdomen broad, stoutly obliquely toothed laterally at the base; the basal ventral segment straight, neither keeled nor toothed. Pygidium closely, finely punctured, except at the base. ♀.

Length 7 mm. — *Kilimandjaro*: Kibonoto, 1300—1900 m. May.

Mutilla monochroma, sp. nov.

Black, an irregularly oval spot of white pubescence near the middle of the 2nd abdominal segment, the 3rd covered entirely with similar pubescence; the basal segment, the apical, and the apices of the ventral segments with long white hair. Head in front wider than the thorax, behind narrower than it; the temples long, longer than the eyes, obliquely narrowed, the occiput almost transverse; the vertex closely, somewhat strongly longitudinally striated, and with some thinner transverse striæ, which are continued on to the front, where they form close reticulations; the outer orbits are longitudinally reticulated, and are, as is also the occiput, distinctly margined. Thorax more than twice longer than wide, distinctly narrowed in front, behind bluntly rounded; the back strongly closely longitudinally striated, the striæ more or less interlacing, especially towards the apex, the apical slope with a distinct, straight, oblique slope, and somewhat widely longitudinally reticulated, the reticulations becoming more open and broken towards the apex; the sides are parallel, not narrowed in the middle, they are armed with 11 teeth on the upper edge; the basal 2 are short, blunt and united together at the base, the following 2 are longish, curved and sharp; the 4th small, tubercle-like, the 5th broad, slightly incised above, the others short and sharp. Pleuræ smooth. Basal segment of

abdomen broad, cup-shaped, projecting laterally at the base, obliquely narrowed at the base below, without teeth. Tibiæ with a few short stumpy tubercles above, the lower part with 4 longish fulvous spines; the calcaria white; the apex of tarsal joints with bright fulvous red spines. ♀.

Length 9 mm. — *Usambara*: Mombo, June.

The head, thorax and abdomen above are covered sparsely with long black hair; the hair on the base and apex of the abdomen above, and on the apices of the ventral segments is white. The antennæ long and slender; the 3rd joint is longer than the following 2 united, and is thin compared with the following joints. Mandibles dark red in the middle; the apex blunt, rounded. Palpi dark fuscous.

***Mutilla fuscipalpis*, sp. nov.**

Black, the vertex and mesonotum dull red; an oval spot of white pubescence shortly behind the middle of the 2nd abdominal segment; the 3rd and 4th segments with broad, transverse spots of similar pubescence; the pygidium brownish red, covered with pale hair, the sides not margined; the 2nd ventral segment with a distinct, triangular tooth at the base. Head large, the temples large, much longer than the eyes; the occiput widely incised, the sides of the incision straight, obliquely converging towards the apex, distinctly keeled laterally. Base of thorax narrowed into a clearly separated neck, the sides of which are curved; from the apex of the neck the sides become gradually widened towards the apex; they are armed with 5 small, but distinct, teeth, the 1st being at the base, the 5th at the apex; there is a small tubercle between the 3rd and 4th, these being more widely separated than the others. Mesonotum closely, longitudinally striated; the apical slope shining, smooth. Abdomen longish, oval, as long as the head and thorax united, a little wider than the thorax, but not so wide as the head, the basal segment smooth and shining, the others opaque, alutaceous; the pygidium smooth. Tibiæ with longish, stout spines; the calcaria and the tarsal spines white. The 3rd joint of the antennæ is slender and is nearly as long as the following 3 united. ♀.

Length 7 mm.

Meru low lands, 25th November.

The mandibles are long, dark red in the middle, and end in a long, rounded at the apex, clearly separated tooth. Antennal tubercles compressed, large, triangular, the top black, the rest red; from the lower part of the eyes a keel runs obliquely towards them; it ends in a smooth knob. The top of the apex of the thorax is armed with short, stumpy teeth, with a larger and longer tooth in the centre. The 1st ventral segment straight, indistinctly toothed.

***Mutilla Yngvei*, sp. nov.**

Black, the mesonotum, except round the edges, dull red, the 2nd ventral segment entirely and the sides of the 2nd dorsal red; the 2nd dorsal with 2 large spots of golden red pubescence, which extend from the base to the basal fourth of the segment, converging

towards the apex (which is bluntly rounded) so that the black space separating the 2 spots is wider at the base than at the apex; the 3rd segment has a mark on the sides, wider than long, of white pubescence, extending from the base to the apex; the 4th has a smaller square spot of white pubescence on the outer edge; the basal half of the pygidium is covered with long white hair; the ventral segments have wide apical fringes of white hair; the lower half of the meso- and metapleuræ are densely covered with depressed silvery pile. The top of the head, thorax and abdomen sparsely covered with longish black hair; the legs with white; the tibial spines are few, longish, black; the calcaria white. Ventral keel broad, roundly incised in the middle; the 2 teeth broadly rounded, the apical larger than the basal. Pygidium broad, opaque, finely rugose, the basal half finely, irregularly punctured. Vertex and front closely, distinctly punctured, the former more strongly than the latter, which is irregularly striated above. Head a little wider than the thorax, the temples as long as the eyes, roundly narrowed. Thorax not quite twice longer than wide, rounded in front, transverse behind, the middle narrowed, the dilated base shorter than the dilated apex, which has 5 stout short teeth on the lower two-thirds of the sides. Mesonotum coarsely, irregularly longitudinally striated-punctured; the apical slope widely reticulated. Abdomen longer than the head and thorax united; broad at the base, the apex of the 1st segment punctured, forming a broad margin; the 2nd rounded at the base, becoming narrowed towards the apex. The mandibles end in a long, narrow tooth, rounded at the apex. ♀.

Length 12 mm.

Meru low lands, November 23.

Allied to *M. bioculata*, RAD. and SICH.

***Mutilla basimarginata*, sp. nov**

Black, the thorax and basal slope of abdomen red, 2 oval spots of pale golden pubescence near the apex of the basal third of the 2nd abdominal segment, the 3rd segment covered with similar pile broadly laterally; the hair on the upper surface of the head, thorax and abdomen black, on the sides and lower surface longer and white. Head wider than the thorax, which is twice longer than wide, rounded in front, transverse behind, the sides above slightly narrowed in the middle, with rough irregular edges, the lower part of the apical slope with 2 distinct teeth, of which the lower is the larger; the back is irregularly longitudinally coarsely punctured-reticulated, the punctures formed by the interlacing of the striæ; the apical slope, except narrowly above, is closely, strongly longitudinally striated. Pleuræ smooth, except at the base and apex, which are irregularly punctured. The basal segment at the base has a raised broad curved keel; the apex forms a broader distinct, punctured border, the central part being smooth and with a straight, oblique slope. Basal ventral segment of abdomen with 2 bluntly rounded tubercles, of which the apical is much larger than the other. Pygidium margined laterally, fringed with long white hair, closely minutely punctured. ♀.

Length 9 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m.

Tibial spines long, black, thin; calcaria white. The 2nd ventral segment is shining, sparsely, but distinctly punctured. Head closely rugosely punctured; the temples distinctly roundly narrowed, not much longer than the top of the eyes, which are longish oval.

***Mutilla leucospila*, sp. nov.**

Black, the thorax above red, the red colour extending on to the top of the propleuræ, and, more widely, on to the metapleuræ; head a little wider than the thorax, which is rounded at the base and more bluntly at the apex; the apical half of the thorax is roundly widened; the part before the middle is slightly narrowed; the back is coarsely reticulated, the reticulations becoming widened towards the apex. Ventral keel on apical half with a bluntly rounded tooth, followed by a longer one which is straight below, and from which it is clearly separated. On the base of the 2nd abdominal segment are 2 round spots of silvery pile, the 2nd is covered with silvery pubescence except in the middle; the pygidium laterally and the ventral segments are fringed with long silvery hair; the head is covered with fuscous, the top of the thorax and of the abdomen with black hair. Legs covered with white hair; the tibial spines are longish and black, the calcaria white. ♀.

Length 12 mm.

Meru low lands, 25th November.

Thorax somewhat more than twice longer than wide; the sides at the base rough, and with a short, conical tooth at the end of the rounded part; the upper part of the sides of the metanotum has 3 distinct, longer than wide, teeth. The 3rd antennal joint is as long as the following 2 united. Apical tooth of mandibles long. First abdominal segment small, cup-shaped; the second is narrowed towards the apex. Pygidium, except at the apex, closely, finely longitudinally striated.

***Mutilla grantella*, sp. nov.**

Black, the thorax red, its base bluntly rounded, the apex transverse, the sides slightly contracted, the back strongly longitudinally striated, the striæ more or less twisted; on the top of the apical slope they form reticulations; the apex and pleuræ smooth; the top of the apical slope laterally armed with 4 stout teeth. Vertex longitudinally striated, the striæ running more or less into each other; the front is less strongly reticulated. Temples longer than the eyes, straight, not narrowed, the occiput transverse. Thorax twice longer than wide, of the same width as the head. Basal abdominal segment with an oblique, straight slope on the base, where it is half the width of the apex; the 2nd is somewhat strongly longitudinally striated, the striæ intertwining; its apex depressed; the pygidium closely, distinctly punctured, covered with long pale fulvous hair. Basal ventral segment roundly projecting near the base; the 2nd has a straight oblique slope from beyond the middle to the base; it is there weakly punctured;

the apical part being much more strongly and closely punctured. Calcaria white; the tibial spines black. ♀. — Length 11 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

The tibial spines are long and narrow; the 2nd joint of the flagellum is as long as the following 2 united. The species resembles *M. danai*, SM. in colouration; that species is smaller, and may be readily separated by the thorax becoming narrowed towards the apex.

***Mutilla fortistriolata*, sp. nov.**

Black, the mesonotum, except round the edges, dark red, the pubescence on the front and vertex black, on the rest of the head denser and silvery; on the mesonotum black, on the rest of the thorax silvery; on the apex of the 1st abdominal segment, in the centre, is a square spot, on either side of the centre of the 2nd a transverse one, in the centre of the apex a smaller irregular patch, and similar, but larger patches of silvery hair on the centre of the following 3; the dorsal segments bear stiff black hairs; the ventral are densely fringed with silvery hair. Head wider than the thorax, the temples clearly longer than the eyes, roundly projecting beyond them, the occiput transverse; the vertex strongly longitudinally striated, the striae more or less interlacing; the front strongly, irregularly reticulated. Thorax not much longer than the head, not much longer than wide, the base bluntly rounded, the apex transverse, the back strongly, regularly, closely striated, the sides straight, near the base armed above with 2 teeth of which the basal is the larger. Pleurae smooth, except round the edges. Abdomen longish oval, rounded at the base; the 2nd segment longitudinally striated, the striae becoming weaker towards the apex; pygidium, except at the apex, distinctly striated. Basal 2 ventral segments unarmed. Calcaria and tarsal spines black. ♀. — Length 11 mm.

Meru low lands, Ngare na nyuki. January.

***Mutilla quadriornata*, sp. nov.**

Black, the top of the thorax dark red, a spot of silvery pubescence in the centre of the apex of the 1st abdominal segment, one opposite it on the centre of the 2nd, one on either side of the centre of the 2nd and a transverse spot on the centre of the 3rd and 4th; the pubescence on the top of the head, thorax and abdomen dense and black, on the sides of the head, basal slope of abdomen and on its sides and ventral surface long and white. Thorax narrower than the head, about one half longer than wide, the base rounded, the apex transverse, the sides at the base roundly dilated, beyond which are 2 slight rounded dilatations; the back is strongly longitudinally striated; the striae are twisted and extend on to the top of the apical slope, below which the latter is neither punctured nor striated. Pleurae smooth, the base with some obscure punctures, the apex with some stout, irregular striae. Abdomen wider than the thorax, its base broadly rounded above, the hairs on the 2nd segment forming striae; the pygidium irregularly rugose, its apex finely, closely longitudinally striated. The 1st ventral segment is neither keeled nor toothed. ♀. — Length 11 mm.

Kilimandjaro: Kibonoto, May.

Eyes small, oval, the temples behind them slightly roundly dilated, clearly longer than the top of the eyes; the occiput transverse, with the sides broadly rounded. The 3rd antennal joint is almost as long as the following 2 united; the flagellum is obscure brown below. The apical tooth of mandibles becomes gradually narrowed to a rounded blunt point.

Is not unlike *M. zulu*, KOHL in colouration and in the arrangement of the markings, but *zulu* has not the sides of the thorax dilated at the base.

***Mutilla zimrada*, sp. nov.**

Black, the thorax above and the upper two-thirds of the pleuræ red; 2 broad lateral spots (broader than the black central part), narrowed on the innerside, on the apex of the 1st abdominal segment, and a much broader spot (the black central part one third of their width) covering the sides of the 3rd dorsal and extending on to the ventral side, of pale fulvous pubescence; the head and thorax sparsely covered with short black stiff hair, the cheeks, lower part of pleuræ and apical slope of metanotum with longish white hair; the basal slope of abdomen, the sides of the pygidium and the ventral segments covered with longer white hair. Head clearly narrower than the thorax, which is twice longer than wide, the base and apex transverse, with the sides rounded; its upper edge irregularly crenulated; before the middle is a distinct, stout conical tooth, the part immediately behind this is straight, then it becomes obliquely narrowed; the upper part of the thorax is stoutly, irregularly longitudinally rugosely reticulated-striated, the top of the apical slope stoutly striated, the rest covered (but not closely) with longish punctures, which become smaller below. Pleuræ smooth, the apex of the pro- and meta-pleuræ, and the raised central part of the mesopleuræ sparsely punctured. Ventral keel with a stout rounded tooth, at base and a small one at the apex. ♀.

Length 17 mm.

Kilimandjaro: Kibonoto, cultivated region.

Front and vertex coarsely rugosely punctured, more or less reticulated; the temples coarsely widely reticulated. Mandibles ending in a longish, bluntly rounded at the apex, tooth. Temples straight, a little longer than the eyes; the occiput transverse. Basal segment of abdomen broad, curved and projecting laterally at the base. Pygidium finely, closely punctured. Antennal scape sparsely covered with white hair; the flagellum thick, its 2nd joint one fourth longer than the 3rd. The tibial spines long, slender, black, as are also the calcaria.

Allied to *M. pythia*, SM.

***Mutilla amarna*, sp. nov.**

Black, the pro- mesonotum and basal half of metanotum, and the upper part of the pleuræ red, a broad band of pale fulvous pubescence on the sides of the 1st abdominal segment (the black central part one fourth of the width of the spots), and

similar bands on the apical half of the 3rd; the pubescence on the upper part of the head, thorax and abdomen black; on the cheeks, basal slope of pronotum, pleuræ and ventral surface and sides of abdomen sparser, longer and white. Base of thorax quite transverse, the apex more bluntly transverse; the sides straight, crenulated, a blunt tubercle before the middle. Ventral keel with a large, bluntly rounded tooth at the base. The hair on the coxæ and femora white, on tibiæ black in front, white on sides and apex; the calcaria black. ♀.

Length 15 mm.

Kilimandjaro: Kibonoto, cultivated region, April.

Head closely, coarsely rugosely punctured-reticulated; temples as long as the eyes, slightly roundly narrowed, the hinder edges rounded. Top of metanotum crenulated; the upper third of apical slope stoutly striated. The 2nd ventral segment strongly, closely punctured, unthoohed. The reticulations on the temples are longitudinal; their outer edges keeled.

Differs from *M. zimrada* by the outer edges of the temples being sharply angled, by the reticulations being distinctly longitudinal, while in *zimrada* they are coarser and transverse, and only the lower fourth of the pleuræ is black, the top of the metanotum and the upper part of the apical slope are red, not black; in the present species the basal tooth on the basal ventral segment is smaller and there is none on the apex.

Mutilla Mackayi, sp. nov.

Black, the pro- and mesonotum, the pleuræ and a broad band round the top and sides of the apical slope of metanotum, red; a spot of pale fulvous pubescence on the apex of the 1st abdominal segment, near the outer edge and a wide band of similar pubescence on eitherside of the third segment; the head, upper part of thorax and of the abdomen somewhat thickly covered with black hairs; the pleuræ and ventral surface of abdomen with longer white hair, there being also some longish white hair on the basal segment of the abdomen. Head narrower than the thorax, which is truncated at the base and apex, is not twice longer than wide and bears laterally on the central two-thirds 4 blunt tubercles, of which the 1st and 3rd are smaller than the others. Abdomen wider than the thorax, its base broad, bordered, not projecting laterally; the ventral keel not toothed, roundly, broadly curved. Legs covered with white hair; the tibial spines and calcaria black. ♀.

Length 12 mm.

Meru low lands, December.

Head coarsely reticulated. Flagellum stout, brownish beneath, its 2nd joint not much longer than the 3rd. Mesonotum longitudinally reticulated, the reticulations long, becoming wider towards the apex; the apical slope reticulated round the edges, the central part (except below in the middle) finely punctured, the punctures clearly separated. Pleuræ smooth, except for 2 rows of round punctures on the top of the metapleuræ. The 1st abdominal segment on the basal slope, with a broad band of punctures of moderate

size round the top and sides; the 2nd longitudinally, somewhat strongly striated, the striae intermixing; the other segments punctured at the base, smooth at the apex; the last longitudinally, closely reticulated, except at the apex which is transversely striated. Eyes small. The thorax is hardly narrowed behind, where it is almost as wide as the base.

Comes near to *M. disparimaculata*, RAD. and SICH. from Senegal; that has the 1st abdominal segment "armed with teeth", which is not the case with the present species either above or below.

***Mutilla rotundicollis*, sp. nov.**

Black, the thorax red, as wide as the head, about one half longer than wide, rounded in front, truncated behind, an irregular spot near the outer edges of the apex of 1st abdominal segment of white pubescence and a larger squarish one on the sides of the 4th, the head and thorax above and the back of the basal 4 abdominal segments covered with black, their sides, apical dorsal segments and ventral segments of abdomen covered with longer white hair. Ventral keel of 1st ventral segment straight. Head rounded behind, not transverse, the sides broadly rounded. ♀.

Length 9 mm.

Meru low lands, November.

Head coarsely rugosely reticulated. 2nd joint of flagellum about one fourth longer than the 3rd. Thorax above, including the top of the apical slope and the upper two-thirds of the metapleuræ, coarsely reticulated; the reticulations wider and rounder on the apical slope than they are on the top; the apex of the apical slope finely punctured. Propleuræ, apical (and larger) part of mesopleuræ and the lower part of metapleuræ smooth, the base of mesopleuræ closely reticulated. Apex of 1st abdominal segment above with round, the 2nd covered closely with longish interlacing punctures. Pygidium closely, strongly punctured all over. On the sides of the 4th ventral segment is a patch of white silvery pubescence. The tibial spines are sparse, longish, black; the calcaria pale.

***Mutilla Parki*, sp. nov.**

Black, the upper part of the thorax, the upper two-thirds of the mesopleuræ and the upper part of the apical slope dark red; a large patch of pale fulvous pubescence on the sides of the apex of 1st abdominal segment, a similar, but somewhat smaller one on either side of the centre of the apex of the 2nd, and a broad, widely interrupted band on the 3rd; the apical segment and the apices of the ventral covered with long white hair; the head, upper part of the thorax and of the abdomen with longish black hair. ♀.

Length 17 mm.

Kilimandjaro: Kibonoto, culture zone, April.

Head large, largely developed behind the eyes; from these the temples become gradually wider; the occiput transverse; closely rugosely reticulated, the reticulations on

the vertex and front longitudinal; it is wider than the thorax, which is more than twice longer than wide, is transverse behind, rounded in front, slightly roundly contracted behind the middle, there being a small, conical tooth at the apex of the widened apical part; there is a longish triangular reticulated part on the upper basal portion of the propleuræ; the rest is smooth, as is also the mesopleuræ and the metapleuræ. Apex of 1st abdominal segment with a broad not very closely punctured belt; the 2nd is irregularly covered with longish, interlacing punctures. There is a distinct, oblique tooth behind the middle of the 1st ventral segment. Tibial spines short and thick; the calcaria white.

Allied to *M. cepheus*, Sm.

***Mutilla transversonotata*, sp. nov.**

Black, the thorax, except the lower part of the meso- and metapleuræ, red, a broad band of pale golden pubescence on the apex of the 1st abdominal segment laterally, a smaller one on either side of the middle of the 2nd and a broad one on the sides of the 3rd (the black central part one third of their width) and the pygidium densely covered with longer, whiter pubescence; the hair on the upper part of the body black, except on the occiput, cheeks, base and apex of thorax, base of abdomen above and on the ventral segments, where it is white. Head large, wider than the thorax, the temples long, more than twice the length of the eyes, broadly, roundly dilated, the occiput transverse, with the sides broadly rounded. Base of thorax rounded, the apex transverse, with the sides rounded; the thorax is more than twice longer than wide; the basal half of the thorax is a little wider than the apical and has a small tooth at the base and apex of the broad basal part. Basal ventral segment straight, untoothed. The sculpture of pygidium is hidden by the dense hair covering. ♀.

Length 15 mm.

Kilimandjaro: Kibonoto, cultivated zone, February.

Head stoutly, longitudinally reticulated. Eyes small, oval, shorter than the malar space. Mandibles stoutly bidentate, the 2nd tooth oblique, triangular. The temples are more strongly punctured than the vertex, the punctures forming coarse reticulations. Top of thorax, except the pronotum and apex of metanotum, strongly reticulated, the reticulations becoming larger towards the apex, and on the top of the metanotum they are wider. Propleuræ strongly punctured, the mesopleuræ smooth, the apex of metapleuræ weakly irregularly reticulated. Basal segment of the abdomen stoutly, obliquely projecting laterally at the base; the 2nd is closely, somewhat strongly longitudinally striated, the striae interlacing.

Allied to *M. Parki*, it having the same form of the head and thorax; *Parki* may be known by the mesonotum being much more closely and finely reticulated, by the pleuræ being broadly black, especially behind, by the metapleuræ at the apex being much more strongly, regularly and broadly reticulated, the apical slope of the metanotum, too, being more regularly and closely reticulated, and there is a distinct tooth on the basal ventral segment.

Mutilla basiornata, sp. nov.

Black, the thorax except ventrally, red, the basal segment of the abdomen with a pale fulvous hair spot on eitherside, similar spots, but nearer the middle, on the apex of the 2nd, and a broad interrupted band of fulvous pubescence on the 3rd abdominal segment; the apical segment covered with longish silvery hair; basal ventral segment neither keeled nor toothed. Head large, wider than the thorax; the temples twice the length of the eyes; the occiput transverse, the sides broadly rounded. Thorax twice longer than wide, the base rounded, the apex transverse; near the middle, on the sides, are 2 blunt, indistinct tubercles; near the centre is a short tooth, narrowed and rounded towards the apex; from it the thorax becomes slightly, gradually narrowed towards the apex. ♀.

Length 10—11 mm.

Kilimandjaro: Kibonoto, May.

Head and upper part of the thorax coarsely reticulated, the apex of the metanotum smooth, the reticulations above this smooth space smaller than they are above. Propleuræ coarsely reticulated above, weakly below; the mesopleuræ smooth, the apex weakly reticulated; the basal half of metapleuræ smooth, the apical reticulated, more weakly than the metanotum. Basal slope of 1st abdominal segment somewhat strongly, the apex more weakly punctured; the base of the 2nd segment distinctly punctured; the rest of the segment more or less striated, the striæ running into each other. Apical segment broad, triangular, punctured at the base.

Mutilla Spekei, sp. nov.

Black, the thorax above and the upper two-thirds of the pleuræ red; a broad band on the sides of the 1st abdominal segment, a slightly smaller one on eitherside of the centre of the 2nd, and a broader one — broader than the black central part — of pale golden depressed pubescence on the 3rd, the apices of the ventral segments and the pygidium covered with long white hair as is also the base of the 1st dorsal segment; the rest of the latter and the other segments bearing black hair as do also the head and the upper part of the thorax. Head large, the temples rounded, not narrowed, distinctly longer than the eyes; the occiput transverse; it is clearly longer than the thorax, and is somewhat coarsely longitudinally striated-reticulated. Thorax about two- and a half times longer than wide; above it is coarsely longitudinally reticulated; on the top of the apical slope the reticulations are wider and larger, except at the bottom. Pleuræ smooth; the pro- and metapleuræ with round punctures above. First abdominal segment broad at the base; the apex punctured; the ventral keel straight; the 2nd segment is closely longitudinally striated, the striæ more or less interwoven; its ventral surface strongly closely punctured, its base rounded.

This species has the colouration of *M. basiornata* CAM. described in this paper; the latter may be known from it by the longer, narrower thorax, which becomes nar-

rowed towards the apex; *grantella* may be separated by the head not being wider, but narrower than the thorax.

***Mutilla albicanda*, sp. nov.**

Black, the thorax, except the lower part of the pro- and mesopleuræ and the lower half of the metapleuræ, red, a broad patch of silvery pubescence on the sides of the basal abdominal segment, one of the same size and colour on either side of the centre of the 3rd, a broad band on the 4th, commencing at the inner end of the patch on the 3rd, and the last segment above covered with long white hair, as are also the apices of the 3rd to 5th ventral narrowly. Ventral keel on 1st segment toothed at the base, the rest straight. Thorax clearly narrower than the head, twice longer than wide, rounded in front, truncated behind, slightly narrowed from the middle, where there is a blunt, short tooth. The 2nd joint of the flagellum is as long as the following 2 united. ♀.

Length 10 mm.

Kilimandjaro: Kibonoto, cultural zone, April.

Head coarsely longitudinally reticulated; the temples straight, longer than the eyes; the occiput transverse, with the sides rounded. Apical tooth of mandibles bluntly rounded. Thorax above coarsely reticulated; the reticulations, if anything, larger and rounder on the apical slope. Pleuræ smooth, irregularly punctured round the top. Basal slope of 1st abdominal segment coarsely rugosely punctured; the 2nd longitudinally striated, the striæ intertwining. Pygidium somewhat strongly punctured; the segment below covered with long black hair. The 2nd abdominal segment becomes gradually narrowed towards the apex; below it is somewhat steeply obliquely sloped at the base.

***Mutilla leucoura*, sp. nov.**

Black, the top of the thorax and upper part of the pleuræ dark red; a patch of pale golden pubescence on the apex of 1st abdominal segment laterally, a larger one on either side of the middle of the 2nd and a broader one — broader than the black central part — on the sides of the 3rd; the pygidium densely covered with long white hair; the ventral segments fringed with white hair; the keel on basal segment with a bluntly rounded, clearly separated tooth on the apex. Thorax not quite twice longer than wide, the base rounded, the apex truncated; it is slightly narrowed from behind the middle; at the apex of the basal part is a small tooth. ♀.

Length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., November.

Head large, slightly, but distinctly wider than the thorax; the temples clearly longer than the eyes above, the occiput transverse; coarsely reticulated; the thorax above is more widely reticulated all over; base of propleuræ with a row of longish punctures; the meso- and metapleuræ smooth. Tibial and tarsal spines stout, black; the calcaria white.

Subgenus *Barymutilla*, ANDRÉ.**Mutilla Sjöstedti**, sp. nov.

Black, the top of the thorax dark red, a spot on the sides of the basal 3 abdominal segments, the basal 4 wider than long, the 3rd pair square, the top of the head, thorax and abdomen covered with longish black hair; the base of 1st abdominal segment, the apices of the 2nd ventral, the following segments and the legs covered with longer white hair; the basal ventral keel with a stout tooth, roundly narrowed towards the apex; the 2nd with stout lateral and a central keel extending from the base to beyond the middle; the segment rising obliquely from the base to the end of the keels, then falling obliquely from the top of the raised part to the apex. — Thorax almost twice longer than wide, of almost equal width, only slightly narrowed towards the apex; the base and apex bluntly rounded. Tibial spines black, the spurs white. The 2nd joint of flagellum as long as the following 2 united. Eyes small; the temples almost twice their length, roundly dilated behind them; the occiput transverse, with the sides rounded. The head is large and is a little wider than the thorax. ♀.

Length 13 mm.

Kilimandjaro: Kibonoto, 1000—1300 m.

Head coarsely, longitudinally rugosely reticulated. Apical tooth of mandibles long, sharply pointed. Thorax above coarsely longitudinally reticulated; on the sides, shortly beyond the middle, are 2 teeth, of which the 2nd is the larger. Pleuræ smooth; the apex of the metapleuræ covered broadly with round punctures. First abdominal segment broad, cup-shaped, the base projecting laterally; the dorsal segments are neither punctured nor striated; the last has no defined area; it is broad and rounded at the apex; the 2nd ventral is closely, somewhat strongly punctured.

Mutilla Thomsoni, sp. nov.

Black, the thorax above, except at base and apex, dark red, the red extending on to the pleuræ; a spot of light fulvous pubescence on either side of the 1st abdominal segment, a broad transverse band on the sides of the 3rd, a square one on the 4th and one on the base of the 5th; the pygidium and the apical ventral segments fringed with silvery hair; basal ventral keel dilated downwards at the base, transverse below; from this part it becomes roundly narrowed towards the apex; on the middle of the basal half of the 2nd segment is a stout keel which becomes higher towards the apex, where it almost forms a tooth; the sides on either side of this are keeled, these keels becoming thicker towards the apex, but not so much as the central. Thorax almost twice longer than wide, almost transverse above at the base and apex; it is of equal width; there is a broad tubercle in the centre above, followed by a more distinct one; the reticulations almost form teeth on the sides of the metanotum at the apex. Upper part of the head, thorax and abdomen sparsely covered with long black hair; the oral region densely with long silvery hair, as is also the ventral surface and legs; there is a large patch of de-

pressed silvery pubescence on the lower part of the mesopleuræ. Calcaria white, tinged with fulvous. ♀.

Length 17 mm.

Kilimandjaro: Kibonoto, 1000—1300 m., September.

Head large, wider than the thorax; the temples more than twice the length of the eyes, which are comparatively small, oval. Vertex and front coarsely longitudinally punctured-striated-reticulated. Upper part of thorax coarsely longitudinally reticulated, the keels stout, clearly defined; the edges of the apical slope reticulated; meso- and metapleuræ smooth, punctured round the edges.

Named after the late JOSEPH THOMSON, so well known for his travels in Tropical Africa.

***Mutilla semyra*, sp. nov.**

Black, the pronotum, mesonotum and scutellum dull red, the tegulæ a paler red; the sides of the apex of the 1st abdominal segment and of the 2nd and the 3rd entirely covered with white depressed pubescence, the dorsal abdominal segments sparsely with black, its ventral segment at the apex, the head, pleuræ and apex of metanotum covered with white hair. Wings fuscous violaceous, the basal fourth of both hyaline. Ventral keel straight, untoothed; the 2nd with 3 large, blunt tubercles on the apex. ♂.

Length 14 mm.

Meru low lands, January.

Head and thorax closely rugosely punctured, the punctures running into reticulations; the metanotum closely rugosely reticulated, short, transverse, with the sides broadly rounded; the basal central area small, smooth, wider than long, horse-shoe shaped. Base of metapleuræ smooth, the rest reticulated. Tegulæ large, their apex extending beyond the wing, hyaline, bone-colored. Basal segment of abdomen short, broadly rounded, the 2nd longer than it is wide at the apex. Pygidium with a slight, oval depression on the basal half; it is wider than long, bluntly rounded, and wide at the apex; the hypopygium punctured at the base, the apex smooth and depressed. The central tubercle on the 2nd ventral segment is longer and more distinct than the lateral; it rises gradually from the base to the apex.

Allied to *M. humeralis*, SICH. and RAD. That has only 2 small tubercles on the 2nd ventral segment and there is a "sillon profond" between the ocelli and the antennæ, there being none in the present species.

Genus *Dolichomutilla*.

***Dolichomutilla tuberculicollis*, n. sp.**

Black, the thorax dull brick-red, the lower part of the metapleuræ covered with depressed white pubescence, a transverse oval mark on the sides of the 2nd abdominal segment, and a more or less interrupted band on the 3rd segment above the apex of the 2nd ventral and the whole of the 3rd covered with white hair; the hair on the sides

of the head, face, clypeus, metapleuræ, base and apex of abdomen, sides of ventral segments and legs white; on the rest of the body sparser and black; the mesosternum laterally ends in front of the middle coxæ in a stout, triangular tooth; the keel on basal ventral segment is armed with a small rounded tooth near the base, nearer the apex are 2 larger ones united together, the first being larger than the apical, projects distinctly below it and has a straight lower edge, the smaller apical tooth being rounded; base of 2nd ventral segment stoutly keeled in the centre to near the middle of the segment, the keel ending in a stout, projecting tooth. Pygidium broadly smooth in the middle. Thorax nearly 3 times longer than wide, its base above slightly rounded, the sides ending in blunt tubercles; the sides beyond the basal third are roundly, but not deeply incised, the incision deeper and more distinct at the base than the apex; behind the incision is a distinct tooth, which becomes gradually widened from the base to the apex; at the apex of the incision is a blunter, more rounded tubercle, followed by a smaller rounded one. Apical slope of metanotum straight, obliquely sloped; a stout keel runs down its centre to near the apex; the part on either side of this is smooth, narrow above, becoming gradually widened below; looked at from above the apex is transverse, with the sides rounded. ♀.

Length 21 mm.

Usambara: Mombo, June.

Head slightly wider than the base of the thorax, longitudinally rugosely reticulated, the longitudinal striæ stronger and more distinct than the transverse; it is longer than it is wide; the temples long, longer than the eyes; the occiput transverse. Antennal tubercles smooth and shining. The mandibles end in a longish tooth, bluntly rounded at the apex. Antennal scape with longish deep punctures and covered with white hair; the flagellum opaque, bare, its 2nd joint as long as the following 2 united. Thorax above, except at the apex, stoutly longitudinally striated-punctured; pleuræ coarsely reticulated, except the base and a broad curved oblique space above, this upper part extending to the apex of the metapleuræ, where it is weakly, irregularly reticulated. Base of abdomen broad, roundly curved inwardly, the sides projecting. Tibiæ with 3 or 4 stout, longish black spines, their apex also having one.

Allied to *D. sycorax*, SM.

***Mutilla (Dolichomutilla) kibonotoensis*, sp. nov.**

Black, the thorax dark red, the pleuræ largely suffused with black; 2 oval spots of white pubescence near the middle of the 2nd abdominal segment, and an interrupted band on the 3rd. Keel on 1st ventral segment with 3 distinct teeth on the apical half; the 1st tooth distinctly separated from the 2nd, which is united to the 3rd and is broader and longer than the other two, which are of almost the same size and are rounded at the apex; the basal half of the 2nd is bluntly keeled down the centre, the keel at the apex projecting into a blunt tooth. Thorax fully 3 times longer than wide, transverse at the base and apex, with the edges rounded; the sides are slightly roundly curved in-

wardly before the middle; there are 2 rounded tubercles at the base of the incision, and 2 more widely separated ones beyond it; there is a distinct tubercle on the top of the apical slope, from which a keel runs down to near the apex, the space on either side of the keel being smooth, narrowly above, broadly below. ♀.

Length 18 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., June.

Head fully as wide as the thorax; the temples long, straight, longer than the eyes above, the occiput transverse; it is coarsely reticulated, more weakly on the front than elsewhere, the temples more strongly than the vertex; the pubescence is white, intermixed with long black hair on the vertex. Thorax, except in the centre of the apex, coarsely longitudinally reticulated; the propleuræ and metapleuræ similarly reticulated; the mesopleuræ with a broad smooth, oblique space, covered with depressed white pubescence; the rest weakly reticulated. Basal segment of abdomen broad, smooth, the apex punctured and covered with black hairs. Pygidium strongly punctured, smooth in the centre. Antennal scape covered with silvery pile and more sparsely with black hair; the 2nd joint of flagellum as long as the following 2 united.

Mutilla (Dolichomutilla) apicicarinata, sp. nov.

Black, the thorax dark red; the 2nd abdominal segment with 2 transverse oval marks of white pubescence near the middle, the 3rd covered broadly on either side with similar pubescence; the ventral keel with 2 distinct teeth, close to each other in the middle, of which the basal is a little shorter than the other; the 2nd has a keel on the basal half which becomes stronger towards the apex, where it projects into a blunt tooth. Base of thorax almost transverse above, the sides there forming blunt tubercles; the apex of the basal fourth projects, the base projects into a blunt, rounded tooth; beyond this is a slight incision, deepest at the base; beyond the incision are 2 bluntly rounded tubercles, the apical of which is more sharply pointed than the basal; top of apical slope almost transverse; its apex from near the top smooth, the smooth part narrowed above, the keel bounding it, roundly curved outwardly, with the lower (and smaller) part straight and slightly oblique; in the centre is a straight keel, which extends half way down, *i. e.*, to the end of the curved lateral keel. ♀.

Length 15 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., May.

Head, if anything, wider than the thorax, the temples longer than the eyes, the occiput transverse, with the sides rounded and narrowed; coarsely rugosely punctured, more or less reticulated; sparsely covered with silvery pubescence and with long black hair. Middle of mandibles dark red, their apical tooth long, bluntly rounded at the apex. Top of thorax coarsely reticulated-punctured, more strongly towards the apex; propleuræ similarly punctured, except broadly below; mesopleuræ smooth, except for an oblique ridge down the middle; metapleuræ smooth, except at the top, on to which the metanotal reticulations extend. The hair on the base, apex and ventral surface of the

abdomen white, on the rest of the back black; apical segment punctured, narrowly smooth in the centre. The hair on the legs white; it is thicker on the tibiae than on the femora, and denser on the tarsi than on the tibiae; the latter have 2 or 3 black spines and white spurs.

Mutilla (Dolichomutilla) apicireticulata, sp. nov.

Black, the thorax red, entirely closely reticulated-punctured above; the propleuræ similarly punctured, the mesopleuræ smooth, except for a triangular, reticulated space in the centre below, the metapleuræ smooth; base and apex of thorax bluntly rounded above; central part of ventral basal keel with 2 distinct teeth of almost equal size; the keel on basal half of 2nd segment distinct, not projecting much at the apex, but with the tooth distinct enough. ♀.

Length 12 mm.

Usambara: Mombo, June.

The hair on thorax and top of abdomen is black; on the sides and ventral surface of abdomen white, as it is also on the legs; calcaria white. The 2nd joint of the antennal flagellum slightly longer than the following 2 united.

Mutilla (Dolichomutilla) heterodonta, sp. nov.

Black, the head and thorax lighter in tint than the abdomen which is of a deeper black colour; the 3rd abdominal segment with 2 oval spots of white pubescence shortly behind the middle; the 3rd with a wide interrupted band of similar pubescence; thorax about 4 times longer than wide; the base transverse, the apex rounded; at the apex of the basal third of the thorax, on the sides above, is a longish tooth, with the apical (and smaller) part narrowed; shortly beyond the middle are 2 blunt teeth, of which the basal is the larger and rounder; the apex of the thorax has a gradually rounded slope and is gradually and slightly narrowed. Ventral keel with 3 teeth on apical half; the 1st roundly curved at the base, the bottom bluntly rounded; the 2nd is larger, transverse below; the 3rd is the smaller and becomes gradually narrowed to a blunt point; the basal half of the 2nd ventral segment bluntly keeled, the keel ending in a somewhat sharp tooth. ♀.

Length 13 mm.

Meru low lands, November.

Head as wide as the base of the thorax; the temples clearly longer than the eyes, hardly narrowed towards the back; occiput transverse; the front and vertex widely, deeply reticulated; covered, not very thickly, with silvery pubescence, and, more sparsely, with long black hairs; both kinds being denser on the malar space and face than elsewhere. Upper part of thorax coarsely longitudinally reticulated, this being also the case with the propleuræ; the mesopleuræ smooth, weakly reticulated at the base; the lower apical part thickly covered with depressed white pubescence; the metapleuræ smooth at the base above, the rest reticulated like the metanotum. The mesosternum, in front of the middle coxæ, projects into a large tooth, of which the basal end is the larger. Upper

part of thorax covered with long black, the ventral with white hair; last segment punctured, the apex and the centre smooth.

The species of *Dolichomutilla* described above may be separated by the following table.

- | | | |
|-------|--|-------------------------|
| 1 (8) | Thorax red. | |
| 2 (7) | Apical slope of metanotum smooth, keeled down the middle. | |
| 3 (6) | Ventral keel with 2 teeth. | |
| 4 (5) | The teeth large, united at the base; length 21 mm. | <i>tuberculicollis.</i> |
| 5 (4) | The teeth only moderately large, clearly separated; length 18 mm. | <i>kibonotoensis.</i> |
| 6 (3) | Ventral keel with 3 teeth. | <i>apicicarinata.</i> |
| 7 (2) | Apical slope of metanotum reticulated throughout. | <i>apicireticulata.</i> |
| 8 (1) | Thorax black (apical slope of metanotum reticulated; ventral keel with 3 teeth). | <i>heterodonta.</i> |

B. The ♂ species of *Mutilla* in the collection may be grouped thus:

- | | | |
|---------|---|-----------------------|
| 1 (8) | Scutellum pyramidal, conical, distinctly raised above the mesonotum. | |
| 2 (5) | Thorax more or less red, the abdomen black. | |
| 3 (4) | Pro- and mesonotum only red. | <i>danana.</i> |
| 4 (3) | Thorax entirely red. | <i>cana.</i> |
| 5 (2) | Thorax entirely black, the abdomen banded with red. | |
| 6 (7) | Wings uniformly dark violaceous, only the 2nd abdominal segment red, length 18 mm. | <i>leucopyga, KL.</i> |
| 7 (6) | The 2nd and 3rd abdominal segments red, the wings hyaline; length 13 mm. | <i>udana.</i> |
| 8 (1) | Scutellum not conical, hardly raised above the level of the mesonotum. | |
| 9 (22) | Entirely black. | |
| 10 (21) | The pubescence on abdomen white. | |
| 11 (20) | The 2nd cubital cellule large, the 2nd abscissa of the radius as long, or almost as long as the 3rd. | |
| 12 (19) | Wings uniformly dark fuscous violaceous. | |
| 13 (16) | 2nd abdominal segment without hair bands or marks on apex. | |
| 14 (15) | The central basal area on base of metanotum elongate, twice longer than wide, the 2nd transverse cubital nervure broadly rounded; length 19 mm. | <i>hellotia.</i> |
| 15 (14) | The base of metanotum with 2 small squarish areas in the centre; the upper (and smaller) part of the 2nd transverse cubital nervure straight, only slightly oblique, the lower part turned sharply towards the base of the cellule, the 2 parts at their junction forming an angle. Length 16 mm. | <i>phegea.</i> |
| 16 (13) | The 2nd abdominal segment with apical hair band. | |
| 17 (18) | The pubescence on the head and thorax black, the base of metanotum and pronotum not densely pilose; 3rd antennal joint whitish. | <i>spilotoma.</i> |
| 18 (17) | The pubescence on head and thorax white, the pronotum and base of metanotum densely pilose; the 3rd antennal joint immaculate. | <i>trichionota</i> |
| 19 (6) | Wings not uniformly fuscous, the base being hyaline. | <i>pilidecorata.</i> |
| 20 (11) | The 2nd cubital cellule small, narrowed in front, the 2nd abscissa of radius one fourth of the length of the 3rd. | <i>microphatna.</i> |
| 21 (10) | The pubescence on abdomen dense and golden. | <i>pulchrihirta.</i> |
| 22 (9) | Not entirely black, the abdomen or thorax red, wholly or in part. | |

- 23 (24) Thorax entirely red. *cana*.
 24 (23) Thorax not entirely red.
 25 (30) Pro- and mesonotum red, the metanotum black.
 26 (29) Abdomen black.
 27 (28) Large, robust, the base of wings hyaline, tegulae red. (*Barymutilla*) *semyra*.
 28 (27) Small, slender, the base of wings not hyaline, the tegulae black. *mitana*.
 29 (31) Abdomen blue. *pulchricolorata*.
 30 (25) The metanotum red, the pro- and mesonotum black. *artatana*.
 31 (35) Abdomen more or less red, the thorax black.
 32 (35) Basal segment of abdomen red.
 33 (34) The 2nd and 3rd segments red, the wings dark fuscous violaceous from the transverse basal nervure. *pulchridecorata*.
 34 (33) The 2nd and 6th segments red, the wings hyaline, only slightly infuscated at the apex. *amabilis*.
 35 (31) The basal segment of abdomen black, the 2nd and 3rd red. *ruhama*.

Mutilla danuna, sp. nov.

Black, the prothorax except the lower half of the pleurae, the mesonotum and the scutellum red, the hair long, on the upper part of the head, thorax and abdomen black, on the other parts and the legs white, the spurs white; wings dark fuscous violaceous, the nervures black, the 1st and 2nd abscissae of radius equal in length, half the length of the 2nd; the recurrent nervures are received near the base of the apical third of the cellule. Basal three fourths of ventral keel broadly rounded, the smaller apical part clearly separated, not extending so far downwards. Sides of pygidium closely, strongly punctured, the central (and larger) part smooth, dilated almost into a tooth at the apex, which is red and broadly bluntly rounded. Scutellum large, bluntly conical. Head and thorax closely, somewhat strongly punctured, the metathorax reticulated; its basal central area extending to the middle, its base widened, the apex sharply lanceolate. Basal slope of mesonotum with a smooth, raised line. Base of mandibles densely covered with silvery pubescence. Palpi black. ♂.

Length 15 mm.

Usambara: Tanga.

Temples broadly rounded and narrowed; the occiput transverse. Face bare, smooth and shining. The 2nd antennal joint small, narrowed obliquely at the base; the 3rd about one fourth longer than the following. Lateral furrow on 2nd abdominal segment bare.

Mutilla cana, sp. nov.

Black, the thorax red, the pubescence long, on the front and vertex, pro-, mesonotum and scutellum, black, on the other parts white; the apices of the abdominal segments with narrow bands of white pubescence; scutellum sharply conical, distinctly raised over the mesonotum, narrowed to a transverse point above; head, pro- and mesothorax strongly rugosely punctured, the punctures running into reticulations on the lower part of the pro- and mesopleurae. Metathorax, strongly on the back, weakly and irregularly

on the upper half of the pleuræ, the lower half of the latter smooth, except for some weak reticulations on the middle below; in the centre of the basal part is a long area, extending from the base to the top of the apical slope, where it is obliquely narrowed; the keel inside the outer edge is stouter than the others. Ventral keel short, slightly dilated at the apex; it only extends to the middle of the segment, which turns from it obliquely upwards. The 2nd segment is wider than long, is narrowed and depressed at the apex; its back is sparsely, weakly punctured, the centre smooth; the other segments are more strongly and closely punctured, especially the apical, which has a smooth line, widened towards the apex, down the middle. There is a band of rufous pubescence along the sides of the 2nd segment. Wings uniformly dark fuscous violaceous, the nervures black; the basal 3 abscissæ of the radius are almost equal in length, the 1st recurrent nervure is received near the base of the apical third of the cellule. ♂.

Length 14 mm.

Usambara: Mombo.

Antennal tubercles longish, rounded at the base and apex; below and between the lower edge of the antennæ, extending half way down the face, is a stout, blunt keel, roundly narrowed at the apex. 2nd antennal joint short, rounded; it and the 3rd are, together, as long as the 4th. Temples roundly obliquely narrowed, the occiput transverse, margined behind.

***Mutilla leucopyga*, KLUG.**

Black, the 2nd abdominal segment red all round, the entire body and legs thickly covered with black hair, except on the sides and apical segment of the abdomen where it is longer and white; wings uniformly dark fuscous violaceous; the nervures black; the 2nd abscissa of radius a little longer than the 3rd, its apex turned up straight towards the costa; the 1st ventral segment with a short, bluntly rounded, distinct tooth at the base. Scutellum large, conical, obliquely narrowed towards the top which is smooth and shining. Metanotum with an area extending from the base to the top of the apical slope, narrow, obliquely widened at the base; the sides of the metanotum are bounded by a keel. ♂.

Length 17—18 mm.

Meru low lands, Ngare na nyuki, January, November.

The 3rd antennal joint is as long as the 4th; the 2nd is very short. Head closely, rugosely punctured. Base of mandibles covered with white pile; the apical tooth long, gradually narrowed to a bluntly rounded point. Temples obliquely roundly narrowed, the occiput transverse. Thorax distinctly wider than the head; the base rounded, the apex transverse; closely rugosely punctured; there is a smooth, shining keel down the middle of the mesonotum and a distinct furrow on the apical two-thirds on either side of it. Scutellar depression smooth and shining. Metanotum coarsely reticulated; there is a smooth space, bounded on the outside by a curved keel, on either side of the base on the outerhalf; outside this is a straight, stout keel which extends to the top of the apical slope; the latter is steep, and is more weakly and irregularly reticulated than

the rest. Abdomen distinctly punctured, the punctures becoming weaker towards the apex; the 2nd dorsal segment has a large smooth space in the middle, the punctures being also sparser round this part. Tegulae smooth, punctured in front.

As I am not certain of this species being truly *leucopyga* (= *opaca*, LEP. and *churascus*, SM. Cf. ANDRÉ, Zeit. f. Hymen. und Dipter. 1902, p. 22, and Ann. d. Mus. Civico di Storia Nat. di Genova (3), 1, 230). I give a description of it.

***Mutilla udana*, sp. nov.**

Black, the 2nd and 3rd abdominal segments red, the pubescence long, white; the front and face broadly in the centre, the temples, mesopleuræ and basal half of metanotum densely covered with depressed silvery pubescence, mixed with longer white hairs. Wings hyaline, iridescent, slightly tinged with violaceous at the apex; the 2nd abscissa of radius a little longer than the 3rd; the basal is shorter. Scutellum conically, triangularly raised, the basal (and shorter) slope roundly curved, the apical straight, oblique; the basal upper half with a broad, smooth shining keel in the centre. Ventral keel stout, prominent, roundly bluntly curved below. ♂.

Length 14 mm.

Meru low lands, Ngare na nyuki, January.

Head narrow, not quite so wide as the thorax, hardly so wide as the thorax, weakly, not closely punctured, the space bordering the ocelli smooth. 3rd joint of antennæ below as long as the 4th Mesonotum not strongly, but not very closely punctured, the scutellum more closely, rugosely punctured. Metanotum closely reticulated. Propleuræ smooth at the base above, below punctured, the rest closely somewhat strongly striated. Mesopleuræ closely, rugosely reticulated. Apical part of metapleuræ widely reticulated, the base smooth above, punctured below. Mandibles long, narrow, edentate, gradually narrowed towards the apex.

***Mutilla hellotia*, sp. nov.**

Black, densely covered with black pubescence; a spot on the apex of the 1st abdominal segment and an interrupted band covering the 3rd of depressed white pubescence; the ventral segments broadly on the apex and the pygidium and penultimate segment covered with longish white hair; the ventral keel with a sharp-pointed, longish conical tooth between the middle and apex. Scutellum broadly rounded, not much raised above the mesonotum; the metanotum with a distinct keel extending from the base to the top of the apical slope, the part on either side of it being free from reticulations, especially at the base. Wings uniformly dark fuscous violaceous, the nervures black; the 2nd abscissa of radius a little shorter than the 3rd; tegulae large, curled up at the apex, punctured, more weakly and less closely at the base than elsewhere. ♂.

Length 22 mm.

Meru low lands, Ngare na nyuki, January. — *Usambara*: Tanga, June.

Head narrower than the thorax; the temples clearly longer than the eyes, not much narrowed, a little rounded; closely reticulated, except before and behind the ocelli;

the temples more strongly than the sides of the vertex. Apex of mandibles bluntly narrowed. The 3rd antennal joint is as long as the 4th. Thorax bluntly rounded at the base and apex; rugose, the pleuræ more distinctly than the upper part, the punctures running into reticulations. Metathorax closely reticulated, except on the lower part of the metapleuræ, which is covered with round distinctly separated punctures, the two parts being separated by a smooth line. The hair on the femora is white in front, black behind; on the rest of the legs black; the calcaria white.

***Mutilla phegea*, sp. nov.**

Black, densely covered with long black hair, the 3rd abdominal segment with broad lateral bands (broader than the black central part) of depressed white pubescence, the apical 2 dorsal segments densely covered with long white hair, the apices of the ventral segments with narrow bands of similar hair; the hair on the legs black; the spurs white. Wings uniformly fuscous violaceous, the nervures black, the 2nd and 3rd abscissæ of the radius black; the 2nd transverse cubital nervure is roundly angled towards the 3rd in the middle. The keel on basal ventral segment roundly, broadly curved, the apex more prolonged than the base. Scutellum rounded, flat, hardly projecting over the mesonotum. The 3rd antennal joint twice the length of the 2nd and half the length of the 4th; the 2nd and 3rd united not being so long as the 4th. Head rounded behind the eyes; the temples as long as the top of the latter. ♂.

Length 16 mm.

Meru low lands, Ngare na nyuki, January.

Head as wide as the thorax, above and on the temples closely reticulated. Pronotum and upper part of propleuræ coarsely reticulated, the lower part of the latter smooth. Mesonotum strongly punctured and with 2 furrows in the centre. Scutellum not much raised, rounded, coarsely reticulated. Metanotum and upper half of metapleuræ reticulated; the centre of the former at the base with 2 aræ of equal width and not much longer than wide, bordered by an area as wide as the central 2 united and narrowed on the outer side. The lower part of the metapleuræ strongly punctured, this part separated from the upper reticulated one by a smooth space, which becomes gradually widened towards the apex. Tegulæ strongly, but not closely punctured throughout.

This species was found by Prof. SJÖSTEDT flying on the open plains.

***Mutilla spilotoma*, sp. nov.**

Black, a band, narrowly interrupted in the middle, on the apex of the 2nd and a broader one, less widely interrupted, covering the apical two-thirds of the 3rd segment of depressed white pubescence, a band of longer pubescence on the apex of the 1st and similar bands on the apices of the 2nd and 3rd ventral segments; the basal segment above with longish white hair; the hair on the rest of the abdomen dense and black. The keel on the basal ventral segment curved, dilated triangularly at the apex. Wings

uniformly fuscous violaceous; the 2nd abscissa of the radius a little longer than the 3rd. ♂.

Length 17 mm.

Kilimandjaro: Kibonoto, cultivated region, May.

The 3rd antennal joint below, and at the base narrowly above, is yellowish white; it is about one quarter longer than the 4th. Head clearly narrower than the thorax, the temples as long as the eyes, roundly obliquely narrowed, the occiput not transverse; the upper part and the temples are closely reticulated; the face has a broad, roundly narrowed towards the middle, longitudinal keel down eitherside of the middle. Basal half of mandibles covered with white pubescence, and with longish white hair; the apex is bluntly rounded. Pro- and mesonotum closely, somewhat strongly punctured; the scutellum hardly raised above the level of the mesonotum, its apex with a broad rounded slope. Propleuræ smooth, the mesopleuræ closely reticulated. Metanotum reticulated; the base with 3 areæ, of which the central is longer than wide, narrowed towards the apex; the lateral do not reach to its apex but are much wider. The dorsal abdominal segments are weakly punctured; the 2nd is broadly smooth in the centre; the hypopygium is stoutly keeled near the outer edges, the keels becoming stouter towards the apex; the apex of the segment is obliquely sloped.

***Mutilla trichionota*, sp. nov.**

Black, covered with white pubescence, long and dense on the head, pronotum, pleuræ and base of abdomen; the basal half of metanotum densely covered with depressed silvery white pubescence, which hides the surface; the base of basal ventral segment of abdomen broadly roundly dilated, the apex not reaching to its middle below slightly, broadly roundly curved. Wings fuscous violaceous, lighter tinted at the base and middle of the anterior, the posterior uniformly coloured; the basal abscissa of radius sharply obliquely sloped, a little longer than the 2nd, the apical abscissa roundly curved; the 1st recurrent nervure is received before the middle, near the apex of the basal third. ♂.

Length 12 mm.

Kilimandjaro: Kibonoto, cultivated region. February.

Head narrower than the thorax, closely rugosely punctured, broadly, roundly narrowed behind the eyes, the space there as long as the latter. Mandibles unidentate, bluntly narrowed towards the apex. The 2nd and 3rd joints of the antennæ, united, are as long as the 4th, the 3rd is twice the length of the pedicle, which is wider than long. Thorax about twice longer than wide, rounded at the base, the apex transverse; the mesonotum is more strongly punctured than the pronotum; towards the apex the punctures run into coarse reticulations. Scutellum coarsely reticulated, the basal slope steep, smooth, bare and shining; the apex has a rounded, gradual slope. Metanotum coarsely reticulated. Base of propleuræ punctured, the middle smooth, the apex closely, longitudinally striated. Mesopleuræ closely, the metapleuræ more widely reticulated. Abdomen closely, distinctly punctured, the pygidium more coarsely than the rest, its middle

down the apical three-fourths smooth, the hypopygium strongly punctured except round the edges; the central part is thickly covered with long black hair. Tegulae smooth, their outer edge bearing black depressed hair; the apex depressed, fuscous.

***Mutilla pilidecorata*, sp. nov.**

Black, the upper part of the head, mesonotum and scutellum covered with longish black pubescence, the pubescence on the post-scutellum, the rest of the head, thorax, on the abdomen and legs white, the base of abdomen sparsely covered with long white hair; the 3rd and fourth abdominal segments, except in the centre, covered with depressed whitish pile; the apex of the antennal scape and the pedicle below, with a tuft of long white hair; the keel on the basal ventral segment roundly broadly curved, untoothed; the pygidium with a broad raised smooth central part, widened towards the apex; the sides and base of the hypopygium broadly raised. Wings smoky violaceous, the base to near the transverse basal nervure hyaline; the 2nd abscissa of radius not much longer than the 3rd; the hind wings have the basal third hyaline. ♂.

Length 12 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

Antennal scape below covered with long silvery hair; the 3rd joint widened gradually towards the apex, about one quarter longer than the 4th. Head as wide as the thorax, the temples roundly narrowed; the cheeks, malar space, sides of face and oral region densely covered with longish white pubescence; the centre of the face with a smooth, bare, shining, bordered depression, which becomes gradually roundly narrowed from the bottom to the top. The front, vertex strongly rugosely, the temples less strongly punctured. Thorax about 3 times longer than wide, the base and apex rounded; the pronotum coarsely reticulated; the mesonotum less strongly and more closely rugosely punctured; the scutellum flatly rounded, more closely rugosely punctured. The metanotum reticulated; the basal central area not reaching to the top of the apical slope; the basal half widened, obliquely narrowed at the apex. Basal two abdominal segments punctured, the 2nd weakly and more sparsely and with a large smooth space in the centre.

***Mutilla microphatna*, sp. nov.**

Black, densely covered with longish white hair; the basal 3 abdominal segments with broad bands of white pubescence on their apices, the basal ventral segment straight, broad, untoothed; wings fuscous violaceous, the basal abscissa of radius three times the length of the 2nd, the second cubital cellule being much smaller than usual, narrowed in front, where it is half the width of the hinder part, which receives the recurrent nervure at the apex of the basal third; the 1st and 2nd transverse cubital nervures are roundly curved; the recurrent is received in the middle of the cellule. The 3rd and 4th joints of the antennae are equal in length. ♂.

Length 10 mm.

Kilimandjaro: Kibonoto, 1000—1200 m., April.

Head roundly narrowed behind the eyes; closely, somewhat strongly punctured; the part in the centre below the antennæ triangularly raised, the narrowed end above and bordered by a depression. Antennal tubercles and apex of mandibles brownish. Thorax 3 times longer than wide, bluntly rounded in front and behind, the pro- and mesonotum and the scutellum closely, strongly punctured, except in the centre of the scutellum; the metathorax, except at the base of the pleuræ, closely reticulated, without a distinct central basal area.

This species may be known by the small 2nd cubital cellule.

***Mutilla pulchrihirta*, sp. nov.**

Black, the calcaria white, the abdominal segments densely and broadly fringed with bright golden hair; wings fuscous violaceous, their nervures black; the pubescence dense and black, longer and white on the pleuræ, sternum, base of abdomen and middle of the ventral segments, golden on the sides of the latter. Head coarsely punctured, more or less reticulated, the centre of the face smooth, raised; the occiput with the sides broadly rounded, the temples as long as the eyes, narrowed. Base and apex of thorax broadly rounded, about 3 times longer than wide, closely, deeply punctured, the lower half of the propleuræ stoutly longitudinally striated, the apex of metapleuræ smooth; the metathorax closely reticulated. Basal 2 segments of abdomen strongly, closely, the others more weakly punctured; the pygidium strongly punctured. ♂.

Length 9 mm.

Kilimandjaro: Kibonoto, cultured zone, April.

Mandibles sharply pointed at the apex. The 3rd antennal joint not much longer than the 4th, and about one third of the length of the latter. The 2nd abscissa of the radius is a little shorter than the 3rd; the 2nd transverse cubital nervure is roundly bent outwardly in the middle; the 1st recurrent nervure is received very shortly behind the middle of the cellule. Hind tibiæ with 4 short, thin, widely separated spines.

***Mutilla mitana*, sp. nov.**

Black, the prothorax, mesonotum and scutellum red, the head, thorax and base of abdomen thickly covered with long white hair; the rest of the body and legs more sparsely covered with similar hair; the apex of the 2nd abdominal segment with a band of depressed white pubescence; the whole body, except the apices of the pro- and mesopleuræ, closely, strongly punctured; the metathorax, except the pleuræ broadly in the middle, closely, strongly reticulated; wings fuscous violaceous, lighter coloured at the base, the nervures black; the basal 2 abscissæ of the radius equal in length; the 2nd transverse cubital nervure roundly curved; the 1st recurrent nervure received distinctly beyond the middle. The keel on 2nd abdominal segment straight, stout, obliquely narrowed at the base and apex. ♂. — Length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

Antennal scape covered with short white hair; the flagellum thick, opaque; the 2nd

joint is wider than long, roundly narrowed at the base, transverse at the apex; the 3rd, thicker than it, as long as broad; the 2 not being together so long as the 4th. Mandibles with 3 distinct teeth, the apical 2 oblique, the 1st longer and more sharply pointed than the 2nd; the 3rd large, pointing downwards, wide at the base, roundly curved at the apex, transverse at the base, ending in a curved sharp point. Temples roundly narrowed, a little longer than the top of the eyes. Antennal tubercles round, smooth and shining below, punctured above; there is a longish, shining tubercle down the centre of the face; its apex is obliquely sloped. Pygidium more strongly punctured than the rest of the segments, its apex transverse; the hypopygium sparsely punctured in the middle; the sides with a wide, deep, curved furrow. The base of the thorax is almost transverse, the apex is rounded; the tegulae black, strongly punctured.

***Mutilla pulchricolorata*, sp. nov.**

Dark blue, the head and pleurae darker coloured, the prothorax, tegulae, mesonotum, scutellum and upper half of mesopleurae sanguineous; a broad band of pale fulvous pubescence on the sides of the 1st and 3rd abdominal segments and a narrow band on the apex of the 2nd; the head, pro-mesonotum, scutellum and back of abdomen densely covered with blackish hair; the hair on the rest of the head, thorax and abdomen, as well as the legs, white; the calcaria white; wings fuscous violaceous, the base narrowly hyaline; the 2nd abscissa of the radius is a little longer than the 3rd; the 1st recurrent nervure is received beyond the middle. ♂.

Length 12 mm.

Kilimandjaro: Kibonoto, low lands, January.

Head as wide as the thorax, the temples straight, shorter than the eyes, the occiput obliquely dilated from them to the middle; the front and vertex closely reticulated. Mandibles with a broadly rounded apical tooth; the 2nd is long, transverse and broad, depressed in the middle, giving it the appearance of being bidentate. Thorax twice longer than wide, transverse at the base and apex with the sides rounded; the pro-mesonotum and scutellum closely, rugosely reticulated; the mesonotum with 2 distinct furrows on the apical half bounding the centre; the metathorax more widely and regularly reticulated; in the centre of the base of the metanotum is an area, longer than wide, rounded at the apex, smooth and with a keel down its centre. Tegulae closely punctured. First abdominal segment short, cup-shaped, broad; its sides at the base forming stout teeth; the 2nd segment is not much longer than it is wide at the apex; below at the base it broadly rounded; the segments are all closely punctured, the last more strongly than the others and with the basal half raised; the hypopygium is less strongly punctured and is smooth in the centre at the base. The basal ventral segment untoothed.

***Mutilla artotana*, sp. nov.**

Black, the metathorax red, the outer edge of the tegulae white, the apex more broadly white, tinged with rufous; the calcaria white, wings hyaline, tinged with viola-

ceous, the nervures black, the basal abscissa of the radius twice the length of the 2nd; the 3rd as long as the 1st. The 1st recurrent nervure received near the base of the apical third of the cellule. Ventral keel broad, slightly dilated at the apex, which is, as is also the base, obliquely sloped. Antennal tubercles and middle of mandibles red. The 2nd antennal joint broader than long, short; the 3rd is almost as long as the 4th. Thorax rounded at the base and apex. Head rounded broadly behind. The whole body strongly punctured, except the metathorax which is closely reticulated; the pubescence is white, and is longer on the scutellum and base of abdomen than elsewhere. Pygidium strongly, the hypopygium less strongly and closely punctured, the sides rounded. ♂.

Length 7 mm.

Meru low lands, December.

The 1st abdominal segment is as long as it is wide at the apex; the 2nd has the sides broadly rounded.

***Mutilla pulchridecorata*, sp. nov.**

Black, the basal three abdominal segments bright red, except the basal slope of the 1st and a broad line in the centre of the 3rd; covered somewhat thickly with longish white hair; the pronotum, basal half of metanotum, the apices of the abdominal segments fringed with white pubescence and with white pile; the basal half of the 2nd with depressed white pile; wings fuscous violaceous, the basal fourth hyaline; the basal abscissa of radius one fourth of the length of the 2nd and a little longer than the 3rd; both the recurrent nervures are received beyond the middle of the cellules. Scutellum large, triangularly conical, the basal slope smooth in the middle. ♂.

Length 12 mm.

Kilimandjaro: Kibonoto, cultivated zone, April, November.

Head as wide as the thorax, the temples short, broadly narrowed; there are 2 rounded tubercles on either end of the base of the mandibles, and a distinct tooth, rounded at the apex, in the centre of the face shortly below its middle. Malar space one third of the length of the eyes. The puncturation on the head is close and strong; it is still stronger on the mesonotum and scutellum; the metanotum closely reticulated; the basal half with 2 curved keels which converge towards the apex, but do not touch there; in the centre, between them, is a straight keel. Propleuræ punctured above, the apex, from near the top, with a row of longitudinal foveæ with sharp edges. Metapleuræ strongly, closely punctured-reticulated; the upper part of the metapleuræ widely reticulated to the middle, which is smooth; the lower part has round punctures. The abdominal segments closely punctured, smooth in the centre. There is a curved, strongly punctured depression on either side of the apical half of the hypopygium; the pygidium is strongly punctured, with a straight line down the middle.

***Mutilla amabilis*, sp. nov.**

Black, the abdomen, except the apex of the penultimate above and the apical all round, red, the front broadly in the centre, the apical half of the pronotum, the basal

half of the metanotum and the mesopleuræ densely covered with depressed silvery pubescence; the rest of the head and thorax clothed, not very densely, with white, the mesonotum densely covered with short black stiff hair. The 3rd antennal joint is not much longer than the 4th. Basal 3 abscissæ of radius equal in length. Wings hyaline, the apex slightly tinged with violaceous. Temples roundly narrowed. ♂.

Length 10 mm.

Meru low lands, Ngare na nyuki, January.

Face broadly raised, densely haired. Clypeus broadly depressed in the centre, the sides broadly raised. Mesonotum with distinct, complete parapsidal furrows, strongly punctured, with the punctures distinctly separated; the scutellum is more closely rugosely punctured. Metanotum strongly reticulated; short, the apex almost transverse. Propleuræ with distinct punctures at the base and apex above, the middle strongly obliquely striated. Central part of mesopleuræ closely reticulated-punctured, the base and apex smooth; the base of metapleuræ smooth, except for a few punctures below, the rest reticulated. Apex of tegulæ covered with silvery pubescence.

***Mutilla ruhama*, sp. nov.**

Black, the 2nd and 3rd segments entirely and the 4th broadly on the sides above and entirely below, the black central portion being narrower than the lateral and widened gradually towards the apex, red; wings almost hyaline to near the transverse basal nervure, fuscous-violaceous beyond it; the 1st and 3rd abscissæ of the radius equal in length, the 2nd a little shorter; the 1st recurrent nervure is received very shortly beyond the middle of the cellule, the 2nd nearer the apex. Ventral keel with a short, blunt tooth near the base, and a sharper, narrower and longer one on the apex. Clypeus with a blunt, distinct tooth on the outer edge of the apex. The mandibles become gradually narrowed towards the apex; unidentate. ♂.

Length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., May.

The entire body and legs clothed with long white hair; the base of the metanotum with a dense semicircular patch of depressed silvery pubescence. Eyes ovate, broader below than above, without an incision. Temples rounded, not narrowed, longer than the top of the eyes; the occiput is quite transverse. Front and vertex rugosely reticulated, the former more strongly and distinctly than the latter. Pro- and mesonotum closely and rugosely punctured, more or less reticulated, the scutellum more strongly reticulated. Metanotum reticulated; near the top of the apical slope is an area, twice longer than wide, rounded above, transverse below. The base of the thorax is more bluntly rounded than the apex. Basal 2 segments of abdomen somewhat strongly, the 3rd to 6th more weakly punctured on the basal half; the last dorsal is more strongly punctured than any of the others. The 3rd antennal joint is clearly shorter than the 4th. Base of propleuræ rugosely reticulated, the centre depressed, stoutly striated, the striæ clearly separated; the apex smooth; the mesopleuræ closely rugosely reticulated in

the centre; the metapleuræ reticulated closely at the base below, the apex more widely and irregularly reticulated, the rest smooth. There are distinct parapsidal furrows; there are no spines on the hind tibiæ.

Gen. *Dasylabris*, RAD.

Dasylabris euphemia, sp. nov.

Black, the upper part of the thorax to the top of the apical slope, dark red; the apex of the 1st segment above and of the 2nd all round covered with white pubescence, a semicircular spot of similar pubescence on the centre of the 4th, and the whole of the apical is covered with white hair, as are also thinly the apices of the ventral segments. Thorax twice longer than wide, rounded at the base and apex; the basal half becomes gradually widened; the apex of this part is widened; and from there it becomes gradually and distinctly narrowed. Ventral keel straight, untoothed. ♀. — Length 7 mm.

Meru low lands, November.

Head, thorax and abdomen somewhat thickly covered with black hairs on the back; the legs sparsely covered with white hairs, and still more sparsely with longer black hair; the tibiæ have no spines; the calcaria pale fulvous. Abdominal petiole clearly longer than it is wide at the apex; it becomes gradually wider towards the apex; the base laterally projects into stout, oblique teeth; it is flat and straight below.

Dasylabris basihirtus, sp. nov.

Entirely black; the head covered with depressed silvery pubescence, and, more sparsely, with long black hairs, the thorax sparsely covered with short depressed silvery pubescence, and, more thickly than the head, with black hairs; the basal half of metapleuræ thickly covered with depressed silvery pubescence; the apex of the abdominal petiole from the top of the basal slope covered with silvery pile, the sloping basal part, above and below, with long black hair; on the base of the 2nd segment, in the centre, is a pyriform spot (the narrowed end at the base) of silvery pubescence, on its apex are 4 larger spots of similar pubescence, the central 2 round, the lateral larger and oval, extending beyond the base and apex of the central; there is a small spot, longer than wide, on the centre of the 4th, and a large wide, transverse one across the central part of the 5th; the dorsal segments are somewhat thickly covered with black hairs, the ventral are fringed with long white hair. Legs densely covered with depressed silvery pile; the spurs and tarsal spines black. Thorax almost transverse at the base; with the sides broadly rounded; its apex above bluntly rounded; there is a stout, bluntly rounded tubercle on the sides above before the middle. ♀.

Length 14 mm.

Meru low lands, Ngare na nyuki, January.

Head clearly narrower than the thorax, very transverse behind, margined above; the temples shorter a little than the eyes. Antennal scape strongly punctured and covered with longish white hair; the flagellum with a microscopic pale down; its 2nd joint

about one fourth longer than the next; it is longitudinally reticulated-punctured; the longitudinal reticulations longer below. Thorax fully twice longer than wide; it becomes gradually, slightly, but distinctly narrowed from the lateral tooth; the apex has a steeply oblique slope; its sides stoutly serrate. The sculpture of the pleuræ is hid by the pubescence. Abdomen wider and longer than the thorax; the 2nd segment is broadly rounded at the base, and becomes slightly narrowed towards the apex. Pygidium clearly defined, the lateral bordering keels distinctly raised and separated; the central part is closely, longitudinally reticulated. The keel on 1st ventral segment is obliquely narrowed upwards from shortly beyond the middle; the basal part has a straight edge; the base of the 2nd projects obliquely sharply downwards, and forms with the apex of the 1st a triangular incision; there is no keel on it; the 1st is broad at the base, with tooth-like lateral angles; the segment does not become much widened towards the apex.

D. mephitis, SM. is a smaller species than this; it has the thorax red above, and it becomes gradually narrowed from the base towards the apex, which is not the case with *basihirta*, its head is narrower compared with the thorax; the 2nd abdominal segment longer compared with the width at the base, and narrower compared with the width at the thorax, the abdominal hair marks are distinctly tinged with yellow or fulvous, not clear white; and altogether it is a more slenderly built species.

***Dasylabris punctinoda*, sp. nov.**

Black, densely covered with white pubescence, the 2nd and following segments of the abdomen with distinct pubescent bands on the apex; wings hyaline, the nervures black. Head rugosely reticulated, the vertex behind the ocelli less strongly than the rest. Temples shorter than the eyes, not narrowed; the occiput transverse. Antennæ stout, the 3rd joint about one quarter longer than the 4th. Pro- and mesothorax closely, somewhat coarsely reticulated, the greater part of the propleuræ, the base and the apex of the mesopleuræ, and more than the basal half of the metapleuræ, smooth. Base of thorax bluntly rounded, the sides of pronotum straight, oblique; the top of metanotum transverse, keeled; between the keel and the base are 5 longitudinal keels; the space bounded by the 3rd and 4th is as wide as that covered by the inner three; the outer area is a little more than half the width of that on its innerside; in the centre of the inner area are 3 transverse keels, the outer areas are stoutly, irregularly reticulated; the apical slope is depressed slightly in the centre; the sides are irregularly reticulated, more strongly above than below; the upper reticulations larger than the lower; on the apical half of the metapleuræ are 2 rows of areas. Base of 1st abdominal segment smooth, the rest strongly punctured, the punctures deep, round and clearly separated; its ventral surface straight, neither toothed nor keeled; the 2nd closely punctured, as long as it is wide at the base, where it becomes roundly narrowed; its basal segment rounded at the base; the other segments are more closely punctured; the pygidium more coarsely punctured. Calcaria white. Tarsal spines fulvous. ♂. — Length 8 mm.

Kilimandjaro: Kibonoto, cultivated region. May.

Scoliidae.

Triliacos nigrita, FAB.

Scolia nigrita, FAB., Spec. Ins. 1, 452, 3. — *Triliacos nigrita*, SAUSSURE, Cat. Spec. Gen. Scoli., 35. — *Kilimandjaro*, Kibonoto, 1000—1900 m. October. One ♀. — This species mimics *Discolia alaris*, SAUS. It is much more strongly and closely punctured all over than any specimens of that species I have seen; the smoky part of the wings (anterior and posterior) is much less extended, it only, in the fore wings, forming a narrow stripe which just reaches the anterior portion of the cubital cellules, and, at the base, it does not reach the posterior part of the discoidal, the apical discoidal being hyaline, the second having a narrow cloud along the fore margin and extending in a broadly rounded curve to the posterior part of the apex; there is a difference, too, in the apical transverse cubital and transverse median nervures; in *alis* these are rounded, in *nigrita* distinctly angled in the middle.

Discolia alaris, SAUSS.

Cat. Sp. Gen. Scoli., 85 and 282. — *Kilimandjaro*: Kibonoto, 1300—1900 m. May. SAUSSURE hints, *l. c.* that *Triliacos nigrita* may be a form of *alis* with two, instead of one, discoidal cellules. There is, however, a difference in the form of the alar neurulation; in *nigrita* the radial nervure projects distinctly beyond the apical transverse cubital, while in *alis* it only extends to it; in the latter the apical transverse cubital and the transverse median are broadly rounded in the middle; in *nigrita* narrowly angled, the transverse median being sharply angled below the middle.

D. disparilis, KIRBY (Trans. Ent. Soc. 1889, 445, Pl. XV, f. 7) is very closely related to *alis*, but is, I consider, a distinct species, it having the body much more strongly and closely punctured, the clouds in both wings are much more extended, the radius extends distinctly beyond the cubital cellules, and there is a well marked difference in the form of the apical submedian cellule; in *disparilis* it becomes gradually roundly narrowed from the lower part of the base to the upper part of the apex, the discoidal nervure issuing from distinctly above its middle; in *alis* the upper and lower parts are straight, oblique, the upper part more oblique than the lower, and the discoidal nervure issues from the middle. In *alis*, it is to be noted, however, that the extent and depth of colour of the clouds in the wings vary.

Discolia ruficornis, FAB.

Scolia ruficornis, Ent. Syst., II, 230, 9. — *Discolia ruficornis*, SAUSS. Cat. Spec. Gen. Scoli., 85, 62.

Kilimandjaro, Kibonoto low lands. January. — *Usambara*.

D. melanaria, BURM., seems to be a form of *ruficornis* with black antennæ.

***Discolia abyssinica*, SAUSS.**

Scolia abyssinica, SAUSSURE, Ann. Soc. Ent. Fr. 1858, 203, 9; *Discolia abysinnica*, SAUSS., Cat. Spec. Gen. Scoli., 87, 66. — One example of SAUSSURE'S var. *b.* from *Meru* low lands. December.

***Discolia usambaraensis*, sp. nov.**

Black, the hair on the apex of the 4th abdominal segment and on the following 2 bright red, on the rest of the body and legs black; the wings uniformly dark fuscous violaceous, the nervures black. The puncturation on the head behind the ocelli is very weak and sparse; below them the punctures are more numerous but not much stronger; they become stronger and more numerous nearer the antennæ, the part above these being raised into a broad triangle, the narrowed end below; the upper part is bounded by a strongly punctured transverse furrow. The sides and base of the mesonotum, broadly, the apex more narrowly and sparsely punctured, the rest impunctate; the scutellum are more closely and strongly punctured, except narrowly at the apex; the metanotum and basal segment of the abdomen are still more strongly and closely punctured; on the top of the apical slope of the latter is a smooth, oval, distinct fovea or depression. The apical transverse cubital nervure is obliquely sloped in front and behind, the latter being longer than the former. ♀. — 27 mm.

Is allied to *D. erythropyga*, BURM. and the Oriental *D. analis*, F. *D. erythropyga* is smaller, narrower, and has the head and antennæ red.

Mombo, *Usambara*. June.

***Discolia mernensis*, sp. nov.**

Black, the mandibles piceous red, the spurs and tarsal spines white, the wings hyaline, iridescent, the costa, stigma and basal nervures testaceous, the apical nervures very pale; the hair on the mesonotum rufous, on the rest of the body, head and legs white; the abdominal segments with distinct hair bands; the pygidium with firey red stiff hair; the basal half with long stiff black hair. Radial cellule not much longer than wide, the apical abscissa of the radius long and straight, rounded below. ♀. — Length 10 mm.

Meru low lands, Ngare na nyuki, January.

Vertex smooth, the front sparsely punctured below. Scutellum with a row of punctures at the base, and at the apex laterally; the post-scutellum punctured at the base and apex; the base of the metanotum is more finely and much more closely punctured. The apical transverse cubital nervure is straight, not oblique and forms a sharp angle with the cubitus below.

This is the smallest *Discolia* known. It may be really a *Dielis* with the apical recurrent nervure obliterated, the apical nervures all being, as I have stated, faint. If a *Dielis* it most resembles *D. capensis*, SAUSS.

***Dielis curvittata*, sp. nov.**

Black, the abdomen rufo-fulvous, with the basal slope of the 1st segment, the base narrowly of the 2nd, 3rd and 4th, a transverse stripe beyond the middle of the 4th, a curved comma-like spot on the sides of the 2nd and 3rd, the thickened part on the outer edge, and the ventral segments more or less, black. Wings fuscous, much darker in front to the end of the radial cellules. Calcaria white, the inner hinder spur roundly dilated at the apex. Radial cellule distinctly projecting beyond the cubital, rounded below, straight at the apex; the apical transverse cubital nervure straight in front, the lower half roundly curved backwards. Head, pro-mesonotum and metanotum closely punctured; the scutellums more sparsely punctured at the base and apex. The pubescence on the head, thorax and legs is cinereous; the apices of the abdominal segments are fringed with bright rufous hair. ♀.

Length 17 mm.

Usambara: Mombo, June.

Probably the size and form of the abdominal markings vary. The colour of the long spines on the fore tarsi are blackish in one, reddish in another specimen.

***Dielis Sjöstedti*, sp. nov.**

Black, the head with pale fulvous, the pronotum, base of mesonotum and apical 3 abdominal segments densely covered with rufo-fulvous hair, the hair on the rest of the thorax, head and legs white; the apices of the basal 3 abdominal segments with white hair fringes; the pygidium fiery red; the ventral fringes white, except the last which is bright rufous. Wings hyaline, iridescent, the apex from the end of radius lightly fuscous violaceous, the nervures fuscous to testaceous; the radius distinctly projects beyond the cubitus, it is broadly rounded below, straight in front; the transverse cubital nervure is slightly, but distinctly curved towards the apex in the middle. The metanotum is more closely and strongly punctured than the rest of the thorax and has a patch of pale fulvous hair in the centre. Fore tarsi more or less rufous; the spurs not dilated. ♀. — Length 17 mm.

Meru low lands: Ngare na nyuki. January.

This species is related to *D. albicollis*, CHR. and especially the var. *aureicollis*, LEP., but that species may be known from it by the hair on the apex of the abdomen being black, and by the wings being uniformly blackish.

***Dielis masaica*, sp. nov.**

Black, the pubescence white all over, the pygidium black, towards the apex its stiff pile is dull rufous; the abdominal segments with white hair bands, the calcaria white, the tarsal spines black; wings fuscous, the apex of costal and radial cellules dark fuscous violaceous; the whole wings iridescent, tinged with violaceous; apex of radius straight, broadly rounded below, clearly projecting beyond the cubital nervure, which is straight on front half, curved towards the base of the cellule behind. ♀.

Length 17 mm.

Meru low lands: Ngare na nyuki. January.

The puncturation is weak, except on the sides of the mesonotum, which are broadly and rather strongly punctured; the metanotum is smooth, and its base forms a large triangle in the centre, the sides being depressed and narrowed from the centre to the sides. Clypeus with 3 strong keels down the centre, the space between the central and lateral being depressed; on either side of these, on the apex, is a row of short keels or stout striae, widely separated. Labrum piceous.

Allied to *D. stigma*, SAUSS. and *D. capensis*, SAUSS.; both of these are much more strongly, closely and regularly punctured all over, the former may further be known by the apex of the wings being fuscous violaceous, the apical radial cellule being much longer and narrower compared with the length, and the clypeus is closely, strongly striated throughout; *capensis* has not the wings violaceous, but hyaline, slightly yellowish in front at the apex of the costal and at the radial cellules, the nervures, too, being testaceous.

***Dielis erionotus*, CAM.**

Black, the basal segment with a semicircular mark on the apex, and the other abdominal segments, except narrowly at the base, rufo-ferrugineous, the anterior tibiae in front and the basal and apical joints of the anterior tarsi, as well as the outer edge of the tegulae lemon-yellow; the clypeus yellow, with a large black mark in the centre; this mark is narrowed at the base and becomes gradually roundly dilated to the apex, which is transverse and slightly, but distinctly, dilated laterally; the head, thorax, basal segments of abdomen and the legs densely covered with pale cinereous, almost white, pubescence; the other abdominal segments fringed with similar pubescence; spurs and tarsal spines white; the wings hyaline, the nervures testaceous, the middle nervures blackish. ♂. — Length 15—18 mm.

Meru low lands: October. — *Usambara*: Mombo. June.

The apex of the radial cellule largely projects beyond the cubital cellule — about the length of the apical transverse cubital nervure. Head smooth, the mesonotum finely and closely punctured. The size of the black basal bands on the abdomen varies, and they become gradually narrower from the second to the apical segment. There is a yellow line on the base of the mandibles.

The Masai specimens do not differ materially from the types from Cape Colony. Except as regards the size of the black basal markings on the abdomen the examples do not show any variation. There seems to be an obscure yellow line on the apex at the pronotum. I cannot guess what may be the ♀ of this species. It appears to be a common one. It was described in the Trans. South Afric. Phil. Soc., XV, 211.

***Dielis dispilus*, sp. nov.**

Black, the clypeus except for a large triangular mark in the middle, base of mandibles, a line on the apex of the pronotum, narrow at the apex, broadly dilated on

either side of the middle, a little more than the basal half of the scutellum, post-scutellum, the apical third of the 1st abdominal segment, more than the apical half of the 2nd, the 3rd from shortly behind the middle and about the apical third of the 4th and 5th, the apical part of the 2nd ventral and a lateral line on the apex of the 3rd, yellow; there is a small black curved spot on either side of the middle of the 2nd, near the apex; the black band on the 3rd has a square projection on either of the middle; the apex of the 6th and the whole of the last are rufous coloured like the legs, which have the fore coxæ yellow in front, black behind; the 4 posterior coxæ and trochanters and the base of the fore femora are black; the apex of the 4 front femora narrowly and the posterior broadly, yellow; the calcaria white. Head, thorax, base of abdomen and legs densely covered with white pubescence. Wings hyaline, slightly infuscated at the apex, the nervures rufo-testaceous; the radial cellule long, fully 3 times longer than wide, the apical abscissa of radius roundly curved, longer than the apical transverse cubital nervure. ♂.

Length 17 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. September.

Mesonotum sparsely, the metanotum more closely and regularly punctured. Tegulae yellow. In one example the scutellum is black, except for 2 curved lateral spots near the middle; this specimen has only 2 small spots on the pronotum and the black abdominal bands are more extended.

***Dielis longinerva*, sp. nov.**

Black, the sides of the clypeus — the yellow on the sides narrower than the black centre — broadly; the black central mark broad above, becoming gradually, but not much, wider towards the apex, which is rounded, and does not quite extend to the apex, basal half of mandibles, a spot on the scutellums and narrow lines of equal breadth on the apices of the basal 5 dorsal abdominal segments, and on the 2nd to 5th ventral, and the fore tibiae in front, pale yellow; the tarsi rufo-testaceous; wings hyaline, the nervures pale fuscous, the radial cellule long, the apical abscissa projecting far beyond the transverse cubital; it is roundly curved and is about one half longer than the basal 2 united. ♂.

Length nearly 7 mm.

Meru low lands.

The hair on the head, thorax, base of abdomen and legs is white and only moderately dense; on the apices of the abdominal segments it is long and sparse. The tibial spines are distinct and white, as are also the calcaria. Apical half of the mandibles bright ferruginous.

A small slender species, noteworthy for the narrow apical yellow bands, of equal width on the abdominal segments, and for the black clypeal mark being much broader above than with the other species. The apical abscissa of the radius, too, is longer.

***Dielis leptotrichius* sp. nov.,**

Black, with the following parts sulphur-yellow: the sides of the clypeus broadly, the yellow obliquely narrowed below, through the black central mark being broadly dilated laterally at the apex, this part being obliquely narrowed from the top to the bottom on the upper side; labrum, a longish spot near the base of the mandibles in the centre, the apex of the 4 front femora and their tibiae entirely anteriorly, a broad band on the apex of the 2nd and 3rd dorsal segments, occupying almost the apical half of the segments, the black apical part having the central third roundly dilated, the apical half of the 4th, the black basal band with three rounded dilatations in the centre, the apical half of the 5th, the yellow band narrowed laterally, a similar band on the 6th, and minute spots on the sides of the 2nd and 3rd ventral. Wings hyaline, the nervures fuscous, the radial cellule long, broadly rounded at the apex, the radius projecting beyond the apical transverse cubital nervure somewhat more than the length of the latter, which has its lower half obliquely sloped towards the base of the cellule. ♂.

Length 7—15 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. November. — *Meru* low lands: Ngare na nyuki. January.

Head, thorax, base of abdomen and legs densely covered with longish, woolly, white pubescence, which is longer and denser on the metathorax than elsewhere. The puncturation on the head is weak and sparse; on the mesonotum it is stronger, but not close, especially towards the apex; the scutellum is closely, distinctly punctured to beyond the middle, except in the centre which is smooth, as is also the apex, which is bare. Pleurae and metanotum closely, but not strongly punctured.

There is a yellow line in the centre of the metanotum at the apex. The back of the abdomen has a violaceous hue. The species (as is the case with the males of many species of *Scolia* and *Elis*) varies greatly in size and in colouration, especially as regards the yellow markings. I have given the description of the larger sized specimens; with the smaller examples the pronotum may have a yellow band all round its apex; the scutellums may be yellow, wholly or in part, the quantity of yellow on the legs varies, the wing nervures vary from black to testaceous, and in the smaller specimens the dilatation on the black basal abdominal marks may not be so well marked. The apical abdominal segment and the apex of the penultimate vary from black to rufous.

There are 14 specimens, large and small, in the collection, so it is probably a common species. What its ♀ may be I know not. It is not *albicollis*, *collaris* or *fusciatella*.

***Dielis collaris*, FAB.**

Cf. SAUSSURE and SICHEL, Cat. Gen. sp. Scolii., 163. — A single male from *Kilimandjaro*, Kibonoto, 1300—1900 m., December, may be this species which is protean in its variation. It is 9 mm. long, is densely covered with cinereous pubescence all over, has rufous testaceous bands on the apices of the dorsal abdominal segments, these

occupying about one fourth on the 2nd, occupying more on the following until, on the last, it covers the whole segment; the wings are clear hyaline, with pale testaceous nervures; the apical abscissa of the radius is roundly curved, projects largely beyond the cubital, and is almost as long as the basal 2 united. The black mark on the clypeus is large and is not much narrowed above; the basal half of the mandibles is yellow, the apical rufous.

Looks like a small form of *erionotus* but should be known by the apical abdominal bands being much narrower and of equal width, the basal bands not being dilated in the centre as they are in *erionotus*, the basal abdominal segment is entirely black, the pubescence is less dense and the apical abscissa of the radius is longer. SAUSSURE and SICHEL (*l. c.*) state that the abdominal bands in *collaris* may be red.

Tiphiidae.

This group appears to be well represented in East Tropical Africa, not only as regards the number of species, but also in respect of the number of specimens of the individual species. The following table may aid in the identification of the species taken by Prof. SJÖSTEDT.

- | | | |
|---------|--|---------------------------|
| 1 (8) | Legs more or less red. | |
| 2 (5) | Femora red. | |
| 3 (4) | Wings fuscous violaceous, the antennæ black; length 15 mm. | <i>Sjöstedti.</i> |
| 4 (3) | Wings hyaline, the antennæ red; length 9—10 mm. | <i>massaica.</i> |
| 5 (2) | Femora black. | |
| 6 (7) | Metanotal area not narrowed towards the apex, the collar not keeled, the oral region red. | <i>erythrostroma.</i> |
| 7 (6) | Metanotal area narrowed towards the apex, the collar stoutly keeled, the oral region black. | <i>carinicollis.</i> |
| 8 (1) | Legs black. | |
| 9 (10) | Wings fuscous violaceous; length 13—14 mm. | <i>tinctipennis.</i> |
| 10 (9) | Wings hyaline, length under 12 mm. | |
| 11 (14) | Metanotal area transversely striated, the petiole long, pyriform; length 6—8 mm. | |
| 12 (13) | The metanotal area of equal width, its central keel not reaching to the middle; length 8 mm. | <i>marginicollis.</i> |
| 13 (12) | The metanotal area narrowed towards the apex, its central keel reaching to the apex; length 6 mm. | <i>meruensis.</i> |
| 14 (11) | The metanotal area not striated; length over 12 mm.; the petiole not long, pyriform. | |
| 15 (16) | Metanotal area 4 times as long as wide, mandibles red, tegulae black. | <i>aethiopica.</i> |
| 16 (15) | Metanotal area not much more than twice as long as wide; tegulae fuscous in part. Mandibles black. | |
| 17 (18) | Apical branch of radius rounded, not projecting beyond the cubital cellule, a large mark in the centre of the innerside of tegulae; central metanotal keel distinct, a distinct ridge on top of apical slope of abdominal petiole. | <i>pilosella.</i> |
| 18 (17) | Apical abscissa of radius angled, distinctly projecting beyond the cubital cellule, a black mark on the base of tegulae only, central keel on metanotalum indistinct; no distinct ridge on petiole. | <i>kilimandjaroensis.</i> |

***Tiphia Sjöstedti*, sp. nov.**

Black, the flagellum of antennæ fuscous underneath, the wings fuscous, tinged with violaceous, the costal cellule in the fore wings and the base of the posterior paler, more hyaline, the nervures black; the metanotum with 3 keels, the outer slightly converging towards the apex; the metapleuræ from shortly behind the middle closely finely obliquely striated. Basal half of pygidium laterally and the basal fourth in the centre strongly punctured, the punctures longish and interlacing; the rest closely, finely longitudinally striated. The pubescence is long and white, denser on the head, pronotum, mesopleuræ and apical segments of abdomen than elsewhere. Hind tibiæ densely covered with stiff silvery hair, and with a row of pale rufous spines on the innerside. ♀. — Length 14 mm.

Kilimandjaro: Kibonoto, 1300—1900 mm. April.

Head strongly and closely punctured, the punctures sparser on the ocellar region. Temples broadly, roundly narrowed. Pronotum strongly punctured, its basal slope and apex broadly smooth, the propleuræ smooth, except for a finely closely striated band on the lower, apical part. The mesonotum with large, deep, distinctly separated punctures. The scutellum with scattered punctures except in the centre; the apical row larger than the others. Metanotum shining, minutely aciculated. The mesopleuræ moderately strongly and closely punctured. The abdomen sparsely punctured at the base, the punctures becoming gradually closer and stronger from the basal to the apical segments; there is a distinct double row on the apex of the 1st, and a crenulated furrow on the base of the 2nd. — A not uncommon species, there being 6 examples.

***Tiphia massaica*, sp. nov.**

Black, the legs, except the coxæ, red; the flagellum of antennæ of a darker red, the mandibles of a slightly lighter red colour; the wings hyaline, very iridescent, the nervures and stigma black. Metapleuræ weakly, closely striated and opaque at the base, the rest much more strongly striated; the propleuræ smooth, the mesopleuræ weakly punctured in the middle; mesonotum smooth; the pronotum with a row of punctures on the base and apex; it is transverse in front, the sides do not become widened towards the apex. Head more closely and strongly punctured than the rest of the body; it is broadly rounded behind. There are 3 keels on the metanotum; the inner is weaker than the outer, which converge a little towards the apex. Abdomen weakly punctured on the apex of the segments where they are pilose; there is a distinct transverse, close row of punctures on the apex of the first. Pygidium strongly, almost rugosely punctured on the basal half; the apical is rufous and is closely transversely striated. ♀. — Length 10—11 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. April. — *Meru*: rain forest, 3000—3500 m. 6 specimens.

***Tiphia erythrostroma*, sp. nov.**

Black, the clypeus, mandibles, palpi, tibiae and tarsi red, the middle joints of flagellum fuscous above; wings hyaline, the nervures pale fuscous, the stigma blackish; propleurae aciculated, the mesopleurae strongly, but not closely punctured, the metapleurae finely, closely striated, weakly at the base, more strongly towards the apex. Pygidium reddish in the middle, finely longitudinally striated throughout; the basal 2 segments of the abdomen smooth, the others closely punctured. Basal half of pronotum strongly punctured, the apical smooth; the mesonotum with large, deep, widely separated punctures. Scutellum punctured at the base and apex, the apical rows stronger than the basal. The 2nd transverse cubital nervure is roundly curved outwardly to shortly beyond the middle, the apical part straight, slightly obliquely sloped. ♀.

Length 7—8 mm.

Meru low lands, December. One example.

***Tiphia carinicollis*, sp. nov.**

Black, the antennae, apex of clypeus, mandibles, palpi, tibiae and tarsi red; the flagellum of antennae largely infuscated above; wings hyaline, the nervures and stigma black; tegulae large, conchiform, dark fuscous at the base, the rest pale testaceous. Base of pronotum transverse, strongly keeled and with a crenulated furrow at the apex of the keel. There are 3 keels on the metanotum, the outer two distinctly converging towards the apex; the space between them irregularly, somewhat strongly transversely striated. Propleurae smooth; the mesopleurae in the centre finely, closely, almost rugosely punctured; the metapleurae striated, more closely below than above. First abdominal segment longish pyriform, distinctly narrowed at the base. The transverse median nervure is received in the costal cellule before the transverse basal; the 2nd recurrent nervure near the apex of the cellule. Temples short, the occiput broadly rounded. ♂.

Length 6—7 mm.

Meru low lands, December.

A slender species, readily recognised by the transverse, keeled base of pronotum, by the large tegulae and by the longish, pyriform 1st abdominal segment. One specimen.

***Tiphia tinctipennis*, sp. nov.**

Black, the mandibles broadly in the centre, the femora and the tibiae, red; the wings highly iridescent, fuscous violaceous, the hinder pair lighter in tint than the anterior; a faint hyaline cloud near the apex of the basal cellule, a narrow hyaline line runs in front of the cubitus from the base to the apex, a similar one on the other side of it, commencing near the 1st recurrent, and a curved one runs across obliquely the middle of the 2nd recurrent. Metanotum opaque, covered with a white down; it has 3 keels all extending to the apex, the outer two slightly more widely separated at the base than at the apex; the basal half of the metapleurae smooth and bare, the apical finely, closely obliquely striated. ♀. — Length 14 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

Head a little wider than the thorax, the temples roundly narrowed, forming with the occiput a rounded curve; the front and vertex strongly, closely punctured, the former more closely than the latter; the occiput almost impunctate. Antennal scape and the following 2 joints shining, below covered with white hair; the other joints opaque. Pronotum strongly, closely punctured, slightly more strongly than the head, the apex narrowly smooth; the sides broadly rounded, becoming slightly gradually widened towards the apex; the pleuræ smooth except for a few weak scattered punctures above. Mesonotum strongly, not very closely punctured, the punctures being all clearly separated; the scutellum is more weakly and sparsely punctured than it. Mesopleuræ with scattered punctures on the raised central part. Pygidium strongly, irregularly, not very closely punctured at the base, the centre distinctly striated, the striæ clearly separated. The pubescence on the head, body and legs is longish, white and moderately dense; the pubescence on the hinder tibiæ is dense; the spurs and tarsal spines are white.

This species approaches *T. rugosa* SMITH from South Africa; the latter is a smaller species, has the flagellum of antennæ entirely rufous, the tarsi testaceous and the mandibles red. It is evidently a common species judging from the number of specimens in the collection.

***Tiphia marginicollis*, sp. nov.**

Black, the flagellum of antennæ for the greater part brownish ferruginous; the pubescence white, dense on the base of pronotum at the top which is transverse and keeled; the metanotum opaque, the outer keels distinct, slightly converging towards the apex, the central keel much less distinct and clearly indicated on basal half, the area is irregularly transversely striated; the part outside it is irregularly striated, more or less reticulated; the depression at the base of the apical keel is strongly, but not closely punctured; on the sides is a stout keel, curved round at the apex, to the outer edge, on the basal three fourths, on the innerside of the spiracles; the apical slope is slightly depressed and is opaque, only very indistinctly striated. Front and vertex rather strongly, closely punctured; the temples short, forming with the occiput the segment of a circle. Pronotum, except for a curved band on the apex, strongly, closely punctured. The central third of the mesonotum strongly, closely, the lateral sparsely punctured. Scutellum with the basal slope and a curved band at the apex punctured, strongly but not closely. Propleuræ very finely striated, the striæ curved; the base with strong striæ. Mesopleuræ in the centre distinctly, but not very closely punctured and pilose. Metapleuræ closely, obliquely striated, except at the basal lower half, which is strongly aciculated; its apex is roundly curved. First abdominal segment longish pyriform, fully twice longer than it is wide at the apex, gradually, roundly widened from the base to the apex, which is four times wider than the base; it is strongly, but not closely punctured on the nodose part; the 2nd segment is shining and sparsely punctured; the 3rd to 5th are opaque, closely, finely, almost rugosely punctured; the sides and base of pygidium broadly smooth, the rest coarsely punctured; the hypopygium is not so coarsely punctured and has a

smooth line in the centre. Wings hyaline, iridescent, the stigma and nervures black; the 1st recurrent nervure is received in the middle, the 2nd shortly before the middle. Tegulae black, smooth. ♂. — Length 6—8 mm.

Kilimandjaro, Kibonoto, 1000—1200 m. January to April. 5 examples.

This species resembles closely *T. meruensis* but is larger, has the metanotal area more distinctly widened at the base and not transversely striated, the 2nd cubital cellule is longer, the radius is longer, and projects beyond the transverse cubital, the latter in *meruensis* being interstitial with the upturned branch of the radius, and the abdominal petiole is longer and more clearly narrowed at the base.

***Tiphia meruensis* sp. nov.**

Black, the underside and apex of the flagellum of the antennae and the apical part of the pygidium and hypopygium rufous; wings hyaline, the stigma and nervures black, the apex of the radius not projecting beyond the transverse cubital, but interstitial with it; the 1st recurrent nervure is received in the middle, the 2nd shortly beyond the middle of the cellule. Base of thorax transverse, margined. Metanotum with 3 complete keels, the outer slightly curving outwardly at the base; the apical half of the area irregularly transversely striated; the rest opaque, alutaceous; the metapleuræ closely striated, except at the base below. Propleuræ smooth, except for a striated band at the apex below. Mesopleuræ obscurely punctured in the centre. First abdominal segment longish pyriform, the base distinctly narrowed; the nodose part weakly, sparsely punctured, the apex depressed, striated. There is a distinct, crenulated furrow on the base of the 2nd segment; the last is smooth down the centre; its sides punctured. ♂. — Length 6 mm.

Kilimandjaro. *Meru*: rain forest, 3000—3500 m. One example.

Tegulae black, smooth. Vertex sparsely punctured laterally, the front closely punctured. Pronotum closely punctured, except at the apex; the mesonotum is more strongly, but not so closely or regularly punctured; the scutellum is widely punctured round the edges. The outer lateral keel on the metanotum does not curve round to the sides. The 4 anterior knees are testaceous.

***Tiphia aethiopica*, sp. nov.**

Black, the antennal scape, except at the base above, and the following 2 joints bright red; the rest of the flagellum of a duller red, more or less blackish above; apical joints of the 4 anterior tarsi, the apex of the 4 anterior tibiae and the hind spurs red; the anterior spurs pale, the tarsal spines tinged with fulvous; wings hyaline, very iridescent, tinged with fuscous towards the apex and with hyaline lines along the nervures; the recurrent nervures are received near the middle; the 2nd transverse cubital nervure roundly curved outwardly on the front half. Metanotum with outer carinae parallel, separated by the same distance throughout; the central is weaker and does not extend much beyond the middle; the metanotum opaque, alutaceous, the pleuræ closely striated, more closely and finely on the base below. ♂. — Length 11 mm.

Kilimandjaro: Kibonoto. April. 3 specimens.

The puncturation on the head is strong, but not close; below the antennæ it is aciculated; the clypeus is closer and more rugosely punctured. Pronotum strongly, but not very closely punctured except at the apex. The mesonotum is more closely punctured on the central apical half, the sides smooth, except for 2 or 3 punctures at the base and near the apex. Scutellum punctured round the edges, the apical row having more punctures than the others. The propleuræ sparsely punctured above, the apex finely closely striated. Mesopleuræ strongly, but not closely punctured. Basal abdominal segment almost smooth, except for a row of punctures on the depressed apex; the puncturation on the 2nd segment is weak and sparse; on the 3rd to 5th close and strong; the last is closely, longitudinally striated.

***Tiphia pilosella*, sp. nov.**

Black, densely covered all over with longish white pubescence, the flagellum rufous below; tegulæ sordid testaceous at the base on the outer and, more broadly, at the apex on the inner side; the metanotal area narrowed towards the apex, which is about one third of the length; the metanotum on either side of its apex is depressed, the depression bearing 3 stout keels, forming arcæ; the central keel of the area is weak compared with the lateral; on its apex are a few transverse striæ. The head is closely and strongly punctured, except narrowly at the sides and, more largely, below the ocelli. There is a row of large punctures along the apex of the clypeus. Pronotum strongly punctured, except at the apex, the punctures more numerous at the base. The punctures on the mesonotum are large and much more widely separated; they are as large and still more widely separated on the scutellum than they are on the mesonotum. Propleuræ smooth, obscurely striated at the apex below. Mesopleuræ sparsely, strongly punctured, the puncturation almost hid by the dense long pubescence. Wings hyaline, the stigma and nervures black; the 1st recurrent nervure is received distinctly beyond the middle, the 2nd almost in the middle of the cellule. The 1st abdominal segment is distinctly narrowed at the base; it is there somewhat strongly punctured; above the narrowed part is a transverse ridge; the part beyond the ridge is only very sparsely punctured; the apex depressed and strongly punctured, followed by a strongly aciculated band. The pubescence on the abdomen is dense, and it becomes denser towards the apex; the hairs come from punctures; the last segment is more strongly punctured than the others, above and below. Calcaria white. ♂. — Length 7—10 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May, November. A common species, represented by males only. It is not, I believe, the ♂ of *T. athiopica*.

***Tiphia kilimandjaroensis*, sp. nov.**

Black, the underside of the antennal flagellum fuscous, the 4 anterior knees rufous; the calcaria white, the 4 anterior tinged with fulvous; wings hyaline, slightly tinged with fuscous, especially towards the apex, the stigma and nervures black, the apex of the

radius sharply angled in the middle, projecting outwardly in a short stump and extending distinctly beyond the cubitus; the basal abscissa of the radius roundly curved; both the recurrent nervures are received shortly beyond the middle, and are roundly curved outwardly in front. Tegulae large, rufo-testaceous, black on the innerside at the base. Pronotum rounded, widened gradually, obliquely towards the apex. The central keel on the metanotum is weak, and is indicated only on the basal half; the apex on either side of the area is depressed, the furrow without distinct keels. Basal slope of 1st abdominal segment closely minutely punctured in the centre, the sides with scattered, much larger punctures, the top with an irregular transverse ridge, the apical dilated region with distinct, scattered punctures. The puncturation on the other segments becomes gradually stronger and closer (as does also the pubescence) from the second to the apical on which it is very strong above, somewhat weaker below; it has no smooth longitudinal line. ♂.

Length 11 mm.

Kilimandjaro: Kibonoto. May.

Head closely and strongly punctured on the front and vertex; below the antennae it is as strong, but not so close. The puncturation on the pronotum becomes stronger towards the smooth apex; there is a distinct keel on the base; on the mesonotum it is much stronger, but not very close, especially laterally towards the apex; the puncturation on the scutellum is closer and weaker; the metanotum is impunctate, opaque, the outer keel extends from the base to the apex of the metanotum, the apical part being straight, oblique and runs into the apical outer angle. Propleurae strongly punctured, especially below, the apical part broadly smooth to the lower third. Mesopleurae sparsely, somewhat strongly punctured. Metapleurae strongly, closely, obliquely striated.

The pubescence is very thick and close; it is longer and denser on the mesopleurae, and there is a thick fringe of it on the sides of the scutellum.

This species is closely allied to *T. pilosella* from which it differs in being larger and stouter, in the basal abscissa of the radius being equal in length with the 2nd, not shorter than it as in *pilosella*, in the 2nd recurrent nervure being received beyond, not before the middle of the cellule, the tegulae are only black at the base on the innerside, not black throughout to near the middle, the metanotal area is not narrowed towards the apex, in *pilosella* distinctly so, and the central keel is less distinct. One example.

Myziniidae.

Plesia meruensis, sp. nov.

Black, densely covered with longish white pubescence, mandibles except at apex, clypeus, a widely interrupted band on the base of pronotum, a narrower, less widely interrupted one on its apex, the greater part of the tegulae, a longish mark down the base of mesonotum, straight at the base, narrowed at the apex above, becoming gradually

widened below, the lower edge obliquely rounded; broad bands, widened laterally, on the basal 5 abdominal segments, one on the 6th, narrower on the middle, the sides broadly, squarely dilated backwards to near the middle of the segment, and a triangular spot near the apex of the 7th, the narrowed end at the base, broad bands, incised in the middle, at the base, on the 2nd to 5th ventral segments, and one, not incised, on the 6th, bright sulphur-yellow; the legs of a paler yellow, the coxæ above, trochanters and the femora black, the apices of the tarsal joints rufous; wings clear hyaline, the stigma rufo-testaceous, the nervures black, the 2nd abscissa of radius about one fourth longer than the 3rd; the 1st transverse cubital nervure broadly, roundly curved, the 3rd obliquely sloped, posteriorly rounded, straight from below the middle in front; the 1st recurrent nervure is received close to the apex of the cellule at about the same distance as the 2nd is from the base; in the hind wings the transverse anal nervure is shorter than the space between it and the base of the cubitus. ♂.

Length 13 mm.

Meru low lands, Ngare na nyuki.

Head and metanotum closely and somewhat strongly punctured; the mesonotum closely punctured laterally, the sides of the scutellum more finely, but not so closely punctured; the pleuræ are more closely and finely punctured.

The african species of *Plesia* stand in need of a thorough revision. The present species may be known from *6-fasciata* by the presence of a spot on the pleuræ, by the 2nd transverse cubital nervure being broadly, roundly curved, by the 1st recurrent nervure being received at a greater distance from the apex of the cellule, in comparison with the distance the 2nd is received from the base, and the transverse anal nervure in the hind wings is equal in length with the basal abscissa of the cubitus, not longer than it as in *6-fasciata*.

***Myzine (Meira) rufitarsis*, sp. nov.**

Black, shining, the front and vertex broadly, the apex of the 4th abdominal segment broadly, the greater part of the 5th and the whole of the 6th, the 3rd ventral in the middle and the following entirely, and the mandibles broadly in the middle, bright red; the flagellum of antennæ of a paler, the knees, apex of tibiæ and the tarsi of a deeper, darker red, wings light fuscous hyaline, the costa and stigma black, the nervures dark fuscous; the 2nd cubital cellule shorter than its pedicle, both the nervures roundly curved, the 2nd more so than the basal; the 1st recurrent nervure interstitial; on the sides of the 2nd abdominal segment is a transverse white spot, its apex gradually roundly narrowed from the inner to the outer side, on the 3rd is a somewhat similar, but smaller and more irregular spot. ♂. — Length 7,5 mm.

Meru low lands, 29th December.

Smooth and shining, the head, thorax and legs somewhat thickly covered with longish, stiff white hair; the calcaria and tarsal spines stiffer, thicker, white, tinged with red; the spurs pale reddish; the tarsal spines long; the long spur of tibiæ nearly as long

as the metatarsus; claws cleft, the basal tooth shorter and thicker than the apical. Basal 3 joints of antennal flagellum of equal length, the scape bearing long blackish hair. Ocelli in a curve, the hinder separated from the eyes by a greater distance than they are from each other.

Pompilidae.

Salius, F.

I use the generic names, as a matter of convenience, of the Pompilidae, as defined by Dr. ROBERT LUCAS, in his paper on the Pompilidae of East Africa, p. 57. The species enumerated here may be separated by means of the following table.

- | | | |
|---------|---|-----------------------------|
| 1 (6) | Claws cleft, the basal tooth dilated, shorter than the apical. | <i>Cyphononyx</i> . |
| 2 (3) | Apex of wings broadly yellowish hyaline, the basal 5 joints of antennae rufous. | <i>Caroli-Waterhousi</i> . |
| 3 (2) | Wings uniformly fuscous violaceous, the antennae entirely black. | |
| 4 (5) | 2nd abscissa of radius distinctly longer than the 3rd, the 2nd recurrent nervure received distinctly before the middle of cellule, the anal nervure in hindwings almost interstitial. | <i>melanoceras</i> . |
| 5 (4) | 2nd abscissa of radius equal in length with the 3rd, the 2nd recurrent nervure received before the middle of cellule, the anal nervure in hindwings distinctly before the cubitus. | <i>momboensis</i> . |
| 6 (11) | Claws with one tooth. | <i>Priocnemis</i> . |
| 7 (10) | Small species, wings hyaline. | |
| 8 (9) | Head and flagellum of antennae black, lower inner orbits lined with white. | <i>albolineatus</i> . |
| 9 (8) | Head and antennae rufo-testaceous, the orbits not lined with white. | <i>connectens</i> . |
| 10 (7) | Large species; wings dark fuscous, with lighter patches towards the apex. | <i>fuscofasciatus</i> . |
| 11 (6) | Claws with more than one tooth; the 2nd recurrent nervure received close to 2nd transverse cubital. | <i>Mygminia</i> . |
| 12 (15) | Head and thorax black. | |
| 13 (14) | Antennae and legs rufo-testaceous, abdomen more or less rufous. | <i>prodigiosus</i> , GERST. |
| 14 (13) | Antennae and legs and abdomen black. | <i>vinlex</i> SM. |
| 15 (12) | Head, pronotum, mesonotum and more or less of pleurae rufo-testaceous. | <i>Tamiseri</i> , GUÉR. |

It is evident that the *Pompilidae* are well represented in Tropical Africa. Unfortunately the smaller species are almost unknown.

Obs. The name *Salius* is preoccupied in Coleoptera. Mr. A. SCHULZ (Hym. Stud., 24) proposed that it should be replaced by *Cryptochilus*, BIELBERG.

Salius (*Cyphononyx*) *Caroli-Waterhousi*, sp. nov.

Black, the basal 5 joints of the antennae and the legs, except the coxae, trochanters, base of femora broadly and the apical half of the last joint of the claws, rufo-ferruginous; the wings to near the middle of 1st cubital cellule fuscous violaceous, with brilliant violaceous and brassy tints, the rest ferruginous; the 2nd abscissa of radius a little shorter than the 3rd; the 3rd transverse cubital nervure roundly curved in front

towards the 2nd; the 2nd recurrent nervure roundly curved outwardly and received in the middle of the cellule. Labrum and middle of mandibles dull rufous. Eyes clearly converging above; the hinder ocelli separated from each other by half the distance they are from the eyes. Head, thorax, base of abdomen and ventral surface densely covered with long black hair; pygidium dark rufous and somewhat thickly covered with long black hair. The inner spur of the hind tibiæ is about one fifth of the length of the metatarsus; its basal half thicker than apical, which becomes obliquely narrowed towards the apex. ♀. — Length 25–27 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., December. — *Mombo*: *Usambara*, June.

Temples short, obliquely rounded. Metanotum finely, not very closely transversely striated, the lateral tubercles not very prominent; it is short and has a steep, rounded slope. The accessory nervure is received shortly before the cubitus.

A handsome, well-marked species. Dedicated to Mr. CHARLES O. WATERHOUSE of the British Museum in grateful remembrance of much kindness in connection with the Insect Department of the British Museum.

Salius (*Cyphononyx*) *momboensis*, sp. nov.

Black, the legs, except the coxæ, trochanters and base of femora, rufous, the apical joint of the 4 posterior tarsi black; wings uniformly dark fuscous violaceous, with, in certain lights, a distinct blue and violaceous hue, the nervures black; the 2nd abscissa of radius about one fourth longer than the 3rd; the 1st recurrent nervure received close to the base of the apical fourth, the 2nd shortly, but distinctly before the middle; the anterior half of 3rd transverse cubital nervure straight and obliquely bent towards the base. 3rd antennal joint about one quarter longer than the 4th. Hind spurs short, as long as the 3rd tarsal joint; the basal tooth of claws stout, reaching to the apex of the other. ♀. — Length 25 mm.

Usambara: *Mombo*. June. — *Meru* low lands (♂).

Head, thorax, base of legs and of abdomen sparsely covered with long black hairs. Labrum dark brown, sparsely punctured, its apex broadly rounded. Eyes distinctly converging above. Hinder ocelli separated from the eyes by fully double the distance they are from each other. Temples broadly rounded. Metanotum irregularly, weakly transversely striated; a shallow furrow down the middle; the apex of the furrow with a keel in the centre. Inner spur of hind tibiæ dilated at the base; the basal half stoutly, closely pectinated, the apical pectinations shorter than the basal. Lateral basal tubercles of metanotum large, rounded; the apex of metanotum below transverse, the centre rounded, the sides forming large, broad teeth.

The ♂ is smaller (18 mm.) and more slenderly built; the pronotum is more transverse and with the outer edges slightly projecting and rounded. Beyond these differences I cannot discover any to warrant me to regard the *Meru* example as belonging to another species. *S. momboensis* has the colouration of *Mygnumia dedjas* and *M. prodigiosus*, but it belongs to a different section of *Salius*.

***Salius (Cyphononyx) melanoceras*, sp. nov.**

Black, the apical half of femora, tibiae and tarsi rufo-ferruginous, the apical 2 joints of the 4 anterior tarsi and the terminal one of the hinder black; wings fuscous black, with large violaceous and blue tints; the 2nd abscissa of radius about one fourth longer than the 3rd; the 2nd transverse cubital nervure with the front half roundly curved outwardly; the 3rd has the front half obliquely bent towards it; the 2nd recurrent nervure is received shortly before the middle and is broadly, roundly curved outwardly; the accessory nervure in the hind wings is almost interstitial, being only very slightly received before the cubitus. The long spur of hind tibiae narrow, about one fourth of the length of the metatarsus. ♂.

Length 17 mm.

Meru rainforest, 3,000 m. January.

3rd antennal joint not one fourth longer than the 4th. Metanotum weakly, irregularly transversely striated; the centre and sides inside the spiracles raised, as if keeled; the apical slope rounded; the lateral tubercles prominent.

***Salius (Mygnumia) prodigiosus*, GERST.**

Hemipepsis prodigiosus, GERSTÄCKER, von der Decken's Reisen in Ostafrika, 111, 2, 327; Taf. XIII, Fig. 12. — *Salius prodigiosus*, LUCAS, Hym. Ost-Afr. Pomp. 68

One example of this large species from Mombo, Usambara. May.

***Salius (Mygnumia) Tamisieri*, GUÉR.**

Pompilus tamisieri, GUÉRIN, Voy. Abyss. Lefeb., VI, 355, Pl. 8, f. 4; GERSTÄCKER, Peter's Reise nach Mossambique, 1862, Zool. V, p. 483. — *Mygnumia distanti*, SAUSS., Distant, A Naturalist in the Transvaal, 1892, pp. 220 and 221. — *Salius (Mygnumia) distanti*, KOHL, Mittheil. Naturh. Mus. Hamburg, X, 1893, Hym. p. 6, 20. — *Mygnumia insignis*, SMITH, Cat. Hym. Ins. 111, 188.

Meru low lands, Ngare na nyuki, January. — Kilimandjaro, Kibonoto, 1000 m., April.

***Salius (Himipepsis) vindex*, SMITH.**

Mygnumia vindex, SM., Cat. Hym. Ins. Brit. Mus. 111, 184, 18. — *Himipepsis vindex*, GERSTÄCKER, von der Decken's Reisen im Ost-Afrika, 111, 2, 327; LUCAS, Hym. Ostaf. Pomp., 70. — *Salius reverendus*, KOHL, Ann. d. K. K. Hof. Mus. Wien, 1894, XI, 313. — Kilimandjaro?

***Salius (Priocnemis) connectens*, sp. nov.**

Black, the antennæ, head, mandibles, palpi, prothorax except the sternum, mesonotum, scutellum and legs, except the coxæ and anterior trochanters, rufo-testaceous; the wings hyaline, the anterior suffused with violaceous and highly iridescent, the nervures, costa and stigma black; the 2nd abscissa of radius a little longer than the 3rd; the 1st recurrent nervure is received almost in the middle, the 2nd at the apex of the basal

third; the accessory nervure clearly before the cubitus. Eyes a little converging above, the hind ocelli separated from the eyes by 3 times the distance they are from each other. 3rd antennal joint a little longer than the 4th. Temples roundly narrowed. Smooth and shining; the metanotum finely, closely transversely striated, finely at the base, more strongly towards the apex. ♀ and ♂.

Length 7—9 mm.

Kilimandjaro: Kibonoto, 1300—1900 m.

The long spur of the hind tibiæ extends shortly beyond the middle. The basal tooth of the claws is shorter and thicker than the apical; they are, as is also the apical joint of the hind tarsi, blackish.

A common species judging from the number of specimens in the collection. The apical 2 or 3 joints of the antennæ are darker coloured than the others. All the trochanters may be black, wholly or in part.

Salius (Priocnemis) fuscofasciatus, sp. nov.

Black, the wings violaceous, with large fuscous clouds, the 2nd abscissa of radius about one fourth shorter than the 3rd; the 2nd and 3rd transverse cubital nervures roundly curved; the 2nd recurrent nervure received near the apex of the basal third of the cellule; the basal nervure almost interstitial; the accessory nervure in hind wings received largely beyond the cubitus, which is roundly curved. The long spur of hind tibiæ one third of the length of metatarsus. Metanotum densely covered with black pubescence; the basal part irregularly transversely striated, the apex with a steep, straight slope, transverse, smooth, bare. ♂. — Length 28 mm.

Kilimandjaro: Obstgartensteppe. 27th March.

Eyes parallel, hardly converging above, slightly incised on the innerside above the middle. Ocelli in a curve, the hinder separated from each other by the same distance as they are from the eyes. Temples broadly, roundly narrowed. There is a rufous spot on the mandibles before the middle.

Salius (Priocnemis) albolineatus, sp. nov.

Black, shining, an oblique white line on the lower half of the inner eye orbits, triangular, slightly dilated and tinged with rufous above; the clypeus white, tinged with rufous, as is also the base of mandibles; palpi white; prothorax and mesonotum red, the scutellum of a darker red; antennal scape red; the 2nd joint red, black above, the rest red; the 3rd joint is a little shorter than the 4th. Wings hyaline, the nervures black, the 2nd abscissa of radius about one fourth longer than the 3rd; the 2nd transverse cubital nervure posteriorly curves towards the 1st recurrent nervure which is received in the middle, the 2nd before the middle of the cellule; the 1st transverse cubital nervure is roundly curved; the accessory nervure in hind wings is received considerably in front of the cubitus. ♂. — Length 6 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th May.

Hind ocelli separated from the eyes by 3 times the distance they are from each other. Eyes parallel, reaching to the mandibles.

***Salius (Priocnemis) iterabilis*, sp. nov.**

Black, the legs red, with the coxæ and trochanters black; the wings hyaline, a cloud along the transverse basal and median nervures, broadly behind them, more narrowly beyond them, a cloud occupying the radial, the 2nd and 3rd cubital cellules and slightly beyond them, the discoidal cellules except the basal at the base in front, and a narrow cloud on the apex, fuscous black, tinged with violaceous. ♂. — Length 7 mm.

Meru rainforest, 3000—3500 m. January.

The 3rd antennal joint is as long as the 4th. Temples two-thirds of the length of the top of the eyes broadly, roundly narrowed. Metanotum closely, but not very strongly punctured. The long spur of the hind tibiæ reaches beyond the middle. Hind ocelli separated from the eyes, by about two and a half times the distance they are from each other. Mandibles broadly red in the middle. Palpi black.

Pompilus, F.

A. Abdomen not banded with red at the base.

Synopsis of black species.

- 1 (8) 3rd cubital cellule appendiculated.
- 2 (5) Wings uniformly fuscous violaceous.
- 3 (4) Radial nervure broadly roundly curved, not extending much beyond the posterior apex of 3rd cubital cellule, the apical abscissa of radius shorter than the basal two abscissæ united. *masaiensis*.
- 4 (3) Radius with apical abscissa straight, oblique, extending distinctly beyond the posterior apex of 3rd cubital cellule, distinctly longer than the basal two abscissæ united. *melanochromus*.
- 5 (6) Wings almost hyaline, the apex clouded.
- 6 (7) Apex of metanotum with an abrupt slope, covered with white woolly pubescence. *criophorus*.
- 7 (6) Apex of metanotum with a rounded slope, not covered with woolly hair. *monospilus*.
- 8 (1) 3rd cubital cellule not appendiculated.
- 9 (10) Wings clear hyaline, unspotted, the base of tibiæ with a white band. *brunnipalpis*.
- 10 (25) Wings not entirely clear hyaline, the tibiæ unspotted with white.
- 11 (12) Wings with 3 clouds, the oral region, greater part of antennæ and the apex of abdomen red. *erythrostomus*.
- 12 (11) Wings with only an apical cloud, the base not clear hyaline.
- 13 (14) Legs, oral region and base of antennæ red. *meruensis*.
- 14 (13) Legs, oral region and antennæ black.
- 15 (16) Front raised in the middle, the raised part roundly dilated above. *curvifrons*.
- 16 (15) Front not raised in the middle.
- 17 (18) The 2nd and 3rd transverse cubital nervures touching in front, the apical abscissa of radius broadly roundly curved. *rotundinervis*.
- 18 (16) The 2nd and 3rd transverse cubital nervures distinctly separated, the apical abscissa of radius straight, oblique.

- 19 (20) Small (5 mm.), slender, densely covered with silvery pubescence, which form broad bands on the abdomen. *scriceibalteatus*.
- 20 (19) Larger, more than 5 mm.; not densely covered with silvery pubescence.
- 21 (22) 2nd abscissa of radius more than twice longer than the 3rd; the 3rd transverse cubital nervure with the front half obliquely bent towards the base of the cellule. *exploratrix*.
- 22 (23) 2nd abscissa of radius not twice longer than the 3rd; the 3rd transverse cubital nervure roundly curved.
- 23 (22) 2nd abscissa of radius not much longer than the 3rd; metanotum transversely striated, the tibial spines short. *Yngvei*.
- 24 (23) 2nd abscissa of radius distinctly longer than the 3rd, metanotum not striated, the tibial spines long. *successor*.
- 25 (10) Wings uniformly fuscous violaceous.
- 26 (26) Accessory nervure in hind wings received far beyond the cubitus; the apex of 2nd transverse cubital nervure obliquely bent, the apical joints of antennæ not infuscated, head black. *Bretoni*, GUÉR.
- 27 (26) Accessory nervure in hind wings interstitial; the apex of 2nd transverse cubital nervure not obliquely bent, the apical joints of antennæ infuscated, the head dark rufous. *kilimandjaroensis*.

***Pompilus masaiensis*, sp. nov.**

Black, the abdomen with a blue tint, the wings uniformly bluish fuscous, with violaceous tints, the nervures black; the 3rd cubital cellule shortly appendiculated, the 3rd transverse cubital nervure roundly curved, the 1st obliquely sloped, without a distinct bend; the 1st recurrent nervure received in the apical fourth, the 2nd close to the middle of the cellule, the transverse median received shortly beyond the transverse basal; the accessory nervure in hind wings interstitial. Head as wide as the thorax, the temples broad, rounded. Hinder ocelli separated from each other by a less distance than they are from the eyes. ♀. — Length 11 mm.

Kilimandjaro: Kiboscho, mountain meadows, 3000—4000 m. February.

Base of mesonotum obliquely narrowed to a point, the sides straight. Sides of metanotum broadly rounded, the apical slope not very steep. 3rd antennal joint about one quarter longer than the 4th. The long spur of hind tibiæ extends shortly beyond the middle of the metatarsus; the fore metatarsus with a few short, stout spines; base of claws with a short, sharp-pointed tooth.

***Pompilus melanocheirus*, sp. nov.**

Black, the wings fuscous black, tinged with violaceous, the nervures black, the radius distinctly projecting beyond the cubital cellules, the apical abscissa oblique, only very slightly curved; the 3rd cubital cellule shortly, but distinctly appendiculated, the 2nd transverse cubital nervure straight, oblique, the 3rd rounded; the 1st recurrent nervure received near the base of the apical fourth, the 2nd in the middle of the cellule; the transverse median nervure received very shortly beyond the transverse basal; the accessory nervure in hind wings very shortly before the accessory. Hinder ocelli separated from each other by a distinctly less distance than they are from the eyes, which con-

verge above. Temples short, roundly narrowed. Pronotum shorter than the mesonotum. Metanotum smooth, its sides rounded. The long spur of the hind tibiae reaches to the middle of metatarsus; the claws with a distinct basal tooth. ♀. — Length 7 mm.

Kilimandjaro: Kiboscho, mountain meadows, 3000—4000 m. February.

The 3rd antennal joint is distinctly longer than the fourth. The 1st transverse cubital nervure is broadly roundly curved.

This species comes close to *P. rotundinervis* described above; that species may be known from the present by the apical abscissa of radius being shorter and broadly roundly curved, by the front half of the 1st transverse cubital nervure being obliquely bent, not broadly roundly curved, by the very much shorter, almost obsolete temples and by the stouter, thicker basal tooth of claws.

***Pompilus rotundinervis*, sp. nov.**

Black, covered with a white silky pile; the palpi fuscous, the wings almost hyaline, iridescent; clouded, but not deeply, from shortly beyond the 3rd transverse cubital nervure; the 2nd and 3rd transverse cubital nervures united in front, almost appendiculated; the radius roundly curved, the 1st recurrent nervure received at the base of the apical third of the cellule, the 2nd shortly beyond the middle, the transverse median nervure in anterior and cubitus in hind wings interstitial. Eyes distinctly converging above; the hinder ocelli separated from each other by almost double the distance they are from the eyes. The long spur of the hind tibiae extends beyond the middle of the metatarsus. ♀. — Length 9 mm.

Kilimandjaro: Kibonoto. 4th May.

Head a little wider than the thorax; its temples almost obsolete. 3rd antennal joint hardly longer than the 4th. Base of mesonotum with straight, oblique sides, angled in the centre. Metanotum smooth, rounded. Anterior spurs pale; the metatarsus closely, minutely spinose, without any long spines. The 3rd transverse cubital nervure is roundly curved throughout. In fresh specimens the abdominal segments are probably banded with white silky pile.

***Pompilus monospilus*, sp. nov.**

Length 8 mm. ♂. — *Kilimandjaro*: Kibonoto, cultivated zone. May.

Very similar to *P. rotundinervis*, but much more slenderly built; the 2nd cubital cellule is distinctly appendiculated; the 3rd transverse cubital nervure is more broadly rounded and the 1st is also more gradually roundly bent. The apical antennal joints are roundly dilated; the 3rd joint is shortly, but distinctly longer than the 4th. Eyes converging above. The hinder ocelli are separated from each other by a distinctly greater distance than they are from the eyes. The long spur of the hind tibiae more than three fourths of the length of the metatarsus; claws with a stout basal tooth. The anal segment is for the greater part white. The transverse basal in the anterior and the accessory nervure in the hind wings are interstitial.

Pompilus eriophorus, sp. nov.

Black, the underside of antennal scape and the last dorsal abdominal segment obscure yellowish white; the sides of apical slope of metanotum with a broad thick patch of whitish hair; the apex of metanotum with a steep, straight slope; the 2nd cubital cellule distinctly appendiculated, it receives the recurrent nervure shortly, but distinctly beyond the middle; basal abscissa of radius straight, oblique, the apical roundly curved; the transverse median nervure received shortly beyond the transverse basal; the accessory nervure in hind wings received before the cubitus. Hinder ocelli separated from each other by a greater distance than they are from the eyes, which converge slightly above. Wings obscure hyaline, iridescent, the apex clouded from the 3rd transverse cubital nervure, the radial cellule being more faintly clouded. Temples very short. The long spur of the hind tibiae about three fourths of the length of metatarsus. Claws bifid, the basal tooth thicker and shorter than the other. Antennal joints from the 7th roundly dilated. ♂.

Length 9 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th May.

This species is very close to *P. monospilus*, but may be known from it by the 2 large patches of hair on the metanotum and by the accessory nervure in hind wings being received distinctly before the cubitus.

Pompilus brunnipalpis, sp. nov.

Black, the spurs and the outer and hinder part of the hinder tibiae at the base white; the apex of clypeus, palpi and mandibles broadly at the base dark brownish red; wings clear hyaline, the nervures black; the 2nd abscissa of radius more than one quarter longer than the 3rd; the 1st transverse cubital nervure broadly roundly curved; the 1st recurrent nervure received beyond the middle, the 2nd in the middle of the cellule; the transverse basal nervure interstitial; the accessory nervure in hind wings received shortly before the cubitus. The long spur of the hind tibiae does not reach to the middle of metatarsus. Eyes distinctly converging above; the hinder ocelli separated from each other by about the same distance as they are from the eyes. ♀.

Length 10 mm.

Meru low lands, Ngare na nyuki. 25th November.

Head wider than the thorax; the temples very short, the occiput transverse. Eyes reaching to the base of the mandibles. Pronotum as long as the mesonotum, its base finely margined above. The 3rd antennal joint is not much longer than the 4th; the scape is dark brown below.

Pompilus erythrostomus, sp. nov.

Black, the clypeus, labrum, mandibles, all the tarsi, apex of anterior tibiae narrowly, the apex of posterior from near the middle and the 3rd and following segments of the abdomen red; the spurs and palpi whitish; wings hyaline, a cloud on the transverse

median and transverse basal nervures, wider on the outer than on the inner side, and gradually narrowed in front, and a broader one, commencing opposite the posterior part of the 1st transverse cubital nervure and extending almost to the apex of the radial cellule and beyond the 3rd transverse cubital nervure; posteriorly it commences at the top of the 1st recurrent nervure; the 2nd abscissa of radius is two-thirds of the length of the 3rd; the 1st recurrent nervure is received at the base of the apical third, the 2nd very shortly beyond the middle; the transverse median nervure is received very shortly beyond the transverse basal. ♀. — Length 9 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

Covered with a white pile. Eyes converging above; the hinder ocelli separated from each other by a slightly greater distance than they are from the eyes. Temples very narrow; the occiput transverse. Antennæ stout, the 3rd joint slightly, but clearly longer than the 4th. Pronotum a little longer than the mesonotum, roundly narrowed in front. Apex of metanotum transverse, with the sides rounded.

***Pompilus curvifrons*, sp. nov.**

Black, covered with a white pile; wings light fuscous violaceous, the radial cellule and the apex from the end of the latter darker coloured, the nervures black, the 2nd abscissa of radius almost 4 times longer than the 3rd; both the recurrent nervures are received shortly beyond the middle, the 1st a greater distance than the 2nd, which is roundly curved outwardly; the transverse median nervure received shortly beyond the transverse basal; the accessory nervure in hind wings received considerably in front of cubitus. Hinder ocelli separated from each other by double the distance they are from the eyes. Front below on the sides depressed, the depression roundly curved, so that the raised central part is narrow below, becoming roundly widened above. ♀. — Length 11 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th November.

Antennæ stout, the 3rd joint about as long as the 4th. Head broadly rounded in front, transverse behind, the temples very narrow. There is a small, but distinct malar space. The head is slightly longer than the thorax. Pronotum a little longer than the mesonotum and very slightly longer than the metanotum, which has the apex transverse, with the sides narrowly rounded; there is a narrow furrow down its centre; and there is a more clearly defined, narrow furrow on either side of the mesonotum. Claws with a large process at the base; tibial and tarsal spines long, black; the long spur of hind tibiæ half the length of metatarsus.

***Pompilus meruensis*, sp. nov.**

Black, the legs, except the anterior, the basal half of the intermediate and the posterior coxæ to near the apex, red, the basal 6 joints of the antennæ of a darker red, the apical black; the apex of the clypeus narrowly and the mandibles, except at the apex, red; wings hyaline, a curved cloud on the apex of the fore wings, commencing

near the end of the radial cellule, and one of about the same size on the apex of the posterior pair; the nervures black, the 1st abscissa of radius about twice the length of the 2nd; the 1st recurrent nervure is received shortly, but distinctly beyond the middle, the 2nd in the middle; the 1st transverse cubital nervure is roundly curved; the 3rd has the anterior half obliquely bent towards the top of the 2nd. Eyes distinctly converging above; the hinder ocelli separated from each other by a distinctly greater distance than they are from the eyes. ♀. — Length 10 mm.

Meru low lands, Ngare na nyuki. 25th November.

Head wider than the thorax, the temples narrow, rounded. Prothorax rounded in front; in the middle almost as long as the mesonotum. Metanotum large, more densely pubescent than the mesonotum, the apical slope slightly, broadly depressed in the middle; an indistinct impressed line down the middle of basal half. 3rd antennal joint almost as long as the following 2 united. Tibial spurs long; the anterior metatarsus with 3, the 2nd joint with 2, and the 3rd with one long spine.

***Pompilus sericeibalteatus*, sp. nov.**

Black, densely covered with a white silky pile, which gives it a whitish appearance; on the abdomen the pile forms broad bands; wings hyaline, the apex with a cloud which commences at the end of the radius, the apical abscissa of which turns sharply obliquely upwards, the radial cellule becomes gradually wider from the base to the lower part of the apex, through the nervure sloping sharply, obliquely; the 2nd abscissa of the radius is about 4 times longer than the 3rd; the 2nd cellule is large, the 3rd small; the 1st recurrent nervure is received shortly but distinctly before the middle, the 2nd in the middle of the cellule; transverse median nervure interstitial; the accessory nervure in hind wings received before the cubitus. Anterior spurs white, the 4 posterior black; fore metatarsus incised at the base, the long spur of the hind tibiae extends shortly beyond the middle. Temples short. Hinder ocelli separated from the eyes by almost the same distance as they are from each other. ♂. — Length 6 mm.

A slender species. The base of the mesonotum is rounded. 3rd joint of antennæ a very little shorter than the 4th. Palpi black, covered with white pile. Tips of mandibles rufo-testaceous.

***Pompilus exploratrix*, sp. nov.**

Black, covered with a white pile; the wings fuscous, darker towards the apex, the nervures black; the apex of the wings darker coloured; the 2nd abscissa of radius about 4 times longer than the 3rd; the apical abscissa of radius straight, oblique, extending clearly beyond the cubital cellules; the 1st recurrent nervure received shortly, the 2nd at a greater distance beyond the middle; the transverse median nervure shortly beyond the transverse basal; the accessory nervure in hind wings before the cubitus. Ocelli in a curve, the hinder separated from each other by double the distance they are from the eyes. Front with a narrow, but distinct furrow. Temples almost obsolete, the occiput

transverse. Mandibles broadly red near the apex. Pronotum a little longer than mesonotum. Metanotum transverse at the apex, the sides narrowly rounded; the apical slope steep. ♀. — Length 7 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m.

The 3rd antennal joint is shortly, but distinctly longer than the 4th. The long spur of the hind tibiae extends shortly beyond the middle of the metatarsus. Claws simple.

***Pompilus Yngvei*, sp. nov.**

Black, mandibles broadly rufous at the base; wings fuscous violaceous, the nervures black, the 2nd abscissa of radius very slightly longer than the 3rd, the apical roundly curved, hardly projecting beyond the 3rd transverse cubital; the transverse median nervure received distinctly beyond the transverse basal; the 1st recurrent nervure received shortly before, the 2nd shortly beyond the middle; accessory nervure in hind wings received shortly before the cubitus. ♀.

Length 11 mm.

Meru rainforest, 3000—3500 m. January.

Hind ocelli separated from each other by half the distance they are from the eyes; the ocelli form a triangle. Temples broad, roundly narrowed, three fourths of the length of the top of the eyes; the head is a little wider than the thorax. Pronotum in the middle as long as the mesonotum, which has a narrow, but distinct furrow on the sides. Metanotum finely transversely striated, the striae weak at the base, stronger towards the apex, the sides at the apex broadly rounded. Pygidium covered with rufous golden pubescence. Long spur of hind tibiae about one fourth of the length of metatarsus.

***Pompilus successor*, sp. nov.**

Black, the wings fuscous violaceous, the nervures black; the apical abscissa of radius roundly curved, projecting beyond the posterior part of the 3rd transverse cubital nervure; the 2nd abscissa of radius slightly, but distinctly longer than the 3rd, the 1st recurrent nervure is received close to the base of the apical fourth of the cellule, the 2nd shortly beyond the middle; the transverse median nervure is received shortly beyond the transverse basal; the accessory in hind wings shortly before the middle. Hinder ocelli separated from the eyes by almost double the distance they are from each other. The temples are roundly narrowed, about one third of the length of the top of the eyes. The long spur of the hind tibiae extends shortly beyond the middle of the metatarsus, the claws simple. ♀.

With its violaceous wings and being of the same size and colouration this species looks very like *P. masaiensis*, which, however, is readily separated from it by the appendiculated 2nd cubital cellule. *P. Yngvei* is larger, has the cubital cellules larger, and, more particularly, the radius does not extend beyond the cubital cellules, as it does distinctly in the present species; the metanotum, too, in *Yngvei* is clearly transversely striated. — Length 9 mm.

Meru low lands, Ngare na nyuki. 25th November.

The metathorax in *successor* is short and rounded broadly at the apex.

***Pompilus kilimandjaroensis*, sp. nov.**

Black, the head dark red, darker, almost black at the ocelli, the basal 8 joints of the antennæ red, the apical black; wings uniformly fuscous violaceous, the nervures black, the 2nd abscissa of radius fully one fourth longer than the 3rd, the recurrent nervures are received beyond the middle, the 1st nearer the apex than the 2nd, the apical abscissa of radius straight, oblique; the 1st transverse cubital nervure roundly curved, the 3rd with the anterior half obliquely bent towards the 2nd; the transverse median nervure interstitial; the accessory nervure in hind wings interstitial. Eyes slightly converging above. Hinder ocelli separated from each other by a little greater distance than they are from the eyes. Temples very narrow, almost obsolete; the occiput not quite transverse. ♀. — Length 17 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

The 3rd antennal joint is about one fourth longer than the following. Head a little wider than the thorax. Prothorax roundly narrowed in front, roundly incised at the apex. Metanotum smooth, its apex, seen from above, transverse, the slope straight, oblique. Tibial spines longish; the fore metatarsus with 2 or 3 short spines, the spurs with a longish stout basal process. Apical abscissa of radius almost as long as the preceding 2 united. The long spur of hind tibiæ half the length of metatarsus.

***Pompilus Bretonii*, GUÉR.**

Magas. de Zool. XIII, 114, 4, Pl. 115, fig. 2; KOHL, Denkschr. d. Mathem.-Naturwiss. Klasse d. Kaiser. Akad. d. Wissen., 1906, 100. — *Meru* low lands: Ngare na nyuki, October. 2 examples of this wide-ranging African Species.

Characteristic of this species is the fact that the 2nd transverse cubital nervure is, posteriorly, bent angularly towards the 2nd recurrent nervure.

Pompilus vindicatus SMITH (Cat. Hym. Ins., 111, 142, 118), from "Port Natal and Congo", appears to me to be identical with *P. Bretonii*, so far as one can make out from the description. I have it (named by SMITH himself) from the Cape.

***Pompilus? anomalopterus*, sp. nov.**

Entirely black, the abdomen slightly tinged with blue, the wings uniformly fuscous violaceous, the transverse median nervure received distinctly beyond the transverse basal; the 2nd abscissa of radius not quite one fourth shorter than the 3rd; the 1st recurrent nervure received distinctly beyond, the 2nd very slightly before the middle; the accessory nervure in hind wings shortly before the cubitus. Eyes converging slightly above; the hinder ocelli separated from the eyes by about one half more the distance they are from each other. Long spur of hind tibiæ about one fourth the length of the metatarsus. Claws with a distinct triangular tooth. Tibiæ minutely, sparsely spined; the apex of the

anterior with short, stout spines on the sides (the number indefinite, owing to some having, apparently, been broken off). ♀. — Length 22 mm.

Mombo, *Usambara*, June.

Temples roundly narrowed. The 3rd joint of antennæ not one quarter longer than the 4th. Pronotum clearly shorter than the mesonotum. Metanotum irregularly transversely striated, more weakly and closely at the base than at the apex; the striæ clearly separated and more or less curved; the apex is broadly rounded. There is a distinct, transverse furrow on the 2nd ventral segment. Clypeus somewhat short, its apex broadly rounded; labrum hidden.

A comparatively large species. It differs from typical *Pompilus* in the transverse median nervure not being interstitial, it being as in *P. caffer*, KOHL.

The tibiæ, too, are only very weakly spinose, they being almost as in *Agenia*.

B. Abdomen broadly red at the base, the 2nd cubital cellule not narrowed in front.

***Pompilus rubrozonatus*, sp. nov.**

Black, the 1st abdominal segment except narrowly at the base, the 2nd entirely and the 3rd to near the middle red; covered with a white pile; the wings hyaline, smoky from near the end of the radial and cubital cellules, the nervures black; the 2nd and 3rd abscissæ of radius longish, equal in length, the recurrent nervures received shortly before the middle of the cellules, the 2nd more distinctly so than the 1st; the transverse median nervure received distinctly beyond the transverse basal; the accessory nervure in hind wings shortly before the cubitus. ♀.

Length ♀ 11 mm.; ♂ 7 mm.

Kilimandjaro: Kibonoto, steppe—lower cultivated zone, 1000—1200 m. April and May.

Eyes slightly converging above; the hinder ocelli separated from each by a distinctly less distance than they are from the eyes. Temples distinct, roundly narrowed. 3rd antennal joint about one fourth longer than the 4th. Base of mesonotum broadly rounded, not angled. The long spur of the hind tibiæ short, not much more than one fourth of the length of metatarsus; the claws with a sharp, short tooth at the base.

C. Abdomen red at the base, the 3rd cubital cellule appendiculated or subappendiculated = Entypus.

***Pompilus (Entypus) subpetiolatus*, sp. nov.**

Black, the 1st, 2nd and basal half of 3rd abdominal segment, red, the wings fuscous, slightly tinged with violaceous, the nervures black; the 2nd abscissa of radius as long as the basal, the 3rd very short, the apical two transverse cubital nervures almost, in some examples, actually meeting; the 3rd transverse cubital nervure roundly curved; the transverse median nervure is received shortly beyond the transverse basal; the 1st recurrent in the apical fourth, the 2nd in the middle of cellule; the transverse

cubital nervures being more widely separated in some specimens than in others. The 3rd antennal joint is distinctly longer than the 4th.

Is allied to the European *P. fuscus*.

***Pompilus (Entypus) trigonophatnus*, sp. nov.**

Black, the basal abdominal segment except on the basal slope and the 2nd entirely red; the wings almost hyaline, the radial cellule and the rest from the 3rd transverse cubital and 2nd recurrent nervures blackish, tinged with violaceous; the transverse median nervure interstitial; the 1st recurrent nervure in hind wings interstitial. Eyes converging on top; the hinder ocelli separated from each other by about the same distance as they are from the eyes. Temples short, roundly narrowed. Prothorax not quite so long as the mesonotum, roundly narrowed in front. Metanotum not quite so long as the mesonotum, roundly sloped behind. The long spur of the hind tibiae extends shortly beyond the middle of the metatarsus; claws with a stout basal tooth. Tibial and tarsal spines stout.

The form of the 2nd cubital cellule varies, the 1st recurrent nervure received close to the apex; the 2nd close to the base of the apical third of the cellule; the accessory nervure in hind wings is received shortly before the cubitus. Eyes with a distinct curve above the middle on the innerside. Hinder ocelli separated from each other by a little less distance than they are from the eyes. 3rd antennal joint distinctly longer than the 4th. Temples short, rounded, the occiput transverse. Base of mesonotum broadly rounded, not angled. ♂. — Length 7 mm.

Meru rainforest, 3000 m. January.

The 2nd and 3rd transverse cubital nervures meet in front, and in some examples probably the cellule is appendiculated; in the present specimen it is triangular; the 3rd transverse cubital nervure is more obliquely sloped than the 2nd. The long spur of the hind tibiae is fully three-fourths of the length of the metatarsus.

D. Rufous, banded with yellow, the wings tinged with red = Episyrion.

***Pompilus (Episyrion) Sjöstedti*, sp. nov.**

Dark rufous, a curved yellow line on the apex of the pronotum and a narrow irregular one on the base of the 2nd and 3rd abdominal segments; middle of pronotum, the upper part of the meso- and metapleuræ and more or less of the basal 2 abdominal segments, black; wings hyaline, the anterior distinctly tinged with yellow, the apex smoky from the end of the radius and 3rd transverse cubital nervure and more narrowly posteriorly, smoky, the stigma testaceous, the nervures black; the 2nd abscissa of radius about one fourth longer than the 3rd, both the recurrent nervures are received shortly beyond the middle, the front half of 1st transverse cubital nervure, straight, obliquely sloping towards the 2nd; the transverse median nervure interstitial; accessory nervure in hind wings received beyond the cubitus. ♀.

Length 9—11 mm.

Kilimandjaro: Kibonoto, 1000—1300 m.

Apical 6 joints of antennæ black above; the 3rd joint as long as the 4th and one fourth of the 5th. Eyes distinctly converging above; the hinder ocelli separated from each other by a little more than they are from the eyes. Temples short, broadly rounded. Base of mesonotum broadly rounded. Metanotum short, roundly sloped. Basal joint of anterior tarsi with 3, the 2nd and 3rd with 2 long stout spines; claws with a stout basal tooth; the long spur of the hind tibiæ extends shortly beyond the middle of metatarsus.

***Pompilus (Episyron) spilonotus*, sp. nov.**

Dark rufous, the vertex, front, except for a triangular space at the eyes below, a line down the centre of the face, slightly incised and dilated below, occiput except at the orbits, mesonotum, base and apex of scutellum, post-scutellum, the parts bordering them, base of metanotum, a semicircular mark on its apex, the oblique, central furrow on propleuræ, the base of 1st abdominal segment entirely, the black continued broadly to near the apex, the apex narrowly, a band shortly beyond the middle of the 2nd segment, the 3rd and 4th segments more broadly and irregularly, the mesopleuræ except at the apex below, the sternum, and the greater part of the metapleuræ, behind the furrow, black; the face, the yellow triangularly dilated up the orbits above the middle of the eyes, clypeus, the outer orbits broadly, the apex of pronotum broadly, the yellow continued on to the pleuræ to the middle, the yellow at the apex below, projecting on to the furrow, which projects into it, dividing it into two below, a mark, wider than long, near the apex in the middle, a broad curved mark on the scutellum, a transverse mark on sides of the apex of the metanotum, a broad band on the base of the 2nd abdominal segment, a narrower one on the 3rd and 4th and still narrower ones on the others, bright lemon-yellow. Legs coloured like the body, the fore coxæ bright lemon-yellow, as are also the basal half of the hind tibiæ; the basal 4 joints of the fore tarsi, the greater part of the basal joint of the middle and the base of the posterior, with all the spurs of a paler yellow. Wings hyaline, tinged with yellow in the middle, the apex from near the end of the radius smoky; the 2nd abscissa of radius as long as the 3rd; the 2nd transverse cubital nervure is oblique, and bent towards the 2nd recurrent behind; the 1st recurrent nervure is received near the apex, the 2nd in the middle of the cellule. There is a distinct yellow keel between and below the antennæ. Hind ocelli separated from each other by about the same distance as they are from the eyes. The accessory nervure in the hind wings is received far beyond the cubitus.

This species is related to *P. Oncili* CAM. from Cape Colony; that species is larger, has the 2nd abscissa of radius distinctly longer than the 3rd, the mesopleuræ is only black at the base above the oblique furrow, the apical cloud in the fore wings is narrower, it commencing beyond the 3rd transverse cubital, not as it in the present species; and the tarsi are for the greater part bright yellow.

Schizagenia, gen. nov.

Clypeus deeply and widely incised from the apex of the basal third, the incision becoming gradually wider towards the apex; the labrum is below the incision, filling it, and projecting slightly beyond it; the apex of labrum slightly, broadly incised; the penultimate ventral segment broadly, but not deeply incised, the sides of the incision forming distinct teeth; the apex of the last ventral is also broadly incised, and is thickly covered with long hair. Hind femora dilated at the base. Wings as in *Agenia*; the transverse median received shortly beyond the transverse basal; the accessory in hind wings shortly behind the cubitus. The mandibles become gradually narrowed towards the apex.

I only know the ♂ of this genus, but its affinities appear to be with *Agenia* or *Pseudagenia*, rather than with *Pompilus* and its allies, so far as one can judge from the ♂. The metanotum is longer than usual. The tarsi are minutely spinose, the claws have a basal tooth, and there are a few minute spines on the hind tibiae.

Schizagenia carinigena, sp. nov.

Black, the antennæ, head, mandibles, palpi, pro-mesonotum and scutellum, the base and apex of propleuræ, the tubercles, tegulae and legs, rufo-ferrugineous; there are 2 broad oblique lines below the ocelli, which are also enclosed in the black line; the base of the fore coxæ, the middle above and the posterior entirely black; the apical 2 joints of hind tarsi black; wings fuscous violaceous, the nervures black; the 2nd and 3rd abscissæ of radius equal in length; the 1st recurrent nervure received distinctly beyond the middle, the 2nd in the middle of the cellule. ♂. — Length 12 mm.

Kilimandjaro: Kibonoto, cultivated zone. May.

Eyes distinctly converging above, separated there by the length of the 3rd antennal joint. Ocelli in a triangle, the hinder separated from each other by half the distance they are from the eyes. Cheeks stoutly keeled, the keel projecting more behind than in front, black. 3rd antennal joint longer than the 4th. Metanotum finely, closely transversely striated; there is a shallow furrow down the centre; it becomes wider towards the apex. The long spur of the hind tibiae is one fourth of the length of metatarsus. The 5th, 6th and 7th abdominal segments are rufo-testaceous; the last is thickly covered with long blackish hair.

Pseudagenia, KOHL.

The species of the above genus in the collection may be separated thus:

- 1 (2) Wings clear hyaline, unspotted, the transverse median nervure not interstitial. *xanthospila*.
- 2 (1) Wings hyaline, spotted, the body for the greater part or entirely black; transverse median nervure interstitial.
- 3 (4) Clypeus with a distinct tooth. *odontocephala*.
- 4 (3) Clypeus untoothed.

- | | | | |
|---|-----|---|----------------------------|
| 5 | (6) | Wings with a cloud at the transverse basal nervure, as well as with an apical cloud; abdomen black. | <i>kilimandjaroensis</i> , |
| 6 | (7) | Wings with only an apical cloud; base of abdomen rufous. | <i>picistigma</i> . |
| 7 | (6) | Wings uniformly fuscous violaceous. | |
| 8 | (9) | Legs black. | <i>brunniceps</i> . |
| 9 | (8) | Legs red. | <i>canaliculata</i> . |

***Pseudagenia odontocephala*, sp. nov.**

Black, the wings hyaline, a narrow cloud on either side of the transverse basal and transverse median nervures, wider along the latter than along the former, on which it becomes slightly narrowed and rounded in front and not reaching to the costa, a cloud in the basal half of the radial cellule, one in the 2nd cubital, which it fills except a triangular space in the lower two-thirds of the base, an irregular one in the basal two-thirds of the 3rd, and a large cloud in the discoidal cellule, commencing near the top of the 1st recurrent nervure and extending shortly beyond the 2nd. Apex of clypeus extending in a stout, longer than wide, conspicuous, rufo-testaceous tooth. Mandibles broadly rufous in the middle. Hinder ocelli separated from the eyes by one half more the distance than they are from each other. ♀.

Length 8 mm.

Kilimandjaro: Kibonoto, cultivated zone. May.

Head wider than the thorax. Eyes slightly converging above. Temples narrow, oblique. Metanotum coarsely irregularly striated, the striae more or less twisted. Pygidium smooth and shining, its apex brownish. Tarsi sparsely, minutely spinose, the apices of the joints with stouter, rufous spines.

***Pseudagenia xanthospila*, sp. nov.**

Rufo-testaceous, the antennae, tips of mandibles, basal third of 1st abdominal segment, apex of hind tibiae narrowly and the hind tarsi, black; wings hyaline, the apex narrowly, slightly smoky, the nervures and stigma black; the 2nd abscissa of radius about one fourth shorter than the 3rd, the 1st recurrent nervure received close to the middle of the cellule, the 2nd near the apex of the basal third of the cellule; the hinder ocelli separated from each other by half the distance they are from the eyes. ♀. — Length 10 mm.

Mombo, *Usambara*. June.

The antennae are fuscous below towards the apex. The body and base of legs are covered with short, white pubescence. Smooth and shining; the mesonotum and scutellum minutely, sparsely punctured; the metanotum minutely granular. Apex of clypeus broadly rounded seen from above, but looked at from below there can be observed a minute projection. The clypeus, face, a broad band on the lower half of the inner orbits, mandibles and the outer eye orbits are broadly yellow. Palpi rufous. Hinder tarsi closely, distinctly spinose; the long spur of the hinder tibiae reaches close to the middle of the metatarsus.

***Pseudagenia kilimandjaroensis*, sp. nov.**

Black, covered with a white silky pile; the metanotum closely, finely transversely striated, weakly at the base, more strongly towards the apex; wings hyaline, a cloud with ragged edges along the transverse median and transverse basal nervures, the cloud wider on the outer than on the innerside of these nervures, and a broader one, commencing shortly behind the radius, occupying the basal half of the radial cellule, the whole of the 2nd cubital, the basal half of the 3rd cubital and more than the apical half of the discoidal cellule, it extending to the outer side of the 2nd recurrent nervure. Hinder ocelli separated from the eyes by twice the distance they are from each other. The 2nd and 3rd abscissæ of the radius equal in length; the 1st transverse cubital nervure is roundly, obliquely curved, the 1st recurrent nervure is received shortly before the middle, the 2nd shortly beyond the apex of the basal third of the cellule; the transverse median nervure is received shortly beyond the transverse basal. ♀.

Length 12 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 9th May.

Eyes very slightly converging below. Apex of clypeus broadly rounded, as is also the pronotum. Temples narrow, oblique, the occiput transverse, narrowly, but distinctly margined. Tarsi spinose. The long spur of the hind tibiæ about one third of the length of the metatarsus and a little longer than the 2nd tarsal joint. The radius forms almost a broad curve, somewhat as in *P. spilotænia*, KOHL, as figured by KOHL, Ann. K. K. Hof. Mus. IX, Pl. XIV, not curved down in the middle below as in *commendabilis*, KOHL, l. c. f. 53, with which the alar clouds have a greater resemblance; but the apical cloud in the present species is larger and wider and the basal is narrowed in front, not of equal width as in *commendabilis*.

***Pseudagenia picistigma*, sp. nov.**

Black, covered with a white pile, the 1st abdominal segment from shortly behind the middle, the 2nd entirely and the 3rd and 4th at the base rufo-testaceous; the apical half of the last segment white; the fore tibiæ and tarsi and the middle knees testaceous; the long spur of the hind tibiæ does not reach to the middle of the metatarsus; on the inner orbits is a mark, gradually narrowed above at the antennæ and the clypeus, except for a pyriform black mark (the narrowed part above) in the centre, extending to the top, but not to the bottom, and the palpi, white; wings hyaline, the apex with a cloud commencing at the 3rd transverse cubital nervure, the stigma fuscous, the nervures black; the 2nd abscissa of radius not much longer than the 1st and distinctly shorter than the 2nd; the 1st recurrent nervure received distinctly behind, the 2nd in the middle of the cellule. ♂.

Length 7 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

Mandibles broadly rufous in the middle. Hinder ocelli separated from each other by about one fourth less than they are from the eyes, which converge below. The 3rd

antennal joint is not much longer than the 4th, the 5th distinctly shorter. Prothorax large. The middle femora have the apical half dark rufous below, their tibiae are broadly white in the middle behind.

A long, slender species, with the thorax longer than usual.

***Pseudagenia brunniceps*, R. LUCAS.**

Die Hymen. Ost-Afrikas, Pompilidæ, p. 60.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

Recorded by LUCAS from Sanzibar, Taita and Delagoa Bay. The amount of rufous colouration on the head on thorax varies; the fore tibiae and tarsi vary in colouration from blackish to rufous.

***Pseudagenia canaliculata*, sp. nov.**

Black, the head, antennæ and legs, except the coxæ and trochanters, red, the pronotum of a darker red, suffused with black, the front above with a large black mark, widened below; the face, clypeus, mandibles and palpi of a brighter red than the front and vertex; wings fuscous violaceous, the nervures and stigma black; the 2nd abscissa of radius slightly, but distinctly longer than the 3rd, which is as long as the 1st transverse cubital nervure; the 1st recurrent nervure is received close to the base of the apical third of the cellule, the 2nd at a slightly greater distance from the base of the 3rd cellule; the metanotum with a rounded, somewhat steep slope and with a shallow, but distinct furrow down the middle. Eyes converging above; the hinder ocelli separated from each other by half the distance they are from the eyes. Clypeus with a distinct, depressed apical border, which is widest in the middle. The 3rd antennal joint twice the length of the scape and a little shorter than the following 2 joints united. Hind tarsi long, closely spinose, the basal 2 joints united as long as the tibiae, the claws long, stout and with a triangular tooth near the middle. ♀. — Length 14 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. September.

Temples broad, roundly narrowed. Pronotum broadly rounded laterally, the centre with an indistinct, shallow furrow. Head as wide as the thorax.

This species is closely allied to *P. longitarsis* CAM. from Cape Colony; that species may be known from it by the mesonotum and scutellum being dark rufous, by the stouter antennæ, by the metanotum being more strongly and distinctly transversely striated and without a longitudinal furrow, it being also flatter, and by the 2nd recurrent nervure being received in the middle of the cellule, not clearly behind the middle.

***Pedinaspis ruficaudis*, sp. nov.**

Black, the 3rd and following segments of the abdomen red, the apex of clypeus broadly, the fore tibiae and the antennæ more or less of a darker red, the spurs white; mandibles of a brighter red, black on the innerside; spurs white, the apical 4 tarsal joints dark red; wings dark fuscous, the nervures black; the transverse median nervure

interstitial or almost so; the 2nd and 3rd abscissæ of the radius are almost equal in length; the 1st recurrent nervure is received shortly before, the 2nd a less distance beyond the middle of the cellule; the 1st transverse cubital nervure roundly curved; the radius forms a round curve. Ocelli in a curve, the hinder separated from each other by a slightly greater distance than they are from the eyes. Tibial and tarsal spines black, they are short on the anterior, longer on the posterior legs; the long hinder spur reaches close to the apex of the metatarsus. Thorax, abdomen and legs covered with a depressed white pile; on the apices of the basal 2 abdominal segments it forms broad bands. Pro-notum longer than the mesonotum, which is hardly so long as the scutellum; the metanotum is long, as long as the 1st abdominal segment; it is of equal width and has the apex broadly incised. ♀. — Length 8 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. April.

The occiput is transverse and has a sharp margin. There is no malar space; there is a triangular depression between the antennæ and the eyes. There is no sutural line at the base of the clypeus.

***Ceropales ruficollis*, sp. nov.**

Black; the prothorax, apical slope of metanotum and the legs red; the sides of the face, clypeus and labrum broadly, a line on the inner eye orbits, gradually narrowed above, a narrow line on the outer orbits, post-scutellum, a transverse line on either side of the apex of the metanotum, a broad band near the apex of the 1st abdominal segment, similar, but slightly narrower bands on the 3rd, 4th and 5th and the whole of the 6th, pale yellow; antennæ red, the apical joints marked with black above; wings hyaline, the nervures and stigma black; the 3rd abscissa of radius about one fourth of the length of the 2nd, the cellule being thus much narrowed in front; it is as long in front as the space bounded by the 2nd transverse cubital nervure and the 2nd recurrent; the 1st recurrent nervure is received near the base of the apical third of the cellule; the 2nd near the apex of the basal third; the cubitus in hind wings originates distinctly before the transverse median nervure. ♀.

Length 7 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

Face and clypeus sparsely, weakly punctured and covered with a minute white pile, the front and vertex granular; the clypeus is narrowly lined round the edges with rufous, and the labrum is rufous in the middle. The hinder ocelli are separated from the eyes by a distinctly greater distance than they are from each other. Pro- mesonotum and scutellum distinctly, but not closely punctured; the post-scutellum smooth. Metanotum granular; a wide smooth depression at its base, the space on either side striated. Abdomen smooth and shining. The base and apex of the propleuræ are broadly roundly raised, the central part therefore appearing depressed. The long spur of the hinder tibiæ reaches to the apex of the basal fourth of the metatarsus, and is as long as the 2nd joint. The metanotum is obliquely roundly sloped.

Allied to *C. punctulata* CAM. from Cape Colony; that species has the abdomen at the base red and it wants the yellow bands, the metanotum, too, being entirely black.

***Ceropales suleiscutis*, sp. nov.**

Black, shining, the face, clypeus, antennal tubercle, the inner orbits to near the top, broadly below, the top of the line narrowed, the narrowed part roundly curved, the outer orbits narrowly, a line, about 3 times wider than long, shortly below the middle of the propleuræ on the base, a line on the apex of the pronotum, dilated slightly at the apex, a curved spot on the sides of the apex of metanotum, the underside of the 4 anterior coxæ, and the sides of the middle below with a curved line and the apex above, pale yellow; the rest of the coxæ, the anterior femora behind, the 4 anterior tibiæ behind and the tarsi, black; the rest of the femora and tibiæ red; the spurs of a darker red; the long spur of the hinder does not reach the middle of the metatarsus; wings clear hyaline, the 2nd and 3rd abscissæ of the radius equal in length; the 1st transverse cubital nervure is roundly bent above; the 1st recurrent nervure is received shortly beyond, the 2nd in the middle of the cellule. ♀.

Length 7 mm.

Kilimandjaro: Kibonoto, cultivated region. May.

Antennæ stout, the 3rd and 4th joints equal in length. Front and vertex shagreened; the antennal tubercle distinctly furrowed. Eyes distinctly converging below. Hinder ocelli separated from the eyes by about the same distance as they are from each other. Middle of mesonotum broadly depressed and with a triangular raised part in the middle; this depression is strongly, but not closely punctured; the scutellum is similarly punctured except in the middle above; the apical slope smooth, with a deep, distinct furrow down the middle. Metanotum opaque, there is a smooth longitudinal furrow at the base; the sides are obliquely striated, strongly at the base, more weakly towards the apex; the centre finely, closely rugose. Propleuræ smooth, the wide central depression with 4 striæ; the mesopleuræ strongly, but not closely punctured; the metapleuræ shagreened. Labrum dark rufous; the mandibles broadly dark red beyond the middle. Palpi dark fuscous, covered with a white pile.

Sphegidae.

***Sphex umbrosus*, CHRIST.**

Sphex umbrosus, CHRIST., Natur. Ins. 293, T. XXIX, f. 2; KOHL, Ann. d. K. K. Hof. Mus., 1890, 407; Denk. d. Math.-Natur. d. K. Akad. d. Wiss. 1906, 199. — *Sphex metallica*, TASCHENBERG, Zeits. f. d. ges. Naturw., Halle, XXXIV, 414. — *Sphex Taschenbergi*, MAGRETTI, Ann. Mus. Civ. Stor. Nat. Genova, (2) 1, 61 (var.). — *Sphex crebus*, KIRBY, Bull. Liverp. Mus., 111, 10, p. 15 (= *metallicus*).

Meru low lands, December. 1 example of the var. *metallicus*, TASCH.

***Sphex tuberculatus*, SMITH.**

Sphex tuberculatus, SMITH, Ann. Mag. Nat. Hist., XII; KOHL, Ann. d. K. K. Hof. Mus., 1895, 56, Taf. IV, f. 4, 8, 9 and 13. — *Sphex luteifrons*, GRIBODO, Ann. Mus. Civic. Stor. Nat. Genova, (2) 1, 300. — *Kilimandjaro*: Kahe. 2 examples.

KOHL, *l. c.*, 1890, 407, considered this species to be a form of *umbrosus*, but later, *l. c.*, supra, he concludes that it is a good species.

***Sphex luteipennis*, MOSC.**

Sphex luteipennis, MOSC., Magy. Akad. Term. Értek., XIII, 11, 33; KOHL, Ann. d. K. K. Hof. Mus., 1890, 423, 115. — *Sphex rufipennis*, KOHL, Termesz. Füzetek., IX, 198; ANDRÉ, Spec. Hymen. 111, 151.

Kilimandjaro: Kibonoto, cultivated region. May. 7 specimens.

***Sphex kilimandjaroensis*, sp. nov.**

Black, the anal segment more or less rufous, the pubescence dense and black; the wings fuscous violaceous, the 2nd cubital cellule much narrowed in front, the 2nd and 3rd transverse cubital nervures almost uniting in front, the space between them being hardly more than that between the 1st recurrent nervure and the 2nd transverse cubital, the 2nd recurrent nervure is received at the apex of the basal 3rd of the cellule; the apex of the radial cellule is rounded; the 2nd cubital cellule is large, and of equal width, the nervures being parallel; abdominal petiole as long as the hind coxæ and the 2nd joint of the hind tarsi. Face and clypeus in ♂ covered with silvery pubescence; the penultimate ventral segment in ♂ largely triangularly incised, the incision extending to the base of the segment. Eyes slightly converging above, being separated there by about the length of the 3rd and 4th antennal joints united; the hinder ocelli are separated from each other by almost the same distance as they are from the eyes. Scutellum with a shallow furrow down the middle. Claws without a distinct tooth. ♂ and ♀. — Length 25—28 mm.

Kilimandjaro: Obstgartensteppe. March. Kibonoto, cultivated region. May.

Some examples have not the wings so deeply, uniformly fuscous violaceous as others, having lighter coloured patches. The ventral segments in the ♂ bear patches of black hair on the sides; these become longer and denser towards the apex. Leg spines short, not very numerous.

Allied to *S. Stadelmanni* KOHL and *S. Bohemanni* KOHL. The ♂ is easily known from these 2 species by the large deep incision in the penultimate ventral segment.

***Sphex massaicus*, sp. nov.**

Black, the abdomen distinctly tinged with blue, the wings fuscous violaceous; the 1st abscissa of radius a little longer than the 2nd, which is half the length of the 3rd; the 2nd cubital cellule is smaller and narrower than usual and is a little widened behind;

the 1st recurrent nervure is received near the apex of the basal fourth of the cellule, the 2nd quite close to the base of the cellule. Abdominal petiole short — shorter than the hinder coxæ. The 3rd antennal joint is as long as the 4th. Eyes hardly converging above; the hinder ocelli separated from each other by half the distance they are from the eyes. Apex of clypeus with a longer than wide depression in the middle. Mandibles for the greater part red. Scutellum with a shallow depression down the centre. Metanotum coarsely, irregularly transversely striated, the sides and apex depressed, tinged with purple. Claws bluntly unidentate. ♀ and ♂. — Length 38 mm.

Meru low lands, Ngare na nyuki. January.

The apical ventral segments in the ♂ are transverse. This species resembles *S. kilimandjaroensis*, which may be known from it by the large 2nd cubital cellule and by the 3rd being greatly narrowed in front.

***Sphex (Parasphex) albisectus*, LEP. et SERV.**

Sphex albisecta, LEP. et SERV. Encycl. Méth. X, 462; *Enodia albisecta*, DAHLBOM, Hym. Eur. 1, 28 and 438; *Sphex albisectus*, KOHL, Termész. Fuzetek. IX, 2, 185; Ann. d. K. K. Hof. Mus., Wien, 1890, 335, 35; EDM. ANDRÉ, Spec. Hymén. 111, 129.

Kilimandjaro: Kibonoto, 1000—1300 m. 6th September. 1 example. — *Meru* low lands, Ngare na nyuki. January.

***Sphex (Parasphex) Sjöstedti*, sp. nov.**

Black, the head, thorax, coxæ and femora densely covered with long white pubescence; the dilated apex of the petiole rufo-testaceous, the apices of the abdominal segments narrowly, but distinctly banded with white; wings hyaline, the nervures and stigma blackish, the costal nervure dark testaceous; the basal 2 abscissæ of the radius of equal length, the 3rd almost one fourth longer, the apex is roundly curved; the 2nd cubital cellule is widened behind, the 2nd transverse cubital nervure is curved except posteriorly where it is straight and oblique; the 1st recurrent nervure is received shortly before the middle of the cellule, the 2nd close to the base; the 3rd transverse cubital nervure has the anterior three fourths obliquely sloped, the apex is straight. The abdominal petiole is as long as the dilated part and the following 3 segments united. Antennæ short, the 3rd joint about one fourth longer than the following. The hinder ocelli are separated from the eyes by the same distance as they are from each other. The eyes distinctly converge below. Front finely, but distinctly punctured; the ocellar space is raised and punctured. Tegulæ black. ♂. — Length 12—13 mm.

Meru low lands. October. 2 examples.

Is related to *S. albisectus*, LEP.; the latter is larger and stouter, has the head and thorax much less densely and longly pilose, the head in front is shorter and broader, the hinder ocelli are separated from each other by a less distance than they are from the eyes, which do not converge so much below; the 1st abdominal segment and the 3rd are red, and the 3rd abscissa of the radius is clearly shorter than the 2nd.

Sphex (Isodontia) pelopoliformis, DBM.

Sphex pelopoliformis, DAHLBOM, Hym. Eur. 1, 437; *Sphex longiventris*, SAUSS. Reise, Novara; t1, GRIB., Ann. Mus. civ. Stor. Nat. di Genova, (2) 1, 330; *Sphex (Isodontia) pelopoliformis*, KOHL, Ann. d. K. K. Hof. Mus. V, 372, 64.

Usambara. 1 example.

Sphex (Isodontia) meruensis, sp. nov.

Black, the head and thorax densely covered with long cinereous pubescence, the abdomen pruinose; the legs sparsely covered with white hair; the antennal scape entirely, the 6 following joints except above, the mandibles except the teeth, prothorax, tegulae, upper half of mesopleurae, scutellums, 1st abdominal segment except above, the greater part of the 2nd, a broad band near the base of the 3rd and the legs, except the hinder femora above, rufous; wings fulvo-hyaline, the radial and cubital cellules smoky, the costa, stigma and the nervures except in the smoky parts fulvous; the 2nd abscissa of radius more than double the length of the 3rd, which is a little longer than the 1st; the 1st recurrent nervure is received close to the apex, the 2nd near the apex of the basal fourth of the cellule. The 3rd joint of the antennae is almost as long as the following 2 united. The eyes converge slightly, but distinctly above; the hinder ocelli are separated from each other by the same distance as they are from the eyes. ♀. — Length 24 mm.

Meru low lands. October.

Claws bidentate, the tarsi thickly and stoutly spinose; tibial spines short and sparse.

Ammophila, KIRBY.**I. *Ammophila*, sensu str.****A. *Mesonotum transversely striated.******Ammophila massaica*, sp. nov.**

Black, the apex of the 3rd and the whole of the following abdominal segments blue, the 4 front legs except the femora above, the middle of the hinder femora on the outside and the hind tibiae, except below, red; the calcaria testaceous; the wings hyaline, the nervures black; the tegulae rufo-testaceous; the basal 2 abscissae of radius equal in length, the 3rd a little longer than them; the 1st recurrent nervure is received near the basal third of the cellule, the 2nd about the same distance from the apex; the 3rd transverse cubital nervure is elbowed below the middle, the upper and lower parts being straight and oblique. Pro- and mesonotum transversely striated, the former not so closely as the latter, which has a furrow extending from the base to near the centre. Scutellum stoutly longitudinally striated, the central stria weaker than the others; post-scutellum smooth in the centre, the sides with 3 or 4 longitudinal striae. Metanotum transversely reticulated, the basal half more strongly than the apical. Mesopleurae weakly, the metapleurae more strongly punctured; the pleurae densely covered with short, white pubescence.

The outer edge of the collar and the tubercles are dull red. The basal 2 abdominal segments are slender, of almost equal length and about three-fourths of the length of the thorax; the 1st is black; the 2nd and 3rd are rufo-testaceous except on the top. ♂. — Length 18 mm.

Meru low lands, Ngare na nyuki. January.

The face and clypeus are densely covered with silvery pubescence. The eyes distinctly converge below; the hinder ocelli are separated from each other by a slightly less distance than they are from the eyes. The 3rd antennal joint is about one fourth longer than the following. Mandibles rufo-testaceous to the base of the teeth.

Ammophila curvistriata, sp. nov.

Black, the mandibles except the teeth, tegulae, the basal 2 abdominal segments except on the top, the 3rd except for a broad black line, which extends from the base to near the apex above, the sides of the 4th, the red mark narrowed at the base, roundly dilated towards the apex, the 4 front legs, the apex of the hind femora and their tibiae and tarsi, bright red; wings clear hyaline, the nervures black; the 3rd abscissa of radius about one fourth of the length of the 2nd; the 1st recurrent nervure received at the apex of the basal third of the cellule. Pronotum very weakly, sparsely punctured; mesonotum transversely striated, the striae roundly curved, especially towards the apex where they are stronger; the base in the centre aciculated, the sides punctured and with some fine transverse striae. Scutellum punctured distinctly, the sides finely longitudinally striated. Metanotum transversely rugose, the sides punctured and densely covered with silvery longish pubescence. Pro- and mesopleurae densely covered with longish silvery white pubescence which hides the texture; the metapleuræ with the pubescence shorter and much sparser, and finely rugose. Front and vertex smooth; sparsely haired; the hinder ocelli separated from each other by a little less distance than they are from the eyes. The pubescence on the face, clypeus and outer orbits dense and silvery. ♂. — Length 21 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th May.

The eyes converge slightly below. The 3rd antennal joint is about one fourth longer than the 4th, and shorter than the following 2 united. Tarsal spines and calcaria pale testaceous.

Ammophila mernensis, sp. nov.

Black, the basal 3 joints of the antennae, apex of clypeus, basal half of mandibles, prothorax, 2 lines in the centre of the metanotum, tubercles, the hinder part of the mesopleurae, the 4th abdominal segment narrowly at the apex, the 5th more broadly, the 4 anterior legs, except the trochanters and femora above, the apex of the hinder femora narrowly below, the tibiae except above and the 3rd and 4th joints of the hinder tarsi, red; wings hyaline, the apex slightly clouded; the 3rd abscissa of the radius one third of the length of the 2nd; the 1st recurrent nervure received near the apex of the basal third of the cellule. Pronotum smooth; the mesonotum weakly irregularly striated; the

scutellum punctured, the post-scutellum finely, closely rugose; the metanotum somewhat strongly and closely transversely striated. Head and thorax densely covered with a white pruinose pile, which gives them a white appearance. Eyes a little converging above. Hinder ocelli separated from each other by a little less distance than they are from the eyes. ♂. — Length 22—24 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m., 9th May. — *Meru* low lands, Ngare na nyuki, November.

The 3rd antennal joint is a little shorter than the following 2 united. The white silvery pubescence on the face and clypeus is very dense. Tarsi thickly covered with short black, thickish spines.

Ammophila beniniensis, PAL.

Sphex beniniensis, PALISOT DE BEAUV. Ins. p. 48, t. 7, f. 1; *Ammophila beniniensis*, SMITH, Cat. Hym. Ins. 111, 213, 33; BINGHAM, Ann. Mag. Nat. Hist., (7) X, 218 (1902). Neither the description nor the figure of the above species is good, but there are a number of specimens in the collection which fit them; and Col. C. J. BINGHAM tells me that they are identical with 6 specimens in the British Museum which have bore the name of *beniniensis* since 1856. These are from the Congo, Sierra Leone and Port Natal. As I have a specimen from the Cape, as well as the numerous examples from Masai Land it is clear that the species has a wide distribution. As *A. beniniensis* has been very imperfectly described I have given a description of it in full of both sexes. It is variable as regards the quantity of red on the collar and on the legs: thus the tibiae may be entirely black, entirely reddish or red at the base only.

Black, the apical segments of the abdomen tinged with blue and covered with a white pile; the head and thorax densely covered with black hair; the basal 2 joints of the antennae, the base of the 3rd entirely and the rest of it below, the head, prothorax, a mark on the sides of the mesonotum in front of the tegulae, tubercles, the 4 front legs, the apex of the hind femora narrowly and the greater part of the hinder tibiae, red; wings fuscous violaceous, the nervures and stigma black; the tegulae reddish. Posterior part of the pronotum somewhat strongly, irregularly striated; the mesonotum irregularly, transversely striated, the striae more or less curved; the scutellum coarsely longitudinally striated; the post-scutellum less strongly striated, the striae oblique; the metanotum closely, strongly, somewhat irregularly, transversely striated. Propleurae, except at the base, stoutly striated, the striae running more or less obliquely, from the top to the bottom; the mesopleurae irregularly striated from top to bottom; the metapleurae more strongly closely, obliquely striated. ♀.

Length 28—30 mm.

Head smooth, the hair on it longer and sparser than it is on the thorax; the hinder ocelli are separated from each other by a slightly less distance than they are from the eyes; across, and extending beyond them, is a broad curved black mark. Abdominal petiole 2-jointed, the 2 united as long as the head and thorax united. 3rd joint of

antennæ as long as the following 2 united. Tibial and tarsal spines black; those on the former sparse, on the latter numerous, stout and dense; the basal joint of the anterior tarsi projects above into a stout process, about 3 times longer than wide and ending in one stout and 2 thinner longish spines. The basal 2 abscissæ of the radius are about equal in length and a little shorter than the 3rd; the 2nd transverse cubital nervure is oblique and roundly curved; the 3rd is hardly oblique and broadly, roundly curved outwardly; the 1st recurrent nervure is received near the apex of the basal fourth of the cellule, the 2nd close to the apex.

The ♂ is similarly coloured. The size of the black spot on the vertex varies in extent; the scape only of the antennæ may be red, or the basal 5 joints may be entirely red; the amount of red on the prothorax and legs varies also. In most males the head is entirely black and the sides of the collar only are red.

A common species. *Kilimandjaro*: Kibonoto, cultivated region, 1300—1900 m. May. Leitokitok, May. — *Usambara*: Mombo. — *Meru* low lands, Ngare na nyuki. January, October. Dunbrody, Cape Colony (Rev. J. A. O'Neil, S. J.). — *A. rugicollis*, LEP. (Nat. Hist. Hym. Ins. 111, 373, 14), appears to be a closely allied form.

***Ammophila Sjöstedti*, sp. nov.**

Black, the head and thorax densely covered with silvery pubescence; the antennal scape, mandibles, except the apex, the sides of prothorax broadly, the red extending on to the outside of the pronotum, tubercles and 2 longish marks, straight on the inner, rounded on the outer side on the centre of metanotum, red; legs reddish, the 4 posterior femora broadly above, the hind trochanters and the 4 hinder tarsi, black. Wings hyaline, the stigma testaceous, the nervures black; the 2nd abscissa of radius one fourth shorter than the 3rd. The 1st and 2nd abdominal ventral segments and more or less of the others are rufo-testaceous. The pro- and mesonotum are transversely striated; the central part of the metanotum is similarly striated, but with the striae roundly curved. Eyes distinctly converging below; the hinder ocelli are separated from each other by the same distance as they are from the eyes. Tegulæ rufo-testaceous. ♂. — Length 18 mm.

Meru low lands, Ngare na nyuki, October.

There is a rufous streak behind and below the tubercles and a longer oblique one on the lower three fourths of the apex of the mesopleuræ. 3rd antennal joint one third longer than 4th.

b. *Mesonotum punctured*.

***Ammophila longipilosella*, sp. nov.**

Black, the head and thorax densely covered with long white pubescence, the tegulæ, 4 front legs and the hinder tarsi posteriorly, the underside of the 1st abdominal segment, the 2nd, 3rd and 4th except above, the black on the top of the 4th narrow at the base, becoming gradually wider towards the apex, red; pro- mesonotum and scutellum closely, somewhat strongly punctured, the punctures on the scutellum sparser, especially in the

centre of apical half; the metanotum much more closely punctured, especially towards the apex, the centre more or less striated. Pleuræ closely punctured, the puncturation becoming stronger and closer towards the apex; the pubescence is dense, almost hiding the sculpture. Wings hyaline, the nervures black, the apex slightly infuscated; the 2nd abscissa of radius a little longer than the 1st, and not one quarter longer than the 3rd; the 1st recurrent nervure is received shortly before the middle of the cellule. ♂.

Length 22 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th May.

The hair on the head, and especially on the outer orbits, is longer and denser than it is on the thorax. The eyes converge slightly below; the hinder ocelli are separated from each other by a distinctly less distance than they are from the eyes.

II. Subgenus *Psammophila*.

Ammophila (*Psammophila*) *cyanea*, sp. nov.

Blue, the 7 basal joints of the antennæ, the mandibles, tegulæ, the 1st abdominal segment except above, the 2nd and 3rd and the 4 front legs red; wings hyaline, the stigma testaceous, the nervures black; the 1st abscissa of radius a little longer than the 2nd, half the length of the 3rd; the 1st recurrent nervure is received shortly before the middle of the cellule. Head and thorax densely covered with white pubescence. Eyes distinctly converging above; the hinder ocelli separated from each other by a slightly less distance than they are from the eyes. 3rd and 4th joints of the antennæ of the same length. Pronotum distinctly furrowed in the middle. Mesonotum finely, sparsely punctured. Scutellums almost shagreened. Metanotum closely distinctly transversely punctured; the apical slope more widely than the base. Abdominal petiole as long as the hinder femora. Hind tarsi closely spinose. ♂. — Length 17 mm.

Meru low lands, Ngare na nyuki. October.

The apex of the wings is narrowly clouded. The middle coxæ are for the greater part blue; the base and apex of the hind femora narrowly rufous. Radial cellule sharp-pointed at the apex.

A distinct species readily known by the blue colour.

Ammophila (*Psammophila*) *Tydei*, KOHL.

KOHL, Ann. K. K. Hof. Mus. XXI, 284; where the full synonymy and references are to be found. — *Kilimandjaro*: Kibonoto low lands and the lower cultivated region, 1000—1300 m., August to November. Natron lakes, December. 16 examples of this common and wide-ranging species.

Sceliphron spirifex, L.

Spher spirifer, LINN., Syst. Nat. 1, 942, 9. *Pelopocus spirifer*, FAB., Syst. Piez. 202, 1. *Sceliphron spirifer*, KLUG, New. Schrift. Ges. Naturf. Fr. Berl. 111, 564;

BINGHAM, Ann. Mag. Nat. Hist. Ser. 7, X, 1902, 217; SCHLETTNER, Ann. d. l. Soc. Ent. de Belgique, XXXV, 13; STADELMANN, Hym. Ost-Afrikas, 45, 22; GRIBODO, Ann. d. Mus. Civic. di Genova, XVI, 244, 1; *l. c.* (2) 1, 298; MAGRETTI, *l. c.* (2) XIX, 601; *l. c.* 1884, 576; FOX, Proc. Acad. Phil. 1896, 552; KOHL, Denkschr. d. Mathem.-Naturwiss. d. Kais. Akad. d. Wissen. Wien, 1906, 189. — *Sceliphron aegyptium*, W. F. KIRBY, H. O. FORBES, Natur. Hist. of Sokótra and Abd. el Kûri, 240, 10.

Kilimandjaro: Kibonoto, 1300—1900 m. 15th November, September. — *Meru* low lands, 2nd September. 6 examples. — A widely spread African species.

***Philanthus triangulum*, var. *diadema*, F.**

Crabro diadema, FAB., Spec. Ins. 1, 471. — *Philanthus diadema*, FAB., Skrivt. Naturh. Selsk. Copenhagen 1, pt. 127 and 225; DAHLBOM, Hym. Eur. 1, 495; SMITH, Cat. Hym. Ins. Brit. Mus. IV, 471; KOHL, Ann. K. K. Naturh. Hof-Mus. Wien, 1891, 365; *l. c.* 1896, pl. V, f. 25; MAGRETTI, Ann. del Museo Civico di Storia Naturale di Genova, (2) XIX, 52; *l. c.* 609.

Kilimandjaro: Kibonoto, 1000—1300 m., September. Common. — *Meru* low lands, Ngare na nyuki, November.

In some examples the central piece of the frontal mark is obsolete.

***Philanthus loeflingii*, DBM.**

Philanthus loeflingii, DAHLBOM, Tab. Exam. Synopt. Spec. Philanth. Hym. Eur. 1, 495; KOHL, Ann. K. K. Hof. Mus. VI, 1891, 351.

Kilimandjaro: Kibonoto, 1000—1300 m. May to November. One specimen has a honey bee attached to it. As is well-known *Philanthus* stores its nest with *Apis*.

***Philanthus xanthogaster*, sp. nov.**

Black, the abdomen pale yellow except for the extreme base and a line down the basal two-thirds of the 1st abdominal segment, a small curved line on the mesopleuræ behind the tubercles, the post-scutellum and a broad line, not extending to the base or apex, on the sides of metanotum, yellow, the face, clypeus and a mark between the antennæ, its sides projecting upwards and narrowed above of a paler yellow; mandibles rufous, their base tinged with yellow, the apex black; the antennæ below, the posterior part of the head (the black part of the vertex roundly dilated in the middle behind the ocelli), the outer orbits, the apex of the pronotum (except in the middle where it is yellowish), the tegulae and tubercles, rufous; legs of a paler red, the coxæ more or less black behind, the middle tibiae in front and the hinder entirely, pale lemon-yellow; wings hyaline, slightly tinged with fulvous; the nervures and stigma testaceous, the stigma darker, more rufous coloured than the nervures. Metanotal area very smooth and shining, a shallow, but distinct fovea, which becomes gradually widened towards the apex, down its centre. Pygidium slightly, roundly raised in the middle, where it is finely, closely punctured; the sides are more or less striated. ♀. — Length 17 mm.

Meru low lands, Ngare na nyuki. January.

Clypeus smooth, sparsely weakly punctured above; the face finely, closely, the front and vertex as closely, but more strongly punctured. Pro- and mesonotum closely and more strongly punctured than the head; the scutellum is as strongly, but not so closely punctured as the mesonotum; it is largely tinged with rufous and has a transverse yellow mark in the centre of the apex; the post-scutellum is much more sparsely punctured; the depressed centre of the apical slope of the metanotum is shagreened, the sides punctured, but not so closely as the scutellum. Propleuræ finely, closely, obliquely striated; the mesopleuræ and mesosternum closely, strongly punctured, the punctures running into striae; both are covered with white hair, as are also the cheeks and metathorax; the mesonotum is covered with shorter, denser, darker pubescence. The 2nd and 3rd abscissæ of the radius are equal in length; the 1st transverse cubital nervure is roundly bent; the 1st recurrent nervure is received before the middle, the 2nd quite close to the base of the cellule.

***Philanthus reticulatus*, sp. nov.**

Black, the head below the antennæ, between and below them is a mark, with its sides roundly dilated upwards, the top rounded, the prolongations as wide as the transverse lower part; above the centre of the antennal space is a small trilobated mark, the lobes rounded, and from them runs laterally a curved line, narrowed on the innerside, the basal half of the mandibles, the lower half of the outer orbits, the top obliquely dilated outwardly, a narrow line on the outside of the pronotum and a mark below the tegulæ, widest in the middle and triangularly narrowed below, yellow; the abdomen orange yellow, the basal slope of the 1st abdominal segment black, the mark with a rounded incision in the middle above. Legs black, the 4 anterior femora from shortly behind the middle, the apex of the posterior narrowly and the tibiae and tarsi, orange yellow. Wings fuscous, the nervures and stigma black; the 1st transverse cubital nervure obliquely bent towards the top of the 2nd from below the middle; the 2nd abscissa of radius hardly one fourth shorter than the 3rd, the 1st recurrent nervure received in the middle of the cellule. Tegulæ yellow, tinged with red in the middle. ♀.

Length 12 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 24th April.

Head and thorax rather strongly and closely punctured, covered with short fuscous pubescence, which is longer on the apical slope of the mesonotum; the metanotal area coarsely reticulated, the rest of the metanotum more coarsely punctured than the mesonotum. The scutellum is less closely punctured than the latter. Propleuræ smooth, striated in the centre; the mesopleuræ more strongly punctured than the mesonotum, the punctures running into reticulations; the metapleuræ closely reticulated. 1st abdominal segment closely, distinctly, but not strongly punctured; the 2nd more weakly punctured, more strongly towards the apex, the others almost smooth, the last with a semicircular incision.

***Philanthus flavolineatus*, sp. nov.**

Black, a large oblique mark, with irregular edges, extending from the base to the apex, on the sides of the 2nd abdominal segment, a line on the apices of the 3rd, 4th and 5th abdominal segments, the yellow extending on to the sides of the ventral surface, a longish transverse spot on the lower part of the front, waved above, obliquely narrowed on the sides below, the lower part dilated, the centre prolonged into a short, thick projection, along the inner side of the antennæ, a small triangular mark in the centre below, the face, cheeks and clypeus, except for a triangular mark on the face below each antennæ, a smaller oblique one, narrowed towards the top, on the sides of the clypeus below, and a line on the apex of the pronotum, pale yellow; the underside of the flagellum of the antennæ, the 1st abdominal segment, except for a black line down the basal slope and the apical 2 segments, red; a large, oblique spot on the outer orbits of a darker red; wings hyaline, the front half of the anterior from shortly behind the transverse basal nervure, not extending beyond the cubitus and with the 2nd and 3rd cubital cellules lighter coloured, and the apex of the hind wings slightly dark fuscous, the stigma ochraceous, the nervures black. Legs red, the coxæ, trochanters and the 4 posterior femora above black, the outside of the 4 posterior tibiæ and more or less of their tarsi yellow. ♀. — Length 12 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May. Numerous examples. Probably a common species.

Head, thorax and apical segments of abdomen densely covered with white pubescence. Head and thorax closely rugosely punctured, the metanotum closely rugosely reticulated. Propleuræ almost smooth, a stout oblique keel in the middle; mesopleuræ coarsely rugosely punctured, more or less reticulated; an irregular finely punctured space at the base of metapleuræ, the rest smooth, slightly aciculated. Abdomen smooth, the apical segments sparsely punctured, the last roundly incised. Mandibles rufous, yellow at the base.

The ♂ is smaller and more slenderly built, the basal 3 or 4 joints of the antennal flagellum are red, the rest black; the frontal mark is wider, does not extend beyond the antennæ and is not waved; the 2 apical prolongations are thicker; there is a yellow line on the post-scutellum and the red on the basal abdominal segment is only indicated irregularly on the apex. The last abdominal segment is broadly rounded. The 2nd abscissa of the radius is about one fourth of the length of the 3rd; the 1st transverse cubital nervure is roundly curved; the 1st recurrent nervure is received at the apex of the basal third of the cellule.

The amount of red on the basal abdominal segment varies; the post-scutellum may want the yellow line, the tibiæ may be broadly lined with black or may want it entirely.

***Philanthus pilifrons*, sp. nov.**

Black, the clypeus, cheeks, a mark on the lower part of the front, obliquely narrowed at the sides below, laterally prolonged upwards, the prolongation roundly narrowed

above, the inner side below slightly roundly incised, the outer slightly dilated below, a line on the pronotum, scutellum, post-scutellum, a broad line, narrowed above, on the apical three fourths of the sides of the metanotum, a line down the upper half of the base of mesopleuræ, a large, broad transverse mark on the centre of the 1st abdominal, slightly narrowed and rounded on the inner side, the space separating the 2 marks not half their width, the greater part of the 2nd segment, a line on its apex and on the apices of the 3rd and 4th, yellow; there is a black spot, rounded at the apex, on the base of the 2nd abdominal segment, there is a small spot on either side of the middle, touching the apical yellow line, the space between the 3 marks being red, the 3rd segment is largely red in the middle, its apex, and that of the 4th, the apical half of the 5th and the whole of the others are red; as are also the greater part of the 2nd ventral, the centre of the 3rd and 4th and all the apical; there is a small yellow spot on the sides of the 2nd segment at the apex, a large one, roundly narrowed on the hinder side, on the 3rd and a smaller, shorter one, rounded on the inner side, on the 4th. The outer orbits and the top of the occiput, except in the middle, rufous. Legs ferruginous-red, the coxæ and trochanters black, the tarsi yellow, the apices of the joints reddish. Wings hyaline, the apex narrowly clouded, the stigma rufo-testaceous, the nervures black; the 1st recurrent nervure received in the middle of the cellule; the 2nd recurrent nervure is received in the middle of the cellule. ♀. — Length 14—15 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 11th May.

Head, thorax, base of abdomen and the ventral segments densely covered with longish white pubescence; the front more densely covered with longer fuscous hair; the hair on the vertex also fuscous, but shorter. Front and vertex finely and closely punctured, the puncturation on the outer orbits stronger, with the punctures much more distinctly separated. Mesonotum and scutellum closely, deeply punctured, almost reticulated; there is a distinct keel on the centre of the basal half of the mesonotum. Metanotum similarly punctured to the mesonotum but more strongly; the apical slope more or less reticulated, with a few stout transverse striae in the middle; on the basal part is a deep, moderately wide furrow, extending from the base to near the apex. Basal segment of abdomen rather strongly and closely punctured; the others smooth; the last roundly incised. The oral region is fringed with long golden hair. Tegulae ferruginous.

Cerceris. LATR.

The following table may aid in the determination of the species described in this paper.

- | | | | |
|---|-----|--|---------------------|
| 1 | (6) | Metanotal area smooth. | |
| 2 | (3) | Abdominal petiole and sides of 2nd abdominal segment broadly red, the apices of the 4th and 5th segments black. | <i>basiornata</i> . |
| 3 | (2) | Abdominal petiole not entirely red, the apices of the 4th and 5th segments not black. | |
| 4 | (5) | Large, the yellow bands on the abdomen tinged with red; the metanotal area with a deep transversely striated, furrow, its sides regularly, stoutly striated. | <i>Yugrei</i> . |

- 5 (4) Medium sized; the yellow bands on abdomen not tinged with yellow, the metanotal area without a central furrow, the sides with some deep, bordered furrows. *massaica*.
- 6 (17) Metanotal area transversely striated, the 2nd and following abdominal segments orange yellow, wings uniformly fuscous. *cratocephala*.
- 7 (3) Metanotal area rugose, wings for the greater part hyaline.
- 8 (9) Sides of metanotum broadly yellow, the head and body densely haired. *trichionota*.
- 9 (8) Sides of metanotum black, the head and body not densely haired.
- 10 (11) Apex of 1st abdominal segment broadly yellow, the face, clypeus and apex of abdomen red. *erythrourea*.
- 11 (12) Apical half of 1st abdominal segment red, the apex of 2nd narrowly red. *pictinoda*.
- 12 (11) Abdominal basal segment black, the sides of 2nd segment yellow. *kilimandjaroensis*.
- 13 (6) Metanotal area obliquely striated, the scutellums red, the sides of 1st abdominal segment broadly yellow. *rufiscutis*.

***Cerceris basiornata*, sp. nov.**

Black, the 1st abdominal segment, the sides of the 2nd above and beneath broadly (the black upper central part being triangular) and the pygidium, red; the clypeus, the face except above, its upper central part triangularly narrowed, so that the top is in 3 divisions, the apex of the 3rd abdominal segment, narrowly in the centre, broadly on the sides, the 6th segment except at the base and the 3rd ventral, red; antennal scape yellow below, the flagellum below and the apical joint entirely, brownish red; legs with the coxæ black, the trochanters and femora red, the latter black below, the tibiæ and tarsi yellow, the hind tibiæ rufous below, the apical joints of the tarsi rufous. Wings hyaline, iridescent, the nervures and stigma black; the pedicle of the 2nd cubital cellule half the length of the basal branch which is more roundly curved than the apical; the recurrent nervure is received near the apex of the basal fourth of the cellule. Metanotal area smooth, furrowed down the middle. ♂. — Length 8 mm.

Meru rainforest, 3000 m. January.

Last antennal joint bare, smooth, shining, slightly, but distinctly dilated, the apex rounded. Head and thorax strongly punctured; the parts bordering the clypeus black except at the apex, which is rufous; the black parts covered with silvery pubescence. Abdominal petiole almost twice longer than wide. Pygidium coarsely, sparsely, irregularly punctured; its apex transverse, depressed behind; apex of hypopygium depressed, the sides roundly raised.

May be known from *C. pictinoda* by the 1st abdominal segment being entirely red and by the smooth metanotal area.

***Cerceris Yngvei*, sp. nov.**

Black, the head from below the antennal keel, laterally extending shortly above the antennæ, the lateral marks roundly narrowed above, the marks above the clypeus roundly dilated in the middle and more broadly in the centre below, there being a black spot on either side of it below, a line on the sides of the 2nd abdominal segment, widened laterally to the base of the segment, where the yellow is suffused with red, a

narrow line on the apex of the 4th and a broad one, which on the sides extends to near the base of the segment, yellow; the antennæ, tegulæ, a narrow line on the apex of the 1st abdominal segment, a wider one, dilated on the sides, more or less of the sides of the following 3 segments and the whole of the last, red; the yellow on the ventral segments is largely suffused with red; the red on the 2nd broad, narrowed in the middle. Legs rufous, the coxæ and the femora broadly above black, the hind tarsi blackish. Metanotal area smooth, irregularly punctured at the base, the central furrow and the sides crenulated. Wings hyaline, the radial cellule and the 4th cubital broadly at the apex smoky, the stigma and nervures black; the 1st recurrent nervure is received shortly before the middle of the cellule; the 2nd distinctly beyond the 2nd — about two-thirds of the length of the pedicle. ♀. — Length 11 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. August.

Head and thorax closely, strongly punctured and covered with short, white pubescence. Apex of clypeus black, ending laterally in a blunt tubercle. First abdominal segment not much longer than wide. Pygidium distinctly roundly narrowed towards the apex, where it is not half the width of the base; it is irregularly reticulated, more closely at the base than elsewhere; the lateral furrows on the apical half are finely transversely striated; the hypopygium on the apical three-fourths is bordered by keels, which curve outwardly at the base and are thinner there; the space between them at the apex is hollowed.

In a smaller example than that described above the face is black in the centre, and this black is extended round the top of the clypeus, the mark being roundly bilobate in the centre below; the lateral prolongations are narrow.

***Cerceris massaica*, sp. nov.**

Black, a large semicircular mark on the sides of the face below the antennæ, a large curved line on the apex of the 3rd abdominal segment, laterally extending to the base of the segment, a narrow line of equal width on the apex of the 4th; more than the apical half of the 5th, and a large spot, gradually narrowed from the outer to the innerside on the sides of the 3rd ventral, yellow; the antennæ except the apical joints above, the apex of the 2nd abdominal segment narrowly, of the 4th broadly, and the pygidium, red; the legs black, the 4 anterior except at the base, the hind trochanters, the underside of the hind femora and the tibiæ behind, red. Wings hyaline, the radial cellule and the apical cubital violaceous, the nervures black; the 1st recurrent nervure is received close to the base of the cellule, almost interstitial. Metanotal area smooth, the centre with a row of round foveæ, the sides with oblique, longer foveæ. ♂. — Length 8 mm.

Kilimandjaro: Kibonoto, cultivated region.

Head strongly punctured, the face and clypeus not so closely as the front or vertex; the sides of the clypeus fringed with stiff pale rufous pubescence. Pygidium and hypopygium strongly punctured, their apex transverse. The basal abdominal segment not much longer than wide.

***Cerceris cratocephala*, sp. nov.**

Black, the 2nd and following segments of the abdomen pale orange-yellow, the face (the colour produced triangularly in the middle upwards to the antennal keel), the clypeus above from shortly below the middle, the base of mandibles broadly in front, and an oblique mark, 4 times longer than wide, above the middle of the outer orbits, pale yellow. Metanotal area closely transversely striated, the striae roundly curved; pronotum sparsely punctured, the mesonotum longitudinally striated, the striae intermixing, becoming stronger and closer towards the apex; the scutellum laterally similarly striated, its centre with scattered punctures; post-scutellum smooth, except for some punctures in the middle. The metanotum at the base strongly, irregularly transversely striated, the striae intermixing and having among them some strong punctures; the part behind the wings is closely and much more finely striated; the apical slope is transversely striated, finely and broken in the middle above, continuous and stronger below, the striae on the sides much stronger and curved. Propleuræ smooth, weakly striated on the lower half; mesopleuræ closely strongly reticulated; the metapleuræ transversely striated to shortly below the middle, where the striae are bounded by a longitudinal keel; the lower part aciculated and bearing a few oblique striae. Abdomen weakly punctured, shining; the pygidium about two- and a half times longer than it is wide at the base, which is almost smooth, the rest is closely, somewhat strongly reticulated, the reticulations becoming weaker and closer towards the apex; the hypopygium widely roundly incised on the apical third, the incision wider than long. Wings dark fuscous violaceous, the nervures black; the 2nd cubital cellule long, the 1st transverse cubital rounded, the 2nd oblique and distinctly longer than it; the cubitus at the cellule has a distinct oblique slope and receives the recurrent nervure at the base of the apical third. ♀. — Length 15 mm.

Kilimandjaro: Kibonoto, cultivated region. 15th May.

A stout species, with a large head, which is distinctly wider than the thorax. The clypeus in the middle projects into a stout spine, which becomes gradually narrowed towards the apex, which is black, as is also the underside in the middle; the length is not quite double the width at the base. Front closely longitudinally striated, intermixed with punctures; a keel runs from the ocelli to the antennæ, extending on to the antennal tubercle, which is large and rounded at the apex. Abdominal basal segment as wide as it is long.

***Cerceris trichionota*, sp. nov.**

Black, densely covered with longish white pubescence, the face, the lateral line produced upwards above the middle of the eyes, antennal keel, a line above it, rounded and widened above, gradually narrowed below, basal half of mandibles, palpi, a line on the outer orbits, extending to near their top, and obliquely projecting there towards the vertex, a broad line on the pronotum, divided in the middle by the furrow and obliquely narrowed on the outerside, tegulae, a line on the basal half of the scutellum, the post-scutellum, a broad mark on the sides of the metanotum, the mark obliquely narrowed

on the upper inner half, a mark on the upper basal half of the mesopleuræ, narrowed to a point above, a small spot below it, followed by a line, reaching to the sternum, an irregular mark in the centre of the latter, a large mark on the apical half of the 1st abdominal segment, the mark dilated on the inner side at the base, from which it becomes gradually widened, broad bands, narrowly separated in the middle, gradually narrowed from the outer to the innerside, on the 2nd, 3rd, 4th and 5th, the lines becoming gradually narrower, a wider line, hardly narrowed in the centre; and broad lines on the apices of the 2nd, 3rd and 4th ventral segments, yellow; the last segment entirely, the greater part of the basal 2, the 3rd and 4th narrowly, before the yellow lines and the 5th and 6th, ventral segments rufous. Antennæ and legs rufous, the 10th and 11th antennal joints black, the hinder coxæ, trochanters and base of femora — their basal third — below yellow. Wings hyaline, the apex narrowly fuscous, the costa and stigma fulvous; the pedicle of 2nd cubital cellule not quite so long as the posterior nervures which are roundly curved; the recurrent nervure is received near the apex of the basal fourth; the 2nd recurrent at the same distance beyond the 2nd transverse cubital nervure. Metanotal area strongly closely punctured like the rest of the metanotum. ♂.

Length 13 mm.

Meru low lands, Ngare na nyuki. 25th November.

The last joint of the antennæ is roundly curved and is as long as the preceding 2 united and thinner than them. Apex of clypeus broadly, roundly curved, the sides fringed with golden hair; the clypeus and face weakly punctured, the upper part of the face more distinctly than the lower. Front, vertex and thorax closely, strongly punctured, as is also the abdomen. 1st abdominal segment is not much longer than it is wide at the apex; pygidium, except at base and apex, strongly, but not closely punctured; apex of hypopygium roundly depressed.

Cerceris erythroua, sp. nov.

♀: Black, the antennæ, the clypeus, face, the lower half of inner orbits broadly, the outer broadly above, narrowly below, basal two-thirds of mandibles, the apex of 5th abdominal segment narrowly above, entirely below, the whole of the 6th, apical three fourths of anterior femora, the apical two-thirds of the middle, the apical projection on the posterior and the tibiæ and tarsi, red; a narrow line on the sides of the apex of pronotum, post-scutellum, a broad line, narrowed in the middle on the 1st abdominal segment, a narrow line on the sides of the 2nd, a broad continuous one on the apex of the 3rd and a narrower continuous one on the apex of the 4th, yellow. Wings hyaline, iridescent, the costal, radial and cubital cellules smoky violaceous, the radial darker than the others, the costa and stigma rufo-fulvous, the nervures black; the 2nd transverse cubital nervure longer than the 1st, the pedicle shorter than the 1st; the recurrent nervure received at the apex of the basal fourth. Metanotal area obliquely striated, the striæ clearly separated, the apex is more strongly and closely transversely striated, the rest of the metanotum more closely punctured than the mesonotum or scutellum on

which the punctures run into striae; the pro- and mesopleurae more closely, rugosely punctured; the upper part of the metapleurae striated above, opaque, alutaceous below, the rest with distinct, clearly separated punctures. Pygidium closely, almost rugosely punctured, more strongly towards the apex, where the punctures run into striae; the sides at the apex finely transversely striated.

The ♂ has the parts of the head which are red, in the ♀ yellow, the yellow on the 1st abdominal segment is narrower, the penultimate segment is entirely red; the apex of the last segment is roundly incised. — Length 10—12 mm.

Kilimandjaro: Rain forest, 2000 m. January. — *Meru*, 3000 m. January.

Closely related to *C. erythrospila*, which may be known from it by the metanotal area being longitudinally striated throughout, not transversely striated at the apex.

***Cerceris pictinoda*, sp. nov.**

Black, a large bell-shaped mark (the narrowed end above) on the centre of the clypeus, a narrow line on the inner orbits, on lower half, antennal keel, about the apical fourth of the 3rd abdominal segment, and a narrow line on the apex of the 4th and 5th, pale yellow; the basal joints of the antennae entirely and the other joints, except above, the apical half of the 1st abdominal segment, the apex of the 2nd narrowly, and the greater part of the apical 2, red; as are also the greater part of the 2nd, 4th and following ventral segments; the 3rd has the greater part yellow. Legs red, the coxae, anterior trochanters and a broad line on the 4 anterior femora above, black; the 4 posterior trochanters for the greater part yellow. Metanotal area irregularly rugose, a finely closely punctured shallow furrow in the centre. Wings hyaline, the radial and cubital cellules smoky, the nervures black; 2nd cubital cellule triangular, the pedicle short, not much longer than the space bounded by the 2nd transverse cubital and the 1st recurrent nervure. Mandibles red, obscure yellow at the base, the teeth black. ♀. — Length 7 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. 6th September.

Face, clypeus, pleurae, breast and ventral surface of abdomen covered with white pubescence. Front and vertex closely, strongly punctured, the face and clypeus as strongly but not so closely punctured. Thorax more strongly punctured, the propleurae more coarsely than the rest; the metanotum more strongly than the mesonotum; the meso- and metapleurae punctured like the mesonotum. Abdomen strongly punctured, the puncturation becoming wider towards the apex; the 1st segment twice longer than wide; the pygidium more strongly punctured than the penultimate segment, not much narrowed towards the apex; the hypopygium roundly, broadly incised.

***Cerceris kilimandjaroensis*, sp. nov.**

Black, antennal keel, a triangular spot on the eyes opposite it, base of tegulae narrowly, a somewhat semicircular spot on the outside of the 2nd abdominal segment, the apex of the 3rd, narrowly in the middle, broadly laterally, the apex of the 5th

broadly, — more broadly laterally than in the centre — the greater part of the tibiae, the 4 anterior tarsi and the basal joint of the hind tarsi on the basal half, pale yellow. The underside of the antennal flagellum brownish red. Wings hyaline, the apex clouded from shortly before the apex of the radial cellule, the nervures black, the 1st recurrent nervure received at the apex of the basal third of the cellule — at about the length of the pedicle. Metanotal area with 2 parallel keels down the middle, the space between them stoutly transversely striated; the lateral space irregularly obliquely striated. Pygidium irregularly rugose on the basal half and aciculated. ♀. — Length 9 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

Face and clypeus densely covered with silvery pubescence, the hair on the vertex sparse and black. Front and vertex closely, the face and clypeus sparsely punctured. Thorax more strongly punctured than the head, the metanotum more closely than the mesonotum; the post-scutellum with a few fine punctures, almost smooth.

The ♂ has the clypeus, the sides of the face broadly — the mark narrowed above — a mark, widened gradually below, leading from the antennal keel and the post-scutellum yellow; the pygidium is sparsely, strongly punctured; the apex roundly, shallowly incised. The size of the yellow marks probably varies; the line on the post-scutellum is interrupted.

Cereeris rufiscutis, sp. nov.

Black, the labrum, mandibles, except at base and apex, antennae, occiput, upper half of outer orbits, scutellums, the 2nd abdominal segment, except for a broad black line on the sides of the basal three fourths, and one down the middle of the basal three-fourths, gradually narrowed towards the apex, a narrow line, widened laterally, on the apex of the 4th, the 5th except for a curved black line on the base, the whole of the 6th, a triangular mark on the sides of the 4th ventral and the whole of the apical 2 ventral abdominal segments, rufous; the antennal keel, a broad, irregular line on the lower part of the inner orbits, commencing shortly above the middle, an oblique mark of equal width and more than twice longer than wide on the clypeus below it, a large triangular mark, rounded and almost bilobate below on the middle of clypeus, a broad line on the sides of the 1st abdominal segment, widest at the apex, the black central line being widened in the middle, a small spot on the apex of the 2nd on the sides, a line on the apex of the 3rd, widened at the sides, where it is more than half the length of the segment, 2 large marks, narrowly separated, on the 2nd ventral, the space between them at the base triangular, the black apex, narrow, widest in the middle, and an irregular, transverse oval mark on the sides of the 3rd, pale yellow. Legs rufous, the coxae and trochanters black, the 4 hinder coxae and trochanters yellow on the outer side; the hinder tarsi infuscated. Wings hyaline, the apex of costal cellule narrowly, the radial and the 4th cubital cellule smoky-brown, the apex of the hind wings narrowly and lightly smoky; the 1st recurrent nervure is received close to the apex of the basal 3rd of the cellule, the 2nd distinctly beyond the transverse cubital; stigma ochraceous, the nervures black. ♀. — Length 13 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 25th April.

Metanotal area furrowed widely on the basal half, narrowly on the apical, the centre closely rugose, the sides irregularly obliquely striated. There is a small reddish raised point in the centre of the apex of the clypeus. Head and thorax closely punctured, the metanotum more strongly than the rest. The base of the metapleuræ aciculated, as is also the top of the propleura; the lower part of the latter stoutly obliquely striated. First abdominal segment not one fourth longer than wide; the pygidium is slightly narrowed towards the base, closely reticulated, more strongly at the base than at the apex; the hypopygium is roundly incised on the apex, with a keel on either side of the middle at the apex.

The ♂ has the head below the antennæ entirely yellow, except for a line, narrowed below, under each antenna; the lateral mark extends to the base of the antennæ, is narrowed and is rounded on the top, there is a short, narrow line on the top of the outer orbits and the coxæ and trochanters are yellow except on the top. Apex of clypeus with the sides oblique, the centre slightly, broadly curved inwardly. Mandibles rufous, the base narrowly yellow, the apex black.

***Trachypus albolineatus*, sp. nov.**

Black, densely covered with silvery pubescence, the clypeus, cheeks, the mark roundly narrowed above, the antennal keel, the keel united to the clypeus by a narrow line, 2 marks on the apex of the metanotum, obliquely narrowed on the outerside above and on the inner below, the sides of the abdominal petiole broadly and the 2nd ventral segment except for a large spot, rounded on the inner side, on either side, whitish yellow. The 4 front legs reddish fulvous, the coxæ, upperside of the femora and of the tibiæ, black, the middle tibiæ much more broadly than the anterior, the hind legs black, the coxæ, trochanters and femora, as well as the apical half of the coxæ above, whitish yellow. Antennæ red, black above. Wings hyaline, the anterior fuscous in front from shortly behind the transverse basal nervure. Pygidium dark rufous. ♀. — Length 13 mm.

Kilimandjaro: Kibonoto, cultivated zone. May.

Head densely covered with silvery pile, less dense on the front and vertex, the latter 2 strongly, closely punctured; the clypeus ends in the middle in a short, broad, reddish projection. The eyes scarcely converge above. Thorax strongly punctured, the mesonotum and, to a less extent, the scutellum longitudinally striated; the puncturation on the mesopleuræ stronger, running into reticulations, on the metapleuræ it is still stronger, but with the punctures clearly separated. Abdomen punctured, the punctures becoming gradually weaker and sparser. Pygidium clearly margined laterally, the basal part to beyond the middle closely punctured, the apical with stout, curved longitudinal striae; the hypopygium broadly, shortly incised.

This species differs from typical *Trachypus* (an American genus strictly speaking) in the 1st abdominal segment being of uniform thickness.

Dasyproctus, LEP.

This genus (or section of *Crabro*) is probably well represented in tropical Africa. The 3 species taken by Dr. SJÖSTEDT may be separated by means of the following table.

- | | | |
|-------|--|-----------------------|
| 1 (2) | Entirely black, the wings tinged with violaceous, the metanotal area bounded by distinct furrows. | <i>kibonotensis</i> . |
| 2 (1) | The antennal scape, pronotum, scutellum and 2nd and 3rd abdominal segments marked with yellow; the metanotal area not bounded by distinct furrows. | |
| 3 (4) | Mandibles rufous, the apex of clypeus squarely projecting in the middle, scutellum with 2 yellow spots. | <i>Sjöstedti</i> . |
| 4 (3) | Mandibles black, the apex of clypeus broadly rounded, scutellum immaculate. | <i>massaicus</i> . |

Dasyproctus kibonotensis, sp. nov.

Black, the hind spurs fulvous yellow; wings hyaline, the nervures black; the recurrent nervure received near the base of the apical fourth of the cellule; metanotal area clearly defined by furrows, the middle closely rugosely punctured, the sides obliquely striated, the rest of the metanotum finely, irregularly obliquely striated; the outer edge bounded by a stout keel, inside of which is a more or less crenulated furrow. Abdominal petiole not much longer than the following 2 segments united, its apex not nodose, the base aciculated, covered with long white hair. Clypeus keeled down the middle to near the apex, where it is followed by a smooth shining space, which becomes gradually widened towards the apex. Mandibles with a dark rufous band near the middle. Palpi dark testaceous. ♀ and ♂. — Length 7—8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 10 examples.

The wings have the apical half slightly, but distinctly tinged with violaceous. Pleural furrows narrow, weakly crenulated. The pubescence on the cheeks, pleuræ and sternum is dense and white.

Dasyproctus massaicus, sp. nov.

Black, a short line on eitherside of the pronotal furrow, a transverse spot, dilated on the outerside at the base, and narrowed on the innerside on the 2nd, a broad band on the 5th abdominal segment, and the hind spurs, pale yellow; wings hyaline, the nervures black; the recurrent nervure is received near the base of the apical third of the cellule. Ocelli in a curve, the hinder separated from each other by the same distance as they are from the eyes. Metanotum bordered laterally by a keel; the area is not defined clearly; there is a furrow down its middle, and it is obscurely, finely striated; the apex has a wide furrow; on the innerside of the apex of the lateral keel are a few transverse striae. Abdominal petiole slightly longer than the following 2 segments united, the apex not dilated, the base with a smooth oval depression in the centre, coarsely aciculated, densely covered with long white hair, the sides bordered by a fine keel. ♀. — Length 6 mm.

Kilimandjaro: Kibonoto, 1000—1200 m. 23rd April.

Apex of clypeus broadly rounded, not keeled, the extreme apex smooth and shining, with a smooth central spot. Mandibles rufous near the apex. A fine, smooth furrow runs from the tegulæ to the middle coxæ. The inner spur of the hind tibiæ is half the length of the metatarsus; its apical half is obliquely narrowed.

***Dasyproctus Sjöstedti*, sp. nov.**

Black, the antennal scape, an interrupted line on the pronotum, tubercles, a small spot on eitherside of the scutellum, an oblique spot, roundly narrowed behind, on the sides of the 2nd abdominal segment, a smaller, curved one on the sides of the 3rd, the hind calcaria, and the middle tibiæ in front, except at the base, pale lemon-yellow; the mandibles, except the teeth, the apex of the fore femora and the fore tibiæ and tarsi rufous; wings hyaline, the nervures black; metanotal area smooth at the base, the middle with a stout longitudinal keel, a shorter one on eitherside of this and 2, still shorter ones, close to each other, on the outer side; following the central keel is a furrow; the apical part is transversely rugosely reticulated punctured; the sides and apex of the segment coarsely rugosely punctured and densely covered with long white hair. Ocelli in a curve, the hinder separated from each other by the same distance as they are from the eyes. Abdominal petiole a little longer than the following 2 segments united, the apex not nodose, not much dilated. ♀. — Length 10 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 4th May.

Face, clypeus and cheeks densely covered with silvery pubescence; there is a narrow keel between and below the antennæ; the clypeus becomes gradually narrowed to a blunt, transverse point. The middle joints of the antennæ are roundly dilated below. A crenulated furrow runs from below the tegulæ to the middle coxæ. There are 5 thin pale spines on the apical half of the hind tibiæ; the longer spur of the hind tibiæ is half the length of the metatarsus, is broad, knife-like, with the apex roundly narrowed.

***Psen latiannulatus*, sp. nov.**

Black, the apex of the anterior 4 femora, their tibiæ and tarsi, the basal half of the hinder tibiæ and the spurs, pale yellow; the underside of the antennal scape yellow, the flagellum dark reddish brown, black above; wings hyaline, the nervures black; the 2nd cubital cellule much narrowed in front, through the oblique sloping of the 1st transverse cubital cellule; the 2nd abscissa of the radius one fourth of the length of the 3rd; the 1st recurrent nervure is received close to the base of the cellule, not interstitial. Abdominal petiole as long as the following 3 segments united, its apex distinctly nodose. Metanotal area smooth; the rest of the metanotum coarsely, irregularly rugosely reticulated; the middle widely depressed; the depression on the apical slope with 2 or 3 curved keels; on either side of the apex is a stout, flattened projection, rounded above. Metapleuræ smooth at the base, the rest widely, irregularly reticulated. ♀.

Length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

Face and clypeus densely covered with silvery pubescence; the apex of the latter transverse. There is a longish, stout keel between and below the antennæ; from the outer side of each antenna a narrower keel runs down, the 2 uniting below, where they are rounded on the outer edge, the whole forming an area wider than long. Front and vertex shining, finely, closely punctured. Pro- and mesothorax sparsely, weakly punctured, the apex of mesopleuræ smooth, as is also the base of the metapleuræ; the rest of the latter coarsely, closely reticulated.

***Psen bidentatus*, sp. nov.**

Black, the basal 5 joints of the antennæ and the apical below, mandibles except at apex, the four anterior femora except below, the apex of the 1st abdominal segment narrowly and the others entirely, rufo-ferruginous, the apices of the 4 anterior tibiæ and their tarsi testaceous. Apex of clypeus ending in 2 blunt teeth or tubercles. Wings hyaline, the nervures black; the 2nd abscissa of radius half the length of the 3rd; the 1st recurrent nervure interstitial. Front between the antennæ with a large flattened spine. ♀. — Length 9 mm.

Kilimandjaro: Kibonoto, cultivated region. 4th May.

Front closely, distinctly, but not very strongly punctured; the centre with a clearly defined keel; the vertex smooth, sparsely pilose. Face closely, minutely punctured, separated from the clypeus by a narrow curved furrow; its top is bounded by a distinct, curved furrow. The pubescence on the face and clypeus is short and sparse; on the outer orbits dense and silvery. Base of pronotum bordered by a raised, stout keel. Mesonotum and scutellum punctured, but not closely, nor strongly; there are 2 fine furrows on the basal slope of the mesonotum and one on the sides opposite the tegulæ. The scutellum is punctured like the mesonotum; the post-scutellum is much more closely punctured and more densely haired. The metanotal area is large, smooth; its bounding keels lead into the central furrow; in the centre are 2 oblique keels and on the outer edges are 2 short ones; the top of the furrow is bounded by a narrow curved keel; the upper half of the furrow is of equal width; the lower part is wider and becomes widened gradually below; on its top are 3 transverse keels; the apical slope is irregularly obliquely striated. The upper keel on the pronotum extends half way down the propleuræ; the base of the latter is margined and ends below in a large triangular tooth; the centre of propleuræ is striated, widely above, closely below. Mesopleuræ somewhat strongly punctured, the apex smooth and with an oblique furrow down the middle; the basal vertical furrow marked with stout keels. Metapleuræ finely, closely obliquely striated; below the spiracles are a few stouter striæ. The pubescence on the sternum and metathorax is denser than it is on the rest of the thorax.

***Ampulex melanocera*, sp. nov.**

Green with brassy tints, the flagellum of antennæ, except at the extreme base, black; the tibiæ and basal joint of the tarsi blue, the other tarsal joints black; wings

hyaline, tinged with violaceous, the nervures black; the apex of radius largely projecting beyond the posterior part of the 2nd transverse cubital nervure, rounded; there are only 2 transverse cubital nervures; the recurrent nervures received shortly before the middle of the cellule; middle of front bordered by roundly curved keels which unite immediately behind the ocellus; from near the base of the area thus formed a keel runs on the outside to shortly beyond the middle; inside this is an other and similar keel, commencing shortly behind the middle. Apex of clypeus broadly rounded, not keeled. Mandibles black. Basal half of pronotum strongly transversely striated; a distinct, not very broad, furrow down the centre, the apical part sparsely, distinctly punctured. Mesonotum sparsely punctured, the parapsidal furrows wide, with clearly separated transverse keels; the basal half of the sides strongly closely punctured. Base of scutellum weakly, the apex somewhat more strongly punctured. Post-scutellum opaque, coarsely aciculated, sparsely punctured laterally. Metanotum transversely striated, more strongly and widely in the centre than elsewhere; the central keel is straight; those bordering it oblique and uniting at the apex, forming a triangular area; the apical small area obliquely narrowed at the base and with a keel down the centre; its apex broader and rounded; the lateral teeth broad, the part behind them roundly narrowed; the apical slope has 3 keels down the centre, the lateral uniting at the apex, the outside irregularly areolated. Pleuræ distinctly, sparsely, but not strongly punctured. Abdomen distinctly, but not very closely nor strongly punctured; the apex more strongly and closely than the rest. Claws with a stout, somewhat triangular tooth behind the middle; the apex of the joints spinose; the 3rd in the centre half the length of the 2nd. ♂. — Length 13 mm.

Usambara: Mombo. June.

Occiput broadly, roundly narrowed. Apex of vertex slightly depressed, irregularly striated, the striæ uniting in front. The posterior tibiae are much more closely and strongly punctured than the others. Penultimate tarsal joint more than half the length of the last.

Comes near *A. assimilis*, KOHL.

***Tachytes testaceinerva*, sp. nov.**

Black, the legs rufo-testaceous, all the coxæ and trochanters, the anterior and posterior femora to near the middle except above and the middle pair entirely to near the apex, black; the palpi testaceous, the base of the mandibles rufo-testaceous and covered with a silvery pubescence; wings hyaline, a little tinged with fulvous, the nervures rufo-testaceous, the 2nd abscissa of radius about one fourth shorter than the 3rd, and shorter than the space bounded by the recurrent nervures, the apical of which is received shortly beyond the middle of the cellule. Eyes above separated by the length of the 3rd antennal joint, which is not much longer than the 4th. Head, thorax and base of abdomen densely covered with pale fulvous pubescence; the apices of the abdominal segment with silvery white bands of depressed pile; the pygidium covered with stiff rufous pubescence. ♀. — Length 17 mm.

Meru low lands, Ngare na nyuki. 25th November.

Mesonotum granular, the scutellum closely distinctly punctured. In the centre of the apical part of the metanotum is a bare triangular area, which has, on the apical half, a fine longitudinal keel, the space on either side of it being finely closely obliquely striated. Tegulae pale rufo-testaceous.

***Tachytes Sjöstedti*, sp. nov.**

Black, the basal 3 abdominal segments red, the apical 4 joints of the anterior, and the apical 2 of the 4 posterior tarsi of a darker red colour; wings hyaline, the costa and nervures testaceous, the 2nd abscissa of the radius almost one fourth longer than the 3rd, longer than the space bounded by the recurrent nervures, the apical of which is received in the middle of the cellule. The pubescence is silvery, the head and thorax being also covered densely with white hair, which is longer and denser on the metathorax; on the abdominal segments the depressed silvery pubescence forms apical bands. The pubescence on the outer side of the hind tibiae is golden; the spines are whitish, the calcaria pale fulvous. Pygidium covered with dark reddish golden pile. ♀. — Length 15 mm.

Meru low lands, Ngare na nyuki. 25th November.

Eyes above separated by the length of the 3rd antennal joint; a curved furrow with raised sides runs from either side of the posterior ocelli, the 2 forming a horse-shoe-shaped area. Metanotum granular, the apex closely transversely striated; in the centre of the apex of the basal part is a smooth triangular area, with a few transverse striae on the apical half.

***Tachytes pulchrivestita*, sp. nov.**

Black, the head densely covered with silvery, the thorax with greyish pubescence, which is much longer and denser on the metathorax, the abdomen densely covered with depressed reddish golden pile to the base of the pygidium, the rest of the pygidium with stiff, dark red pile; the legs covered with white pile and the femora sparsely with pale hair; the apices of the joints of the fore tarsi rufous below; the spines pale, the calcaria dark rufous; the hinder longer than the metatarsus. Wings hyaline, the nervures pale fuscous; the radius thickened, as long as the following 2 abscissae united, the 2nd half the length of the 3rd, shorter than the space between the recurrent nervures, the apical of which is received in the middle of the cellule; the 1st transverse cubital nervure broadly roundly curved. Tegulae piceous. ♀. — Length 17 mm.

Usambara: Mombo. June.

The base of the metanotum is depressed and irregularly striated; there is a shallow furrow down the centre, which ends in a triangular depression. The abdomen becomes distinctly obliquely narrowed from the base to the apex.

Resembles the Indian *T. monetarius*, SM. The West-African species *T. rclor*, SM. has the abdomen similarly coloured, but the wings are fulvo-hyaline with ferruginous nervures and rufo-piceous costa, and the face has pale golden pubescence.

***Liris haemorrhoidalis*, FAB.**

Pompilus haemorrhoidalis, FAB., Syst. Piez., 198. *Lyrops Savignyi*, SPIN., Ann. Soc. Ent. Fr. VII, 476. *Liris orichalcea*, DAHLBOM, Hym. Eur. 135. *Liris haemorrhoidalis*, KOHL, Verh.z-b. Ges. Wien, XXXIV, 256; Ann. K. K. Hof-Mus. Wien, VIII, 227; MAGRETTI, Ann. d. Museo Civico di Storia Nat. di Genova, XIX, 50; *l. c.*, 1 (2), 583; STADELMANN, Die Hymen. Ost-Afrikas, 44; BINGHAM, Ann. and Mag. Nat. Hist., 1902, X, 209.

Meru low lands, Ngare na nyuki, October. — Mombo, *Usambara*. June.

***Liris violaceipennis*, sp. nov.**

Black, the antennal scape and the basal 2 joints of the antennæ red, the 3rd joint of the flagellum for the greater part of a darker red; the apical half of the fore femora and their tibiae and tarsi red; wings uniformly fuscous violaceous, the nervures black; apex of pygidium in ♂ broadly roundly incised; the pygidium in ♀ covered with depressed reddish golden pubescence. Smooth, the sides of the metathorax finely, closely obliquely striated. Mandibles, except at the apex, rufous. ♂ and ♀.

Length ♀ 23, ♂ 14—17 mm.

Meru low lands, Ngare na nyuki. — Mombo, *Usambara*. June.

First joint of antennal flagellum twice longer than wide, the 2nd not quite one fourth longer than the 3rd. Eyes distinctly converging above, separated there by a little more than the length of the 2nd joint of the flagellum. Metanotum finely, but not very closely punctured, the punctures becoming finer and closer towards the apex; in the centre of the basal half is a distinct furrow, marked with some fine transverse striæ; the apical slope is more strongly and closely punctured, and has a few fine curved striæ; on the upper half is a furrow which is shallow and indistinct above, deep and clearly defined below. Pygidium closely, obliquely striated, more strongly on the apex than on the base. The 2nd abscissa of the radius about one fourth of the length of the 3rd; the recurrent nervures are received near the apex of the basal fourth of the cellule and are almost confluent; the 1st transverse cubital nervure is roundly curved. In one ♂ the 1st and 2nd transverse cubital nervures are almost united. The apical joints of the tarsi incline to rufous. The 2nd ventral segment in the ♂ becomes gradually roundly dilated from the base to the apex; in the ♀ it is not so much dilated; in both sexes the ventral segments are impunctate. Antennæ and legs stout; the spines on the 4 anterior tibiae and tarsi rufous, on the hinder black.

Allied to *L. Braueri*, KOHL, from Arabia.

***Notogonia punetipleura*, sp. nov.**

Black, sparsely covered with a silvery pile, the mesonotum closely, distinctly punctured, the scutellum as closely, but not so strongly punctured, the mesopleuræ, if anything, more strongly punctured than the mesonotum, a crenulated furrow down its base, the propleuræ almost smooth; with a few striæ in the middle; metanotum closely reticul-

ated, with a keel down its basal three fourths, the apical slope transversely striated, the striae clearly separated, more or less curved. Abdominal segments with broad bands of silvery pile; the pygidium densely covered with silvery pubescence, its apex transverse. Wings hyaline, the nervures black; the radial cellule wide, especially at the apex; the apical abscissa of the radius roundly dilated outwardly in the middle; the 2nd and 3rd abscissæ of radius equal in length; the 1st transverse cubital nervure obliquely bent towards the top of the 2nd from shortly below the middle, there being a bulla at the bend; the 2nd recurrent nervure is received before the middle of the cellule; the space between the 2 recurrent nervures more than half the length of the 2nd abscissa of the radius. ♂.

Length 6 mm.

Kilimandjaro: Kibonoto, 1000—1200 m. April.

The 3rd joint of the antennæ is as long as the 4th. The eyes at the top are separated by almost the length of the antennal pedicle and the following joint united. There is a distinct furrow below the ocellus. The lower part of the front, the face and the clypeus are densely covered with silvery pile. Tegulae dark piceous.

***Notogonia montivaga*, sp. nov.**

Black, covered with a silvery pile, which is very dense on the lower part of the front, face, clypeus and base of mandibles, the latter reddish in the middle; the metanotum closely longitudinally striated, the striae more or less twisted, the apical slope transversely striated; wings hyaline, the apex slightly clouded, the nervures black; the radial cellule wide, the apical abscissa straight, not oblique, the part between it and the 3rd transverse cubital nervure oblique, the 2nd and 3rd abscissæ of radius equal in length; the 2nd recurrent nervure is received in the middle of the cellule; it is bluntly angled in the middle. The 3rd antennal joint is a little shorter than the 4th. Eyes at the top separated by a little more than the length of the 2nd and 3rd antennal joints united. Pygidium closely punctured, covered with silvery pile, the apex almost transverse; apex of hypopygium rounded. ♂. — Length 6 mm.

Kilimandjaro: Kibonoto, cultivated region. April.

The sternal process has the sides stoutly keeled and furrowed inside the keel; the central keel is only stout in the middle; there is a longish triangular incision on the apex. Metapleuræ weakly obliquely striated. Tibial and tarsal spines black, intermixed with fulvous ones. The long spur of the hind tibiae is two-thirds of the length of the metatarsus.

***Notogonia erythrotoma*, sp. nov.**

Black, the apical third of the basal joint of the 4 anterior tarsi, the apical half of the posterior and the whole of the others, except the apex of the last, red; the tibial spines and those on the metatarsus black, those on the apex of the metatarsus and on the other joints red; the spurs black; wings hyaline, the apex slightly infuscated, the nervures black; the 2nd abscissa of the radius about one fourth shorter than the 3rd;

the 2nd recurrent nervure is received shortly, but distinctly before the middle; the 2 recurrent nervures separated by about two-thirds of the length of the 2nd abscissa of radius; the 1st transverse cubital nervure obliquely, roundly curved. Metanotum finely coraceous, a distinct keel down the basal half, the apex at the sides with 4 stout transverse striæ, which become successively longer; the apical slope with some longish striæ, clearly separated, on the outside. Pygidium closely, clearly longitudinally striated, sprinkled with some short golden hairs. Sternal process twice longer than wide, the sides raised, keeled, the centre with a narrow keel, the apex with a longish triangular incision, twice longer than it is wide at the apex. ♀.

Length 11—13 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. April and May.

Body and legs covered with a silvery pile. The 3rd antennal joint is not much longer than the 4th. The eyes above are separated by the length of the 3rd antennal joint. Face, cheeks and clypeus densely covered with silvery pubescence. A short, narrow, clearly defined furrow runs down from the ocellus, and there is another narrow one above the antennæ.

The pygidium in one ♀ is densely covered with bright silvery pubescence, and this is probably the case with all fresh specimens; in this ♀, too, the apices of the abdominal segments bear bands of silvery pile.

Notogonia massaica, sp. nov.

Black, covered with a white pile, which forms broad bands on the apices of the abdominal segments, the wings hyaline, iridescent, the apex clouded, violaceous, the nervures black, the 2nd abscissa of the radius about one fourth shorter than the 3rd; the 2nd recurrent nervure is received shortly beyond the apex of the basal third of the cellule, the 2 recurrent nervures separated by half the length of the 2nd abscissa of the radius, the 1st abscissa of the radius roundly oblique; tibial and tarsal spines black. Metanotum with a keel down the basal half, the keel with a few striæ on either side; on the sides beyond the stigma are a few short striæ; the apical slope has a few striæ on the sides; the metapleuræ have some short striæ on the apex, and some longer curved ones below. ♀ and ♂. — Length 11—12 mm.

Kilimandjaro: Kibonoto, cultivated zone. May.

Eyes at the top separated by slightly more than the length of the 3rd antennal joint; the latter is as long as the 4th. Face and clypeus densely covered with silvery pubescence. Middle of mandibles dark red. There is a furrow below the ocelli, between the raised lobe; lower down is a longer one. Pygidium longer than it is wide at the base, closely strongly, obliquely striated, the pile not dense, golden. The apical joints of the tarsi dark rufous below. The sternal process is twice longer than wide; its sides are raised, more so at the base than at the apex; the base depressed, there is a narrow, but distinct central keel, and the apex is bilobate, the 2 lobes not very deeply separated.

The ♂ is similar, but smaller; the pygidium is wider than long, closely punctured and densely covered with silvery pubescence, its apex slightly, broadly incised; the hypopygium distinctly bilobate, the lobes narrowed towards the apex, where they are rounded; the incision becoming gradually wider towards the apex.

***Notogonia nsambaraensis*, sp. nov.**

Black, covered with a silvery pile, which forms broad bands on the abdominal segments, the legs, except the coxæ and trochanters, bright red, as are also the spines; the spurs blackish; wings hyaline, the nervures black, the appendicular cellule clearly defined, the 1st transverse cubital nervure roundly curved, distinctly bullated at the top and below the middle; the recurrent nervures separated by the length of the 3rd abscissa of the radius, the 2nd received very shortly before the middle of the cellule; tegulæ piceous red. Metanotum finely, closely transversely striated, the striae becoming much weaker towards the apex; there is a stouter longitudinal stria down the centre of the basal half; the apical slope finely, closely transversely striated. Eyes at the top separated by the length of the 4th antennal joint. Basal half of mandibles red. ♀. — Length 13 mm.

Usambara: Mombo. June.

The 3rd antennal joint is not much longer than the 4th. In the depression behind the ocelli are 2 oblique, clearly defined furrows, which unite above. The furrow down the base of the mesopleuræ is wide, deep and irregularly crenulated; the longitudinal furrow is narrower, weakly irregularly crenulated, and it runs from the base to the middle.

Apart from the red legs this species differs from *N. cnemophila* by the distinct appendicular cellule, by the more widely separated recurrent nervures, by the distinctly striated metanotum with the distinct longitudinal keel down the basal half, by the black wing nervures, and by the weaker mesopleural furrows.

***Notogonia cnemophila*, sp. nov.**

Black, densely covered with a silvery pile, the hind femora red, the tarsal spines of a paler, brighter red; the wings hyaline, the nervures pale fuscous, the costa darker coloured; the recurrent nervures received distinctly before the middle of the cellule, are placed close to each other, and separated by about one fourth of the length of the 2nd abscissa of the radius; the 1st transverse cubital nervure is broadly, roundly curved in the middle. Metanotum weakly transversely striated in the middle at the base, its sides from the base to the apex more strongly striated. Eyes above separated by some what more than the length of the 3rd antennal joint. Antennal scape covered with a silvery pile. ♀. — Length 14 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. September.

The tarsal spines are long and stout; the hinder calcaria slender, the longer one extending clearly beyond the middle of the metatarsus. Pygidium longish, clearly margined

laterally. In certain lights the wings are seen to have a distinct brassy tint, and are darker at the apex. The mesopleural furrows are somewhat indistinct.

Tachysphex ferrugineipes, LEP.

Tachytes ferrugineipes, LEP., Hymen., 111, 248, 11. *Larrada ferrugineipes*, SMITH, Cat. Hym. Ins. IV, 283, 32. One example of what I make out to be this little known species from *Mera* low lands, Ngare na nyuki, October. I have seen it from Cape Colony, and it has been recorded from Senegal and the Congo by SMITH, *l. c. supra*. The lower part of the front, the clypeus and the base of the mandibles are densely covered with silvery pubescence; the mandibles are rufous in the middle; the eyes above are separated by the length of the antennal pedicle and the following joint united; the mesonotum and scutellum are shining and closely, finely, but distinctly punctured; the metanotum is longitudinally striated, the striae more or less twisted and there are some finer transverse striae; the apical slope is more strongly transversely striated, the striae more or less curved in the middle. The abdominal segments have broad bands of silvery pile on the apices. The 2nd abscissa of the radius is about one fourth longer than the 3rd; the 2nd recurrent nervure is received shortly beyond the middle of the cellule; the 2 recurrent nervures are separated by slightly more than the length of the 3rd abscissa of the radius. The 3rd joint of the antennae is about one fourth longer than the 4th.

Pison montanus, sp. nov.

Black, covered with silvery pubescence, which is very dense on the face, clypeus and outer orbits and forms bands on the apices of the abdominal segments; wings hyaline, the apex slightly darker, the nervures black, the 2nd cubital cellule triangular, shorter than the pedicle, which is roundly curved outwardly, the 1st recurrent nervure is received near the base, the 2nd is interstitial. ♂. — Length 9 mm.

Kilimandjaro: Kibonoto, rainforest, 2000 m. October.

Front closely, rugosely punctured, the punctures almost forming reticulations; the space between and at the sides of the ocelli more finely punctured; the part behind the ocelli more strongly, but less closely punctured, at the sides of the ocelli almost smooth. Pro- and mesonotum strongly punctured, the punctures clearly separated; in the middle of the mesonotum they are more widely separated; on the scutellum the punctures are much more widely separated, especially in the middle; the furrow at its base closely crenulated. Post-scutellum punctured at the base and apex. Metanotum closely and strongly punctured; there is a furrow down its centre, keeled in the middle, irregularly striated on either side, followed at the apex of the keel by 4 or 5 transverse keels, wider than the furrow. The pleurae strongly, closely punctured, the propleurae more finely than the rest; the tubercles fringed behind by a silvery pubescent band. The 1st abdominal segment somewhat strongly, the 2nd much more weakly, the 3rd still more weakly punctured, the others smooth; the apices of the apical brownish.

Trypoxylon massaicum, sp. nov.

Black, the palpi and spurs pale testaceous, the head and thorax densely covered with silvery pubescence, the wings hyaline, iridescent, the nervures black; the front with a large area, bounded by distinct keels; it extends behind the anterior ocellus, where it is rounded, but projecting slightly in the middle behind; below the middle it becomes gradually obliquely narrowed to a blunt, rounded point; it is almost twice longer than wide. Metanotal area large, wide, widely furrowed in the middle, and bordered laterally by a narrower furrow; the central furrow is more shining and more strongly striated than the raised sides, the striation on which becomes finer and closer towards the apex; on the sides and apical slope the striation is stronger, with the striæ clearly separated. Pro- and mesopleuræ smooth; the metapleuræ obliquely striated, more closely and strongly below. First abdominal segment as long as the following 2 united, its base flat above, the apex not much dilated. Mandibles ferruginous. ♀. — Length 13 mm.

Kilimandjaro: Kibonoto, Obstgartensteppe. 14th May.

The form of the frontal area is not unlike what it is in *T. scutifrons*, SAUSS.; in that species the basal part becomes gradually widened and the apex ends in a sharp point; in the present species the basal part does not become widened and the apex is distinctly rounded. Cf. KOHL, Denkschr. d. Mathem.-Naturwiss. d. K. Akad. d. Wissen., 1906, Taf. 111, f. 3. In length, as compared with the width, it more resembles that of *Stroudii*, GRIB., but in it the apex ends in an acute point.

Bembex, FABR.

The 3 species described here agree best with HANDLIRSCH's Group 35 (*Fuscipennis*) cf. Sitzung d. K. Akad. d. Wissensch. in Wien, C. 11, 850.

Bembex massaica, sp. nov.

Pale olive yellow, the upperside of the antennal scape, the flagellum, 2 oblique pyriform marks on the top of the clypeus in the centre, the vertex, the black continued to either antenna, the lines gradually narrowed below, the occiput except round the edges, the mesonotum, except for a narrow line on either side of the centre of the basal half and a broader line on the sides at the tegulæ, the scutellums except round the apices, the metanotum, except for a curved broad line, dilated below in the centre and with a square dilatation in the middle above, a bilobate mark on the top of the propleuræ, the lobes narrowed above, the posterior the larger, the lower part at the base narrowly produced towards the base of the pleuræ, the mesopleuræ, except for a longish line, gradually widened from the top to the bottom, a curved line below the hind wings, one of equal width in the centre of the metapleuræ, the sternum, the basal half of the 1st abdominal segment, the mark roundly narrowed at the apex, a broad line on the apex, slightly dilated in the middle, the apices of the 2nd, 3rd and 4th segments broadly, the lines dilated in the middle, a curved line, not extending to the outer edges, on the

5th, the whole of the 6th segment, above and below, the whole of the 1st ventral and the 2nd to 5th, except for a triangular mark on the sides at the apex, black. Legs lemon-yellow; the coxæ and trochanters, a broad line on the front femora behind, a broader one on the basal half of the anterior, a line on the basal half of the middle and hinder femora and on the apical above, and a longish line on the hinder part of the tibiæ (shortest on the middle pair) black. Wings clear hyaline, the nervures black. Head and thorax densely covered with moderately long pubescence, fuscous on the top, longer and white on the sides; the base of abdomen densely with pale fuscous pubescence. Front bluntly keeled between the antennæ; the latter separated from each other by a some what greater distance than they are from the eyes, which hardly converge above. Antennæ moderately slender, the apical joints rufous below. Median cellule in hind wings emitting 2 short branches of which the anterior is the longer. Anterior tarsi dilated, the metatarsus with 7 spines, of which the basal is only half the length of the others. Pygidium closely punctured, with out a distinct area or keeled laterally. There is a triangular black point in the centre of the 2nd dorsal abdominal segment, 2 oblique lines in the centre of the 2nd and 3rd, and 2 semicircular ones on the 4th and 5th.

The ♂ has the black markings less extended than they are in the ♀; the antennæ have the flagellum brownish, except on the top, the 8th joint has 2 short teeth, of which the apical is blunter and shorter than the basal; the 9th is roundly dilated; the following 2 slightly hollowed below, the last is roundly curved. Middle femora indistinctly, irregularly serrate. Anterior tarsi slender, the spines slender; on the metatarsus are 7 spines as in the ♀. Spine on 2nd ventral segment prominent; at the apex it forms a rounded curved with the 2nd segment. Pygidium closely, strongly punctured, except in the middle of the apical half; the hypopygium is keeled in the centre, its apex rounded, slightly turned in in the middle; the penultimate ventral segment has the apical half distinctly raised in the middle; the raised part clearly defined and becoming gradually narrowed towards the apex. — Length 13—15 mm.

Meru low lands, Ngare na nyuki. — Mombo, *Usambara*, June.

***Bembex ornatilabiata*, sp. nov.**

Black, a curved line on the sides of the labrum, narrow above, wider below (the black central part is roundly dilated above), a narrow line on the outer orbits, a narrower one on the apex of the pronotum, a curved mark behind the tubercles, a mark, gradually narrowed on the innerside, in the centre of the sides of the 1st abdominal segment, the middle of the 2nd and 3rd segments, the black basal part with a projection on eitherside of the middle, that on the 2nd projecting outwardly, the projection clearly separated, a curved line, narrowed in the middle across the centre of the 4th and a transverse mark (about one third of the width of the segment) narrowed gradually on the innerside, on the sides of the 5th, and triangular spots on the sides of the 2nd, 3rd and 4th ventral segments, pale olive-yellow. Legs of a brighter yellow colour, the coxæ, trochanters, base of femora narrowly above, and from near the top of the sides and

below, and a line on the tibiæ black. Wings clear hyaline, the nervures and stigma black. ♀. — Length 15 mm.

Meru low lands, Ngare na nyuki, October.

Eyes slightly converging above; the space between the antennæ and the centre of the clypeus bluntly keeled. Head, thorax and base of abdomen densely covered with dark cinereous pubescence, the clypeus also with a silvery pile. Flagellum of antennæ reddish-brown below. Anterior tarsi moderately dilated, the metatarsus half the width of the apex of the tibiæ; it bears 6 spines, the basal short, the apical long and stout. The cubitus at the apex of the 2nd cubital cellule is roundly curved.

***Bembex lineatifrons*, sp. nov.**

Black, a thrice curved line immediately below the ocelli, a large triangular mark above the antennæ, the narrowed end above, a mark on the inner orbits extending from the ocelli to the antennæ and becoming gradually widened from the top to the bottom, the face, clypeus, except for a black mark under each antennæ, widened and obliquely truncated above, rounded below, the labrum, mandibles, the outer orbits — the line narrow above, becoming gradually widened below — the prothorax, except for a black spot in the middle and a smaller one on either side, a line on the sides of the mesonotum in front of the tegulæ — transverse on the inner, rounded on the outside — a continuous or interrupted line across its apex, the apex of the scutellums, a curved line in the centre of metanotum, a line on the base of the mesopleuræ on the hinder side of the tubercles, curving round them and running down the basal edge, a line below them, narrow above, becoming gradually widened below and projecting towards the base of the pleuræ below, a narrow curved line down the base of the metapleuræ, and the abdomen, bright-sulphur-yellow, except for the following black marks: the basal half of the 1st abdominal segment, the apex of the black irregular and slightly dilated in the middle, a broad band on the apex, united to the centre of the basal band, broad bands, dilated in the centre, on the apices of the 2nd, 3rd and 4th, a triangular mark in the centre of the 5th, the basal part narrow and continued to the base of the segment, the whole of the 6th, transverse marks on the sides of the 2nd to 5th; the whole of the basal ventral segment, a large mark on the 2nd, extending to the outer edges at the base and becoming narrowed towards the apex, and smaller, more irregular marks on the 3rd, 4th and 5th, and the 6th, except for 2 oblique lines in the centre. Legs of a paler yellow colour than the body, the coxæ, trochanters and more or less of the femora black. Antennal scape yellow, black above, flagellum brownish-red, black above. ♀. — Length 15—18 mm.

Meru low lands, Ngare na nyuki, January. A common species.

Head, thorax and base of abdomen densely covered with cinereous pubescence. The eyes converge a little above. Fore tarsi moderately dilated, the base of metatarsus a little more than half the width of the apex of the tibiæ, the metatarsus with 6 spines. Pygidium strongly, closely punctured, except at the apex. Front keeled.

The size of the yellow and black markings varies. The line on the front may be continuous or divided into three.

Stizus pruinosis, sp. nov.

Black, densely covered with white pubescence, the pubescence on the face and clypeus silvery; a line on the lower half of the inner orbits, the face, clypeus, except for a large mark in the middle, narrowed and transverse above, slightly roundly dilated laterally, not reaching quite to the apex of the clypeus, labrum, mandibles, except at the apex, palpi, a line on the top of the pronotum, roundly narrowed in the centre and obliquely laterally, tubercles, a short line on the mesonotum behind the tegulae, a larger one, obliquely widened from the base to the apex, on the sides of the apical three-fourths of the scutellum, the post-scutellum except the centre of the base, a line on the sides of the metanotum, including the lower spine, a broad line, roundly contracted in the middle at the base, narrower bands, dilated in the middle and laterally, on the apices of the 2nd, 3rd and 4th segments, and 3 separated spots — the central the smaller — on the apex of the 4th, a line, dilated laterally, on the apex of the 2nd and 3rd ventral segments and one, not dilated, on the 4th, pale yellow. The antennal scape, except above, pale yellow, the underside of the flagellum yellow tinged with fulvous. Legs black; the underside of the apical three fourths of the anterior femora, the underside of the middle pair, the posterior tibiae except at the apex, the 4 anterior except behind and the tarsi, except the basal 2 joints above, pale yellow. Wings hyaline, the 2nd cubital cellule shortly but distinctly appendiculated. ♀. — Length 8 mm.

Meru low lands, Ngare na nyuki, January.

Eyes distinctly converging below. Upper part of the front distinctly, but not very closely punctured. Punctuation of thorax weak and sparse. The lateral angles of metanotum somewhat deeply and widely incised, the upper part of the incision longer and more curved than the lower, which forms a distinct triangular tooth, as long as it is wide at the base; it is placed in the middle of the apex.

The ♂ wants the black mark on the clypeus, there is a continuous line on the apex of the 5th abdominal segment; the apical half of the antennal flagellum is brownish.

The apical tarsal joints are brownish. The abdomen in some lights has a violaceous tinge. The 2nd cubital cellule is more clearly appendiculated in some specimens than in others. The metathoracic incision is placed higher up than in most of the species, than in *e. g.*, any of those figured by HANDLIRSCH, Verh.z.-b. Ges. Wien, 1900, p. 474. It seems to be most nearly related (of the *tridens* group to which it belongs) to *tenellus*.

Nyssus nasutus, sp. nov.

Black, the basal 6 joints of the antennae, tegulae, the tubercles, the 4 front legs and the last abdominal segment dark red; the hinder tarsi of a darker red colour; the basal abdominal segment with a large mark on the sides, narrow at the base, becoming roundly dilated inwardly at the apex towards the middle of the segment, the yellow of this part being bordered with dark rufous, and the 3rd and following segments, yellow;

the 4th segment with a narrow, the 5th with a broad black band down the centre; the apices of the 2nd to 4th abdominal segments narrowly pale yellow. Wings hyaline, the apex narrowly smoky, the nervures and stigma black; the 3rd cubital cellule much narrowed in front, it being there not the length of the distance between the 2nd recurrent and the 2nd transverse cubital nervures, the accessory nervure in hind wings is received at a good distance behind the cubitus. The front below, at the antennæ, projects into a prominent, rounded, nose-like, projection, which is keeled in the centre. Clypeus, face and the lower two-thirds of the inner orbits densely covered with depressed golden pubescence; the sides of the metanotum densely with silvery pubescence. 3rd joint of antennæ slightly, but distinctly longer than the 4th, and almost of the same length as the 5th. Pronotum at the apex clearly separated, the base rounded, the sides oblique. Mesonotum and scutellum irregularly rugosely punctured; the scutellum with the base broadly rounded, flat; the post-scutellum has the middle depressed. Metanotal area smooth, bare, and bearing 8 irregular keels; its apex with an oblique slope, smooth. The 2nd ventral abdominal segment is broadly rounded at the base; it is coarsely shagreened.

Length 11 mm. — *Meru* low lands, December.

A distinct species, not readily confounded with any of the described African species.

Abstract: Mutillidæ 43 species, including 42 new species. — *Scoliidæ* resp. 12 and 7. — *Tiphidæ* resp. 10 and 10. — *Myzinidæ* resp. 2 and 2. — *Pompilidæ* resp. 38 and 34. — *Sphegidæ* resp. 56 and 45. — Total resp. 161 and 140, incl. Usambara 173 and 149.

Of the above (Hym. 6.) enumerated 42 *Vespidæ* (10 belonging to the Social wasps and 32 to the Solitary), 35 are undescribed, including 1 New Genus. I find it difficult, in our present state of knowledge of the *Hymenoptera* of German East Africa, to draw any trustworthy conclusions as to the Geographical relations of the species dealt with in this Memoir, for the reason that however valuable the material collected so industriously by Dr. SJÖSTEDT is, it still can only be looked upon, at least as a whole, as representing the commoner species inhabiting the Kilimandjaro District. Moreover, we know hardly anything of the species of the great mountains of British East Tropical Africa and very few from the great mountain Ruwenzori. As regards the known species from Kilimandjaro and Meru, they are, alike in the Fossores and Wasps, widely spread species, found, like *Sphex umbrosus*, in all the warmer regions of the Old World, or, if they are confined to Africa, range from Abyssinia to the Cape.

A comparison of the list of species given in this Memoir with the list in Dr. H. STADELMANN'S Die Hymenopteren Ost-Afrikas, shows some noteworthy features and also shows how valuable has been Prof. SJÖSTEDT'S contribution to our knowledge of East Tropical Africa's Hymenopterous Fauna. Thus no species of *Tiphia* is recorded by Dr. STADELMANN, while no less than 10 have been found by Dr. SJÖSTEDT. On the other hand Dr. STADELMANN records 8 species of *Synagris*, a typical African wasp genus, of which Dr. SJÖSTEDT has only collected 1 species. *Sceliphron* is only represented by one common species as against 7 in Dr. STADELMANN'S list. I should have expected *S. hemipterum* F. to have been found, considering how widely it is distributed. Also *Polistes hebraeus* F. The Honey-bee killing genus *Philanthus* appears to be a characteristic one. The spider-killers, the *Pompilidæ*, the cricket-feeders, *Sphex* and, to a less extent, *Noto-gonia*, *Tachytes* & *Tachysphex* are common. The *Pompilidæ* (38 species, including one new genus) and the *Mutillidæ* of which the actual number of species is impossible to accurately reckon owing to our want of knowledge of the relationship of the sexes, are the two predominant groups of the *Fossores*. Among the noteworthy forms I have described are the new genus *Schizagenia*, the *Pseudagenia odontocephala*, the *Trachypus atbolineatus* (if it be truly identical with the American genus *Trachypus*, or only an aberrant *Philanthus*) and *Meira rufitarsis*. — I have, in conclusion, to thank Dr. SJÖSTEDT for the opportunity of examining and reporting upon his very valuable collection.

March 1908.