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M. R. Smith

1917

FROM THE

ANNALS

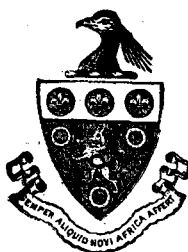
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VOLUME XIV.

PART III.

- 1.—*A Monograph of the Formicidae of South Africa* (Myrmicinae). By GEORGE ARNOLD, M.Sc., A.R.C.S., F.E.S., Curator of the Rhodesia Museum, Bulawayo, pp. 271-402.



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Scapes long, extending beyond the occipital margin by nearly one-third of their length. The pro-mesonotal suture faintly indicated by a shallow impression; the meso-epinotal suture very deep. The anterior and posterior lateral dorsal angles of the pronotum fairly pronounced, the ventral lateral angles produced into large triangular teeth, a little longer than their basal width, very prominent, and projecting well beyond the lateral outline of the thorax, when viewed from above. Pronotum twice as wide as long. Mesonotum posteriorly with the lateral carinae high, almost angular when seen from the side, but not expanded outwards. Base of the epinotum feebly raised and slightly expanded outwards at the sides. The dorsum of the epinotum margined, about one-quarter longer than wide at the base, distinctly concave transversely. The spines are horizontal, subparallel, about as long as the distance between them. The declivity is sharply margined at the sides, nearly vertical, shorter than the dorsum. The peduncle of the 1st joint of the petiole long and thin, a trifle longer than the node. The latter is compressed above, as high as long, its dorsal profile convex, and including the narrow posterior portion as long as wide, the anterior and posterior faces nearly vertical. The 2nd node is also laterally compressed above, but not so much as the 1st node, longer than the 1st, but hardly wider, subconical, highest posteriorly. Base of abdomen straight, the corners rounded. Legs long and slender.

Matopo Hills, S. Rhod. 1 ♀. In my collection.

TRIBE TETRAMORIINI, Emery.

This tribe includes the following genera: Tetramorium (with sub-genera Triglyphothrix, Xiphomyrmex and Decamorium), Tetramyrma and Rhroptromyrma.

GENUS TETRAMORIUM, Mayr.

Verh. Zool. Bot. Ges. Wien, v, p. 423, 1855.

Characters.

♀. Antennae 10-, 11- or 12-jointed, with a 3-jointed club; maxillary palpi 4-jointed, labial palpi 3-jointed. The posterior margin of the clypeus is raised on each side into a ridge or carina, which separates the front of the clypeus from the antennal socket (see Text-fig. 19, A and B). Frontal carinae short and fairly wide

apart, or long and forming the upper margin of a scrobe. Antennal scrobes frequently present. Promesonotal suture generally obsolete or feebly defined, meso-epinotal suture usually distinct. Epinotum armed above with two spines or teeth, and below with two episternal teeth or lobes. Nodes of petiole variable, the 1st node always pedunculate, the 2nd node usually wider than the 1st. Abdomen oval.

♀. Like the ♂ but larger. Pronotum usually very little exposed above; mesonotum and scutellum raised above the level of the pro- and epinotum. The latter with stouter and shorter spines or teeth than in the ♂. Fore wing with one cubital, one discoidal and a closed radial cell. Otherwise like the ♂.

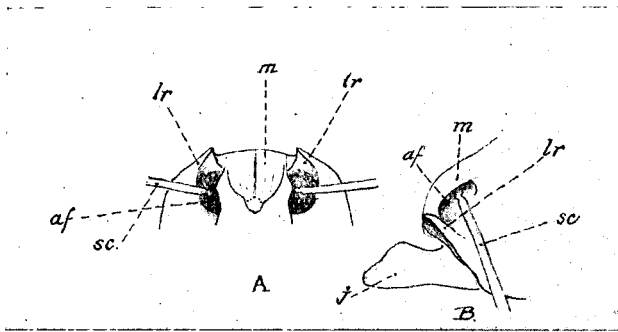


FIG. 19.—A. Dorsal. B. Profile. *m*. Median area of the clypeus. *lr*. Lateral ridges of the clypeus. *af*. Antennal fossa or socket. *sc*. Scape. *j*. Mandible. Anterior portion of the head of a *Tetramorium*, the depth of the antennal fossae slightly exaggerated.

♂. Antennae 10-jointed,* the 2nd joint of the flagellum very long and representing four joints fused together. Head small, eyes large. Mandibles small but distinctly dentate. Pronotum not visible from above; mesonotum gibbous, Mayrian furrows present. Epinotum truncate and bidentate.

The clypeus has usually at least one median and longitudinal raised line, which when fairly high may be termed a carina. It should be noted, however, that the clypeus very often bears other raised lines on each side of, and quite as strong as the median carina.

The lateral ridges are almost obsolete in the sub-genus *Decamorium*. The frontal carinae are often produced backwards almost to the

* *T. solidum*, var. *grootensis*, Forel, is an exception, having 12-jointed antennae, and *T. Emeryi*, Mayr, has 13-jointed antennae.

occipital margin, and are also somewhat expanded outwardly, forming the upper wall of a groove, the scrobe, which lies below them. This groove is sometimes divided into two halves by a longitudinal carina, the upper and lower halves receiving the folded scape and flagellum. The scrobe in such a case is complete, and is usually distinguished from the rest of the cheeks by its smoother and more shining surface. It is particularly well developed in the sub-genera Triglyphothrix and Xiphomyrmex. But in most species of Tetramorium (s. str.), only the upper half of the scrobe, that which accommodates the scape, is distinct, forming only a demi-scrobe; or again, it may be defined only in its anterior region, in which case it is referred to in the following pages as a "trace of a scrobe." The sides of the declivity of the epinotum are usually bounded by a raised margin, which terminates below in two small teeth or lobes. These episternal teeth are in most cases much smaller than the epinotal teeth above them.

It should be observed that the 1st node of the petiole is inclined at various angles, and that it is therefore impracticable to take the measure of the length of the node through its thickness, as unfortunately some authors appear to have done. In the following pages, the length of the 1st node is measured from the anterior to the posterior margin of the dorsal or posterior-dorsal face. It is also necessary to define some of the terms used in these pages in describing the sculpture of the chitin.

In regard to such terms as "rugose," "rugulose," "striate," &c., a certain looseness of definition exists, which is plainly apparent, if the reader will compare half a dozen insects of different orders with their original descriptions. The term "striate," for example, has been used to express a form of sculpture consisting of raised lines, as well as one which is made up of incised lines or fine grooves. Similarly, that which some authors describe as "coarsely striate" has been termed "rugose" by others. It has therefore seemed desirable to append a short glossary, defining the sense in which I have used certain words.

rugae (adj. rugose) = raised lines, usually rather coarse, which may be more or less parallel over their whole length, but which in part are also somewhat irregular, broken, wavy, sinuate or zigzagged.

striae (adj. striate) = raised lines which are parallel, straight and continuous.

reticulate = a sculpture consisting of a network, the strands of which are composed of raised lines.

reticulate-rugose = a sculpture consisting of *rugae*, more or less

broken up in parts and connected by transverse strands or branches to form a more or less distinct network.

sulcate = a sculpture composed of incised lines or fine grooves (not common in South African ants).

rugulose = a sculpture composed of very fine wavy lines.

alutaceous = a sculpture composed of a very fine or microscopic network.

reticulate-punctate = a close and even puncturation, in which the spaces between the punctures are not wider than the punctures themselves, and form more or less of a network around them. I have used the term as an equivalent of the German "Fingerhutartig punktiert" (punctured like a thimble).

The sense of such combinations as "striato-rugose," "rugoso-striate" are sufficiently evident, and need no further comment.

The genus *Tetramorium* is well represented in our regions, and is composed of active species which generally nest in the ground. The colonies are often large, and are in some cases known to harbour many myrmecophilous insects. I have not, however, found any in the nests of our Rhodesian species.

I have thought it necessary to reduce *Triglyphothrix*, Forel, to the rank of a sub-genus of *Tetramorium*, since there is not one character or even a set of characters which can be used consistently as a basis of differentiation.

In *Triglyphothrix Arnoldi*, Forel, the hairs are simple as in *Tetramorium* s. str.; in *Triglyphothrix Marleyi* which has branched hairs, there is no scrobe. Also no reliance can be placed on the width of the nodes, which varies considerably. In the new species, *Tetramorium Ericae*, the shape of the nodes and the general facies of the insect is decidedly like that of *Triglyphothrix*, but the hairs are simple, and the nodes only moderately wide, so that it might just as well be assigned to that sub-genus as to *Tetramorium*.

The sub-genera of *Tetramorium* may be distinguished as follows:

1. ♀ and ♀, antennae 12-jointed; ♂, antennae 10-jointed.
 - (a) Hairs usually branched, or, if not, both nodes much wider than long, the 1st node never squamiform *Triglyphothrix*, Forel.
 - (b) Hairs not branched; the 2nd node generally wider than long, or, if both nodes are much wider than long, then the 1st is squamiform *Tetramorium*, Mayr.
2. ♀ and ♀, antennae 11-jointed; ♂, antennae 10-jointed. *Xiphomyrmex*, Forel.
3. ♀, ♀, and ♂, antennae 10-jointed *Decamorium*, Forel.

Key to the ♀♀ of Tetramorium (s. str.).

- (8) 1. First node of petiole more or less squamiform.
- (3) 2. First node of petiole strongly and transversely striate; large species, 4.5-5 mm. *grandinode*, Santschi, and var. *hopensis*, Forel.
- (2) 3. First node of petiole smooth; small species, 3 mm.
- (5) 4. Second node of petiole less than twice as wide as long, its sides rounded. *squaminode*, Santschi.
- (4) 5. Second node of petiole twice as wide as long.
- (7) 6. Sides of 2nd node, seen from above, angular; head brown. *squaminode*, race *do*, Forel.
- (6) 7. Sides of 2nd node straight; head dark yellow. *squaminode*, var. *flaviceps*, Arnold.
- (1) 8. First node of petiole not squamiform.
- (12) 9. Eyes very small, composed of a single facet.
- (11) 10. First node of petiole considerably narrowed in front; seen from above, the anterior margin acutely convex or conical. *subcoecum*, Forel, var. *inscia*, Forel.
- (10) 11. First node not much narrower in front than behind; seen from above, the anterior margin feebly convex or straight. *Traegaordhi*, Santschi.
- (9) 12. Eyes not very small, composed of several facets.
- (28) 13. Scape extending back as far as, or beyond the occipital margin.*
- (15) 14. Promesonotum smooth and shining. *laevithorax*, Emery.
- (14) 15. Promesonotum sculptured, not very shining.
- (17) 16. First node wider than long. *Frenchi*, Forel.
- (16) 17. First node longer than wide, or at least as long as wide.
- (23) 18. First node coarsely sculptured, rugoso-punctate.
- (20) 19. A demi-scribe present. *setigerum*, Mayr, race *quaerens*, Forel.
- (19) 20. Scribes entirely absent.
- (22) 21. Clypeus convex transversely; epinotal spines short, shorter than the interval between their bases; eyes not very large. *Gladstonei*, Forel.
- (21) 22. Clypeus flat transversely; epinotal spines long, longer than the interval between their bases; eyes decidedly large. *longicornis*, Forel.
- (18) 23. First node finely sculptured, at least not rugoso-punctate.
- (27) 24. Pronotum with at least a few longitudinal rugae.
- (26) 25. Reddish-brown; 1st node distinctly longer than wide. *Blochmanni*, Forel, race *continentis*, Forel.
- (25) 26. Yellowish-red; 1st node barely longer than wide. *Bequaerti*, Forel, race *bulawayensis*, Forel.
- (24) 27. Pronotum very finely reticulate only. *quadriscopinosum*, Emery.
- (13) 28. Scapes not extending back as far as the occipital margin.
- (32) 29. Pubescent hairs on the body flattened, almost scale-like and closely adpressed.
- (31) 30. First node above, nearly twice as wide behind as in front; epinotal spines as long as the interval between their bases. *setuliferum*, Emery.

* *Jauresi*, Forel, has the scapes *almost* reaching the occipital margin, and is therefore included in the alternative series (28).

- (30) 31. First node above, one and a half times as wide behind as in front; epinotal spines shorter than the interval between their bases.
setuliferum, race *cluna*, Forel.
- (29) 32. Pubescent hairs simple, not scale-like.
- (34) 33. Epinotal spines very long, as long as the dorsum of the epinotum.
Joffrei, Forel.
- (33) 34. Epinotal spines shorter, not as long as the dorsum of the epinotum.
- (42) 35. Epinotal spines distinctly longer than they are wide at the base.
- (39) 36. Pronotum finely striated, not reticulate.
- (38) 37. Dorsal face of 1st node distinctly longer than wide; dark yellowish-red *Popovici*, Forel.
- (37) 38. Dorsal face of 1st node as wide as, or a little wider than long; pale ochreous *capensis*, Mayr., and var. *Braunsi*, Forel.
- (36) 39. Pronotum reticulate or sparsely rugose.
- (41) 40. Pronotum merely rugose, joining the mesonotum in a curve. ✓
Grassi, Emery.
- (40) 41. Pronotum with very strong and wide reticulations, its junction with the mesonotum angular. *guineense*, Fab.
- (35) 42. Epinotal spines not longer than they are wide at the base.
- (52) 43. Larger species, not less than 3.5 mm. long.
- (47) 44. No trace of a scrobe.
- (46) 45. Epinotal spines (teeth) longer than the episternal; scapes not nearly reaching the occipital margin . . . *solidum*, Emery, var. *signata*, Forel.
- (45) 46. Epinotal teeth not longer than the episternal; scapes almost reaching back as far as the occipital margin *Jauresi*, Forel.
- (44) 47. A more or less distinct demi-scrobe present.
- (51) 48. Dorsal profile of thorax feebly convex or straight; epinotal teeth distinct.
- (50) 49. Larger species, 5 mm. or more; 1st segment of petiole with the peduncle less than half as long as the node *simulator*, Arnold.
- (49) 50. Smaller species, 3.5 mm.; peduncle of 1st segment as long as the node.
lobulicorne, Santschi.
- (48) 51. Dorsal profile of the thorax strongly angulated at the pro-mesonotal junction; epinotal teeth almost obsolete.
Emeryi, Mayr, race *crystalatum*, Forel.
- (43) 52. Smaller species, less than 3.5 mm. long.
- (54) 53. Abdomen dull, closely and finely punctured.
semi-reticulatum, Arnold.
- (53) 54. Abdomen shining, not closely punctured, or only at the extreme base.
- (64) 55. Epinotal teeth fairly large, at least distinctly larger and longer than the episternal.
- (57) 56. Colour entirely black *oculatum*, Forel.
- (56) 57. Colour more or less yellow or yellowish-red.
- (59) 58. Second node of petiole as wide as long; a trace of a scrobe present.
simillimum, Smith, var. *shilohensis*, Forel.
- (58) 59. Second node wider than long.
- (61) 60. Sculpture fine; no trace of a scrobe; 2.2 mm. long.
pusillum, Emery, var. *mossamedensis*, Forel.
- (60) 61. Sculpture coarse.

- (63) 62. A slight trace of a scrobe present; 2.5-2.9 mm. long . *longoi*, Forel.
(62) 63. A very distinct demi-scrobe present . . . *Ericae*, Arnold.
(55) 64. Epinotal teeth small, as large as or smaller than the episternal, or nearly obsolete.
(66) 65. First node, seen from the side, subconical; its anterior margin strongly convex; episternal teeth larger than the epinotal.
simillimum, race *isipingense*, Forel.
(65) 66. First node merely slightly convex or even flat in profile; its anterior margin almost straight.
(68) 67. Pro-mesonotum shining, almost smooth.
simillimum, var. *Poweri*, Forel.
(67) 68. Pro-mesonotum dull, distinctly sculptured.
(70) 69. Scrobes entirely absent; the frontal carinae do not extend back beyond the middle of the head . . . *pusillum*, race *tablense*, Forel.
(69) 70. Either a trace of a scrobe present, or the frontal carinae extend back nearly as far as the occipital margin.
(72) 71. Dorsum of epinotum two and a half times longer than the declivity.
pusillum, race *ladsmithensis*, Forel.
(71) 72. Dorsum of epinotum less than twice as long as the declivity.
(74) 73. Head slightly shining, not longer than wide; 2.5 mm.
intectum, Santschi, var. *cataractae*, Santschi.
(73) 74. Head dull, a little longer than wide; 2.2 mm. . . *simillimum*, Smith. ✓

The following species, which I have not seen, have been omitted from the above key: *Blochmanni*, race *Petersi*, Forel; *bacchus*, Forel; *titus*, Forel; *setigerum*, Mayr, i. sp.; *Emeryi*, Mayr, i. sp.; *caespitum*, race *Schultzei*, Forel; *Grassi*, var. *laevigatum*, Mayr, and var. *simulans*, Santschi; *solidum*, race *lugubre*, Forel; *Simoni*, Emery; *sericeiventre*, race *femoratum*, Emery; *simillimum*, races *Bothae* and *delagoensis*, Forel; *guineense*, var. *erectum*, Emery.

T. QUADRISPINOSUM, Emery.

Bull. Soc. Ent. Ital., vol. 18, p. 362, ♀, 1886.

♀. 3.3 mm. Dark brown or piceous; the anterior half of the head and the mesonotum lighter and more reddish-brown; coxae, tibiae, antennae, and mandibles dark reddish-yellow, tarsi brownish-yellow. A few whitish and thick, blunt hairs on the clypeus, nodes, and abdomen. Legs and antennae with a very sparse, short, and decumbent pubescence, the rest of the body without pubescence.

Exceedingly minutely reticulate or alutaceous on the head, thorax, and nodes, the sculpture of the head and epinotum being a little stronger than the rest. In addition, the head is fairly strongly reticulate in front, between the eyes and frontal carinae. The vertex and frons are also very finely and longitudinally striate. There are a few

very shallow punctures on the posterior half of the head and on the pronotum. Abdomen smooth and moderately shining, microscopically alutaceous near the base. Nodes nitidulous, head and thorax rather dull.

Head hardly longer than wide, the sides feebly convex, the posterior margin straight, the posterior angles moderately rounded, as wide in front as behind. Eyes placed at the middle of the sides of the head. Clypeus with a distinct median carina, not very convex transversely, the anterior margin almost straight. Frontal area distinct; a shallow frontal sulcus present, not extending beyond the middle of the vertex. Frontal carinae short. Mandibles 6-dentate, closely and finely striate. The scape of the antenna extends back beyond the occipital margin by not more than its own thickness; 1st joint of flagellum not quite as long as the 2nd, 3rd, and 4th joints taken together. Thoracic sutures obsolete. The thorax is feebly marginate in front, the shoulders of the pronotum subangular and low. The anterior third of the pronotum slopes downwards and forwards, the remaining portion is level with the epinotum. The thorax is not strongly constricted between the meso- and epinotum. Dorsum of epinotum nearly twice as long as the declivity; epinotal spines divergent, directed upwards and backwards, a little longer than their basal width, distinctly shorter than the interval between their bases; episternal teeth almost as long as the epinotal. First node of the petiole wider behind than in front, about one-third longer than wide, feebly convex transversely above, the anterior face short and oblique, the posterior face short and vertical. The node is twice as long as its peduncle, the latter bearing a small tooth below. Second node a little wider than long, widest behind, wider than the 1st, subglobose. Sides of abdomen moderately convex. Legs slender and rather long; femora hardly swollen in the middle.

Table Mountain. (S.A.M., R.M., G.A. colls.)

T. BLOCHMANNI, Forel, race CONTINENTIS, Forel.

Mitth. Schweiz. Ent. Ges., vol. 7, p. 384, ♀, 1887.

(Race) Ann. Soc. Ent. Belg., vol. 54, p. 426, ♀, 1910.

♀. 3.8 mm. Head, thorax, and nodes dark castaneous, abdomen brownish-black. Occasionally the head, thorax, and nodes are paler, more yellowish-red, with the abdomen brown. Antennae and legs reddish-brown, the middle and hind femora dark brown. Pilosity and pubescence as in *quadriscopinosum*.

Head, thorax, and nodes dull, finely reticulate-punctate, and also

longitudinally striate and partly rugose. The head is longitudinally striate all over, not merely on the frons, cheeks, and vertex, as in the preceding species. Prothorax fairly strongly and longitudinally rugose. Epinotal spines longer than in *quadrispinosum*, almost as long as the interval between their bases; the episternal teeth not much shorter than the epinotal. The 1st node of the petiole is not so narrow as in the *quadrispinosum*. Abdomen microscopically rugulose near the base, the remaining portion smooth and shining. The sculpture of the head, thorax, and nodes is decidedly coarser than in *quadrispinosum*, but otherwise the two species are very similar and closely allied. In some specimens the puncturation and rugae are stronger than in others, and the meso-epinotal suture is also sometimes fairly clearly defined.

♀. 4.2 mm. Head, thorax, nodes, legs, and antennae dark red (burnt sienna), abdomen reddish-brown, the apical margins of the segments paler. The sculpture of the head is like that of the ♂. Pronotum coarsely reticulate-rugose, mesonotum strongly and evenly longitudinally striate (more finely so on the anterior half of the scutellum), dorsum of epinotum with 4 or 5 strong and transverse rugae, the declivity finely reticulate, the sides of the thorax finely and longitudinally striate, the nodes of the petiole dull, granulate, and very sparsely and shallowly punctured. Abdomen dull, very finely rugulose. Head and thorax feebly shining between the striae. Pronotum exposed above only at the shoulders. Mesonotum feebly convex in front transversely, fairly flat behind. Dorsum of epinotum as long as the scutellum. Epinotal spines stouter than in the ♀. First node of petiole wider than in the ♀, as wide as long. Second node more or less spherical, moderately convex above from side to side. Wings tinged with yellow, nervures and stigma brownish-yellow. Otherwise like the ♂.

♂. 4.5 mm. Head brownish yellow, the vertex, in front of and between the ocelli, brown. Thorax brownish-yellow or reddish-yellow, the pronotum paler, the base of the scutellum, the apical half of the epinotum, and the nodes pale brown; abdomen brownish-black. Legs, antennae, and mandibles dirty yellow. Head dull, very finely reticulate and striate. The striation is longitudinal in front, transverse between the ocelli and at the posterior corners. Pronotum exceedingly finely reticulate; mesonotum posteriorly and the scutellum very finely, regularly, and longitudinally striate. The scutellum is also somewhat reticulate-punctate. Epinotum and nodes reticulate-punctate and dull. Mesonotum smooth and shining in front. Abdomen microscopically reticulate and shining. Head as long as

wide, about as wide in front as behind, widest across the eyes; the latter occupy about one-third of the sides and are placed a little in front of the middle. Scape of antenna as long as the 2nd joint of the flagellum, and extending back as far as the anterior ocellus. Clypeus with a median carina. Frontal carinae well developed. Mandibles triangular, 5-dentate, dull and finely rugulose, the masticatory margin dark brown. Mayrian furrows on the mesonotum distinct. Mesonotum and scutellum raised above the level of the dorsum of the epinotum. The latter is oblique, sloping down to the brow of the declivity, and is about one-third longer than the declivity. Epinotal spines well developed, the episternal very obtuse. The 1st node of the petiole is nearly twice as long as wide, the lateral margins of the dorsal face almost parallel. Second node like that of the ♀ but longer, as long as wide, less convex above transversely than in the ♀. Legs long and thin. Wings as in the ♀.

Bulawayo and S. Rhodesia generally, common. The nest, which is in the ground, is usually surrounded by a more or less circular crater of earth. (S.A.M., R.M., G.A. colls.)

Race *CONTINENTIS*, var. *EUDOXIA*, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 231, ♂, 1914.

♂. 3.8-4 mm. Darker than the type of the race; dark brown, the abdomen black, the mandibles and limbs rusty-red. The sculpture is finer than in the race, the longitudinal striae being much less coarse. The epinotal spines are slightly longer. This variety is almost intermediate in its structure and general appearance between *quadripinosum* and race *continentis*.

Willowmore, Cape Prov. (S.A.M., R.M., G.A., colls.)

Race *PETERSI*, Forel.

Schultze, Reise Süd Afrika, vol. 4, p. 19, ♂, 1910.

“ ♂. 2.3-3.2 mm. Mandibles sharply striated, with a feebly convex external margin, 3 strong teeth in front and 4 or more smaller ones behind. Clypeus sharply carinate. Frontal area triangular. Frontal carinae divergent, not long. No scrobe and no depression for the scape. Head rectangular, distinctly longer than wide, moderately concave behind, the sides feebly convex, as wide behind as in front. Eyes not large, convex, placed in the middle of the sides. The scape extends beyond the hind margin of the head by about twice its own thickness; 3rd and 4th joints of the flagellum about as wide as long, the rest all longer than wide. Pronotum convex in

front. Dorsum of the thorax almost straight, widely and shallowly impressed in the middle. Dorsum of epinotum much longer than wide, moderately convex, much longer than the declivity. Epinotal spines small, acute and nearly as long as the interval between them; the episternal spines as long and as acute as the upper ones. Petiole, particularly the 1st segment, shaped as in *Blochmanni*, i. sp., and also similarly curved. Second node somewhat longer, nearly as long as wide (the 1st node is much longer than wide). Shining. Head, thorax, and petiole irregularly and feebly reticulate-rugose. Abdomen quite smooth. Pilosity moderate, yellowish; the pubescence almost decumbent and very sparse. Tibiae, femora, and scapes with almost decumbent pubescence. Yellowish-red to reddish-yellow. Mandibles and tarsi a paler yellow. Abdomen brownish.

Okahandja, S. W. Africa."

T. BEQUAERTI, Forel.

Rev. Zool. Afric., vol, 2, p. 318, ♀, 1913.

"♀. 3.7-4.1 mm. Closely allied to *Blochmanni*, Forel, from which it may be distinguished by having the whole body, legs and scapes covered with short, erect and reddish-yellow hairs. Those on the legs and scapes are very short, somewhat truncate at the apex and slightly oblique. The head is still more emarginate behind than in the *Blochmanni*, and has the sides straighter. A little more shining than in *Blochmanni*, but sculptured as in race *continentis* of that species, reticulate or reticulate-punctate, with some distinct but sparse punctures on the head and thorax. The thorax has also some coarser and more accentuated longitudinal rugae; on the head these are finer, and mostly in the middle. The petiole has some reticulate and very coarse rugae. Abdomen subopaque, only finely reticulate. Rusty-red, with posterior half or two-thirds of the abdomen brown. Otherwise like *Blochmanni*.

"Lake Kabwe, Katanga. (Dr. Bequaert)."

Although this species has not yet been recorded from our region, I include it here, as it is likely to be found within the same.

RACE BULAWAYENSIS, Forel.

Ann. Soc. Ent. Belg., vol, 57, p. 119, ♀, 1913.

♀. 3 mm. Much smaller than the type of the species. Yellowish-red (burnt sienna), the legs, antennae and mandibles dark yellow, somewhat reddish. The head is shorter than in the type, being barely one-sixth longer than wide (mandibles excluded), the

posterior margin is convex, and the posterior angles are much more rounded and obtuse. The scape extends beyond the hind margin of the head by about as much as the length of the 1st joint of the flagellum. The frontal carinae extend back as fine raised lines as far as the level of the eyes. Head and pro-mesonotum longitudinally rugose, mesonotum and epinotum also reticulate-punctate, the epinotum also transversely rugose. Epinotal spines acute, shorter than half the length of the interval between their bases. The episternal spines are not much shorter than the epinotal. Dorsum of epinotum one and a half times longer than wide, quite twice as long as the oblique declivity, moderately convex transversely, feebly so lengthwise. The 1st node of the petiole is widest behind, nearly as wide there as it is long, and nearly twice as long as its peduncle. The 2nd node is two-thirds wider than long, and about that much wider than the 1st, and nearly twice as wide at its posterior third as it is at the anterior margin. Both nodes reticulate, with a few longitudinal and raised lines. Basal third of the 1st abdominal segment dull and very finely reticulate, the rest of the abdomen smooth and shining.

♀. 4.4 mm. (Hitherto undescribed). Colour like that of the ♂ but darker, the apical half of the abdomen reddish-brown, the middle of the apical margins of the segments paler. Pilosity and pubescence as in the ♂. Head longitudinally striate above in the middle, strongly reticulate-rugose in front of the eyes, very finely so behind them. The frontal carinae extend back beyond the level of the anterior ocellus. Mandibles longitudinally striate and strongly punctured. Pronotum coarsely rugose in front, rather finely so at the sides. Mesonotum and scutellum strongly and longitudinally rugose. Epinotum above and at the sides coarsely and transversely rugose. The rugosities extend over the upper half of the declivity, the lower half of which is smooth and shining. Peduncle of petiole finely granulate, the nodes coarsely rugoso-punctate. Head, thorax and nodes fairly dull, the spaces between the rugae slightly shining. Abdomen dull, very finely but distinctly striate, somewhat concentrically near the basal angles, longitudinally elsewhere. The epinotal teeth are very little longer than the episternal, and not longer than they are wide at the base. The 1st node is a trifle wider than long, hardly longer than the peduncle, the anterior margin of its upper face moderately convex; 2nd node widest behind, almost hemispherical, two-thirds wider than the 1st. Wings tinged with brownish-yellow, nervures and stigma brown.

Very much like the ♀ of *continentis*, from which it may be

distinguished by its smaller size, lighter colour and stronger sculpture, especially on the nodes and epinotal spines. The latter are more divergent and shorter, hardly half as long as the interval between their bases (distinctly longer in *continentis*). The 1st node is also more convex, the sides not forming an obtuse angle with the anterior margin as in *continentis*.

Bulawayo; nesting in grassy soil, not common. (S.A.M., R.M., G.A. colls.)

T. LONGICORNE, Forel. (Plate VII, figs. 96, 96a).

Ann. Mus. Nat. Hung., vol. 5, p. 13, ♀, 1907.

♀. 4.7 m.m. Very dark reddish-brown, the head paler or more reddish, the apical two-thirds of the abdomen brownish-black, legs, antennae, mandibles, and clypeus rusty-red or dark reddish-yellow. A very short and sparse pubescence on the legs and antennae, and a few yellowish hairs on the abdomen and clypeus, otherwise glabrous. Head, thorax and nodes reticulate-rugose, very coarsely so on the head and the dorsum of the thorax. The rugae are longitudinal on the vertex and the pro-mesonotum. The clypeus has one median carina and three others or raised lines on each side of the same. Abdomen nitidulous and alutaceous, distinctly but very finely and longitudinally striate over the basal third. Legs and antennae finely reticulate and dull. Head, thorax and nodes dull, the spaces between the rugae scabrous.

Head about as long as wide, the posterior margin strongly concave, the posterior angles rounded and turned downwards. Mandibles large, subopaque, very finely striate and punctate, with three strong teeth in front, and indistinctly dentate behind. Median area of clypeus flat transversely, the anterior margin feebly arcuate; the lateral ridges of the clypeus are very prominent. Frontal carinae more widely separated from each other at their base than they are from the sides of the head, somewhat expanded above the antennal sockets, furnishing a slight depression below for the base of the scapes, and extending back beyond the level of the posterior margin of the eyes. The latter large, convex and very prominent, placed a little behind the middle of the sides. Scapes long, extending beyond the hind margin of the head by nearly one-third of their length; all the joints of the flagellum longer than wide.

Pronotum distinctly marginate in front and at the sides, the anterior angles fairly sharp. Below the raised anterior margin there is a short vertical face which joins the rather long and finely granulate

neck. The pronotum is rather flat transversely, and slopes downwards and forwards; above, it joins the mesonotum in an obtuse angle, and bears a small tubercle on each side. Thorax fairly long, not much, constricted between the meso- and epinotum and not depressed between them above. Pro-mesonotal suture obsolete, meso-epinotal suture very shallow and faintly indicated. Dorsum of epinotum two and a half times longer than wide, slightly concave in its apical half, and at least twice as long as the declivity. Epinotal spines long, thin, and acute, subparallel, oblique, one-third longer than the interval between their bases. The declivity of the epinotum subvertical, smooth, distinctly margined at the sides, the margins being continued into the episternal teeth, which are short and triangular. The peduncle of the 1st segment of the petiole is as long as the node; the latter seen from above, is more or less oval, slightly longer than wide, fairly convex transversely, less so lengthwise; 2nd node subhemispherical, half as wide again as it is long, and one and a half times wider than the 1st node; the ventral surface bears a tubercle on each side. Legs rather long, femora only moderately and gradually swollen.

Bulawayo; not common. These specimens are decidedly larger than those from East Africa, on which the species was founded (3.8-4 mm.), but there is no other difference. (S.A.M., R.M., G.A. colls.)

T. GLADSTONEI, Forel.

Deutsch. Ent. Zeitschr, Beiheft, p. 219, ♀, 1913.

♀. 4.3 mm. Very dark brown; abdomen and femora, except the bases of the latter, black; tibiae, tarsi, antennae and mandibles brownish or reddish-yellow. A few yellowish, stiff hairs on the clypeus and abdomen. Legs and antennae with a very short and scanty pubescence. Head fairly strongly striato-rugose. Thorax longitudinally rugose, more coarsely so on the dorsum than on the sides, also somewhat reticulate; dorsum of epinotum strongly and transversely rugose, the declivity transversely rugulose. Nodes very strongly reticulate-rugose. Head and thorax subopaque, the spaces between the rugae shining. Abdomen smooth and shining, except the extreme base, which is somewhat dull and finely striate.

Head rectangular, excluding the mandibles very little longer than wide, the sides and posterior margin almost straight, the posterior angles rounded. Clypeus with a strong median carina, convex transversely and lengthwise, the anterior margin straight. The

lateral ridges of the clypeus are prominent, but not so much so as in *longicorne*. Frontal carinae subparallel, not raised as in *longicorne*, and not extending back as far as the middle of the vertex. Scapes extending just beyond the hind margin of the head, the 3rd-6th joints of the flagellum as wide as long, the rest longer than wide. Mandibles with three distinct teeth in front, indistinctly dentate behind, very evenly and longitudinally striate, and with a row of punctures along the masticatory margin. Thorax fairly long, twice as long as it is wide in front. Pronotum with fairly sharp anterior angles, submarginate anteriorly, convex transversely and lengthwise, joining the mesonotum in a gradual curve, not obtusely angularly as in *longicorne*. Dorsal profile of meso- and epinotum flat and horizontal. Pro-mesonotal suture obsolete, meso-epinotal suture shallow. The thorax is but little constricted at the sides at the meso-epinotal suture. Dorsum of epinotum two and a half times longer than wide, its apical half and the declivity marginate. The declivity is very oblique and about two-thirds the length of the dorsum. Epinotal spines acute, shorter than the space between their bases, directed upwards and slightly backwards, hardly divergent. The episternal teeth are large, not much shorter than the upper spines. The 1st node of petiole, seen from above, is suboval, a little narrower in front than behind, moderately convex transversely, one-fifth longer than wide, the anterior face nearly vertical; the peduncle is about two-thirds as long as the node and concave below. The 2nd node nearly one-third wider than long, higher behind than in front, not so high as, and only little wider than, the 1st node.

Shiloh, S. Rhodesia, in sandy soil. (S.A.M., R.M., G.A. colls.)

T. FRENCHI, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 229, ♂, 1914.

♂. 3.2 mm. Black; mandibles and legs reddish-brown, the tarsi brownish-yellow. Pilosity fairly long, yellow and sparse, almost absent on the thorax, entirely so on the legs and antennae which are only finely pubescent. Head longitudinally rugose above and reticulate between the rugae; the sides of the head, the dorsum of the thorax, and the nodes reticulate-rugose. The sculpture is fairly strong in front of the eyes and on the dorsum of the thorax, and the spaces between the reticulations are very finely reticulate-punctate, as also the sides of the thorax. Abdomen smooth and shining, except the basal fourth which is dull and alutaceous. Head and thorax subopaque,

Head, excluding the mandibles, one-quarter longer than wide, parallel-sided, a trifle wider behind than in front, the posterior angles very rounded, the posterior margin straight. Eyes not large, placed in the middle of the sides. The clypeus has three raised longitudinal lines on the median area, and its lateral ridges are small. Mandibles triangular, closely and finely striate, subopaque, armed with 5 or 6 small teeth. The frontal carinae extend back almost to the occiput; they are slightly raised and on each side below them there is a smoother space, merely reticulate-punctate, which forms an indistinct demi-scribe for the scapes. The latter are rather thin, and extend beyond the hind margin of the head by almost the length of the eye. The 1st joint of the flagellum is as long as the three following joints taken together.

Thorax rather narrow, very slightly constricted at the meso-epinotal suture, twice as long as it is wide in front. The pronotum is convex transversely and longitudinally, and joins the mesonotum in a gentle curve. Pro-mesonotal suture obsolete, meso-epinotal very feeble. Dorsum of meso- and epinotum horizontal. Dorsum of epinotum twice as long as wide, and nearly twice as long as the oblique declivity. Epinotal spines thin, a little shorter than the interval between their bases; episternal teeth small and obtuse. The declivity is narrow and margined at the sides. The peduncle of the 1st segment of the petiole is longer or at least as long as the node. The latter is one and a third times wider than long, convex above from side to side, the anterior face vertical, the short posterior face oblique. The 2nd node is a little wider than the 1st and a little wider than long, narrower in front than behind.

A very distinct species, easily recognised by its long head, and the wide first node.

Krantz Kloof, Natal. (H. B. Marley.) (G. A. coll.)

T. LAEVITHORAX, Emery. (Plate VIII, figs. 110, 110a.)

Ann. Soc. Ent. France, vol. 63, p. 39, ♀, 1895.

♀. 2.7-3 mm. Brownish-yellow, the head and abdomen darker and more reddish-yellow. Legs and antennae pale ochreous. Head, pro-mesonotum, and abdomen shining, epinotum and nodes only slightly so. Pilosity yellow, long and suberect, more abundant on the abdomen than elsewhere. Pubescence of the legs and antennae rather long, yellow and oblique. Head above, longitudinally striate between the frontal carinae (about 5 striae), the striae connected by a few feeble transverse strands. Sides of head below the demi-scribe,

reticulate-rugose. The demi-scrobes are fairly wide but not deep, very finely reticulate-punctate. The clypeus has a strong median carina and one or two finer lines on each side. The pro-mesonotum is almost smooth and impunctate. Dorsum of epinotum very shallowly reticulate, the sides of the thorax reticulate-punctate. Nodes of the petiole very finely and superficially punctate on their posterior faces, otherwise smooth. Abdomen smooth and shining. Head a little longer than wide, the sides feebly convex, the posterior margin shallowly concave, the posterior angles rounded. The scapes are thin and long, extending beyond the hind margin of the head by a length about equal to their apical width. Flagellum long, rather thin in its basal half, the 9th and 10th joints quite half as long again as wide, the 1st joint as long as the three following joints taken together, the 2nd joint half as long again as wide, the 3rd-8th joints at least as long as wide. Mandibles triangular, finely striate, pubescent, with three acute teeth in front. Clypeus convex, the frontal area depressed and well defined. Frontal carinae long, extending back almost to the occiput. Below them there is a smooth and shallow demiscrobe. Eyes fairly large and convex, placed a little in front of the middle. Thorax narrow, twice as long as it is wide across the shoulders of the pronotum; the dorsal profile slopes downwards from front to back. The pronotum has a very short declivous anterior face above the neck, and is moderately convex transversely. The dorsum of the epinotum is twice as long as it is wide at the base; epinotal spines acute, slightly divergent, as long as the interval between their bases; the declivity is oblique and shorter than the dorsum. The episternal teeth are reduced to two rounded angles. The peduncle of the 1st segment of the petiole is as long as the node; the latter, seen from the side, is cuneiform or subsquamiform, with a short and vertical anterior face and a longer posterior-dorsal face, which, seen from above, is hexagonal in outline. Second node wider than the 1st, its sides distinctly angular in the middle. Abdomen subglobose.

A very distinct species, easily recognised by the smooth pro-mesonotum, the demi-srobe, and the shape of the petiole.

Pietermaritzburg (Weitzaecker); Port Elizabeth (Dr. H. Brauns).

T. SETIGERUM, Mayr.

Ann. K.K.N.H. Mus. Wien, vol. 16, p. 22, ♀, 1901.

Forel, Ann. Soc. Ent. Belg., vol. 54, p. 424, ♀, ♂, 1910.

“♀. 3.3 mm. Yellowish-red-brown, the upper surface of the head and abdomen darker, the mandibles, antennae, and legs more

yellowish-brown. The upper surface of the head bears moderately long, blunt, pilose hairs; on the under surface of the head and abdomen and on the coxae these hairs are more pointed, and the legs have only a short and decumbent pubescence. Mandibles sparsely punctured and shallowly striate, more strongly and closely striate on the basal third. Head moderately shining, rectangular, longer than wide, the angles rounded, the posterior margin slightly concave. Clypeus with a strong median carina and some longitudinal lines laterally. The frons, and vertex as far as the hind margin, with widely spaced longitudinal striae, between which are some weaker longitudinal rugae and a somewhat indistinct reticulation. Cheeks and sides of the head coarsely and longitudinally rugose and reticulate. The well-defined and long scrobe is finely reticulate, and, like the frontal carina above it, reaches nearly to the posterior margin of the head. The scapes extend to the posterior margin; 2nd-6th joints of the flagellum about equal in length and width, 7th and 8th distinctly longer than wide, the 1st and 2nd joint of the club quite one and a half times longer than wide, the last joint about three times longer than wide.

“Thorax not short; coarsely reticulate, and more or less coarsely and longitudinally rugose, the sides behind the pronotum reticulate-punctate, and with fewer longitudinal rugae, the epinotum between the spines finely but not sharply reticulate, and with or without a few fine, indistinct, and transverse rugae. The thorax above is constricted, and the profile, from the hind margin of the pronotum as far as the epinotal spines is fairly straight, only slightly depressed in front of the epinotum; the epinotal spines are not long, about as long as the interval between their bases, and are directed steeply upwards, not strongly divergent; the episternal teeth form equal-sided triangles. Petiole coarsely reticulate, 1st node slightly wider than long, and somewhat higher than the 2nd node, the anterior face vertical and convex transversely, separated by a semi-circular margin from the upper surface and the sides; the upper face merges gradually into the posterior; 2nd node somewhat wider than the 1st, transversely oval. Abdomen smooth and shining.”

“♀. 4.7 mm. Strongly and longitudinally rugose and reticulate. Dull. Petiole as in the ♀, the basal third of the 1st abdominal segment longitudinally striate. Hairs obtuse as in the ♀. Colour yellowish-brown. Deälated.”

“♂. 3.5 mm. Dirty brownish-yellow. Mandibles quadridentate. Head oval, longer than wide, striate, and reticulate, the posterior margin straight. Thorax shining, with a few striae. Epinotum unarmed, the declivity marginate. The 1st node with a feeble and

arcuate dorsal margin as in the ♀, otherwise rather round. Wings pale, hardly yellowish, nervures yellow. Hairs of the head and thorax blunt as in the ♀."

Bothaville (Dr. H. Brauns); Natal (Wroughton, Schaufuss).

Race *QUAERENS*, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 226, ♀, 1914.

"♀. 3.9 mm. Larger than the type of the species, and of a darker colour, which is blackish or dark brown-black. Legs, antennae, and mandibles brownish-yellow, the apical half of the flagellum darker. The epinotal spines are much longer, at least as long as the space between them. The meso-epinotal suture is feeble, forming no constriction. The pro-mesonotum forms a longer convexity and the thorax is also longer (in the type of the species the pronotum only is more abruptly convex). The pilosity is much scantier. Otherwise almost identical with the type."

Bulawayo, not common; Durban (H. B. Marley), the colour somewhat paler than in the Rhodesian examples. (S.A.M., R.M., G.A. colls.)

T. *SETULIFERUM*, Emery. (Plate VII, figs. 101, 101a.)

Ann. Soc. Ent. France, vol. 63, p. 36, ♀, 1895.

♀. 4-4.5 mm. Castaneous red or burnt sienna, the thorax a little darker, the 1st node almost brown, legs paler and more yellowish. Exserted pilose hairs absent except on the clypeus. Head, thorax, petiole, and abdomen evenly but not very densely clothed with flat, almost scale-like, closely adpressed and silvery hairs, which lie somewhat transversely on the thorax. The hairs on the legs are also silvery, but cylindrical and oblique. The antennae are finely pubescent, the hairs simple. The silvery and flattened hairs on the body sufficiently distinguish this species from all others in our region. Head very finely and longitudinally striate, with a row of fine granules between all the striae; the cheeks, in front of the eyes, also slightly rugose. Clypeus with a strong median carina, and several finer lateral carinae or lines. Mandible closely striate. Thorax very finely and closely rugulose; the sculpture of the nodes similar but stronger, almost granulate, especially the 1st node. Basal third of the abdomen dull and finely aciculate, the rest smooth and shining. Head, thorax and nodes dull.

Head robust, as long as wide, the sides moderately convex, the posterior angles rounded, the posterior margin straight, the upper surface distinctly convex. Anterior margin of clypeus widely but not deeply emarginate in the middle. Mandibles with 6 blunt teeth. Frontal carinae short, divergent, not extending beyond the first third of the head. Scapes short, extending back very little beyond the middle third of the head. Thoracic sutures obsolete. Shoulders of the pronotum angular. Thorax much wider in front than across the epinotum, hardly constricted between the meso- and epinotum, distinctly convex lengthwise, short, hardly one-third longer than it is deep. Epinotal spines long and acute, longer than the interval between their bases, slightly divergent along their basal half, parallel along the apical half, directed obliquely upwards. Episternal teeth small and obtuse, forming almost triangular lobes. The peduncle of the 1st segment of the petiole is a little more than half the length of the node, and furnished below with a small tooth near the base; the node is truncate in front, seen from above trapezoidal, with distinct but rounded anterior and posterior lateral angles, the posterior margin nearly twice as wide as the anterior, the sides barely convex. Second node transversely oblong, two and a half times wider than long, nearly one-third wider than the 1st, the posterior margin moderately convex. Abdomen truncate at the base, with pronounced lateral angles.

♀. 7 mm. (Hitherto undescribed?) Sides of head less convex than in the ♂. Sculpture of the head stronger, mesonotum and scutellum longitudinally rugose, sides of pronotum reticulate-rugose and punctured in between the rugae, the dorsum and sides of the epinotum very closely granulate-punctate, with some more or less longitudinal rugae superimposed, the declivity coarsely and transversely striate. The epinotal spines are relatively shorter and thicker than in the ♂, about as long as their basal width, shorter than the interval between them, horizontal. The dorsum of the epinotum is very short, almost obsolete in the middle. The 1st node is shorter, quite twice as wide behind as it is long (only one-third wider than long in the ♂). The raised anterior angles of the node bear a pair of minute and nearly vertical teeth, between which the surface of the node is concave. The 2nd node is much more convex at the sides, and is nearly two and a half times wider than long. Basal two-thirds of 1st abdominal segment finely and very closely, longitudinally striate, with punctures between the striae.

Wings strongly tinged with yellow, the nervures yellow, the stigma yellowish-brown. Otherwise like the ♂.

♂. 6.8 mm. (Hitherto undescribed.) . Black, flagellum and tarsi brownish-yellow, articulations of the legs reddish. The flat silvery hairs entirely absent; fairly abundantly clothed with a long and yellowish pilosity. On the head, thorax, and nodes the hairs are somewhat woolly and suberect, on the abdomen straighter and oblique. The legs have a sparse pilosity intermixed with a fine and short pubescence. Flagellum pubescent, scape with straight pilose hairs only. Head, thorax, and nodes very closely and sharply reticulate, with some more or less longitudinal rugae superimposed on the head and thorax; on the head these radiate outwards from the ocellar area. Mayrian furrows well defined, the V-shaped space between the furrows with wider reticulations than elsewhere. Scutellum less strongly rugose. The 1st node with a few longitudinal rugae on its posterior half, the 2nd node faintly striate at the sides. Head, excluding the mandibles, a little wider than long, widest across the eyes, narrowed in front and behind (but wider behind than in front), the hind margin shallowly concave, the posterior angles sharp, very convex transversely above and highest behind. Eyes convex and very prominent, occupying about one-third of the sides, and placed a little in front of the middle. Scapes extending back as far as the anterior ocellus. Mandibles closely striate, 6-dentate, the anterior tooth large and acute. Mesonotum gibbous, very convex in front, one-quarter wider than long; scutellum semi-circular, half as long as the mesonotum. Epinotum armed with a short, subacute or dentiform tubercle on each side; the dorsum as long as it is wide between the tubercles, sloping downwards and backwards and merging by a gradual curve into the vertical declivity. The latter is shorter than the dorsum and is concave lengthwise. First segment of petiole with a short and ill-defined peduncle. The node has an oblique anterior face, slightly convex lengthwise, and a shorter posterior-dorsal face; the anterior angles rounded, each one furnished with a minute tooth as in the ♀. Second node hexagonal above, the anterior margin formed of three sides, the lateral margins slightly concave and forming distinct angles at their junctions with the front and hind margins. Abdomen very finely alutaceous, shining. Head, thorax, and nodes dull. Legs long and slender. Wings as in the ♀, but the nervures are darker.

S. Rhodesia, common; Mafeking; Orange Free State and Basutoland. A harvesting and graminivorous species. The entrances to the nests are often surrounded by small accumulations of the husks of a grass seed. These heaps are smaller than those of *Messor*, and much less tidily disposed.

Var. *TRIPTOLEMUS*, n.v.

♂ 5.5 mm. This differs from the type by its larger size and also in the following characters. The sculpture is stronger, especially on the thorax and nodes. The eyes are less convex, almost flat, the posterior margin of the head is shallowly concave, and the meso-epinotal suture is shallow but fairly distinct. The epinotal spines are shorter, distinctly divergent apically, as long as the interval between their bases. The peduncle of the 1st node is relatively shorter, and the node is a little longer in proportion to the width than in the type of the species, the anterior and posterior angles are also much more acute, not rounded as in the type. The sides of the 2nd node divergent posteriorly, not subparallel as in the type of the species. The colour is darker, especially of the thorax and nodes, which are dark brown.

(R.M., G.A. colls.); type in my collection. Closely allied to var. *cucalense*, Santschi, from which it would appear to differ (judging by the description only), in the shape of the nodes and the epinotal spines.

Race *CLUNA*, Forel.

Deutsch. Ent. Zeitschr. Beiheft, p. 218, ♀, 1913.

♂. 3.5-3.8 mm. Black, legs and antennae reddish-brown, mandibles reddish-yellow. The whole abdomen dull, otherwise the sculpture is like that of the species. From the latter it differs in the following characters. The dorsum of the epinotum is not convex, but shallowly concave; the spines are shorter, being barely as long as the interval between their bases. The 1st node of the petiole is shorter, and wider in front (the hind margin hardly more than half as long as the front margin), the anterior margin above more convex. The 2nd node is narrower, about one-quarter wider than the 1st, convex at the sides, not straight as in the type. The flat scale-like hairs are smaller and less abundant, more golden than silvery in colour.

This is an annectant form between *setuliferum*, i. sp., and *solidum*.

Willowmore, Cape Prov. (Dr. H. Brauns). (S.A.M., R.M., G.A. colls.)

T. SOLIDUM, Emery.

Bull. Soc. Ent. Ital., vol. 18, p. 362, ♂, ♀, 1886.

“ ♂. 3.5-4 mm. Piceous, mandibles, antennae and legs, except the middle part of the femora, rufescent and dull; abdomen shining,

sparsely pilose, hardly pubescent; legs pubescent. Head subquadrate, longitudinally striato-rugose, the striae divergent on the occiput, between the striae very finely rugulose. Frontal carina not extending beyond the posterior third of the head. Mandibles striate, the margins black, the masticatory margin denticulate, the apex bidentate. Antennae 12-jointed, club 3-jointed and much shorter than the rest of the flagellum. Thoracic sutures entirely obsolete. Thorax obtusely marginate in front, widest in front and thence narrowed gradually backwards. Epinotal spines robust, suberect, acute, divergent. Thorax above longitudinally rugose, the sides closely and obliquely rugose, and also very finely reticulate-rugulose; 1st segment of petiole pedunculate, the node trapezoidal, truncate behind, transversely rugulose and punctate; 2nd node transversely ovate, rugulose and punctate; apical portion of abdomen shining, the base subopaque, microscopically reticulate.

“♀. 5-5.5 mm. Similar to the ♂ in colour and sculpture; the thorax longitudinally striate; epinotal spines shorter and stouter. Wings hyaline, costal margin testaceous, stigma brown.”

South Africa.

Var. *SIGNATUM*, Emery. (Plate VII, fig. 98).

Ann. Soc. Ent. France, vol. 63, p. 35, ♀, 1895.

“♂. 4.5-5 mm. Blackish-brown; legs, antennae and mandibles castaneous brown, the middle portion of all the femora darker. This form differs from the type of the species by the presence of a well-defined, but not deep, meso-epinotal suture, and by the shape of the nodes. The 1st node, seen from above, is subconical, the apex anterior, slightly wider than long; it has a short, vertical, posterior face, and a vertical anterior face which is convex transversely. The 2nd node is not quite twice as wide as long, a little wider than the 1st; below and in front, it has on each side an obtusely triangular tubercle. The basal third of the 1st abdominal segment is very closely rugulose and dull. The epinotal spines are strongly divergent, fairly short, not longer than their basal width. The episternal lobes are shorter than the epinotal teeth. The scape does not reach the posterior fifth of the head.”

Willowmore, Cape Prov. (Dr. H. Brauns.) (S.A.M., R.M., G.A. colls.)

Race *LUGUBRE*, Forel.

Ann. Soc. Ent. Belg., vol. 54, p. 425, ♀, 1910.

“♂. 4.4-4.5 mm. Brownish-black, the mandibles, antennae and

tarsi reddish, femora brownish. The head is a little longer than wide (wider than long in the type of the species), the sides slightly compressed, and with a fairly distinct border on the sides of the occiput, which is hardly visible in the type of the species. Antennae somewhat more slender: the 9th and 10th joints of the flagellum decidedly longer than wide (as wide as long in the type, hardly longer than wide in var. *signatum*, Emery). Meso-epinotal suture obsolete. Epinotal spines a little larger. The 1st node of the petiole is rounded in front, and not truncate and marginate above as in the type and in var. *signata*; it is wider and the sides are more convex; 2nd node also wider. Otherwise similar to the type of the species. Mossamedes (Picard)."

Var. GROOTENSIS, Forel.

Ann. Soc. Ent. Belg., vol. 57, p. 118, ♀, ♂, 1913.

"♀. 6 mm. A little larger than the type. Thorax a little wider. The 1st node is entire and obtuse in front, without the emargination and the two partly effaced angles which are seen on the upper margin in front in the ♀ of the type.

"♂ (?) 4.8 mm. With the ♀ I received a ♂, which I refer to this species only with great doubt.

"It has the wings of a *Tetramorium*, but has 12 joints to the antenna, which become progressively shorter from the 2nd joint onwards. The insect is dull, densely reticulate-punctate and rugose, except the abdomen which is smooth. Erect pilosity abundant; the nodes shaped as in *solidum*. The epinotum is only bituberculate. Head wider than long, strongly narrowed in front."

Dr. Forel adds that it may belong to a distinct species, but the analogies with *solidum-grootensis* permit of doubt on that point. Or it may be a case of atavism, returning to a condition in which 12-jointed antennae were present.

Willowmore, Cape Prov. (Dr. H. Brauns); types in my collection.

T. SERICEIVENTRE, Emery, race FEMORATUM, Emery.

Ann. Mus. Civ. Genoa, vol. 9, p. 370, ♀, 1877.

(Race) Ann. Soc. Ent. France, vol. 63, p. 37, ♀, 1895.

"Differs from the type of the species in having the 1st segment of the petiole longer, less excavated at the base above, and by having the 1st abdominal segment finely striate transversely, and not longitudinally as in the type; the striation is visible only under

a strong magnification. The colour is very pale, of a reddish-yellow, the abdomen, femora and tibiae partly blackish.

“Makapan, Bechuanaland. (Simon).”

The type species has not yet been recorded from our region, it is characterised as follows:

“♂. . 2·7 mm. Dull; ferruginous, abdomen brown, with the margins of the segments paler and the apex rusty. Head reticulate, finely granulate in between. Mandibles striate, the clypeus depressed in front, finely carinate in the middle, distinct from the frontal area. Frontal carinae produced backwards over three-quarters of the length of the head. The 12-jointed antennae are rather slender, the 1st joint of the flagellum is as long as the two following taken together; the club three-jointed, only slightly incrassate and distinctly shorter than the rest of the flagellum. The thorax is longitudinally rugose on the pro- and mesonotum, transversely so on the epinotum; the meso-epinotal suture deep. The epinotum is armed with two nearly horizontal spines, slightly divergent, wide at the base, fairly acute; there are two smaller episternal spines below. The petiole is finely coriaceous, the node of the 1st segment is hardly longer than wide; the 2nd segment is subglobose, a little wider behind, slightly transverse. The abdomen is dull, with a velvety, silky sheen, due to the very dense and fine striation. The whole body is sparsely clothed with pale hairs, not clavate; those on the abdomen are longer.”

T. SIMONI, Emery.

Ann. Soc. Ent. France, vol. 63, p. 35, ♂, 1895.

“♂. 4 mm. Piceous; mandibles, tarsi and articulations of the legs rufescent; dull; barely pilose and very sparsely pubescent. Head reticulate-rugose lengthwise, clypeus striato-rugose, mandibles very finely striate, meso-epinotal suture deep, pro-mesonotal suture obsolete. Pro-mesonotum strongly convex, coarsely rugoso-reticulate, the convex epinotum also, but without the coarse reticulations. Epinotum armed with two minute spines, erect, acute; episternal teeth absent. Nodes of petiole subequal, globose, hardly more finely reticulate than the epinotum. The abdomen subopaque, very finely punctured, the extreme base striolate.

“Makapan, Bechuanaland. (E. Simon).”

“Remarkable on account of the profile of the thorax and petiole, which forms a series of rounded bosses, and also by the sculpture. The latter consists of a network of coarse rugae, mostly longitudinal,

on the middle of the head and on the dorsum of the thorax. The coarsest rugae are on the pro-mesonotum, those of the head, epinotum and petiole becoming successively finer. In addition to the reticulations, there is a fundamental puncturation, which is fairly close and more or less visible, The frontal carinae are produced backwards as feeble ridges, hardly more pronounced than the neighbouring rugae, and forming no distinct scrobe."

T. JAURESI, Forel. (Plate VII, fig. 99.)

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 226, ♀, 1914.

♀. 4.3-4.7 mm. Dark brown, abdomen piceous, femora and middle portion of the scapes lighter brown; tibiae, tarsi, flagellum, base and apex of the scape, and the mandibles brownish-yellow. A few yellowish hairs on the clypeus and apex of abdomen, otherwise without pilosity. Pubescence very short and scanty, almost absent on the body, a little more noticeable on the legs and antennae. The middle of the head above, longitudinally striate. The clypeus has a median carina which is continued back to the posterior margin of the head; sides of the head finely reticulate, somewhat more coarsely so on the anterior half, which is also partly rugose. Pronotum very finely and longitudinally striato-rugulose; mesonotum smooth and shining in the middle, faintly striate at the sides; epinotum, nodes, and basal half of abdomen closely and finely reticulate and dull. The rest of the abdomen, and also a narrow median area on the 1st node, slightly shining and almost smooth.

Head about one-fifth longer than wide, the sides parallel, the posterior angles rounded, the hind margin shallowly concave. The scapes extend back almost as far as the hind margin of the head and are rather strongly curved near the base; 2nd-8th joints of the flagellum wider than long. Eyes fairly large and prominent, convex, placed in the middle of the sides. Scrobes absent. Mandibles shining, finely striate, armed with 7 small and obtuse teeth, the masticatory margin black. Pronotum truncate in front, the face so formed short, the shoulders obtuse. Thoracic sutures obsolete. Mesonotum with a slight angular enlargement on each side behind the middle. Epinotum moderately oblique, the dorsum one and a half times longer than wide, widest near the base. The declivity is almost vertical, hardly half as long as the dorsum, margined at the sides by a ridge which ends above and below in the teeth. The epinotal teeth are shorter than the interval between their bases, as long as wide at the base, divergent, directed obliquely upwards;

episternal teeth as long and as wide as the epinotal. Peduncle of the 1st segment of the petiole shorter than the node; the latter is as long as wide, convex at the sides, narrowed towards the median line above, the anterior and posterior faces almost vertical; the ventral lamella is produced at its extreme base into a small subacute tooth. The 2nd node is transversely oval, one-third wider than long, a little wider than the 1st. Abdomen narrowly truncate at the base. Femora swollen in the middle.

Park Rynie, Natal. (H. W. Marley.) (S.A.M., R.M., G.A. colls.)

T. SIMULATOR, n. sp. (Plate VII, fig. 102.)

♂. 4.7-5 mm. Head, antennae, mandibles, thorax, nodes, and femora dark castaneous, abdomen piceous, tibiae and tarsi dark yellowish-red. Head and sides of thorax nitidulous, dorsum of thorax, nodes, and abdomen shining. Antennae, legs, nodes, and abdomen with a short, scanty, and decumbent pubescence; head and thorax glabrous. Head strongly and longitudinally striate, more strongly so below the demi-scrobes than between them, the demi-scrobes finely reticulate-punctate. Clypeus with a median carina, and two or three strong lines on each side of same. Pro-mesonotum sparsely and longitudinally striate, the striae somewhat effaced towards the middle, also very shallowly and sparsely punctate, the epinotum fairly closely striato-rugose, except the space between the spines, and the declivity, which are smooth and shining. Sides of thorax fairly closely longitudinally striate, the outer sides of the epinotal spines finely rugulose. Nodes of petiole faintly rugulose and sparsely punctate, the punctures fairly strong. Abdomen sparsely, finely, and sharply punctate. Legs very shallowly and sparsely punctate. Head, excluding the mandibles, slightly longer than wide, widest in the middle, the sides feebly convex, the posterior angles slightly rounded and prominent, the posterior margin shallowly concave. Eyes large and convex, placed a little behind the middle of the sides. Mandibles large, triangular, sharply striate and also sparsely and strongly punctate, armed with 7 large teeth. Anterior margin of clypeus feebly convex. Frontal carinae subparallel, extending back almost to the occipital margin, and forming the upper boundary of the demi-scrobes. Scapes not reaching the occipital margin. Flagellum thick, the 1st joint as long as the 2nd and 3rd together, the 2nd-8th wider than long, the 9th and 10th subequal and a little longer than wide, the apical joint half as long again as wide. Shoulders of the pronotum angular. Thoracic sutures obsolete. The thorax is fairly elongate, slightly narrowed between

the pro- and mesonotum, more strongly so between the latter and the epinotum, not marginate laterally, the sides vertical, the dorsal profile horizontal. The dorsum of the epinotum is narrowest at the base and widest at the basal third; epinotal spines subparallel, directed backwards and very little upwards, acute, compressed laterally, shorter than the interval between their bases and not longer than their basal width. The declivity is vertical, hardly half as long as the dorsum, marginate at the sides, the margins continued below into the rather short and rounded episternal teeth or lobes. Peduncle of the 1st segment of the petiole thick, less than half as long as the node; the latter truncate in front, the anterior face vertical, the posterior face short, rounded above and subvertical. The node is quite one-third longer than wide, widest at its posterior third, convex transversely above, the sides feebly convex. The 2nd node is almost hemispherical, widest behind, nearly twice as wide as the 1st node. Abdomen oval, the 1st segment longer than wide, and forming almost the whole of the dorsum. All the femora swollen in the middle.

Malindi, S. Rhodesia; preying on termites.

At first sight this species bears a resemblance to *T. (Xiphomyrmex) decem*, Forel, but is easily distinguished from it by its larger size and the 12-jointed antennae.

(S.A.M., R.M., G.A. colls.); type in my collection.

T. LOBULICORNE, Santschi.

Ann. Soc. Ent. France, vol. 84, p. 504, ♀, 1916.

♀. 3.5 mm. Reddish-yellow-brown (raw umber), the abdomen reddish-brown, the anterior fourth of the head, the mandibles, antennae and legs ochreous or reddish-yellow. A sparse and short pubescence on the legs and antennae, wanting elsewhere. The pilosity consists of short, suberect, blunt and yellowish hairs, very scanty on the head and thorax, a little more abundant on the nodes and abdomen. Head, between the frontal carinae, fairly strongly and longitudinally striate, the sides of the head in front of the eyes and the cheeks longitudinally rugose and reticulate, the demiscrobes, especially on their posterior halves, closely and finely reticulate. Thorax reticulate-rugose, the rugae uneven and emphasised longitudinally, shallowly reticulate-punctate between the rugae. The apical half of the epinotum and the peduncle of the petiole closely reticulate-punctate or granulate. Nodes sparsely rugose, reticulate-punctate and dull. Abdomen shining, microscopically rugulose. Thorax subopaque, head slightly shining.

Head, excluding the mandibles, a little more than one-fifth longer than wide, the sides moderately convex, the posterior angles widely rounded, the posterior margin shallowly concave, not much narrower in front than behind. Eyes not large, placed just in front of the middle of the sides. Median area of clypeus longer than it is wide across the middle, the anterior margin narrowly excised in the middle, the median carina feeble, not stronger than the lateral striae. Frontal carinae extending back as well-defined ridges almost to the posterior margin and forming the upper boundary of the shallow demicrobes. Scapes incrassate apically, not reaching the posterior margin of the head; 2nd-8th joints of the flagellum wider than long, the club longer than the rest of the flagellum. Mandibles finely and closely striate, feebly punctured, armed with 6 or 7 teeth, the posterior four indistinct.

Thorax constricted at the meso-epinotal suture, the latter distinct but not deep. Shoulders of pronotum rounded; pronotum convex in front. Pro-mesonotal suture feebly defined. Mesonotum marginate at the sides, the raised margins being continued along the dorsum of the epinotum as far as the base of the spines. Dorsum of epinotum widest at the base, a little longer than wide, joining the declivity in a gentle curve; the declivity fairly steep, as long as the dorsum. Epinotal spines subacute, directed obliquely upwards, shorter than the interval between their bases, as long as their basal width, and not much longer than the broad episternal teeth. The peduncle of the 1st segment of the petiole is longer or as long as the node, and is rather wide, being almost as wide as the node. The latter is vertically truncate and convex from side to side in front, a little wider than long, the upper surface slopes steeply backwards into a short posterior face. The 2nd node is subglobose, two-thirds wider than, and a little longer than the 1st node. Abdomen oblong, the 1st segment a little longer than wide and forming nearly the whole of the dorsum. Femora only slightly swollen.

♀. 3.5 mm. Black, antennae and legs reddish-brown, the articulations and tarsi paler, mandibles ferruginous. Frontal carinae wider apart than in the ♂. Pronotum transversely rugose; mesonotum and scutellum strongly and fairly densely longitudinally striate; dorsum of the epinotum short, oblique, transversely striate at the sides, reticulate-punctate in the middle, shorter than the declivity. Wings tinged with yellow, nervures pale yellow, stigma brownish-yellow. Otherwise like the ♂.

♂. 3.4 mm. Black, legs, antennae and mandibles pale brownish-

yellow. Head dull, closely reticulate-punctate, sparsely striate between the frontal carinae and the ocelli. Mesonotum very sparsely punctured, and with faint traces of a longitudinal striation on its posterior half, otherwise smooth and shining. Scutellum dull, finely longitudinally rugulose. Dorsum of the epinotum, the upper two-thirds of the declivity, and the nodes finely reticulate; the sides of the epinotum faintly striate lengthwise. Abdomen smooth and shining.

Head widest in front, nearly as long as wide, the sides and hind margin moderately convex, the posterior angles widely rounded. Eyes fairly large, placed in the anterior third of the head, and almost touching the base of the mandibles in front. The scapes extend back as far as the posterior ocelli. Frontal carinae well defined, widely divergent posteriorly. Mayrian furrows of the mesonotum distinct; mesonotum very convex and gibbous in front; scutellum semi-circular. Epinotum with two feeble lateral ridges at the apical angles of the dorsum, the latter as long as the oblique declivity. Episternal lobes large. Nodes thicker than in the ♀; the peduncle of the 1st segment not distinctly defined (as is usually the case in the ♂ ♂ of this genus), merging insensibly into the node.

Bulawayo. (S.Á.M., R.M., G.A. colls.)

T. EMERYI, Mayr.

Ann. K.K.N.H. Mus. Wien, vol. 16, p. 23, ♀, ♀, ♂, 1901.

“♀. 3.5 mm. Red-brown, the mandibles, antennae and legs paler, head and abdomen dark brown. The pilosity is most abundant on the abdomen, and consists of partly pointed, partly blunt bristly hairs, Antennae and legs with a fairly abundant and oblique pubescence. Mandibles shining, smooth, sparsely and coarsely punctured, and also very finely and shallowly striate, more densely striate on the outer side near the base, armed usually with 7 teeth, the anterior pair large, the others small and indistinct. Head rectangular, the angles rounded, a little longer than wide, very little narrower in front than behind, coarsely striate (the clypeus finely striate), shining between the striae, partly smooth and partly punctate or rugulose, the sides and back of the head coarsely reticulate. Anterior margin of clypeus straight, without any emargination. The frontal carinae, and the fairly deep demiscrobes, extend back as far as the level of the eyes, the demiscrobes not much longer than the scapes; 3rd-6th joints of the flagellum

distinctly wider than long. Eyes placed in about the middle of the sides of the head. The fairly robust thorax is narrower than the head, with obtuse and not prominent shoulders, coarsely reticulate above, finely rugulose or punctate between the meshes, and seen in profile, straight from the front to the pro-mesonotal suture, and also straight from the latter to the epinotal teeth; these two planes meet in an obtuse and rounded angle. The meso-epinotal suture is not very distinct, and the dorsum of the epinotum is only slightly depressed. The latter is longer than wide, feebly concave transversely behind; the epinotal teeth are wide, almost blunt, fairly erect and moderately divergent; episternal teeth rectangular, the sides of the thorax are in greater part finely and closely reticulate-punctate. Petiole moderately coarsely reticulate-rugulose and finely punctured; the peduncle of the 1st segment moderately long, the node a little wider than long, the 2nd segment hardly as long as, and somewhat wider than the 1st node. Abdomen smooth and shining, with scattered piligerous punctures; the base of the 1st segment more or less distinctly and longitudinally striate.

“ ♀. 4.5 mm. Very much like the ♂. The mesonotum and scutellum rugoso-striate lengthwise, the dorsum of the epinotum transversely rugose, the sides of the thorax longitudinally rugose and also closely and finely reticulate-punctate. The wings slightly infuscate, with pale yellow nervures. Otherwise like the ♂.

“ ♂. 4.1–4.2 mm. Shining, brown, the mandibles, antennae and legs, particularly the last four tarsal joints, brownish-yellow. The long pilosity is scanty, more abundant on the ventral surface of the abdomen; the antennae and legs have only short, fine and oblique hairs. Head fairly coarsely and longitudinally rugoso-striate and finely reticulate, between the eyes and ocelli finely reticulate-punctate, the ocellar area transversely rugose, the back of the head unevenly rugose and finely reticulate. In the 7 specimens before me, the antennae are 13-jointed, the scape extends back as far as the anterior ocellus, the 1st joint of the flagellum is a little longer than wide, and wider than the 2nd joint, which is two and a half times, or a little more, longer than wide. The head is gradually narrowed from behind the eyes to the posterior angles, so that the latter project outwards and are almost dentiform, as in the ♂ of *T. guineense*. Thorax fairly finely and longitudinally rugose, the dorsum and declivity of the epinotum finely and closely reticulate. Wings as in the ♀. The segments of the petiole are slender, much more so than in *guineense*, the 2nd segment hardly wider than long. The abdomen in greater part smooth. Port Elizabeth.”

It is to be noted that in the ♂♂ of this species, the 2nd-5th joints of the flagellum remain separate, instead of being fused into one joint, as is the rule in the genus.

Race *CRISTULATUM*, Forel.

Deutsch. Ent. Zeitschr. Beiheft, p. 218, ♀, ♂, 1913.

♀. 4.3 mm. Very dark brown or black, the pro-mesonotum somewhat paler or dark reddish-brown, the antennae, tibiae and tarsi yellowish-brown, femora brown, mandibles brownish-red. This race differs from the type of the species by its larger size, and by the more angular junction of the pro- and mesonotum. The 3rd-6th joints of the flagellum are as wide as long (wider than long in the type). The head is also more coarsely reticulate between the striae, and is also a little wider behind. The meso-epinotal suture is indicated by a raised line. Otherwise like the type.

♀. 5 mm. (Hitherto undescribed.) Pronotum moderately exposed above in the middle, more exposed at the sides, the pronotal shoulders subangular. Pronotum very coarsely and transversely reticulate-rugose; mesonotum and scutellum strongly and longitudinally striate, the epinotum transversely striate, more closely and finely so on the declivity than elsewhere. Dorsum of epinotum sloping steeply downwards, slightly longer than the vertical declivity; the epinotal teeth are represented by elongate tubercles, much smaller than the teeth of the ♀. Wings slightly smoky, nervures and stigma pale yellow. Otherwise like the ♀.

♂. 4.7-5 mm. Black, antennae, legs and mandibles yellowish-brown. Head more or less lozenge-shaped, widest across the eyes, wider in front than behind, without a distinct posterior margin like that of the type, in which the head is shorter and wider behind. Mesonotum very gibbous and convex in front, overhanging the pronotum, which is thereby entirely hidden from above. Epinotum unarmed, the dorsum merging into the declivity by a gradual curve; the declivity fairly steep. The 1st node is more pointed above than in the type. Eyes very large and convex, occupying quite half of the sides of the head, and almost touching the base of the mandibles in front. As in the type of the species, the 2nd joint of the flagellum in some specimens is redivided into two or more of its component segments.

Willowmore, Cape Prov. (Dr. H. Brauns.) (S.A.M., R.M., G.A. colls.)

T. JOFFREI, Forel. (Plate VII, fig. 97.)

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 228, ♀, 1914.

♀. 3.5–3.6 mm. Piceous, legs yellowish-brown, antennae and mandibles somewhat reddish-brown. Head sometimes paler. Pilosity yellowish, fairly long, composed of thin and pointed hairs, not very abundant. Legs and antennae with a scanty yellowish pubescence, which is absent from the body. Moderately shining, strongly rugose, longitudinally so on the head, and reticulate-rugose on the thorax. The rugae on the head connected by a few transverse branches. Apical half of the dorsum and the declivity of the epinotum, the nodes and abdomen smooth and shining. Head slightly longer than wide, the sides moderately convex, the posterior margin almost straight, the posterior angles rounded, hardly narrower in front than behind. Eyes occupying about one-quarter of the sides, placed a little in front of the middle. The frontal carinae extend back as strong ridges nearly as far as the occiput, and form the upper boundary of the demicrobes, which are smooth and fairly deep. The scapes do not reach the occipital margin; 2nd–7th joints of the flagellum wider than long. Clypeus coarsely and sparsely rugose, with a strong median carina. Mandibles closely and finely striate, armed with two distinct teeth in front, and five obtuse and smaller teeth behind. Pronotum submarginate in front and at the sides, the shoulders rounded. Pro-mesonotal suture feeble, meso-epinotal suture shallow and wide. Dorsum of epinotum longer than wide, hardly wider at the base than at the apex, a little longer than the vertical declivity; the latter marginate at the sides. Epinotal spines very long, acute, strongly divergent and not very oblique, much longer than the interval between their bases and as long as the dorsum of the epinotum. Episternal teeth small. Peduncle of the 1st segment of the petiole as long as the node; the latter much higher than long, truncate in front, the anterior dorsal margin convex transversely, the dorsal face convex lengthwise and sloping downwards posteriorly; seen from above, about as wide as long and wider in front than behind. 2nd node transversely oval, three-quarters wider than long, and a little wider than the 1st. Abdomen decidedly convex above.

♀. 4.2 mm. Sides of the head behind the eyes more convex than in the ♀. Pronotum coarsely reticulate-rugose. Mesonotum and scutellum sharply striate, the striae larger and wider apart on the scutellum. Epinotum longitudinally rugose at the sides and above, near the base, fairly smooth elsewhere. Dorsum of the epinotum short, sloping from its base downwards to the longer and

vertical declivity. Epinotal spines relatively shorter than in the ♀, hardly divergent, not directed upwards as in the ♀, but nearly horizontal. Nodes wider, the anterior dorsal margin of the 1st node less convex than in the ♀. Wings tinged with dirty yellow, nervures and stigma pale yellow.

Durban; nesting in a rotten and very moist tree stump. (S.A.M., R.M., G.A. colls.)

Var. ALGOA, n. v.

♂. 3.5 mm. Differing from the type in the following characters. The colour is darker, on the body quite black. The demiscrobes are wider and deeper and more distinctly defined externally. The sculpture of the thorax is weaker, and almost effaced on the middle of the mesonotum. Pro-mesonotal suture obsolete, meso-epinotal shallower and narrower. Epinotal spines shorter, hardly as long as the dorsum of the epinotum, much more oblique and less divergent than in the type. The dorsal (posterior-dorsal) face of the 1st node is longer, a little longer than wide, and the 2nd node is longer and more convex above.

♀. Like the ♀ of the type but a little smaller. The sculpture of the thorax is weaker, the anterior third of the mesonotum smooth and shining; the epinotal spines nearly horizontal.

The resemblance of this variety to *T. Grassi* and its var. *laevigatum*, Mayr, is even greater than in the type of the species. *Joffrei* and *Grassi* are evidently very closely allied.

Port Elizabeth. (Dr H. Brauns.) (S.A.M., R.M., G.A. colls.); type in my collection.

T. GRASSI, Emery. (Plate VII, fig. 105.)

Ann. Soc. Ent. France, vol. 63, p. 37, ♂, ♀ (?), 1895.

Mayr, Ann. K.K.N.H. Mus. Wien, vol. 16, p. 25, ♀, 1901.

♂. 2.7-3 mm. Brown, legs, antennae, mandibles and petiole brownish-yellow. Pilosity yellow, very sparse; pubescence short, oblique, very sparse and present only on the legs and antennae. Head fairly strongly and longitudinally striate or striato-rugose, the striae rather wide apart, the sides of the head reticulate-rugose. Thorax longitudinally rugoso-reticulate, the rugae somewhat discontinuous, the median portion of the mesonotum smooth. Head and thorax moderately shining; declivity of epinotum, petiole and abdomen smooth and shining.

Head subrectangular, about as long as wide, a little narrower in

front than behind, the sides moderately convex, the hind margin straight. Distinct demicrobes present; the frontal carinae extend backwards as far as the posterior margin of the head, 2nd-8th joints of the flagellum wider than long. Clypeus with a strong median carina, and two weaker and broken lines on each side of it. Mandibles finely striate, armed with three distinct teeth in front, feebly denticulate behind. Sides of pro-mesonotum indistinctly marginate, the shoulders of the pronotum obtusely angular. Thoracic sutures obsolete. Dorsum of epinotum oblique, a little longer than wide, as long as, or a little longer than the declivity. The epinotal spines are longer than the interval between their bases, but shorter than the dorsum of the epinotum, divergent, acute and fairly oblique. Petiole similar to that of *Joffrei*, but the dorsal face of the 1st node is fairly distinct from the short posterior face, not forming a continuous curve as in *Joffrei*. The femora are but slightly swollen in the middle.

♀. 3.5 mm. The colour of the thorax is rather darker than in the ♂. Pronotum reticulate-rugose, the sides and posterior third of the mesonotum longitudinally striate, the anterior two-thirds smooth. The dorsum of the epinotum is almost obsolete, being in very nearly the same plane as the declivity. The epinotal spines are parallel and nearly horizontal. Dealcated. Otherwise like the ♂.

Table Mountain; making small nests under stones in the pine woods. (S.A.M., R.M., G.A. colls.)

Var. LAEVIGATUM, Mayr.

Ann. K.K.N.H. Mus. Wien, vol. 16, p. 25, ♂, 1901.

"The ♂ differs from that of the type species in having the thorax smooth, from the anterior margin of the pronotum as far as the epinotal spines." Port Elizabeth. (Dr. H. Brauns.)

I possess some specimens from this locality, collected by Dr. Brauns, which appear to belong to this variety. The dorsum of the thorax is in greater part smooth, but there are distinct, though fine, short rugae near the lateral and anterior margins of the pro-mesonotum, and on the basal half of the epinotum. The size is a little larger, 3.4 mm.

Var. SIMULANS, Santschi.

Göteborgs K. Vetens. och Vitterh. Handl. XV, 2, p. 24, ♂, 1914.

"♂. Brownish-black, abdomen black. Mandibles, antennae, tarsi and peduncle of the petiole rusty-red, the middle of the femora

and tibiae brownish. Larger than the type, 3.3-3.5 mm., and still more resembling *Xiphomyrmez Weitzaeckeri*, Em., the colour and pubescence being the same. The sculpture differs from that of *Weitzaeckeri* but little, the rugae not being effaced on the thorax. The epinotal spines are nearly twice as long as the interval between their bases. The 1st node forms a scale, as abrupt in front as behind, a little wider than thick. Otherwise like the type of *Grassi*."

Richmond, Natal. (Traegaordh.)

T. GUINEENSE, Fab.

Ent. Syst. II, p. 357, ♂, 1793.

Nylander (*Myrmica bicarianata*), Act. Soc. Fenn. II, 3, p. 1061,
♀, 1846.

Mayr (*Myrmica Kollari*), Verh. Zool. Bot. Ges. Wien, III, p. 283,
♂ 1853.

This species, whose original home was probably West Africa, has spread over a large part of the Tropics in both hemispheres, and has also been introduced into hot-houses in temperate countries. I have no records of it having been taken in our region, but as it is almost certain to be found sooner or later, I append a description of the ♀. It is smaller than the various races and varieties which are described further on.

♀. 3.5 mm. Head, thorax, and nodes bright reddish-yellow, abdomen brownish-black, legs and antennae ochreous yellow, the base of the 1st, and the apical margins of the remaining abdominal segments yellowish. The pilosity is fairly abundant on the body, and consists of long, erect, blunt, and rather thick hairs, which are somewhat shorter and oblique on the head. Antennae and legs with a rather long, oblique, and yellowish pubescence, which is absent from the body. Vertex of the head between the demi-scores, thorax, and nodes strongly reticulate-rugose. The rugae, near the middle line of the head, are emphasised longitudinally, and the meshes there and on the pronotum are very wide, the spaces between the network shining and fairly smooth. In some specimens the reticulations become closer and less sharp on the meso- and epinotum, and even more so on the 2nd node. The sides of the head and thorax are more closely reticulate than elsewhere. Abdomen smooth and shining.

Head, excluding the mandibles, nearly one-sixth longer than wide, hardly narrower in front than behind, a little more convex behind the eyes than in front of them, the hind margin nearly straight. Eyes placed in the middle of the sides, convex, and prominent. Clypeus

with a median carina, and a lateral one on each side. Scape not reaching the posterior margin, somewhat curved near the base, 2nd-8th joints of the flagellum wider than long, 2nd-5th twice as wide as long. Mandibles very finely striate, dull, armed with 7 teeth, the posterior four small. Pro-mesonotal suture obsolete, meso-epinotal suture indistinct above. Shoulders of the pronotum angular. Dorsum of the thorax marginate in front and at the sides, the margin uneven, being formed by the outermost rugae. The rugae of the head, thorax, and 1st node are brownish, darker than the ground colour. Thorax narrowed at the meso-epinotal suture, widening immediately behind the same at the base of the epinotum and thence narrowed again towards the spines. Seen in profile, the dorsum of the thorax is fairly straight except in front, where the pronotum joins the mesonotum in an obtuse and indistinct angle. The dorsum of the epinotum is a little longer than wide; the declivity is vertical and striate on its upper half. The epinotal spines are acute, moderately divergent, directed obliquely upwards, longer than the interval between their bases and longer than their basal width. Episternal teeth acute, less than half as long as the epinotal. Peduncle of the 1st segment of the petiole shorter than the node; the latter, seen from above, hexagonal, the anterior lateral sides longest, wider behind than in front, the dorsal surface moderately convex; seen from the side, the anterior face is shorter than the posterior; the ventral lamella is produced into a minute tooth at the base of the peduncle. Second node transversely ovate or subglobose, one-quarter wider than long, and wider than the 1st node. Abdomen oval. Femora moderately swollen.

Var. **ERECTUM**, Emery.

Ann. Soc. Ent. France, vol. 63, p. 37, ♀, 1895.

“Differs from the type by being more robust and a little larger. The petiole is a little thicker, the nodes rounder. The epinotal spines fairly short but nearly erect, their posterior margin, in profile, being the continuation of the declivity, and nearly perpendicular to the dorsum of the thorax. The base of the 1st abdominal segment is more distinctly striate than in the type. Vrijburg, Bechuanaland. (Simon).”

Var. **PHASIAS**, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 226, ♀, 1914.

♀. 3.6 mm. Yellow, the abdomen and nodes, clypeus and antennae more reddish-yellow. The sculpture is a little more

superficial than in the type, from which it differs, like the race *striatum*, in the much more angular junction of the pro- and mesonotum. The 1st node is also narrower above, and the base of the 1st abdominal segment more distinctly striate. The frontal carinae are more prominent than in the type.

Durban. (C. B. Cooper.) (R.M., G.A. colls.)

Race *STRIATUM*, Stitz.

Mitth. Zool. Mus. Berlin, vol. 5, p. 144, ♀, 1910.

♀. 4.6 mm. Head, antennae, and nodes yellowish-red, thorax reddish-yellow, abdomen and legs bright ochreous yellow, the abdomen sometimes more or less brownish-yellow. Differs from the type by the stronger sculpture. The frontal carinae are decidedly stronger, forming prominent ridges bordering the demiscrobes. The junction of the pro- and mesonotum, seen in profile, is much more angular, even more so than in var. *Phasias*. The pro-mesonotal suture is indicated by a dark transverse ridge. First node of the petiole more abruptly truncate in front, the anterior face as long as the posterior. The sculpture of the 2nd node as strong as that of the 1st (distinctly weaker in the type and var. *Phasias*). The basal third of the 1st abdominal segment finely and longitudinally striate, and rather dull.

♀. 5 mm. Mesonotum and scutellum longitudinally reticulate-rugose; the posterior two-thirds of the mesonotum flat. Pronotum not much exposed above, the shoulders much less angular than in the ♀. Dorsum of epinotum moderately oblique, as long as it is wide between the spines. Wings hyaline, nervures and stigma pale yellow. Otherwise like the ♀.

♂. 4.2 mm. Head yellowish-brown, thorax and abdomen brownish-yellow, the parapsidal sutures of the mesonotum and the margins of the scutellum darker, legs, antennae, and mandibles ochreous. Pilosity and pubescence much sparser than in the ♀. Head and nodes subopaque, thorax and abdomen nitidulous. Head finely reticulate, with a few fine longitudinal striae on the vertex in front of the ocelli, and also some oblique striae behind them; between the eyes and antennal sockets transversely striate. Thorax and nodes longitudinally striate, very finely and fairly closely so on the mesonotum and scutellum and 2nd node, more coarsely so on the epinotum and 1st node; the latter are also partly reticulate, and the epinotum is also closely and shallowly punctate between the striae. Head narrower behind the eyes than in front, the posterior margin straight

and reflected to form a collar, with prominent lateral angles. Eyes large, occupying nearly the whole of the anterior half of the sides; ocelli large and prominent. Frontal carinae extend back almost as far as the anterior ocellus. Mandibles small, dentate. Scape not extending back as far as the anterior ocellus, twice as thick as the 2nd joint of the flagellum; the latter is longer than the scape and the 1st joint taken together. Pronotum slightly exposed above at the shoulders. Mayrian furrows well defined. Mesonotum separated from the scutellum by a wide and clathrate groove. The dorsum of the epinotum not distinctly delimited from the declivity, the profile of the epinotum forming a continuous curve from base to apex. First node of petiole somewhat pyriform, the ventral lamella produced into a rather large tooth near the base. Second node at least half as wide again as the 1st, wider than long, only slightly convex transversely. Wings as in the ♀.

S. Rhodesia. Common in grassy soil. The entrance to the nest consists of one or more holes, which are rarely surrounded by mounds of earth. (S.A.M., R.M., G.A. colls.)

T. BACCHUS, Forel.

Ann. Soc. Ent. Belg., vol. 54, p. 426, ♀, 1910.

“♂. 3.7 mm. Mandibles smooth, shining, with small scattered punctures, armed with 7 teeth, the posterior ones indistinct. Clypeus without a carina, the anterior border emarginate in the middle. Head as in *guineense*, but much wider, hardly longer than wide, distinctly narrowed in front. Club of the antenna more slender, composed of almost four joints. Thorax, especially the pronotum, decidedly wider than in *guineense*, and much more convex lengthwise, submarginate; meso-epinotal suture a little stronger. Epinotal teeth more vertical, a little shorter, wider at the base, not curved at the extremity; episternal teeth a little shorter. Nodes of the petiole thicker, wider and more rounded than in *guineense*. The 1st node is not truncate in front, but rounded, and with its peduncle forms a single concave curve in profile; it is also rounded and much less truncate behind. Sculpture as in *guineense*, but closer, a little finer and less shining; base of the abdomen longitudinally striate. Pilosity as in *guineense*. Brownish-red, legs paler; abdomen a little darker, more yellowish-brown; darker than *guineense* excepting the abdomen, which is paler.

“Natal (Haviland). Closely allied to *guineense*, but nevertheless

clearly distinct; larger, more robust, the mandibles smooth, the spines differently shaped, as also the 1st node, etc.”

T. CAPENSE, Mayr.

Reise der Novara, Zool. Formicidae, p. 89, ♀, 1865.

Emery, Ann. Soc. Ent. France, vol. 63, p. 36, ♀, ♂, 1895.

“♂. 3.5 mm. This species bears a great resemblance to *guineense*, but nevertheless is easily distinguished from it. Yellowish-red, the legs more yellow, the abdomen faintly brownish, the masticatory margin of the mandibles, and the eyes black. The pilosity is very sparse on the body, whereas it is much more plentiful in *guineense*. The feebly shining mandibles are sharply and longitudinally striate, with single punctures between the striae (in *guineense* the mandibles are shining, very shallowly striate, and not over the whole surface). The clypeus has several carinae or longitudinal rugae, but the median one is strong and is continued on to the frontal area; the latter is distinctly delimited from the clypeus, which is not the case in *guineense*, and the frontal area itself is more distinct than in that species. Frons and vertex as in *guineense*. The sides of the head are coarsely reticulate also, but the rugae are emphasised longitudinally, which is not the case in *guineense*. The flagellum is somewhat longer and more slender. The thorax is short and fairly high, as in *T. caespitum*, whereas in *guineense* it is longer and lower. The thorax above is finely coriaceous and reticulate-rugose (or finely reticulate punctate), with fewer longitudinal striae, which disappear on the epinotum. . . . The epinotal spines are wider at the base than in *guineense*, the space between the spines smooth and shining, the sides of the thorax reticulate-punctate. The 1st node of the petiole is wider than long (in *guineense* as long as wide), both nodes are coarsely and shallowly rugose (coarsely reticulate in *guineense*). The abdomen shining, exceedingly finely coriaceous at the base.”

“♀. Petiole wider than in the ♂, the 1st node truncate in front, with the anterior margin straight, ending in an angle on each side; the wings are hyaline, the stigma and nervures brownish-yellow. ♂. Testaceous. The head striate, the scutellum, epinotum, and petiole very finely punctured and dull, the rest shining; mandibles shining, 5-dentate; . . . in profile, the 1st segment of the petiole forms a rounded rectangle, the 2nd is hardly wider than long, excluding the articular portion.”

Capetown. (S.A.M. coll.)

Var. *BRAUNSI*, Forel.

Ann. Soc. Ent. Belg., vol. 57, p. 119, ♀, 1913.

Deutsch. Ent. Zeitschr. (Beiheft), p. 220, 1913.

“ ♀. 3.5–4 mm. Differs from the type by its larger eyes, longer epinotal spines, and the hind margin of the head, which is more concave. Otherwise like the type.”

Willowmore, Cape Prov. (Dr. H. Brauns); East London (ex S.A.M. coll.) (S.A.M., R.M., G.A. colls.)

It is misleading to compare this species with *guineense*, as its author has done. This species and its var. *Braunsi*, have a very different facies. The total absence of wide and coarse reticulations on the head and thorax (the latter dull), and the form of the pro- and mesonotum, which in profile form only a very slight convexity, suffice to remove it fairly far from *guineense*.

T. *POPOVICI*, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 230, ♀, 1914.

♀. 3.7 mm. Rather dark yellowish-red, the 1st abdominal segment more brownish, legs yellow. Pilosity yellowish and very scanty, the hairs on the petiole and abdomen obtuse. Legs without pilose hairs, merely sparsely pubescent. Head longitudinally rugoso-striate, the striae not very strong; the sides of the head are reticulate-rugose, the spaces between the reticulations finely reticulate-punctate. Dorsum of thorax finely and more or less longitudinally rugulose. Sides of thorax longitudinally rugose, partly reticulate. Head and thorax slightly shining. Nodes dull, shallowly and irregularly reticulate. Abdomen smooth and shining.

Head a little wider behind than in front, a trifle longer than wide, the sides and posterior margin nearly straight, the posterior angles widely rounded. Eyes rather small, placed in the middle of the sides. Clypeus very narrowly excised in the middle of the anterior margin, longitudinally striate, the median carina feeble. Frontal carinae well defined, divergent in front, nearly parallel along their posterior half, extending back almost to the occipital margin, hardly forming a demiscribe. The scape falls short of the occipital margin by twice the diameter of the eye; 2nd–7th joints of the flagellum wider than long. Mandibles closely and longitudinally striate, armed with 7 teeth.

Thorax rather short, the shoulders of the pronotum rounded. Pro-mesonotal suture absent, meso-epinotal suture shallow, the lateral

profile slightly constricted between the meso- and epinotum. A fine transverse ridge separates the pronotum from the mesonotum. From the ridge forwards, the pronotum slopes downwards to the neck (not vertically so, as described by Forel). Dorsum of the epinotum one and a half times longer than wide, widest at the basal third, longer than the declivity. Epinotal spines acute, longer than their basal width and a little longer than the space between their bases, slightly divergent, directed very obliquely upwards. Declivity subvertical, margined at the sides, the episternal teeth small and triangular. Peduncle of the petiole a little shorter than its node. The latter truncate in front, the anterior face shorter than the oblique posterior face. The dorsal and posterior faces, taken together, longer than wide, the anterior border above margined with a dark line. Second node shorter than the 1st, nearly twice as wide as long, wider than the 1st, transversely oval. Femora only slightly swollen.

♀. 5.2 mm. (Hitherto undescribed.) Colour like that of the ♂, but a little darker; tegulae, metanotum, and posterior margin of the scutellum almost black. Sculpture of the head stronger than in the ♂; the frontal carinae more pronounced, mesonotum and scutellum shining, more so than in the ♂, closely and finely longitudinally striate. Epinotum rugulose above, and also partly reticulate-rugose at the sides. Epinotal spines much more robust than in the ♂, acute, about as long as their basal width. Nodes much shorter and wider than in the ♂; the dorsal face of the 1st node more sharply delimited from the oblique posterior face, and nearly three times wider than long; the 2nd node has the anterior face almost vertical and the sides subangular in the middle. Deälated. Otherwise like the ♂.

Table Mountain, 1500 ft. Under stones in the Pine woods. (S.A.M., R.M., G.A. colls.)

T. GRANDINODE, Santschi.

Ann. Soc. Ent. Belg., vol. 57, p. 308, ♂, 1913.

“ ♂. 4.5 mm. Black; mandibles, antennae, tarsi, peduncle of 1st node of the petiole, and the apex of the abdomen rusty red. Middle of the femora brownish. Sometimes a part of the 2nd node and the base of the abdomen very dark red. Shining. Strongly and regularly striate, the intervals between the striae smooth, or here and there, finely reticulate. Striae on the head longitudinal, those above diverging from the occiput and anastomosing behind the eyes with the striae from below. Transversely striate on the pronotum, longitudinally so on the rest of the thorax, the striae forming concentric curves on the pronotum. Declivity of epinotum smooth, with

a few transverse striae between the spines. The two nodes transversely striate above, smooth below. There are some long reddish hairs round the mouth and below it, and on the coxae and the ventral surface of the abdomen. Tarsi and antennae furnished with shorter hairs, which are fairly oblique and abundant. A very fine, short, and very sparse pubescence present all over, but more distinct on the abdomen. Head quadrate, angles rounded, sides nearly straight, a little narrower in front, the vertex fairly gibbous. Frontal carinae very divergent, reaching back as far as the middle of the head, and forming only a short demiscrobe for the basal third of the scape. Eyes one-fourth the length of the sides of the head, placed in the middle, the margin angular below. Mandibles smooth, with a few striae near their masticatory margin, feebly and sparsely punctate, armed with 6 rather short teeth. Clypeus only slightly convex, the anterior margin nearly straight. The scape extends back nearly to the vertex, 2nd-8th joints of the flagellum nearly as long as wide. Anterior portion of the pronotum flat, transversely margined, the shoulders forming prominent and acute angles. The rest of the pronotum forms an even convexity with the mesonotum (segment of a sphere). Meso-epinotal suture feebly indicated. Dorsum of the epinotum horizontal in profile, convex transversely, not margined. Spines stout, as long as two-thirds of the dorsum of the epinotum, fairly high and divergent. Declivity concave, with a triangular tubercle in the lower part, and a lamelliform expansion on each side of the articulation with the petiole. First node squamiform, as wide as the middle of the thorax, much wider than high, trapezoidal, the upper margin narrower, the lateral margins compressed, oblique below; the posterior face convex, especially in its upper half, which appears horizontal in profile; the anterior face slightly concave from above to below, and convex from side to side. The peduncle is as long as the scale is high, and bears a very small tooth below at its base. Second node wider than the 1st, lower, three and a half times wider than long, convex above, the sides sharply marginate, trenchant, and arcuate, transverse in front and slightly convex behind. Below it bears a fairly thick and transverse appendage. Abdomen a little more than one-quarter wider than the 2nd node, truncate at the base."

Cape of Good Hope.

Var. *HOPENSIS*, Forel. (Plate VII, figs. 103, 103a, 103b.)

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 223, ♂, ♀, 1914.

"♂. 4.9 mm. Differs from the type of the species by the

2nd node of the petiole, which is narrower and lacks the flattened and translucent upturned edge at the sides. The spines are also a little shorter." Abdomen smooth and shining, and in some examples also very faintly rugulose over the 1st segment.

♀. 6 mm. Somewhat lighter than the ♂, more reddish-brown, especially the thorax, nodes, and legs. Pronotal angle only just visible from above, prominent but not acutely angular as in the ♂. The mesonotum is longitudinally striate, the scutellum and epinotum transversely striate, the striae on the former more or less concentric. The head is as wide as the thorax, not considerably wider as in the case of the ♂. The 1st segment of the petiole differs from that of the ♂ in not having a dorsal face. It is very compressed from front to back, almost laminate throughout, so that the posterior surface forms one continuous and oblique face, from the dorsal edge above to the ventral edge below. The 2nd node, four times wider than long, is on the contrary less rounded above, so that the anterior and posterior faces meet above in a fairly acute angle; the dorsal edge formed by the junction of the two faces, is slightly sinuate, curving forwards at the sides. Epinotal spines shorter and less acute than in the ♂, and only very slightly divergent, very little longer than their basal width, and hardly longer than half the interval between their bases. Wings tinged with yellow, nervures and stigma pale yellow.

Hopetown, Orange River.

The description of the petiole in the type of the species is not very clear, and requires amendment.

The 1st node is more or less squamiform, but much thicker above than below, so that there is a distinct, but short, dorsal face. This meets the almost vertical posterior face at right angles. The dorsal face becomes narrower, *i. e.* thinner, laterally and is curved downwards and is continuous with the sides of the node or squame. The sides end below in somewhat projecting and obtuse angles, which are turned a little bit forwards. The 2nd node, which is fairly convex transversely, has the posterior third of its sides strongly flattened dorso-ventrally (lamine), so as to form a trenchant edge at its lateral margins.

(S.A.M., G.A. colls.)

T. squaminode, Santschi, *Race do*, Forel.

Ann. Soc. Ent. France, vol. 79, p. 356, 1910.

(*Race*) *Bull. Soc. Vaud. Sc. Nat.*, vol. 50, p. 224, ♂, ♀, ♂, 1914.

♂. 3-3.2 mm. Light reddish-brown, the mandibles and antennae paler; nodes dark brown, abdomen black, legs pale yellow. Pilosity

scanty, composed of pale, erect, and thick hairs, absent from the legs and antennae, which have only a short, decumbent and yellowish pubescence. Body without pubescence.

Head longitudinally and strongly rugose between the frontal carinae, the rugae connected by a few transverse branches, the sides of the head more distinctly reticulate, the spaces between the rugae fairly smooth and shining; scrobes finely reticulate-punctate. Clypeus tricarinate, the median carina the strongest. Thorax very coarsely reticulate-rugose, the meshes wide, and the spaces between the reticulations shining. The sides of the pronotum smooth and shining, the sides of the meso- and epinotum more or less longitudinally rugose, but finer than on the dorsum. Between the epinotal spines there are a few transverse striae; the declivity, nodes, and abdomen smooth and shining. Head hardly longer than wide, a little narrower in front than behind, the posterior margin straight, the sides almost so, the posterior angles moderately rounded. Eyes moderately convex and large, placed in the middle of the sides. Frontal carinae prolonged back almost to the occipital margin, and forming below distinct demiscrobes for the scapes. The latter as long as the demiscrobes, the 2nd-8th joints of the flagellum much wider than long. Mandibles shining, sparsely and finely punctured, 6-dentate, the posterior 4 teeth small and indistinct. Thorax marginate, moderately constricted between the pro- and mesonotum, strongly so between the meso- and epinotum. Pro-mesonotal suture nearly obsolete above, meso-epinotal broad and shallow. Shoulders of pronotum subangular. Pronotum nearly as wide behind as in front, sloping fairly steeply downwards. Dorsum of epinotum about as long as wide, widened angularly near the base; epinotal teeth divergent, directed obliquely upwards, acute, as long as, or a little longer than, the interval between their bases; the declivity vertical, the episternal teeth small, acute, and triangular. First node of petiole squamiform, inclined slightly forwards, the lateral and dorsal edges trenchant, the anterior face convex transversely, the posterior face feebly convex. The peduncle is nearly as long as the node. Second node twice as wide as long, wider than the 1st, the anterior and posterior faces steep and convex transversely, and meeting angularly at the sides. Abdomen smooth and shining, convex, the 1st segment forming almost the whole of the dorsum. All the femora moderately swollen.

♀. 3.6 mm. Like the ♂, but the thorax somewhat paler, more reddish. Mesonotum and scutellum fairly closely and longitudinally striate. Pronotum exposed above only at the shoulders. Dorsum of

epinotum wider than long, sloping steeply downwards to the declivity. Epinotal teeth horizontal. The dorsal edge of the 1st node is very shallowly concave. The 2nd node less angular at the sides than in the ♀. Wings tinged with yellow. Otherwise like the ♀.

♂. 3.5 mm. Dark brown, the head black, the petiole paler, the legs, antennae and mandibles pale yellow. Head dull, very closely and finely reticulate-punctate, with a few striae radiating outwards from the ocellar region. The sides of the thorax and epinotum finely and longitudinally striate and also reticulate-punctate, nitidulous, the rest of the body smooth and shining. Head much wider in front than behind, the posterior margin and sides convex. Scapes hardly reaching back as far as the anterior ocellus. Mandibles small, with 3 or 4 teeth. Dorsum of epinotum oblique, merging gradually into the declivity, and twice as long as the latter. First node of petiole not squamiform, about as wide as thick, seen from the side subcuneiform, hardly wider than high. Second node wider than the first, widest in front, one and a half times wider than long, the anterior margin moderately convex.

Bulawayo, nesting in sandy soil.

This differs from the type species, which has not yet been recorded from our region, by the wider 2nd node, the more abruptly convex pronotum, and the coarser sculpture.

(S.A.M., R.M., G.A. colls.)

Var. *FLAVICEPS*, n. v.

♀. 2.8 mm. Head, thorax, and nodes yellow, the head also slightly brownish, abdomen dark brown, legs pale yellow. Apart from the smaller size and the colour, this variety differs from the type of the species as follows.

The lateral constriction of the thorax between the pro- and mesonotum is much less, almost obsolete. The 2nd node of the petiole has the sides straight, it is more rounded above, the anterior and posterior faces meeting much less angularly than in the type. The sculpture is also weaker, especially on the head, which is longitudinally striate rather than rugose. The pilosity is also more abundant on the abdomen. Otherwise like the type of the species.

Matopo Hills, S. Rhodesia. (S.A.M., R.M., G.A. colls.), type in my collection.

Var. *MUS*, n. v.

♀. 2.8 mm. Very similar to var. *flaviceps*, but differing from it in the darker colour of the head and thorax, which is brownish-yellow,

and in the sculpture. This is much weaker, and the striation of the head between the frontal carinae is sparser; the spaces between the striae on the head and thorax are very finely reticulate and duller than in the type species or *flaviceps*. The 1st node of the petiole is a little thicker, and the dorsal face of the 2nd node much more convex lengthwise. The pilosity is shorter and scantier, especially on the abdomen, which is microscopically alutaceous.

Hillside, Bulawayo; forming fairly populous nests in the ground, and occasionally in the mounds of *Platythyrea lamellosa-rhodesiana*. (S.A.M., R.M., G.A. colls.), type in my collection.

T. TITUS, Forel.

Ann. Soc. Ent. Belg., vol. 54, p. 427, ♀, 1910.

“ ♀. 3 mm. Mandibles smooth, shining, finely and very sparsely punctured, with two teeth in front, and a denticulate margin behind. Clypeus not carinate, the anterior margin narrowly excised in the middle, behind which is an impressed line. Head quadrate, slightly narrowed in front, as wide as long, hardly concave behind. Eyes placed in the middle of the sides. The frontal carinae and the scapes extend back as far as the posterior 8th of the head. The scape lies in a demiscrobe which is decidedly shallow, entirely smooth, and not delimited externally except by the sculpture. The club of the antenna is about as long as the rest of the flagellum, of which the 2nd–8th joints are wider than long. Pro-mesonotum without a suture, convex in all directions, feebly marginate, but fairly clearly marginate in front and laterally; seen from above, it is shaped like a trapeze, narrowed behind, slightly longer than it is wide in front. Meso-epinotal suture deep. Dorsum of epinotum strongly convex in its anterior half, distinctly longer than wide, excavated between and in front of the spines, marginate at the sides. Declivity marginate by a downward extension of the edge of the spines. The latter wide at the base, pointed, as long as the interval between them. Episternal teeth small and triangular. The 1st node forms a thick scale, biconvex and narrow, hardly thicker, but much narrower, than that of *T. (Xiphomyrmex) Weitzaeckeri*, with a small and obtuse summit; the peduncle as long as the base of the scale. Second node transversely oval, nearly twice as wide as the 1st. Head longitudinally striato-rugose, shining, reticulate-rugose at the sides. Clypeus and thorax very shining, with a feeble and not very close, longitudinal striation. Dorsum of the pro-mesonotum partly smooth. The rest of the body smooth and shining. Pilosity fine, yellowish, pointed, fairly short, sparse on the body and absent from

the tibiae and scapes. Pubescence very sparse, more apparent on the legs and antennae. Brownish rusty red; head and abdomen brown.

“Natal (Wroughton).”

T. SUBCOECUM, Forel, var. INSCIA, Forel.

Rev. d'Ent., vol. 26, p. 135, ♀, 1908.

(Variety) Deutsch. Ent. Zeitschr., Beiheft, p. 218, ♀. 1913.

♀. 3 mm. Ochreous, the head slightly reddish-yellow, the thorax dirty yellow, the legs pale yellow. The whole body shining, except the sides of the head and thorax which are somewhat dull. Head faintly and sparsely longitudinally striate above, more strongly and more densely at the sides. Thorax very finely and faintly striate at the sides and in front of the pronotum, almost smooth elsewhere. Nodes and abdomen smooth. Pilosity yellow, moderately long, sparse and obtuse, absent from the scapes and legs, which have only a very fine decumbent pubescence.

Head, excluding the mandibles, barely longer than wide, widest across the eyes, and wider in front of them than behind; the sides fairly convex, the posterior angles slightly rounded, the posterior margin feebly concave in the middle. Eyes very small, composed of a single facet, placed in the middle of the sides. Clypeus with a feeble median carina which does not reach the anterior margin; the latter narrowly emarginate in the middle. Mandibles shining, sparsely punctured, feebly striate near the apex, armed with 6 very obtuse teeth. Frontal carinae short, strongly divergent behind. The frontal sulcus narrow, extending back almost to the occiput. The scapes are curved near the base, and reach back as far as the posterior sixth of the head; 2nd-8th joints of the flagellum wider than long. Promesonotal suture obsolete, meso-epinotal, shallow. Thorax marginate at the sides and in front, strongly narrowed towards the meso-epinotal suture. The pro-mesonotum is as long as it is wide in front, and nearly three times wider in front than at the meso-epinotal suture. Dorsum of epinotum almost twice as long as wide, longer than the declivity. Epinotal spines acute, not much longer than they are wide at the base, shorter than the interval between them, moderately divergent and oblique. Episternal teeth hardly shorter than the epinotal. Peduncle of the petiole as long as its node. The latter is as long as wide, narrower in front than behind. Seen from the side, it has a dorsal face which is feebly convex lengthwise, and a vertical anterior face which is shorter than the subvertical posterior face. Second node nearly one-third wider than long, its anterior margin

very convex, subglobose, wider than the 1st node. Abdomen truncate at the base, the lateral angles rounded.

Bulawayo: Matopo Hills, S.R. (S.A.M., R.M., G.A. coll.)

T. TRÆGAORDHI, Santschi.

Göteborgs Kungl. Vetens. och Vitterh. Handl. XV, 2, p. 23, ♂, ♀, 1914.

♂. 2.5-2.7 mm. Pale yellow. Very similar to var. *inscia* of *subcoecum*, and differing from it chiefly in the following characters:

The pilosity is longer, more abundant, and not obtuse. The sculpture of the head is finer and almost effaced above; the sides of the thorax are dull, closely and very finely reticulate-punctate, not striate, as in *inscia*. Mandibles distinctly striate, with about 7 teeth. The thoracic sutures obsolete. The pronotum is much less convex lengthwise in front, and its lateral margins are not so convex. The thorax is also less narrowed than in *inscia*, and the lateral margins of the mesonotum are straight, or even slightly concave, whereas in *inscia* they are distinctly convex. The dorsum of the epinotum is wider and flatter, and the epinotal teeth are triangular and longer than the episternal; the latter are merely rounded lobes, not distinct and pointed teeth as in *inscia*. The peduncle of the petiole is very closely and finely punctured (smooth in *inscia*), and the node, seen from above, is not subconical in front, but convex, or with a slight suggestion of an anterior and two lateral margins. The 2nd node is wider than the 1st and, seen from above, hemispherical in outline.

“♀. 3.3 mm. Ocelli and mandibular margin brownish-black. Head duller than in the ♂. Eyes as large as one-quarter of the sides of the head. Mesonotum and scutellum very polished and shining. First node higher than in the ♂. Wings hyaline, with the nervures pale yellow, the anterior wing 4 mm. long. Stamford Hill, Natal (Traegaordh).”

(G.A. coll.)

T. SEMIRETICULATUM, n. sp.

♂. 2.2-2.4 mm. Castaneous or reddish-brown; the anterior third of the head, the basal third of the 1st abdominal segment, and the whole of the remaining segments somewhat paler, antennae, mandibles, and legs yellowish-brown. Pilosity sparse, composed of short, oblique, thin, and pointed yellowish hairs. Pubescence very fine and short, present only on the legs and antennae. The whole body dull, except

the 2nd and following abdominal segments, which are feebly shining. The body and the femora very closely and finely reticulate-punctate, almost granular. The reticulations are closer and finer on the abdomen and nodes, more open and coarser, but still very fine, on the sides of the thorax. In addition to this fundamental sculpture, the head has a few fine longitudinal striae in the middle, which do not reach quite as far as the occiput behind, but extend over the clypeus in front. The sides of the head, below and in front of the eyes, are also finely and widely reticulate-rugose. The anterior half of the pro-mesonotum has a very distinct and wide reticulation superimposed.

Head, excluding the mandibles, slightly longer than wide, the sides almost straight or very feebly convex, the hind margin straight. Scrobes absent. Eyes rather small, distinctly angulated in front below, placed in the middle of the sides. Frontal carinae short, divergent, not reaching the middle of the head. Clypeus with a feeble median carina, the anterior margin angularly excised in the middle. The scapes extend back as far as the posterior sixth of the head, 2nd-8th joints of the flagellum wider than long, the club not thick. Mandibles dull, very finely and closely striate, armed with 3 teeth in front and 4 very small ones behind. Thorax in front not quite as wide as the head, the sutures obsolete, not much constricted between the meso- and epinotum. Shoulders of the pronotum fairly prominent, but rounded. The thorax in profile is feebly convex above, with the anterior portion of the pronotum vertical. The meso- and epinotum feebly marginate at the sides. The dorsum of the epinotum is twice as long as it is wide at the base, where it is widest, and twice as long as the oblique declivity. The epinotal teeth are very small, shorter than their basal width, hardly as long as the episternal teeth, but more pointed. The 1st joint of the petiole resembles very closely that of *subcoecum*, var. *inscia*, but the peduncle is broader. The 2nd node is semicircular, wider behind than in front, and wider than the 1st. Both nodes have traces of fine rugae on the dorsal surface. Legs entirely dull, femora not much swollen.

♂. 2.8 mm. Brownish-black; tarsi, flagellum, and apical half of the abdomen brownish-yellow; mandibles yellow, scapes, tibiae, and femora yellowish-brown. Pilosity and pubescence as in the ♀, the pilosity almost entirely absent from the head. Head, thorax, nodes, and basal third of the 1st abdominal segment very closely and finely reticulate-punctate and dull, the sculpture on the head very fine. The declivity of the epinotum marginate at the sides, and with some wider reticulations superimposed. The apical two-thirds of the 1st

and the whole of the remaining segments of the abdomen smooth and shining. Head subquadrate, widest across the eyes, wider than long (excluding the mandibles), the sides convex, the posterior margin straight, the posterior angles narrowly rounded. The eyes occupy the anterior two-fifths of the head, not touching the base of the mandibles. The latter very finely striate and dull, with 6 or 7 minute teeth. Scapes long, as long as the 1st and 2nd joints of the flagellum taken together, extending back as far as the posterior ocelli. The latter small, not raised. Clypeus reticulate-punctate; frontal area distinct, frontal sulcus very shallow, shining, and extending back to the anterior ocellus. Mesonotum twice as wide as long, and twice as long as the scutellum. The parapsidal sutures and a median longitudinal line between the Mayrian furrows smooth and shining. In profile the dorsum and declivity of the epinotum form a continuous and steep curve. Peduncle of the petiole thicker than in the ♀, the node thicker and shorter. The 2nd node like that of the ♀, but wider and more narrowed in front. Wings tinged with dirty yellow, nervures and stigma very pale yellow.

A very distinct species, easily recognised by the sculpture. It is found only in the mounds of *Platythyrea lamellosa-rhodesiana*, usually making its nest near the top and sides of the mound, or about 2 or 3 in. down below the entrance. Its association with *Platythyrea* is probably an instance of what Wheeler has termed "xenobiosis." It may be found in about 50 per cent. of the mounds of *Platythyrea* in the Hillside district of Bulawayo, but I have never found it elsewhere.

(S.A.M., R.M., G.A. colls.); types in my collection.

T. LONGOI, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 344, ♀, 1914.

♂. 2.5-3 mm. Varying from brownish-yellow to dark yellowish red-brown, the 1st abdominal segment brown, except at the extreme base; the posterior half of the head generally a little darker. Pubescence almost entirely absent. The pilosity is fairly abundant, and consists of short, thick, obtuse, and yellowish hairs, which are erect on the body, oblique on the legs and scapes. Head and thorax fairly dull, abdomen smooth and shining. Head strongly and longitudinally rugose, with strong transverse anastomoses between the rugae, the sides of the head more reticulate-rugose. Thorax reticulate-rugose, the reticulations becoming gradually finer and closer posteriorly; 1st

node of petiole more finely reticulate than the epinotum, the 2nd node rugulose.

Head rectangular, excluding the mandibles, very little longer than wide, a little wider behind than in front, the posterior angles rounded, the posterior margin feebly concave in the middle. Eyes fairly large, placed in the middle of the sides. Frontal carinae divergent, extending back as far as the posterior fifth of the head, not forming a scrobe, although there is a slight depression below them along their basal half. Scapes extending as far back as the frontal carinae; 2nd-7th joints of the flagellum wider than long. Mandibles strongly striate, 5-dentate. Clypeus rugose, with a strong median carina, the anterior margin straight. Pronotum fairly convex lengthwise, the shoulders subangular. Thorax not greatly narrowed posteriorly, and not noticeably constricted between the meso- and epinotum. Promesonotal suture obsolete, the meso-epinotal indicated by a shallow impression. Dorsum of the epinotum longer than wide, the spines acute, slightly divergent, and as long as the interval between their bases; episternal teeth shorter than the epinotal. The declivity is shorter than the dorsum of the epinotum, vertical, marginate at the sides. First node of petiole cuboid, a little wider than long, longer than its peduncle, vertically truncate in front, nearly so behind, wider behind than in front. Second node transversely oval, half as wide again as the 1st, abdomen subtruncate at the base. Femora swollen.

George, Cape Prov. (Dr. H. Brauns.) (S.A.M., R.M., G.A. colls.)

T. INTEXTUM, Santschi, var. CATARACTAE, Santschi.

Voyage d'Allaud et Jeannel, p. 104, ♀, 1914.

(Variety) Ann. Soc. Ent., France, vol. 84, p. 506, ♀, 1916.

♀. 2.5 mm. Rusty red, the head a little paler, the nodes and abdomen darker or reddish-brown. Legs and antennae brownish-yellow. Head, thorax, and nodes subopaque, abdomen smooth and shining. Pilosity very sparse on the head, thorax, and nodes, more abundant on the abdomen, composed of short, thick, blunt, and yellowish hairs. Legs and antennae finely pubescent. Clypeus and the head, between the frontal carinae, finely and longitudinally striate, with a few feeble transverse anastomoses, the spaces between the striae feebly shining. Sides of the head reticulate-rugose, the floor of the demiscrobes only finely reticulate. Dorsum of thorax and nodes closely rugose or rugulose, the sculpture emphasised longitudinally. The sides of the thorax, the epinotum except at the base, and the peduncle of the petiole finely reticulate-punctate.

Head a little longer than wide, the sides more convex behind the eyes than in front of them, hardly narrower in front than behind, the posterior margin shallowly concave. Eyes fairly large, placed in the middle of the sides. Frontal carinae divergent, extending back as far as the occiput, and forming the upper margin of shallow, but fairly distinct demiscrobes. Scapes not reaching the occipital margin by as much as their own width; 2nd-7th joints of the flagellum wider than long, the 8th as long as wide. Clypeus carinate in the middle. Mandibles closely and very finely striate, with 3 distinct teeth in front, and 4 feeble teeth behind. Thorax moderately constricted between the meso- and epinotum, very slightly so between the pro- and mesonotum. Pro-mesonotal suture obsolete, meso-epinotal wide but shallow. Pronotum sloping fairly steeply downwards in front, the shoulders rounded. Thorax submarginate, narrower than the head. Dorsum of epinotum widest at the base, about one and a third times longer than wide, not much longer than the declivity; epinotal teeth wider at the base than long, somewhat obtuse. Episternal teeth triangular, a little longer than the epinotal. Peduncle of petiole very wide and nearly as long as its node; the latter, seen from above, wider than long, transversely oval, narrower in front than behind, indistinctly hexagonal in outline; seen in profile, the anterior face vertical, the posterior face oblique and merging gradually into the dorsal face. Second node transversely oval, one-third wider than long and wider than the 1st, convex above, transversely and lengthwise. Femora only slightly swollen.

Victoria Falls. (R.M., G.A. colls.)

T. PUSILLUM, Emery.

Ann. Soc. Ent., France, vol. 63, p. 38, ♂, 1895.

“ ♂. 1.7 mm. Ferruginous-testaceous, head dark, abdomen piceous; pilose hairs subclavate, scanty, legs with a shorter pubescence.

“ Head subrectangular, frontal carinae subparallel and extending back almost to the posterior margin; closely punctured, the cheeks anteriorly and the frons very finely and longitudinally striate; mandibles shining, punctate; thorax hardly marginate, longitudinally rugoso-reticulate, epinotum obtusely bidentate, peduncle of petiole punctate, the node angular above, barely longer than thick, 2nd node subglobose, the abdomen shining.

“ ♀. 2.5 mm. Piceous, mandibles, antennae, legs, and apex of abdomen testaceous; head and peduncle of petiole sculptured as in the ♂, mesonotum and scutellum longitudinally striate, the epinotum

acutely bidentate; the petiole more robust, the 2nd node transversely ovate.

“Capetown (Simon).”

Var. *MOSSAMEDENSIS*, Forel.

Warburg Kunene-Zambesi Exped. (H. Baum), p. 560, ♀, 1905.

♀. 2.2 mm. Reddish-brown, the petiole a little paler, the abdomen dark brown, legs, antennae, and mandibles brownish-yellow. Head, thorax, and nodes very slightly shining, abdomen smooth and very shining. Pilosity scanty, composed of whitish and rather blunt hairs, oblique on the abdomen, erect elsewhere. Legs and antennae pubescent only, the pubescence very short and sparse.

Head longitudinally striate between the frontal carinae, reticulate at the sides, the reticulations becoming finer and smaller towards the posterior angles and the frontal carinae. Thorax, epinotum, and nodes finely reticulate-punctate. On the pro-mesonotum a coarser reticulation is superimposed, almost rugose; the sculpture of the nodes is very feeble. Sides of pronotum closely reticulate-punctate, the sides of the mesonotum more strongly so, with the meshes wider than elsewhere. The peduncle of the petiole very finely reticulate or alutaceous. Head quadrate, hardly longer than wide, the sides feebly convex, the posterior angles narrowly rounded, the posterior margin straight. Eyes placed a little in front of the middle of the sides, moderately large. Frontal carinae very divergent, prolonged back as thin lines to the posterior fourth of the head, no trace of scrobes. Clypeus tricarinate, the median carina the strongest. Mandibles 6-dentate, sparsely punctured, very finely striate. Scapes not reaching the hind margin of the head, 1st joint of flagellum nearly as long as the four following joints taken together, 2nd-7th joints wider than long. Thoracic sutures absent, but the meso- and epinotum are separated by a shallow depression. Dorsum of thorax feebly marginate at the sides, half as long again as wide in front, very slightly constricted between the meso- and epinotum; shoulders of pronotum subangular. Dorsum of epinotum horizontal on its basal half, the apical half oblique, sloping towards the declivity, and twice as long as the latter. Epinotal teeth small (but longer than the episternal), as long as their basal width, directed slightly upwards, moderately divergent. Declivity vertical, marginate at the sides, the episternal teeth obtuse. Peduncle of petiole nearly as long as the node; the latter has the anterior face vertical, higher than the posterior face, which is convex and forms with the dorsal face a single convexity.

Seen from above, the node is trapezoidal, wider behind than in front, about one-third wider than long. Second node a little wider than the 1st, distinctly wider than long; the anterior margin seen from above, is convex, narrower behind than in front. Abdomen ovate, slightly truncate at the base, the basal angles widely rounded. Femora only slightly swollen.

Bulawayo, common in grassy soil. (S.A.M., R.M., G.A. colls.)

Race *LADISMITHENSIS*, Forel.

Ann. Soc. Ent. Belg., vol. 57, p. 117, ♂, ♀, 1913.

♂. 2.2-2.4 mm. Brown; the head and abdomen dark brown, legs, antennae, and mandibles ochreous. Closely allied to *mossamedensis*, but smaller and more slender, and differing from it in the following characters:

The sculpture is finer and closer; on the thorax the larger reticulations are almost absent, the pronotum smooth and shining, or only reticulate-punctate at its margins. The frontal carinae are more distinct and form shallow demiscrobes, the floor of which is slightly shining and less strongly reticulate than the rest of the head. The pronotal shoulders are more rounded, and the profile of the dorsum of the thorax is not depressed between the meso- and epinotum. The epinotal teeth are much smaller, much shorter than their basal width, being hardly more than wide angles, also shorter and smaller than the episternal teeth. The thorax is not marginate above. The dorsal surface of the 1st node is as long as wide (wider than long in *mossamedensis*), submarginate in front, the anterior margin not so convex as in *mossamedensis*.

♀. 3.3-3.5 mm. Very dark brown, almost black, the extreme apices of the abdominal segments testaceous; legs, antennae, and mandibles ochreous. Head narrower in front than behind and, excluding the mandibles, one-fifth longer than wide. Mesonotum and scutellum finely, closely, and longitudinally striate, sides of thorax rugulose. Mesonotum rather flat, with the scutellum very little higher than the dorsum of the epinotum. Epinotal teeth acute, subvertical, a little longer than their basal width, longer and larger than the episternal teeth. Second node relatively wider than in the ♂, about twice as wide as long. Otherwise like the ♂.

Ladismith, Cape Prov. (Dr. H. Brauns.) (S.A.M., R.M., G.A. colls.)

Race TABLENSE, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 223, ♀, ♀, ♂, 1914.

♀. 2-2.2 mm. Colour as in var. *mossamedensis*. Similar to race *ladismithensis*, but the head is a little less elongate, the thorax more constricted between the meso- and epinotum. The epinotal teeth are almost obsolete, being represented by two small ridges. The frontal carinae are much shorter, without a trace of scrobes below them. Otherwise like the race *ladismithensis*.

♀. 2.6 mm. Blackish-brown. The mesonotum and scutellum feebly and longitudinally striate; the dorsum of the declivity steep, the epinotal teeth distinct, acute, triangular, not quite as long as their basal width. Deilated. Otherwise like the ♀.

♂. 2.7 mm. Black; legs, antennae, and mandibles dirty yellow. Head subquadrate, widest in the middle, a little wider behind than in front. Scapes extending back as far as the posterior ocelli. Eyes large, convex, occupying the anterior third of the head, not touching the base of the mandibles. Head dull, very finely and closely reticulate-rugulose. Mesonotum and scutellum very faintly and longitudinally striate or aciculate, shining. Epinotum reticulate-striate, dull; nodes feebly reticulate and slightly shining. Abdomen smooth and shining.

Table Mountain, nesting under stones. This is one of the few species which appear to be able to hold their own against the invading *Iridomyrmex humilis*, and it is found at the lower levels of the mountain where *humilis* has succeeded in driving out almost all other kind of ants.

(S.A.M., R.M., G.A. colls.)

T. SIMILLIMUM, Smith.

List of British Animals in B.M., Part 6, ♀, 1851.

Roger (*Tetrogmus caldarius*), Berlin Ent. Zeitschr., p. 12, ♀, 1857.

Meinert (*Myrmica caldaria*), Naturv. Afh. Dansk. Vid. Selsk. V, p. 334, ♂, 1860.

♀. 2.8 mm. Head, thorax, and nodes brownish-ochreous, abdomen brown, the apical half and sometimes the base paler; legs, antennae, and mandibles ochreous. Very sparsely pilose, the hairs fairly thick and blunt, erect on the head and thorax, oblique elsewhere. Legs and antennae with a fine pubescence, rather sparse on the legs. Abdomen and legs shining, the rest of the body dull. The funda-

mental sculpture of the head and thorax is a very fine reticulation. Head longitudinally striate between the frontal carinae, the sides below the carinae only reticulate in the upper half, more longitudinally rugose in the lower half, and in front of the eyes more or less reticulate rugose. Thorax above fairly closely and finely rugose, more or less longitudinally; at the sides chiefly reticulate. Dorsum of epinotum reticulate only, the declivity smooth and shining. Nodes coriaceous, with a few feeble and uneven rugae. Abdomen smooth, without striae at the base. Head a little longer than wide, slightly narrowed in front of the eyes, the sides feebly convex, the posterior angles rounded, the posterior margin straight or at the most only feebly concave. Eyes of medium size, placed in the middle of the sides of the head. Clypeus with a thin median carina and a thinner stria on each side of it. Mandibles slightly shining, aciculate, very sparsely and faintly punctured. Frontal carinae produced backwards as fine lines almost as far as the occipital margin; the scapes extend back equally far. No trace of scrobes. Pro-mesonotal suture obsolete, the meso-epinotal very shallow, indistinct. Dorsum of epinotum nearly twice as long as wide; the epinotal teeth small, forming merely triangular prominences of the ends of the raised margins of the declivity; episternal lobes rounded, larger than the epinotal teeth. Declivity subvertical. First node, seen from the side, as long as its peduncle, the anterior face vertical, the posterior and dorsal faces forming a single convexity. Seen from above, it is barely wider than long. Second node subglobose, a little wider than long and wider than the 1st. Femora moderately swollen.

♀. 3.8 mm. Similar to the ♀ in greater part, the colour a little darker, the tegulae, metanotum, and a patch behind each ocellus dark brown. Pronotum widely reticulate-rugose, mesonotum and scutellum longitudinally striate, epinotum reticulate-punctate and feebly striate. Nodes rugulose, also very sparsely striate longitudinally. Moderately shining. Head more parallel-sided than in the ♀, longer than wide. Pronotum exposed above at the shoulders. Mesonotum and scutellum horizontal and flat, except the anterior third of the former, which is moderately convex. Epinotal teeth a little larger than in the ♀. (Deälated.)

♂. 3.3 mm. Ochreous; the abdomen and ocellar area slightly fuscous. Head, scutellum, and epinotum slightly dull, the rest of the body shining. Head feebly and longitudinally striate, more or less reticulate on the cheeks in front of the eyes. Frontal carinae extend back as far as the level of the anterior ocelli. Head longer than wide, widest across the middle, a little narrower behind than in front.

The eyes occupy nearly half of the sides, placed in front of the middle of the head. Mayrian furrows well defined, mesonotum smooth and shining; scutellum and epinotum faintly rugulose. The dorsum and declivity of the epinotum form a single plane, sloping steeply from base to apex. Both nodes smooth and shining. First node, seen from above, more or less lenticular, two-thirds wider than long, as long as its peduncle, the middle of the sides angular. Second node a little wider than long, and a little wider than the 1st. The 1st node is more, and the 2nd node less convex from back to front than in the ♀. Wings pale fuscous, the nervures yellowish.

Durban. A widely distributed species which has been carried through commerce to many parts of both hemispheres. It is frequently found in hothouses in temperate countries. (S.A.M., R.M., G.A. colls.)

Var. *POWERI*, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 225, ♂, 1914.

♂. 2.2-2.6 mm. Yellowish-red, antennae, legs, and mandibles reddish-yellow, 1st abdominal segment more or less brownish, the remaining segments yellow. The demiscrobes are practically obsolete, their position being indicated only by a smoother area, devoid of sculpture and not lower than the rest of the surface. The frontal carinae are not prolonged backwards, their place being taken by 3 or 4 irregular and longitudinal striae on each side; the median area between the striae almost smooth and distinctly shining. The head is only feebly sculptured behind the eyes, fairly distinctly reticulate in front of them, the floor of the meshes dull and finely rugulose. The pro-mesonotum, except the lateral and anterior margins which are finely rugulose, is smooth and shining; the epinotum and sides of the thorax very finely reticulate-punctate and subopaque, the sculpture finest on the sides of the pro-thorax. Nodes and abdomen smooth and shining. The clypeus is prominently carinate in the middle. Mandibles shining, very sparsely and shallowly punctured, 6-dentate. The pubescence of the legs and scapes is noticeably long and abundant. The scape falls short of the occipital margin by a distance equal to the length of the eye. Thorax feebly marginate above. Epinotal teeth acute, very small, distinctly shorter than the episternal lobes. The nodes of the petiole very convex above transversely, much less so longitudinally.

Kimberley (Brother Power). (S.A.M., R.M., G.A. colls.)

Var. SHILOHENSIS, Forel.

Deutsch. Ent. Zeitschr., Beiheft, p. 218, ♀, 1913.

♂. 2.3-2.5 mm. Bright yellow, with the reticulations and the flagellum somewhat reddish-yellow. The larger forms, found in a different locality, are darker than the smaller ones, but otherwise similar. The pilosity is fairly abundant, and is composed of pointed, yellow hairs, erect on the body, oblique and shorter on the legs and antennae, which are also sparsely pubescent. Head, thorax, and nodes feebly shining. Head, between the frontal carinae, dorsum of thorax, and sides of pro-thorax, rather strongly and longitudinally rugose, also partly reticulate. Sides of head reticulate, the rugae emphasised longitudinally, the floor of the meshes finely reticulate. Distinct demicrobes present. Sides of meso- and epinotum duller, closely rugulose. Nodes feebly rugulose. Declivity of epinotum and the abdomen smooth and shining.

Head, excluding the mandibles, a little longer than wide, the sides moderately convex, the posterior margin straight or feebly concave in the middle. Eyes small, placed in the middle of the sides. Frontal carinae prolonged back as far as the occipital margin, divergent along their anterior third, nearly parallel behind. Scapes rather short, barely reaching beyond the posterior third of the head. Clypeus tricarinate. Dorsum of thorax distinctly marginate in front and at the sides. Pro-mesonotal suture obsolete above, the meso-epinotal indicated by a shallow groove. The thorax is moderately constricted between the pro- and mesonotum, more strongly so between the meso- and epinotum. Dorsum of epinotum one and a half times longer than the subvertical declivity. Epinotal teeth fairly large, acute, a trifle longer than their basal width, and quite twice as long as the episternal lobes; moderately divergent, directed very obliquely upwards. First node of petiole as long as its peduncle, vertically truncate in front, convex lengthwise above and behind, a little longer than wide. Second node one-third wider than the 1st, as wide as long, widest behind.

Bembesi, S. Rhodesia (the smaller forms, 2.3 mm.), in the nest of *Platythyrea cribrinodis*; Shiloh, S. Rhodesia, in the nest of *Ophthalmopone Berthoudi*. (S.A.M., R.M., G.A. colls.)

Race ISIPINGENSE, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 225, ♀, 1914.

♂. 3-3.3 mm. Pale ochreous yellow, the nodes slightly brownish,

the 1st abdominal segment, except the base, brownish-yellow. Moderately shining, including the legs. Pilosity scanty, composed of very thin, short, and pointed hairs, pale yellowish. Head sparsely and longitudinally striato-rugose, more reticulate at the sides. Thorax reticulate-rugose, the floor of the meshes finely and shallowly rugulose, the sides of the thorax more closely but less sharply reticulate. Nodes with a few feeble rugae. Abdomen moderately shining, very clearly and evenly punctate, the punctures small.

Head, excluding the mandibles, one-sixth longer than wide, the sides parallel, the hind margin shallowly concave, the posterior angles narrowly rounded. Eyes very convex, prominent, and large, placed in the middle of the sides. Frontal carinae prolonged back as far as the posterior sixth of the head, moderately divergent. Faint traces of demiscrobes present. Clypeus with a few longitudinal striae, hardly carinate. Mandibles smooth and shining, very finely and sparsely punctured, the masticatory margin long, armed with three distinct and small teeth in front and four smaller ones behind, the teeth widely separated. Thorax elongate, quite twice as long as wide in front, the dorsum feebly marginate at the sides and in front, very slightly constricted between the meso- and epinotum. The epinotal teeth are very minute, much shorter and smaller than the episternal, which are acute and triangular. The peduncle of the 1st segment of the petiole is almost as long as the node, and bears a small and sharp tooth below near the base; the node is a little longer than wide, and seen from the side, very convex from front to back. The 2nd node is one-third wider than the 1st, and one-third wider than long, transversely oval, narrower and lower in front than behind. Femora swollen in the middle.

Ispingo, Natal (H. B. Marley). (S.A.M., R.M., G.A. colls.)

Race DELAGOENSE, Forel.

Mittb. Schweiz. Ent. Ges., vol. 9, p. 80, ♀, ♀, ♂, 1894.

“♂. 2.2–2.5 mm. Like *simillimum* i. sp., but the frontal carinae are straight or only feebly divergent (not curving round again towards each other posteriorly). Eyes nearer to the anterior than to the posterior angles of the head. Thorax rather longer and narrower. Epinotum with two elongate tubercles, barely dentiform. First node of petiole less thick, abruptly truncate and highest in front, sloping convexly backwards from the anterior margin. Both nodes shining, with a very shallow sculpture; abdomen smooth. The club is shorter than the rest of the flagellum (quite as long as the rest in *simillimum*

i, sp.). Sculpture and hairs as in the type species, even so the size of the head in relation to that of the body, but a little more slender; legs somewhat stouter. Yellowish, thorax and head reddish-yellow, the abdomen paler.

“♀. 3-3.4 mm. Head much longer than wide (hardly so in the type species). Thorax longer and lower, the epinotal teeth broad, obtuse, and triangular. First node thinner than in the type species, almost squamiform, thinner than in the ♂. Dorsum of epinotum at least as long as the declivity. Sculpture, pilosity, and colour as in the ♂. Wings almost hyaline, with very pale nervures and stigma. Thorax narrower than the head.

“♂. 2.9 mm. Dirty brownish-yellow. Epinotum with two feeble tubercles; the dorsum much longer than the declivity. Head and epinotum reticulate-punctate, slightly shining. Abdomen, mesonotum, and petiole shining and fairly smooth. Antennae 10-jointed, the 2nd joint of the flagellum long. Otherwise like the ♀.”

Delagoa (Dr. Liengme); Natal (Wroughton).

Race BOTHAE, Forel.

Ann. Soc. Ent. Belg., vol. 54, p. 425, ♀, ♀, ♂, 1910.

“♀. 2.3-2.5 mm. Larger than the type of the species and its race *delagoense*. Differs from both by its more robust stature. The dorsum of the epinotum is wide, only very little longer than wide; the episternal and epinotal teeth stronger, more spinose. The 1st node is distinctly wider than long, plainly truncate in front, with a well-defined upper anterior margin. Both nodes dull, reticulate-punctate, sometimes striate. Head and thorax chiefly brownish; thorax reddish-brown. Tarsi, antennae, and mandibles reddish-yellow, the club brown.

“♀. 3 mm. Like the ♀. First node nearly twice as wide as long.

“♂. 3 mm. Nodes a little wider. Otherwise like the type of the species.”

Basutoland and Natal (Wroughton, Haviland).

T. CAESPITUM, Linn., race SCHULTZEI, Forel.

Syst. Nat. Edition. 10a, p. 581, ♀, 1758.

(Race) Schultze Reise Süd Afrika, vol. 4, p. 19, ♀, 1910.

“♀. 1.9-2 mm. Mandibles finely striate, fairly shining, with 6 or 7 teeth. Head distinctly, although not greatly flattened, quadrangular,

not wider than long, feebly concave behind. Eyes in the middle of the sides of the head. Clypeus feebly carinate; the frontal carinae short. The scape almost reaches the posterior margin of the head; 3rd-5th joints of the flagellum wider than long. No trace of a scrobe. Thorax short; the profile of the dorsum hardly, or not at all interrupted (more distinctly interrupted in the race *depressum*). Epinotum with very small teeth. First node almost cuboid, as in *caespitum*, var. *punicum*, Smith. Clypeus, frons, cheeks, and thorax finely and feebly longitudinally striate (sometimes indistinctly) shining. The rest of the body smooth. Pilosity and pubescence as in the other races. Brown; legs and antennae brownish-yellow, abdomen dark brown.

“Kgakong-Kang, Kalahari (Schultze) in sand.

“Near the race *depressum*, Forel, but much smaller, not so smooth and without any emargination of the thorax, with a more cuboid 1st node. Also closely allied to the var. *punicum*, Smith, but still smoother and with the head depressed. Differs from *pusillum*, Emery, by the short frontal carinae.”

The type species has a wide distribution, occurring over the whole of Europe and the south shores of the Mediterranean.

T. ERICAE, n. sp.

♂. 1.7 mm. Pale ochreous yellow, the abdomen slightly brownish-yellow; the clypeus more reddish-yellow. Pilosity abundant, composed of thin, whitish hairs, which are erect on the head, thorax and nodes, oblique on the abdomen. Legs and antennae very sparsely pubescent. Head, dorsum of thorax and the nodes nitidulous, finely reticulate-rugose, the sculpture emphasised longitudinally on the head between the frontal carinae, the sides of the head and thorax more densely sculptured, almost rugulose. Abdomen smooth and shining, and in some examples, with a golden reflection on the sides. Head subquadrate, excluding the mandibles as long as wide, the sides nearly parallel, the posterior margin straight, a little narrower in front than behind. Eyes large, placed a little in front of the middle, occupying about one-fifth of the sides of the head. Frontal carinae divergent, extending back almost as far as the occiput, and forming the upper boundary of the fairly deep and wide scrobes. The latter are smooth and shining, divided into two parts over the basal third, by a longitudinal ridge. Scapes as long as the scrobes; 1st joint of flagellum as long as the 2nd, 3rd and 4th taken together, 3rd-7th joints quite twice as wide as long, the club one and a half times longer than the rest of the flagellum. Mandibles shining,

sparsely punctured, the masticatory margin piceous, with 3 distinct teeth in front, indistinctly denticulate behind. Clypeus feebly carinate in the middle. Frontal area triangular, fairly well defined. Thoracic sutures obsolete. Thorax narrower than the head, widest in front, narrowing gradually behind towards the epinotal teeth, slightly constricted between the meso- and epinotum, one and a half times longer than wide in front, the shoulders of the pronotum rounded. In profile, the thorax is moderately convex lengthwise, the dorsum of the epinotum oblique and merging gradually into the declivity. Epinotal spines acute, divergent, half as long as the interval between their bases, hardly longer than their basal width, one-third longer than the episternal teeth. Declivity marginate at the sides. Peduncle of the petiole half as long as its node; the latter, seen from above, is subglobose, nearly one-quarter wider than long. Seen in profile, it is obliquely truncate in front, and the posterior-dorsal face is convex. The 2nd node is transversely oval, twice as wide as long, one-quarter wider than the 1st, convex transversely and longitudinally, as wide in front as behind. Abdomen globose. Femora very slightly swollen.

Hillside, Bulawayo, in sandy soil. (S.A.M., R.M., G.A. colls.), type in my collection.

This species appears to me to be intermediate in structure between *Tetramorium* s. str. and its subgenus *Triglyphothrix*. The absence of branched hairs and the less transverse 1st node are the only points of difference between it and the subgenus.

I have much pleasure in associating this species with the name of Mrs. Hepburn, whose unflinching hospitality has given me the opportunity to collect many of the interesting species which are found at Hillside, near Bulawayo.

Subgenus TRIGLYPHOTHRIX, Forel.

Ann. Soc. Ent. Belg. C.R., vol. 34, p. cvi, 1890.

Characters.

♀. Antennae 12-jointed, the club 3-jointed. Mandibles and clypeus as in *Tetramorium*. Distinct antennal scrobes nearly always present, divided by a longitudinal carina into two halves, for the reception of the folded scape and flagellum. Thorax stout and short, the thoracic sutures obsolete or nearly so. Epinotum armed, episternal teeth also present, as in *Tetramorium*. First joint of petiole with a short peduncle; both nodes, or at least the 2nd, much wider than long. Hairs usually trifid, sometimes polyfid.

♀. Similar to the ♂ but larger; forewing with one closed cubital cell, the radial cell open.

♂. Antennae 10-jointed; 2nd joint of flagellum very long, 3rd joint short, shorter than the 1st. Mayrian furrows present. Nodes of petiole not so wide as in the ♀, the 1st joint subpedunculate.

This subgenus is distributed throughout the Ethiopian and Indo-malayan regions. One species, *T. striatidens*, Emery, has become almost cosmopolitan, and is often found in hothouses in temperate countries. The ants of this subgenus are rather timid insects, generally feigning death when touched. The nests are made in the ground. One species, *T. Arnoldi*, Forel, is more frequently found in the nests of other ants, apparently in plesiobiotic or cleptobiotic association.

Key to the ♂ ♀ of Triglyphothrix.

- (4) 1. Yellow or reddish-yellow species.
- (3) 2. Thorax dull, very closely and finely punctured; hairs simple.
Arnoldi, Forel.
- (2) 3. Thorax coarsely reticulate and shining between the reticulations.
auropunctatus, Forel, var. *fusciventris*, Forel.
- (1) 4. Black or brownish species.
- (6) 5. Epinotum with long spines, as long as the interval between their bases
Constanciae, Arnold.
- (5) 6. Epinotum armed only with small teeth.
- (8) 7. Second node of petiole at least two and a quarter times wider than long
Marleyi, Forel.
- (7) 8. Second node of petiole not more than twice as wide as long.
- (10) 9. Thorax irregularly reticulate, brownish; larger species, 3.3 mm.
Inezulae, Forel.
- (9) 10. Thorax strongly and evenly reticulate, piceous; smaller species, 2.6 mm.
Hepburni, Arnold.

Microps, Mayr, and *Trimeni*, Emery, are not known to me in nature, and are not included in the above key. Judging by the descriptions *Hepburni* appears to differ from *Trimeni* by its larger size and by the 1st node of the petiole, which is clearly wider than long; *microps* is apparently allied to *auropunctatus*, but has much smaller eyes.

T. AUROPUNCTATUS, Forel.

Schultze, Reise Süd-Afrika, vol. 4, p. 20, ♂, ♀, 1910.

“ ♂. 2.1–2.6 mm. Mandibles strongly striated, punctured, with 3

distinct teeth in front, and 4 indistinct teeth behind. Clypeus carinate, distinctly emarginate in the middle. Head quadrangular, as wide behind as long, narrowed in front, nearly straight behind (hardly feebly concave). Eyes decidedly small, consisting of 10-12 facets, but yet larger than in *microps*. The scape, incrassate from the middle, reaches the posterior fifth of the head; the 2nd-5th joints of the flagellum are more than three times wider than long. The frontal carinae form exteriorly a deep and wide scrobe for both scape and flagellum, the scrobe bending round behind. Between the groove for the scape and that for the flagellum, there is a raised and sharp triangle, with its base forwards. The floor of the scrobe is shining and finely reticulate. The eye lies close to the outer margin of the groove for the flagellum, which is obsolete in front. Thorax very wide, short, feebly convex, almost marginate above, with blunt anterior angles. Pro-mesonotal suture absent. Meso-epinotal suture feeble, a suggestion of a metanotum. Epinotal teeth broad, triangular, fairly short and acute; episternal teeth flat and obtuse. First node of petiole with a very short peduncle, the node two and a half times wider than long, almost vertically truncate in front and behind, the upper surface almost flat or only feebly convex transversely, a little declivous behind, the anterior margin feebly emarginate. Second node nearly three times as wide as long, somewhat wider than, and nearly as high as the 1st, with a straight or even slightly concave anterior face, and a convex posterior face. Abdomen truncate in front. Femora distinctly swollen in the middle. Head, thorax, and 1st joint of the petiole coarsely and densely, longitudinally rugose, coarsely and closely punctured between the rugae. Second joint of the petiole (the 1st also partly) coarsely punctured. The rest smooth, merely very finely and sparsely punctured. The whole body, femora and tibiae closely covered with fairly short, yellow and polyfid hairs. Yellowish-red, abdomen more brownish-yellow. The floor of the coarse punctures appears golden in certain lights.

“♀. 3.3 mm. Like the ♂. Mesonotum flat above, longitudinally rugose, sharply and coarsely punctured. Nodes somewhat wider, otherwise like the ♂. Darker yellowish-red; a spot on the vertex, the post-scutellum, a part of the mesonotum, and the abdomen brown. Deälated. Pubescence and all else as in the ♂.

“Natal, 2500 metres (Haviland).”

Var. BULAWAYENSIS, n. v.

♂. This differs from the above by the absence of the triangular prominence between the two halves of the antennal scrobe, and by the

entire absence of the meso-epinotal suture. The floor of the punctures without any golden reflection.

Bulawayo, living in the nests of *Platythyrea cribrinodis*, apparently in plesiobiosis. (S.A.M., R.M., G.A. colls.), type in my collection.

Var. PALLENS, Forel.

Ann. Soc. Ent. Belg., vol. 54, p. 424, ♂, 1910.

“♂. 2 mm. A little smaller than the type of the species. Entirely pale yellow, with the same golden punctures. Epinotal spines shorter, only a little longer than their basal width. Nodes of the petiole less broad, the 2nd only twice as wide as long, the 1st one and a half times wider than long.

“Natal (Haviland).”

Var. FUSCIVENTRIS, Forel.

Ann. Soc. Ent. Belg., vol. 57, p. 116, ♀, 1913.

“♀. 2.2–2.5 mm. A little smaller than the type of the species. Epinotal spines distinctly shorter, subdentiform but acute, very little longer than their basal width. The same golden punctures as in the type. The sculpture a shade finer and more rugose. Nodes a little wider. Of a darker yellow and more brownish colour than that of the type. Abdomen brownish. Otherwise like the type species.”

The thorax is narrowed between the meso- and epinotum, but there is no trace of the suture dorsally. The margins of the thorax and the edges of the epinotal teeth are more darkly coloured. The basal third of the abdominal segments paler than the remaining portions. Some of the hairs are simple, the rest are shorter and trifid.

Bulawayo, like var. *bulawayensis*, also nesting in and near the galleries of *Platythyrea cribrinodis*. (S.A.M., R.M., G.A. colls.)

Var. RHODESIANA, Forel.

Deutsch. Ent. Zeitschr. Beiheft, p. 221, ♀, 1913.

“♀. 3.6–4 mm. Darker than the type of the species, dark brown. Frons, cheeks, mandibles, antennae, legs and transverse bands on the posterior portion of the abdomen, yellowish-red. Head less emarginate behind and more narrowed in front. The 1st node is more rounded at the sides, and above all, the 2nd node is differently shaped, being obtusely and conically pointed laterally, less flat above, forming more of a rounded, transverse edge. Otherwise like the type.”

The colour is reddish-brown, that of the head lighter, especially on the anterior third. The base of the 1st abdominal segment is evenly and shallowly punctured.

Bembesi, S. Rhodesia. (S.A.M., R.M., G.A. colls.)

T. TRIMENI, Emery.

Ann. Soc. Ent. France, vol. 63, p. 40, ♂, ♀, 1895.

“♂. 1.7 mm. Allied to *T. Walshi* and *lanuginosa* (Indian species), but differing in having the 2nd node of the petiole transverse, distinctly wider than the 1st; the 1st abdominal segment has foveiform punctures, and the epinotal spines are shorter.

“♀. 3.2 mm. Very like the ♂; abdomen similarly sculptured, 2nd node of the petiole less transverse. Kimberley, 1 ♂, 2 ♀ (Simon).”

Also a variety of the ♂; “less strongly sculptured, 1st abdominal segment without foveiform punctures. Hammans Kraal, 1 specimen.”

In addition to the above, the author remarks that in *Trimeni* the 2nd node is distinctly wider than the 1st and strongly transverse, the 1st appears hardly wider than long.

T. MICRUPS, Mayr.

Ann. K.K.N.H. Mus. Wien, vol. 16, p. 25, ♂, ♀, 1901.

“♂. 2.3-2.5 mm. Yellow, fairly dull, abdomen shining. The whitish erect hairs on the upper surface of the body are not long, but are fairly abundant. Mandibles longitudinally striate. The head is coarsely reticulate-punctate, the frons and vertex chiefly coarsely and longitudinally rugose, the clypeus with longitudinal striae and a little median carina, somewhat impressed in the middle in front, the anterior margin emarginate; the scrobe is shining and fairly finely and irregularly rugose, with a few strong transverse striae near the antennal socket. The eyes are very small, composed of from 6-9 facets. Seen in profile, the closely reticulate thorax has the pronotum strongly curved backwards from below and in front; the mesonotum is only slightly convex, the epinotum moderately so. The latter bears two large, triangular, and equilateral teeth. The dorsum of the epinotum merges gradually into the declivity. . . . The 1st node of the reticulate petiole is twice as wide as long, the 2nd node somewhat wider than the 1st, and fully twice as wide as long. The abdomen is smooth, with scanty piligerous punctures.

“♀. 3.4-3.5 mm. More or less reddish-yellow, or also partly

brown; the pubescence and sculpture as in the ♀. Mesonotum and scutellum longitudinally rugose. Otherwise like the type of the ♀. The anterior wings fairly clear. Port Elizabeth. (Dr. H. Brauns)."

T. ARNOLDI, Forel. (Plate VII, fig. 93.)

Deutsch. Ent. Zeitschr. Beiheft, p. 220, ♀, 1913.

♂. 2.2-3 mm. Ochreous or reddish-ochreous; antennae, and sometimes also the abdomen, darker. Head, thorax, and petiole dull, abdomen smooth and shining. Mandibles and clypeus slightly shining. Head, thorax, and petiole very closely and finely reticulate-punctate or granulate; in addition, the head above is finely and longitudinally striate, the scrobes and the cheeks in front finely punctate only. Legs slightly shining. Pubescence very short and yellowish, fairly scanty all over; the erect pilose hairs are also short and sparse. All the hairs simple.

Head as long as wide, slightly narrowed in front, the posterior angles widely rounded, the posterior margin almost straight. Clypeus feebly carinate in the middle, and with two or three longitudinal and raised lines on each side of the carina; the anterior margin straight. Frontal area small and indistinct. Mandibles finely striate, with 7 teeth, the 4 posterior ones indistinct. The frontal carinae diverge behind the antennal sockets and are continued in a slight curve almost to the posterior margin of the head, where they curve downwards and forwards below the eye. The scrobe so formed is distinct but shallow, and is divided into two by a longitudinal raised line. Eyes small, placed at about the middle of the sides. Scape of antenna extends back almost to the posterior fourth of the head; 2nd-7th joints of the flagellum quite two and half times wider than long. Thorax short, not longer than the head, considerably narrowed between the meso- and epinotum, feebly convex longitudinally, a little more strongly so transversely, the anterior face abrupt, the shoulders of the pronotum rounded. Thoracic sutures obsolete. Epinotum marginate laterally, the dorsum one and a quarter times longer than wide, the declivity oblique and shorter than the dorsum. Epinotal teeth almost triangular, very little longer than wide at the base, slightly divergent, merging in front and behind in the raised margins of the epinotum. Episternal teeth small and blunt, smaller than the epinotal. First joint of petiole with the peduncle shorter than the node; the latter one and a half times wider than long, convex behind transversely, straight, or feebly concave in front, the dorsal surface feebly convex transversely and sloping downwards and backwards.

Second node wider than the 1st, twice as long as wide, not longer than the 1st, a little narrower behind than in front.

♀. 3.8 mm. (hitherto undescribed). Dark yellowish-brown, the head somewhat reddish, the legs and antennae paler than the body, the sides of the mesonotum in front dark brown. Pilosity and pubescence as in the ♂. Sculpture similar to that of the ♂, but the puncturation all over is a little stronger, and the longitudinal striae on the head are sharper. The base of the 1st abdominal segment is closely and very finely punctured, rather dull. The eyes are large, occupying about one-quarter of the sides of the head; there is a black spot behind each of the three ocelli. Mesonotum rounded in front, flat behind, the pro-mesonotal suture arcuate. The sides of the mesonotum and scutellum sparsely striate. Dorsum of epinotum wider than long, the declivity nearly vertical. The petiole is similar to that of the ♂, but the nodes are shorter (thinner). Wings slightly yellowish, the nervures dirty yellow.

The smaller sized ♂♂, 2.2 mm., and the ♀ were taken in an independent nest under a stone; except in size, they do not appear to differ from the larger form. The latter was taken in nests made in the walls of the galleries of *Platythyrea lamellosa-rhodesiana*, and also of *Ophthalmopone Berthoudi*

Shiloh and Bulawayo, S. Rhodesia. (S.A.M., R.M., G.A. colls.)

T. CONSTANCIAE, n. sp. (Plate VII, figs. 94, 94a.)

♂. 3.3-3.6 mm. Black; mandibles, antennae, and tarsi reddish-yellow, femora and tibiae yellowish-brown in the middle, reddish-yellow at their base and apex. Densely clothed all over, except on the tarsi and flagellum, with fairly long, erect, and whitish hairs, which are distinctly trifid, not hiding the sculpture. Abdomen and legs shining, the rest of the body moderately shining between the reticulations. Head strongly and longitudinally rugose, also somewhat reticulate, owing to the presence of feebler transverse anastomoses. Thorax and 1st node of petiole strongly reticulate, the meshes rather wide, especially on the epinotum; 2nd node less strongly and less distinctly reticulate. Abdomen smooth.

Head a little longer than wide, a little narrower in front than behind, the posterior margin straight, the posterior angles strongly rounded. Mandibles slightly shining, feebly striate and sparsely punctured, armed with distinct teeth in front, indistinctly dentate behind. Clypeus with a median carinula and 3 or 4 longitudinal raised lines on each side of it, the anterior margin straight. Frontal area obsolete, frontal sulcus replaced by a raised line. The frontal

carinae sinuate, divergent, extending back to the posterior fifth of the head. The scrobes are shining, with a few transverse striae; the longitudinal ridge, which divides the scrobe into two parts for the reception of the scape and flagellum respectively, does not reach the posterior end of the scrobe, the outer half of the scrobe not well defined. Eyes large, prominent and very convex, their margins angular below, placed in the middle of the sides of the head. The scape extends to the posterior fifth of the head; 1st joint of the flagellum twice as long as wide, 2nd-7th joints wider than long. Thorax only slightly constricted between the meso- and epinotum, thoracic sutures entirely absent. The thorax is convex transversely in front and above, and in profile, moderately convex in front. The epinotal spines are very acute, directed upwards and outwards, rather long, a little longer than the interval between their bases. The brow of the declivity, between the spines, is transversely striate; the declivity marginate at the sides, the raised margins continued into the short and blunt episternal teeth. First joint of the petiole with the peduncle half as long as the node. The latter, seen from above, has the anterior margin almost semicircular, the posterior margin moderately convex; it is three-fifths wider than long. The 2nd node is transversely oval, very convex from front to back, a little wider than the 1st node, and twice as wide as long. Abdomen one-quarter longer than wide, the sides not very convex.

Matopo Hills, S. Rhodesia. (S.A.M., R.M., G.A. colls.), type in my collection.

This species is allied to *gabonensis*, André, and *mucidus*, Forel. From the former it differs by its smaller size, colour, the shape of the 1st node and the divided scrobes; from *mucidus* it differs by the straight anterior margin of the clypeus, by the angulated lower margin of the eye, by the deep scrobes, the shining head and thorax, and by the hairs, which are all trifid, not divided into six or more branches as in *mucidus*. Quite distinct from *Eminii* and *Rothschildi*, Forel.

T. HEPBURNI, n. sp.

♀. 2.3-2.8 mm. Colour as in *Constanciae*. Pilosity whitish, trifid, less dense than in *Constanciae*, particularly on the head. Sculpture of the head and thorax as in that species, but the reticulations a little closer. The nodes of the petiole reticulate, the 2nd not less strongly than the 1st. Abdomen shining, very sparsely but distinctly punctured, the punctures on the basal fourth shallow and foveiform. Head a little longer than wide, hardly narrowed in front, the hind

margin more convex than in *Constanciae*. The thorax is narrower posteriorly than in that species, the width across the brow of the declivity being a little less than half the width across the anterior angles of the pronotum (much more than half in *Constanciae*). Epinotal teeth small and triangular, not longer than their basal width, slightly divergent. The 1st node of the petiole, seen from above, is transversely oval, one and a half times wider than long, the anterior margin not more convex than the posterior, not semicircular as in *Constanciae*. The 2nd node similar to that of *Constanciae*, transversely elliptical, almost twice as wide as long, not quite one-fifth wider than the 1st. Seen in profile, the pro-mesonotal portion of the thorax is much less convex than in *Constanciae*. Otherwise like that species.

♀. 3.6 mm. Pronotum very short in front, more exposed at the lateral angles. Mesonotum longitudinally rugose, slightly convex in front, flat posteriorly. Scutellum moderately convex. The sculpture, especially on the abdomen, is a little stronger than in the ♂. Wings tinged with yellow, nervures and stigma pale brownish-yellow. Otherwise like the ♂.

♂. 3 mm. Black legs, antennae and mandibles dirty yellow, femora brownish-yellow. Pilose hairs trifid, much less abundant but longer than in the ♀. Mesonotum very sparsely pilose. The hairs on the head short, not branched. Head slightly shining, reticulate-rugose. Mesonotum smooth and shining. Scutellum and nodes slightly shining and feebly rugose. Epinotum unevenly reticulate-rugose and dull. Abdomen smooth and shining.

Head subquadrate, about as long as wide, the posterior angles widely rounded, the posterior margin convex, higher behind than in front. Eyes large, occupying about one-third of the sides, placed a little in front of the middle; ocelli small. Scapes a little longer than the 2nd joint of the flagellum. Mesonotum very convex in its anterior half, somewhat flattened above posteriorly. Mesonotum and scutellum much higher than the epinotum. The latter is unarmed, and its upper surface forms a continuous and steep slope from base to apex, the dorsum and declivity not differentiated. The 1st node, including its articular portion behind, as long as wide, much narrower than in the ♀; 2nd node transversely oval, one-quarter wider than the 1st, half as wide again as long. Wings as in the ♀.

Hillside, Bulawayo; Matopo Hills, S. Rhodesia. (S.A.M., R.M., G.A. colls.), types in my collection.

This species, like the foregoing, has been found by me only on the granite and syenite formations. The Hillside locality, near Bulawayo, is a syenite area, which rises like a small island out of the surrounding

schists. This area harbours not a few species, which, as far as my experience goes, are never to be found on the schist formation. Such are the two species just described, and also *Camponotus mystaceus*, Emery, *Acantholepis longinoda*, n. sp., *Meranoplus spininodis*, n. sp., etc.

T. MARLEYI, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 221, ♀, 1914.

♀: 2.5-3 mm. Brown, the abdomen darker, the legs brown, the antennae, mandibles, and tarsi ferruginous. Densely clothed with a white pilosity, not very long, consisting of hairs divided into 3, 4, or more branches. The pilosity is less abundant on the legs and scapes. Head, thorax, and 1st node closely reticulate, the rugae on the head emphasised longitudinally. The spaces between the reticulations feebly shining. Abdomen smooth and shining, very sparsely and finely punctured, except near the base, which is more strongly punctured. Second node of petiole only with large and shallow punctures.

Head, excluding the mandibles, as long as wide, or with the mandibles as long as the thorax, only a little narrower in front than behind. The antennal scrobe is almost obsolete. The scapes do not extend back quite as far as the occipital margin. Anterior margin of the clypeus straight or feebly convex. Mandibles sharply striated, finely and sparsely punctured, with three distinct teeth in front. Eyes large, convex, placed in the middle of the sides of the head. Thorax not very convex transversely, more so longitudinally, the anterior angles rounded, the anterior face less convex than in *Constantiaae*. The thorax is slightly constricted between the meso- and epinotal regions, twice as wide across the shoulders of the pronotum as it is between the epinotal spines. The latter are short, very little longer than they are wide at the base. Peduncle of the petiole half as long as its node. The latter is distinctly higher than the 2nd, the sides and the anterior dorsal margin convex, the posterior margin and face straight, nearly twice as wide as long; the dorsal surface convex transversely. The 2nd node is almost three times wider than long, one-third wider than the 1st node, the posterior margin more convex than the anterior. All the femora moderately swollen in the middle.

Durban and Krantz Kloof, Natal (H. W. Marley). (S.A.M., R.M., G.A. colls.)

This species differs from all the others in our region by the very wide 2nd node.

T. INEZULAE, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 221, ♀, ♂, 1914.

♀. 2.8–3.2 mm. Very similar to *T. Hepburni*, but larger. In colour and pilosity like *Marleyi*. Head, thorax and nodes reticulate, the sculpture emphasised longitudinally. Abdomen shining, sparsely and evenly punctured, fairly closely punctured at the base.

Head feebly narrowed in front, almost quadrate, slightly longer than wide, the sides feebly convex, the posterior margin straight. Mandibles shining, striated and punctured, with 3 distinct teeth in front, and 3 smaller and less acute teeth behind. Distinct scrobes present, smooth and shining, divided by a longitudinal ridge into two halves. The scrobes and scapes extend back to the posterior fourth of the head. The thorax is similar to that of *Marleyi*, but a little longer in proportion to the width. The epinotal spines are a trifle longer than in *Marleyi*, longer than their basal width. The peduncle of the petiole is a little shorter than the node; the latter, seen from above, is oval, the anterior face hardly more convex than the posterior, not quite twice as wide as long, not higher than the 2nd node. The latter as long as the 1st, not quite twice as wide as long, a little wider than the 1st, and seen from above, also oval.

♂. 4.2 mm. Colour and pilosity as in the ♀, except the mandibles, antennae, tibiae and tarsi, which are pale brownish-yellow; the hairs on the abdomen are mostly simple. Head, pronotum, sides of epinotum and the nodes feebly reticulate. Mesonotum shining, sparsely punctured, also with a few feeble longitudinal lines. Dorsum of epinotum longitudinally striate. Abdomen smooth and shining. Mandibles with 5 small teeth. Head quadrate, the posterior angles rounded, very slightly convex above. Eyes large, occupying the anterior third of the sides. The scapes extend back as far as the posterior ocelli; 2nd joint of flagellum three times as long as the 1st, shorter than the scape. Thorax much wider and higher than the head, the pronotum not visible from above. The dorsum of the epinotum is more than twice as long as the declivity, and ends in two blunt ridges or tubercles. Nodes of petiole shorter than in the ♀, the peduncle of the 1st node longer. Wings pale dirty yellow, nervures yellow. The petiole is much shorter and lower than in *desertorum*, Forel. The epinotum in the latter is rounded, not angular.

Beach Bush, Durban; nesting in sand dunes. (S.A.M., R.M., G.A. colls.)

T. DESERTORUM, Forel.

Schultze, *Reise Süd-Afrika*, vol. 4, p. 20, ♀, ♂, 1910.

“♀. 3.3 mm. Mandibles fairly shining, densely punctured. Clypeus carinate, moderately emarginate. Head quadrangular, as wide as long, feebly concave behind, distinctly narrowed in front. There is a scrobe for the whole of the scape, with a feebly rugose floor; posteriorly the scrobe curves round and forms the beginning of a flat depression, behind the eye, for the base of the flagellum. The large eyes, placed a little behind the middle of the head, occupy one-third of the sides. The scape, like its scrobe, extends back to the posterior fourth of the head; 2nd–7th joints of the flagellum much wider than long. Thorax nearly as wide as the head. Mesonotum flat above. Epinotum with two strong, triangular and almost spinose teeth (slightly longer than their basal width), the dorsum a little longer than the declivity. First node with a fairly short peduncle; both nodes rounded above and at the sides, about one and three-quarter times wider than long, the 2nd node one-third to one-half wider than the 1st. No episternal teeth, only a curved ridge. Coarsely and longitudinally rugose (including the epinotum above), coarsely reticulate between the rugae; the petiole and some places in part only coarsely reticulate or reticulate-punctate, barely shining. Abdomen and legs smooth, but with fairly abundant piligerous punctures. The whole body, including the femora, abundantly clothed with a short, woolly pilosity of 3–5 branched hairs. On the tibiae and scapes the hairs are oblique, almost decumbent, and mostly simple. Red-brown to brownish-red; abdomen brown. Tarsi, tibiae, flagellum and mandibles brownish-yellow-red. Wings not long, faintly tinged with yellow, almost hyaline, with pale nervures and costa.

“♂. 3.2–3.4 mm. Mandibles 6-dentate, shining. Clypeus arched, feebly emarginate. Head quadrangular but rounded, as wide as long. Eyes not large. The scape does not reach the occipital margin. Second joint of the flagellum two and a half times longer than the 1st, and not quite as long as the scape. Epinotum with two tubercles; nodes more angular than in the ♀, otherwise similar. Head coarsely, petiole more finely reticulate; epinotum and sides of thorax coarsely and longitudinally rugose, the rest smooth, sparsely punctured. Hairs on the body mostly bifid or trifid, or simple. Legs and antennae only with an almost decumbent pilosity. Fairly dark brown; antennae, mandibles and legs yellowish, femora brownish. Wings as in the ♀.

“Between Kgokong and Kang, Kalahari (Schultze).”

SUBGENUS XIPHOMYRMEX, Forel.

Mitth. Schweiz. Ent. Ges., vol. 7, p. 385, 1887.

Characters.

♂ and ♀. Antennae 11-jointed; antennal scrobes usually well defined.

Nodes generally squamiform.

♂. Antennae 10-jointed.

Key to the ♂ ♀ of Xiphomyrmex.

- (2) 1. Mandibles tridentate; 1st node not squamiform, *fossulatum*, Forel.
- (1) 2. Mandibles with 5 or more teeth; 1st node more or less squamiform.
- (4) 3. Promesonotum smooth. *Humbolti*, Forel, var. *victorensis*, Forel.
- (3) 4. Promesonotum coarsely rugoso-reticulate. *Weitzaeckeri*, Emery.

T. (XIPHOMYRMEX) WEITZAECKERI, Emery.

Ann. Soc. Ent., France, vol. 63, p. 39, ♀, 1895.

♀. 3.5-3.8 mm. Dark brown, the abdomen piceous, legs and scapes light brown, flagellum, tarsi, and mandibles more or less dark brownish-yellow. Shining, especially the abdomen. Pubescence short and very scanty, present only on the legs and antennae. Pilosity rather sparse, composed of pale yellowish and erect hairs, abruptly truncate at the apex. Head longitudinally and strongly striate or striato-rugose between the frontal carinae, coarsely reticulate-rugose at the sides. Thorax very coarsely reticulate-rugose, the rugae emphasised longitudinally. The spaces between the striae and rugae finely reticulate, more distinctly so on the head than on the thorax. Declivity of the epinotum, the nodes and abdomen smooth and shining, the latter very polished. The 1st node has three impressed lines on the dorsal surface, the outer ones oblique.

Head as long as wide, very little narrower in front than behind, the posterior margin nearly straight, the sides feebly convex, very convex above transversely. Eyes fairly large, placed in the middle of the sides. Frontal carinae divergent, prolonged backwards as strong ridges almost to the occipital margin, curving outwards and forwards at their posterior extremity. The floor of the demiscrobes finely reticulate only. Clypeus with a strong median carina, which is usually forked at its anterior end; the anterior margin feebly excised in the middle. Scapes as long as the scrobes; the flagellum stout, 2nd-7th joints wider than long, the club fairly thick, longer than the rest of the flagellum. Mandibles very finely striate, armed with 6 or 7 rather broad teeth. Dorsum of thorax obtusely marginate at the

sides, slightly narrowed between the pro- and mesonotum, very much more so between the meso- and epinotum. Pro-mesonotal suture obsolete, the meso-epinotal wide but not very deep. Thorax one and a half times longer than it is wide in front, twice as wide in front as it is between the epinotal spines, fairly convex above lengthwise, particularly the pronotum. Epinotal spines divergent, acute, directed obliquely upwards, as long as the dorsum of the epinotum, much longer than their basal width, and longer than the interval between their bases. Episternal teeth small and triangular, hardly one-third as long as the epinotal. Declivity subvertical, 1st segment of petiole with the peduncle longer than the node; the latter squamiform, longer vertically than it is wide, thinner at the sides than at the summit, the anterior and posterior faces vertical, inclined slightly forwards. Second node lenticular, the anterior and posterior faces meeting above acutely, slightly wider than the 1st node, and nearly twice as wide as it is long. Abdomen subglobose, a little longer than wide. Femora moderately swollen.

♀ (hitherto undescribed). 4 mm. Piceous. Thorax wider than the head. Pronotum coarsely reticulate-rugose, the shoulders subangular. Anterior margin of mesonotum very convex. Mesonotum, scutellum, and epinotum strongly and longitudinally striate; the striae on the epinotum do not quite reach the bottom of the declivity. Epinotal spines horizontal, less divergent than in the ♀. Wings hyaline, nervures and stigma pale yellow.

In the largest specimens of the ♀ the sculpture is stronger and closer, and the spines are directed more steeply upwards, but the existence of forms intermediate in size and sculpture precludes their separation as a distinct variety.

Redbank, S. Rhodesia; Durban (3.4–3.5 mm.); Bulawayo (3.6 mm.); Hope Fountain, S. Rhodesia (3.8 mm.).

This species forms largely large nests under stones. It preys to a great extent on termites, and also attends aphides and scale-insects on plants.

(S.A.M., R.M., G.A. colls.)

T. (XIPHOMYRMEX) HUMBLI, Forel, var. VICTORIENSIS, Forel.

Grandidier Hist. Madagasc. 20, p. 154, 1891.

(Variety) Ann. Soc. Ent. Belg., vol. 57, p. 120, ♀, 1913.

♂. 3.2–3.8 mm. Piceous, head slightly reddish, legs, mandibles, and antennae ferruginous. Not unlike *Weitzaeckeri*, differing from it in the following characters:

The head is dull and much more finely striate, the striae becoming effaced towards the occiput; the spaces between the striae are very densely and finely rugulose or reticulate. The mandibles are more strongly striate. The pro-mesonotal suture is faintly indicated, the meso-epinotal suture well defined and deep. The pro-mesonotum is smooth and shining, except the margins, which are feebly punctured. The pronotum has a rounded boss on each side at the posterior corners. The dorsum of the epinotum is depressed, more or less excavated, sparsely and finely reticulate, sparsely rugose at the sides. The epinotal spines are less oblique than in *Weitzaeckeri*. The summit of the 1st node is more convex transversely and lengthwise, and lacks the impressed lines present in the other species. The 2nd node is also more convex and thicker above, the anterior and posterior faces being separated by a convex dorsal face (this is actually only a continuation in the horizontal direction of the anterior face). In the smaller forms (taken from a different nest to that of the larger), the sculpture extends partly over the mesonotum.

♀ (hitherto undescribed). 4.5 mm. Thorax paler than in the ♀, more castaneous brown. Pronotum widely exposed above at the shoulders, which are rounded. Mesonotum smooth and shining in its anterior third, the posterior two-thirds longitudinally striate; the scutellum very shallowly striate. Epinotum longitudinally striate at the sides and in the middle of the dorsum; the latter very steep, almost in the same plane as the declivity. Epinotal spines horizontal, stouter and less divergent than in the ♀. Nodes thinner and wider. Wings tinged with brownish-yellow, nervures and stigma pale yellow. Otherwise like the ♀.

♂ (hitherto undescribed). 4.4 mm. Head brownish-black, the area in front of the eyes dirty yellow. Thorax and nodes dark reddish-brown, the sides of the scutellum, the clathrate groove between the latter and the mesonotum, and the metanotum dark yellow. Abdomen piceous. Legs, antennae, and mandibles pale yellow, the femora slightly fuscous. Head and sides of the epinotum dull, the rest of the body shining. Head closely and finely reticulate, with a few striae radiating from the ocellar area. Mesonotum smooth, except in the middle behind the forks of the Mayrian furrows, where it is shallowly and longitudinally striate. Scutellum feebly striate, a space in the middle smooth. Epinotum very finely reticulate, feebly striate at the sides; the dorsum is as long as the declivity and has a median Λ -shaped excavation with a dentiform ridge on each side of the same. The 1st node of the petiole more or less cuneiform, the posterior-dorsal face as long as wide; the 2nd node is half as wide again as the 1st,

one-third wider than long, the dorsal surface much flatter than in the ♀, the posterior half of the sides parallel. The eyes are large and occupy the anterior half of the sides of the head. The scape extends back as far as the anterior ocellus, and is a little shorter than the 2nd joint of the flagellum.

Victoria Falls, nesting in very moist and rotten wood, and under moss. (S.A.M., R.M., G.A. colls.)

T. (XIPHOMYRMEX) FOSSULATUM, Forel. (Plate VII, figs. 107, 109)

Ann. Soc. Ent. Belg., vol. 54, p. 428, ♂, 1910.

♂. 2.2-2.7 mm. Castaneous, thorax, nodes, and base of abdomen paler, more yellowish-brown. Legs, antennae, and mandibles yellowish-brown. Pubescence very sparse, present only on the antennae and tibiae. Pilose hairs absent, except on the clypeus. Entirely smooth and shining. Head and thorax sparsely and irregularly punctured with wide and shallow pits, more sparsely on the thorax than on the head, the latter almost impunctate anteriorly. Head, excluding the mandibles, a little wider than long, feebly narrowed in front and behind, the posterior margin straight. Eyes large, placed in the middle of the sides. Frontal carinae widely divergent behind, prolonged back as sharp ridges to the posterior fourth of the head, forming distinct demicrobes which are smooth and deep, and hold the basal three-fourths of the scapes. The basal half of the scrobe is delimited below by a longitudinal ridge. Clypeus short, the anterior margin denticulate, carinate in the middle, the carina extending back over the well defined and triangular frontal area. Mandibles smooth, sparsely punctured, tridentate, the anterior pair of teeth close together and separated from the third tooth by a wide space. Scapes extending back as far as the occipital margin, 2nd-7th joints of the flagellum wider than long, the club thick. Thorax as wide in front as it is long, flat above, except the pronotal shoulders, which are depressed. The pronotum bears an angular prominence, somewhat obtuse, on each side behind the middle. Pro-mesonotal suture feebly indicated; the meso-epinotal obsolete above. Dorsum of epinotum impunctate, quadrate, submarginate. Epinotal spines long, divergent, acute, as long as the interval between their bases, directed steeply upwards. Episternum with a small rounded lobe on each side. Declivity marginate at the sides. First node of the petiole cuneiform, with a vertical anterior face, and a horizontal dorsal face, the margin between the two faces rounded, the peduncle very short, hardly differentiated from the node. Second node rectangular, wider than long, as long as and a little wider

than the 1st node; seen from the side, the anterior face is convex, the dorsal face shorter than the anterior. Abdomen round. Femora and tibiae rather swollen.

Willbrook, Natal. (Wroughton.)

This species is quite unlike our other two, and is easily recognised by the form of the mandibles, the clypeus, the peculiar puncturation, and the compact form.

(G. A. coll., ex B.M. coll.)

SUBGENUS DECAMORIUM, Forel.

Ann. Soc. Ent. Belg., vol. 57, p. 121, 1913.

Characters.

♀ and ♀. Antennae 10-jointed. Lateral ridges of the clypeus obsolete. Tibiae and femora very strongly swollen. Scrobes well defined and deep.

♂. Antennae 10-jointed.

T. (DECAMORIUM) DECEM, Forel. (Plate VIII, fig. 111.)

Ann. Soc. Ent. Belg., vol. 57, p. 121, ♀, 1913.

♀. 3-3.5 mm. Head, thorax, and nodes castaneous brown, the head, especially the anterior half, lighter; nodes darker. Abdomen piceous. Legs, antennae, and mandibles dark yellowish-red, the femora somewhat brownish-red. Pilosity and pubescence almost entirely absent, excepting a very short and sparse pubescence on the legs and antennae. Very shining, sides of epinotum slightly dull. Head, dorsum of thorax, and the nodes sparsely, irregularly, but deeply punctured; the sides and front of the head, excepting the clypeus and the sides of the mesothorax, longitudinally rugose. Sides of epinotum closely reticulate-punctate, the declivity transversely striate. The sides of the prothorax and the mesosterna smooth and shining. The apical half of the dorsum of the epinotum rugulose. Nodes sparsely punctured, also the abdomen, but much more finely so.

Head rectangular, parallel-sided, excluding the mandibles almost one-third longer than wide, the posterior margin slightly concave in the middle. Eyes large, placed in the middle of the sides. Frontal carinae wide apart in front, moderately divergent for a short distance behind the clypeus, thence parallel and prolonged back to the posterior seventh of the head, forming the upper boundary of a deep and smooth scrobe. Scapes curved near the base, broad, flattened, not reaching

the extremity of the scrobe; 2nd-8th joints of the flagellum wider than long, the 2nd-6th almost half as wide again as long, the apical joint one-third longer than wide. The flagellum is rather thick and short, not much longer than the scape. Median area of clypeus almost vertical in front, the anterior margin feebly emarginate in the middle. Mandibles curved, smooth and shining, very finely and sparsely punctured, armed with 5 widely spaced teeth; between the posterior pair of teeth there are 2 or 3 denticles. Thorax narrower than the head; pro-mesonotal suture faintly indicated, meso-epinotal deep. Pro-mesonotum feebly convex longitudinally and transversely, one-third longer than wide in front. Shoulders of pronotum slightly rounded, almost rectangular. Dorsum of epinotum moderately convex lengthwise, one and a half times longer than wide; epinotal teeth short, triangular, shorter than the interval between their bases, very slightly divergent, directed obliquely upwards. Declivity of epinotum a little shorter than the dorsum, vertical, sharply marginate at the sides. Episternal teeth shorter than the epinotal, wider than long. Peduncle of the petiole shorter than the node; the latter narrow and high, one-fourth longer than wide, the anterior and posterior faces subvertical, the dorsal face strongly convex. Second node semi-circular, widest behind, two-thirds wider than the 1st, and a little wider than long, the sides oblique and convex. Abdomen oval, nearly one-half as long again as wide. Tibiae and femora strongly swollen and slightly flattened from front to back.

♀ (hitherto undescribed). 4-4.1 mm. Very similar to the ♀. Eyes hardly larger than in that sex, ocelli small. Pronotum narrowly exposed above in the middle, widely so at the sides, the shoulders as in the ♀. The lateral margins of the pro- and mesonotum almost parallel as far as the tegulae. Mesonotum sparsely and strongly punctured, flattened. First node a little shorter than in the ♀. Wings slightly fuscous, nervures pale brownish-yellow. Otherwise like the ♀.

♂ (hitherto undescribed). 3.7 mm. Black, the apical half of the abdomen dirty brownish-yellow, tarsi pale yellow, the rest of the legs pale brown, antennae and mandibles yellow. Head subopaque, closely rugulose. Epinotum and sides of the thorax, and the posterior half of the 1st node more or less rugulose and reticulate, nitidulous. The mesonotum and scutellum sparsely and strongly punctured, also faintly striate in parts. Abdomen smooth and shining. Head high behind and vertically truncate behind the ocelli, the brow of the truncation rounded; the posterior margin is continued round the sides as a trenchant ridge, so that the posterior angles, looked at from

above, appear almost dentiform. Head about as long as wide across the eyes. The latter large, occupying the anterior half of the head, but not touching the base of the mandibles. The scapes extend back almost as far as the anterior ocellus, a little shorter than the 2nd joint of the flagellum. Anterior half of mesonotum very convex transversely and lengthwise; Mayrian furrows fairly deep in front. Dorsum of epinotum oblique, at least twice as long as the declivity, merging gradually into the latter. Peduncle of the petiole with a blunt prominence below, at the extreme base; the node depressed and narrow, its anterior and posterior faces forming an obtuse angle when seen in profile. Second node campaniform, narrowed in front, about as long as it is wide behind. Legs thin. Wings as in the ♀.

Nesting in sandy soil, and forming fairly populous communities; a very slow and timid insect.

Redbank, Nyamandhlovu, and Hillside, Bulawayo, S. Rhodesia; Hartley, S. Rhodesia (H. B. Maufe). The latter are much darker, almost brownish-black, but otherwise similar. (S.A.M., R.M., G.A. colls.)

Var. *ULTOR*, Forel.

Deutsch. Ent. Zeitschr. Beiheft, p. 217, ♀, 1913.

♀. 2·7–3·1 mm. Very similar to the type of the species but smaller. The 2nd node is narrower, as long as wide. The colour is darker, and the puncturation much more scanty and finer. The 1st node is not so high as in the type species, and the epinotal teeth are shorter, not longer than their basal width.

Shiloh, S. Rhodesia. Nesting near and in the nests of *Paltothyreus tarsatus*. (R.M., G.A. colls.)

GENUS RHOPTRMYRMEX, Mayr.

Ann. K.K.N.H. Mus. Wien., vol. 16, p. 18, 1901.

characters.

♀. Antennae 12-jointed; maxillary palpi 3-jointed, labial palpi 2-jointed. Head wider behind than in front, the sides convex. Frontal carinae short; scrobes entirely absent. Thorax short and stout; epinotum armed or unarmed (unarmed in all our species). First segment of petiole usually strongly compressed transversely, at least in the anterior half, deeper than wide, the peduncle generally indistinct. Second node globose or much wider than long, and much wider than the 1st. Femora not swollen.

♀. Antennae 12-jointed. Somewhat slender and having the facies of the ♂ sex. The four known ♀ ♀ of this genus differ so greatly in general features that I am unable to define the generic characters for this sex. Mayr's definition for this sex applies only to *globulinodis*.

♂ (*globulinodis*). Antennae 10-jointed, the 2nd joint of the flagellum long, as in *Tetramorium*. For the rest, see description below.

Key to the ♀ ♀ of *Rhoptromyrmex*.

- (4) 1. Second node of petiole much wider than long.
- (3) 2. Posterior margin of the head distinctly concave; meso-epinotal suture feeble; smaller species, 3-3.3 mm. *transversinodis*, Mayr.
- (2) 3. Posterior margin of the head straight or nearly so; meso-epinotal suture well defined although shallow; larger species, 3.4-3.9 mm.
Steini, Forel.
- (1) 4. Second node of petiole not much wider than long, subglobose.
globulinodis, Mayr.

R. GLOBULINODIS, Mayr.

Ann. K.K.N.H. Mus. Wien, vol. 16, pp. 18-22, ♀, ♀, ♂, 1901.

♀. 3-3.3 mm. Pale reddish-brown, the mandibles, legs and antennae brighter, more yellowish-red. Pubescence decumbent, very scanty, a little longer and more abundant on the legs and antennae than elsewhere. Pilose hairs absent. Smooth and very shining. Head very sparsely and finely punctured, the anterior angles finely and longitudinally striate; the striae end at about the level of the anterior margin of the eyes, and a few striae curve round the antennal sockets. Just behind the clypeus, and bordering the basal portion of the frontal carinae, there are also some short and fine striae. The rest of the head, the pro-mesonotum, nodes and abdomen smooth. On the head and pro-mesonotum a microscopic and very shallow rugulosity is noticeable in some lights. Sides of the thorax, and the epinotum very finely rugulose, duller than the rest.

Head, excluding the mandibles, very little longer than wide, the sides convex, the posterior margin fairly deeply concave, not much narrower in front than behind, concave above, flat below. Eyes not large, placed in the middle of the sides. Frontal carinae hardly divergent, not extending back quite as far as the middle of the vertex. Clypeus rather flat, the anterior margin moderately convex, not carinate. Frontal area shallow, indistinct. Mandibles smooth and shining, the external margin convex, the masticatory margin den-

ticulate, with a large tooth at the apex. Scape extending back a little beyond the posterior fifth of the head, 3rd-8th joints of the flagellum wider than long, the 3-jointed club not very thick, longer than the rest of the flagellum. Anterior margin of pronotum convex, the shoulders very round. Pro-mesonotal suture very feeble or obsolete. Thorax strongly constricted between the meso- and epinotum, the meso-epinotal suture narrow and distinct. The mesonotum has a shallow and transverse impression in the middle. The dorsum and declivity of the epinotum, seen in profile, form a continuous and low curve; the declivity marginate at the sides, the raised margins being continued over the dorsum almost to its base; the dorsum a little longer than the declivity.

The 1st node is much longer from above to below (*i. e.* deeper) than it is wide above, compressed and almost lamelliform. The nodal portion of the segment, seen from above, is nearly hemispherical, narrower in front than behind, as long as wide behind. Second node more or less transversely oval, or subglobose, a little wider than long, wider than the 1st. Abdomen oval.

♀. 3.5 mm. Brown, mandibles, antennae and legs paler. Pilosity abundant, composed of long and short hairs intermixed. Antennae, legs, sides and vertex of head finely pubescent. The hairs on the abdomen are exerted and very long, shorter and less abundant on the thorax. On each side of the head, behind and between the eyes and the median line, there is a very smooth and shining area, which is tumid in the middle. The rest of the head finely striate, except the clypeus, which is smooth, and the posterior and lateral margins above, which are strongly but sparsely punctured. Thorax above strongly and sparsely punctured, the posterior half of the mesonotum almost impunctate. Pronotum closely and fairly finely striate lengthwise, sides of epinotum sparsely striate and punctate, the punctures large. Nodes and abdomen smooth and shining, finely and very sparsely punctured.

Head high in the middle, sloping steeply downwards on each side of a longitudinal median area which extends from the clypeus to the posterior ocelli; behind the latter it is also fairly steep. The head is wider just in front of the eyes than it is behind them or across the clypeal portion, the occipital margin deeply emarginate, more angularly so than in the ♀, the lateral angles rounded. Eyes placed a little in front of the middle of the sides. Ocelli small and close together; for a short distance in front of the anterior ocellus there is a smooth and shining depression. Frontal carinae subparallel, extending back as far as the posterior ocelli. The scapes extend back equally as far. The

thorax is very compressed, as though it had been held on each side and pinched. It is therefore narrow above and much deeper than wide, the sides almost vertical. The pronotum is barely visible from above. The mesonotum and scutellum almost flat, except in front and behind, where they are slightly curved downwards. Seen from above, their outline forms an ellipse, the major axis of which is two and a third times longer than the minor. Dorsum of epinotum obsolete, the upper surface of the epinotum forming a steep and continuous line from base to apex. This upper surface is margined at the sides by a longitudinal ridge, excavated between them, more shallowly so above than below. The petiole resembles that of the ♀, but is narrower and longer. Seen from above, the 1st segment is pyriform, with a long stalk in front; the 2nd node campaniform, widest behind, and a little longer than wide. Abdomen narrowed towards the base, the basal margin concave. The 1st segment forms more than half the abdomen, and has above a semi-oval and flattened or depressed area. Wings with 1 cubital cell and 1 discoidal, the radial cell open.

The above descriptions of the ♂ and ♀ are drawn up from specimens lent to me by Dr. Brauns, who originally discovered the species.

“♂. 3.5 mm. Shining, brown, the mandibles, antennae and legs yellow, coxae and femora more yellowish-brown. The pilosity much less abundant than in the ♀. Mandibles and also the head fairly smooth, the cheeks with a few longitudinal striae, the sides of the head behind the eyes fairly finely and longitudinally rugulose. The pronotum and the lateral margins of the mesonotum in front of the tegulae finely rugose, mesonotum otherwise smooth; the scutellum finely and longitudinally rugose, with a more or less distinct longitudinal groove; the epinotum finely reticulate rugose. Wings as in the ♀. The smooth petiole like that of the ♀, but the 1st node is lower. Abdomen smooth. . . . Mandibles as in the ♂ and ♀, but narrower. The head, including the mandibles, is more or less pentagonal, the apex of the closed mandibles, the eyes and the posterior corners forming the rounded angles. The clypeus is moderately arched and arcuately produced in front, wide behind, not prolonged far back between the frontal carinae, the lateral portions having an angular posterior edge opposite the antennal sockets. Frontal carinae short, parallel and narrow, the sockets of the antennae being freely exposed. Antennae 10-jointed, the scape extending back almost to the posterior ocelli; the flagellum fairly long, the 1st joint about twice as long as wide, the 2nd three times as long as the 1st, the succeeding joints all longer than wide (in three out of the four examples in my possession, the 2nd joint is more or less fused with the

3rd). Eyes moderately large, placed in the anterior half of the head. Behind the eyes the head is gradually narrowed towards the posterior angles, the posterior margin above truncate (hardly concave), distinctly and arcuately emarginate below and at the occipital foramen. Thorax unarmed, the mesonotum not overhanging the pronotum in front. The Mayrian furrows become less distinct before the middle of the mesonotum and before their point of junction. In front of, and parallel to the posterior margin of the mesonotum, there is a curved transverse impression, which is probably present in the living insect, even if not so deep. The scutellum is fairly strongly convex lengthwise, higher than the mesonotum, less rounded behind than in *Tetramorium*. The dorsum of the epinotum is long and fairly narrow, with a median longitudinal groove, oblique, merging arcuately into the much more inclined declivity; the latter marginate at the sides, the margins becoming stronger below. Wings as in the ♀. Legs thin and fairly long. Petiole as in the ♀. Port Elizabeth (Dr. H. Brauns)."

R. TRANSVERSINODIS, Mayr. (Plate VIII, figs. 112, 112a, 113, 113a.)

Ann. K.K.N.H. Mus. Wien, vol. 16, p. 22, ♂, 1901.

♂. 3 mm. Brownish-ochreous; the tarsi, mandibles, and flagellum more reddish-yellow. Smooth and very shining. Sparsely and exceedingly finely punctured, the pubescent hairs arising from the punctures. Under a low magnification practically impunctate. Pubescence adpressed and very scanty, more abundant on the abdomen than on the head and thorax, longer and denser on the legs and antennae. The anterior angles of the head, between the eyes and antennal sockets, finely striate, much more finely so than in *globulinodis*. Very similar to that species, differing from it chiefly in the following characters:

The sides of the head are much more convex, the portion in front of the eyes narrowing gradually towards the clypeus. The posterior margin more deeply and widely emarginate, the posterior angles more prominent. The eyes are placed a little behind the middle of the sides. Frontal carinae shorter, wider apart and more divergent. Thoracic sutures faintly indicated above at the sides, obsolete in the middle. The mesonotum lacks the transverse impression which is present in *globulinodis*, and, seen in profile, the dorsum is not depressed between the meso- and epinotum. The chief distinction lies in the shape of the petiole. The 1st segment, seen in profile, has a short and vertical posterior face; the dorsal face is convex and passes

arcuately into the almost vertical anterior face. Seen from above, the nodal portion is much narrower, a little longer or as long as wide, the whole segment appearing gradually clavate. The 2nd segment is fairly convex lengthwise, much less so transversely, transversely oval, slightly more than twice as wide as long, and quite two and three-quarter times wider than the 1st.

♀ (hitherto undescribed). 3.4–3.5 mm. Brownish-black; the apical half of the abdomen paler, legs brown, paler at the articulations; tarsi and flagellum ochreous, mandibles reddish-brown. Shining, the abdomen and nodes a little less shining than the head and thorax. Club of antenna and the last two tarsal joints pubescent, the rest of the body entirely glabrous. The sculpture is very distinctive and remarkable. It consists of elongate, elliptical, and shallow pits, which have a silvery reflection, and give a false impression of containing flattened scale-like hairs, like those of *Tetramorium setuliferum*. However, under a high magnification (100 diameters) it can be seen that such scale-hairs are absent, the silvery appearance being due to the shape of the pits and their polished surfaces. This puncturation is fairly dense and regular on the head and abdomen, larger and more scanty on the thorax. It also extends over the legs and antennae, the pits becoming increasingly more abundant, narrower, and longer towards the apices of those parts, and near the ends of the limbs bearing fine, flattened, pubescent hairs.

Head much higher behind than in front, very convex lengthwise, the posterior margin widely concave, the posterior angles rounded and projecting prominently outwards and backwards. The vertex is narrow and convex transversely, not flat, as in *globulinodis* ♀; the sides very steep, much more so than in *globulinodis*, and shallowly concave above the posterior angles. Seen from above, the sides of the head, from the posterior angles forwards to the eyes, are straight or even a little concave, in front of the eyes moderately convex. The eyes are fairly large, placed a little in front of the middle of the sides of the head. Ocelli smaller than in *globulinodis*. Frontal carinae wide apart, short, not extending beyond the antennal sockets. Anterior margin of clypeus moderately convex; frontal area shallow and equilateral. Mandibles very convex externally, the masticatory margin denticulate, with a larger apical tooth. The scape extends back about as far as the anterior ocellus. Mesonotum and scutellum flat transversely, nearly so longitudinally. The outline of the two parts together, seen from above, is roughly oval, one and three-fifths longer than wide. The posterior half of the scutellum slopes down-

wards and is concave transversely. The margins of the mesonotum, in front and at the sides, are rounded and project a little over the vertical sides and front of the pronotum. The sides of the meso- and epithorax are also vertical. The epinotum is very deeply excavated from near its base above to its apex below, in such a way as to leave a narrow wall on each side. Seen from above, only the edges of the walls can be seen, so that the epinotum appears almost bispinose. The declivity is margined by the downward continuation of the walls and is vertical (in *globulinodis* the dorsum and declivity are oblique, and only feebly marginate at the sides).

First segment of the petiole very strongly compressed laterally, almost lamelliform except at the lower half behind, where it is a little wider. It is produced downwards and is deeper behind than in front, quite one and a half times deeper than long. Its dorsal surface is rounded transversely, very narrow, almost linear. The 2nd segment four times wider than long, and at least four times wider than the 1st, the anterior margin concave, narrower behind than in front. Basal half of the 1st abdominal segment depressed in the middle, the lateral angles thereby rendered prominent and forming a more or less elongate tubercle at each corner. Abdomen ovate, not much longer than wide, rather flat above. Wings hyaline, nervures very pale.

The structure of the nodes and epinotum may be made more apparent by reference to the figures on Plate VIII.

Port Elizabeth and Bothaville (Dr. H. Brauns); Pretoria, ♂♂ and ♀♀ (C. K. Brain); type of the ♀ in my collection. (S.A.M., R.M., G.A. colls.)

R. STEINI, Forel.

Ann. Soc. Ent. Belg., vol. 57, p. 122, ♂, 1913.

♂. 3.4-3.9 mm. Dark yellowish-brown, the posterior half of the head and the thorax darker, legs, antennae, and mandibles paler, the latter and the flagellum somewhat reddish. Very similar to *transversinodis*, but larger and darker, differing from it also in the following characters:

Very finely and sparsely punctured, the head also very finely rugulose. The pubescence longer and a little more abundant. The sides of the head are much more convex, the posterior margin less emarginate, the posterior angles less prominent and wider. Promesonotal suture obsolete, the meso-epinotal well defined. The dorsum of the epinotum is proportionately longer and more convex lengthwise, passing into the declivity by a much shorter and less oblique curve than in *transversinodis*. The 1st segment of the petiole,

seen from above, is much wider, more pyriform than clavate; the nodal portion is a little wider than long. The 2nd node is transversely oval, two and a half times wider than long and about twice as wide as the widest part of the 1st, hardly thinner at the sides than in the middle.

Ladismith, Cape Prov. (Dr. H. Brauns.) (S.A.M., R.M., G.A. colls.)

GENUS TETRAMYRMA, Forel.

Rev. Suisse Zool., vol. 20, p. 766, 1912.

Characters

♀. Antennae 12-jointed, club 3- or 4-jointed. Frontal carinae divergent, short, not forming scrobes. Lateral portions of the clypeus not ridged posteriorly, the median area more or less trapezoidal, produced fairly far back between the frontal carinae. Frontal area distinct. Mandibles triangular, 5-dentate. Thorax unarmed; the sutures visible but feeble. First node of petiole pedunculate, both nodes large and round. Femora thin at the base, moderately swollen from the basal fourth onwards.

♀. Antennae 12-jointed. Ergatoid. Eyes larger than in the ♀. Ocelli absent. A more or less distinct scutellum present. Nodes wider and less convex above. Abdomen dilated, larger than in the ♀. Pilose (pilosity absent in the ♀).

♂. Unknown.

T. BRAUNSI, Forel, (Plate VII, fig. 86.)

Loc. cit., p. 767, ♀.

Ann. Soc. Ent. Belg., vol. 57, p. 122, ♀, 1913.

♀. 5-6 mm. Black, thorax, nodes, and mandibles dark red, the nodes darkest, the bases of the femora and tibiae dark rusty red. Tarsi and antennae with a sparse and decumbent pubescence, the rest of the body glabrous. Subopaque. Head, thorax, and nodes coarsely rugoso-reticulate, the rugae emphasised longitudinally on the head and pro-mesonotum; on the nodes and epinotum the sculpture is finer and closer, although still fairly coarse. The spaces between the rugae is finely reticulate. Abdomen very finely, closely, and longitudinally striate, also partly reticulate. Legs and scapes sparsely punctate.

Head rectangular, a little longer than wide, slightly narrower in front than behind, the posterior angles rounded, the posterior margin moderately convex, the sides almost straight. Eyes fairly large, placed just in front of the middle of the sides. Median area of the clypeus longitudinally striate, somewhat produced in front, the anterior margin straight, with a longitudinal and shallow impression in the middle. Mandibles sharply striate and sparsely punctured, armed with 5 large and obtuse teeth, the external margin feebly convex. Frontal carinae not extending back beyond the level of the anterior margin of the eyes. Frontal area triangular, depressed, and shining. Scapes not quite reaching the posterior margin of the head; 4th-7th joints of the flagellum as wide as long, all the rest longer than wide. The wide pronotum has a distinct neck in front, the anterior margin above the latter very convex. In most specimens the pro-mesonal suture is very feeble, almost obsolete. The thorax is widest across the posterior third of the pronotum, behind that point it narrows gradually towards the meso-epinotal suture. Epinotum rounded. The dorsum of the thorax, seen in profile, forms two rounded bosses or convexities which are separated by a deep depression at the meso-epinotal suture. Epinotum unarmed, the dorsum widest in the middle, as long as the declivity, the latter not very steep, strongly and transversely rugose; an episternal lobe on each side below. Peduncle of the petiole ending in a small tooth below. The 1st node twice as long as its peduncle, subglobose, as wide as long, the anterior face nearly vertical. Second node wider than the 1st, nearly half as wide again as long, highest behind the middle, the sides rounded. Abdomen oval, truncate at the base.

♀. 6.5-7 mm. Ergatoid or pseudogyne. A fairly abundant pilosity is present, composed of pale, thin, erect, and whitish hairs. Abdomen and legs with a decumbent and fairly sparse pubescence. Eyes a little larger than in the ♂. Thoracic sutures more distinct; a scutellar portion of the mesonotum faintly defined. Dorsum of epinotum impressed transversely in the middle, the junction with the declivity more abrupt than in the ♂; these features are somewhat masked by the very coarse sculpture. Declivity wider than in the ♂. Nodes and abdomen wider than in the ♂, the former rather less convex above. The sculpture is even more coarse, and the rugae on the head diverge outwards towards the lateral angles behind. Otherwise like the ♂.

Willowmore, Cape Prov. (Dr. H. Brauns.) (S.A.M., R.M., G. A. colls.), type of ♂ in my collection.

TRIBE MERANOPLINI, Emery.

Including the following S. African genera: *Calyptomyrmes*, Emery; *Meranoplus*, Smith; and *Dicroopsis*, Emery.

GENUS CALYPTOMYRMEX, Emery.

Ann. Mus. Civ., Genoa, vol. 25, p. 147, 1887.

Forel, Mitth. N.H. Mus., Hamburg, vol. 18, p. 50, ♀, ♂, 1901.

Characters.

♀. Antennae 12-jointed, club 3-jointed, 2nd-8th joints of flagellum much wider than long. Scape thin at the base, flattened and dilated over the apical two-thirds. Clypeus narrow, the median area vertically truncate in front, the brow of the truncation strongly bidentate. Frontal carinae strong, with very deep and complete scrobes below. Eyes small. Pro-mesonotal suture obsolete, the meso-epinotal distinct. Thorax stout and short, the mesonotum feebly bidentate behind, the epinotum oblique, much lower than the mesonotum, also feebly bidentate. Petiole pedunculate anteriorly, both nodes transversely oval. Abdomen round, the 1st segment forming the whole of the dorsal surface. Pilosity partly composed of spatulate hairs.

The above characters of the ♀ refer only to our single species, *C. Arnoldi*, Forel.

“♀. This sex, as exemplified in *C. Schraderi*, Forel, an Australian species, does not differ much from the ♀. The eyes are rather small, the pronotum somewhat truncate in front, the epinotum bidentate. The thorax is not quite so wide as the head. The pilosity consists of spatulate and clavate hairs, as in the ♀.

“♂. Wings as in *Meranoplus*, 1 cubital and 1 discoidal cell, the stigma large and round, the radial cell open. Head relatively large, convex behind. Clypeus with lateral carinae, without teeth. Frontal carinae of the usual form, not forming scrobes.” Mayrian furrows present on the mesonotum. Nodes of petiole more or less round.

C. ARNOLDI, Forel. (Plate VIII, figs. 114, 114a.)

(*Dicroopsis*), Ann. Soc. Ent. Belg., vol. 57, p. 115, ♀, 1913.

♀. 2.6 mm. Reddish-brown, the thorax and nodes darker, more dark brown. Legs, antennae, and mandibles reddish-yellow. The colour is somewhat masked by the pilosity, which is of an ochreous colour, and consists of short clavate and spatulate hairs. The former

are erect, and are mainly confined to the margins of the frontal carinae and the legs (the shape of these and of the spatulate hairs is the same as in *Strumigenys*, see Plate VIII, figs. 114*a*, 117*a* and *b*). Head fairly closely and longitudinally rugose on the anterior half, becoming more reticulate-rugose on the posterior half, the spaces between the rugae finely reticulate, the scrobes very shallowly and very finely reticulate, almost smooth. Pro-mesonotum coarsely rugoso-reticulate, the spaces between more finely reticulate or rugulose. Epinotum, sides of thorax, and nodes finely and closely reticulate-punctate. Abdomen alutaceous, faintly shining, the rest of the body dull.

Head trapezoidal, considerably narrowed in front, the posterior angles widely rounded, the posterior margin straight or slightly convex. Frontal carinae widely divergent, dilated horizontally outwards, extending back as far as the posterior fourth of the head, where they curve downwards and then continue forwards as a fine line, forming the upper and lower margins respectively of deep and wide scrobes, which receive the whole of the folded scape and flagellum. The clypeus is narrow and projects forwards, its upper surface is depressed, slanting downwards, feebly carinate in the middle. The corners of the anterior margin of the upper surface are produced into sharp teeth, the space between the teeth strongly concave. Below the teeth, the front of the clypeus is vertical or even inclined slightly inwards, convex transversely. The teeth of the clypeus, seen from above, project well beyond the middle of the closed mandibles. The latter closely striate, sparsely punctured, armed with two sharp apical teeth, the rest of the masticatory margin merely denticulate. Frontal area triangular and shining. Eyes composed of about 10 or 12 facets, placed behind the middle of the sides and below the scrobe. Scape widened and flattened over the apical two-thirds; 2nd-8th joints of the flagellum very short, at least three times wider than long, the club acuminate, four-fifths longer than the rest of the flagellum. Pro-mesonotum wide, narrowed behind, as wide in front as it is long; pronotal shoulders narrowly rounded, prominent; posterior margin of mesonotum furnished with a small tooth on each side (these are not easily seen, being partly obscured by the spatulate hairs). Dorsum of epinotum nearly flat, quadrate, as wide as long, very oblique, armed with two small, pointed, and triangular teeth. The declivity a little shorter than the dorsum, fairly steep, marginate at the sides, with an episternal lobe on each side below. The peduncle of the petiole is as long as the node. The latter two-thirds wider than long, rounded above, the anterior and posterior faces vertical, the posterior face feebly convex transversely and concave

from above to below. Seen from above, the node is transversely oval. Second node also transversely oval, as wide as the 1st, two-thirds wider than long, the ventral surface armed with a small tooth on each side in front. Abdomen truncate in front, the sides very convex, a little longer than wide.

Bulawayo, under stones, very rare. Occasionally found singly in nests of Ponerine ants, where its presence is probably accidental. I have never found more than half a dozen together in one place. It is a very slow moving ant, and on account of its colour not easily seen even at close quarters. The 2nd-8th joints of the flagellum are so exceedingly short that they can be resolved only under a magnification of at least 80 diameters, and it is therefore not surprising that this species was originally placed by Dr. Forel under *Dicroaspis*.

(S.A.M., R.M., G.A. colls.)

GENUS DICROASPIS, Emery.

Ann. Soc. Ent. Belg., vol. 52, p. 185, 1908.

Characters.

♂. Antennae 11-jointed, club 3-jointed, the scape swollen near the middle. Clypeus as in *Calyptomyrmex Arnoldi*. Deep scrobes present. Head much narrower in front than behind, more or less triangular. Pro-mesonotal suture absent, meso-epinotal distinct. Epinotum armed with two small teeth. Abdomen much longer than wide, as in the genus *Cataulacus*. Spatulate hairs usually present.

♀. Scutellum overhanging the epinotum. Nodes wider and abdomen longer than in the ♂. Otherwise similar, except the usual sexual differences in the structure of the thorax, etc.

D. CLAVISETA, Santschi.

Göteborgs Kungl. Vetensk. och Vitterh. Handl. XV, 2, p. 27, ♂, 1914.

“ ♂. 2 mm. Brownish-red. Head and dorsum of thorax darker. Abdomen blackish-brown. Dull. Head and pro-mesonotum coarsely and longitudinally rugose. The rugae are slightly divergent towards the back of the head, and convergent behind on the thorax. The spaces between the rugae are more finely rugose and covered with large punctures, shining at the bottom, each one giving rise to an erect clavate hair. The sides of the thorax, the epinotum and both nodes finely reticulate and punctate. On the thorax and abdomen the clavate hairs are fairly long and outstanding, also erect but shorter on

the head, very short and oblique on the legs. Pubescence indistinct on the body, abundant on the antennae, sparse on the legs. Head a little longer than wide, the hind margin feebly emarginate, the posterior angles rounded; the sides straight, converging towards the mouth. Eyes placed in the middle of the sides, composed of 8 or 9 facets (3 to 4 along the diameter). Clypeus reticulate, fairly shining, subvertical, produced forwards into a bidentate lobe strongly emarginate in the middle. Frontal carinae as in *D. cryptocerus*, Emery, widely but shallowly emarginate in the middle of the sides. Mandibles smooth, feebly punctured, fairly shining, with 2 apical teeth, followed by 4 or 5 denticles. Scape cylindrical, slightly dilated in the apical half. First joint of the flagellum as long as the four following joints taken together; 2nd-6th joints three times wider than long. Last joint of the club longer than the two preceding united, the latter shorter than wide. Front of the pronotum transverse, the sides convergent behind, submarginate and only feebly arcuate. Dorsum of the epinotum strongly marginate, concave transversely, one-third longer than wide and one-third longer than the declivity. The angles of the epinotum armed with a small tooth. First node nearly twice as wide as long or as high, convex above, the two faces vertical, the anterior face almost as long as the peduncle, the upper margin of the latter very oblique in front. Second node transversely oval, half as wide again as the 1st, nearly twice as wide as long. Much wider and more convex above than below, furnished below with a blunt tooth. Abdomen ovoid, slightly dilated in front."

Pietermaritzburg (Traegaordh).

GENUS MERANOPLUS, Smith.

Trans. Ent. Soc. London, series 2, p. 224, 1854.

Characters.

♂. Antennae 9-jointed, the club 3-jointed, the scape swollen in the apical half. Distinct and deep scrobes present, receiving the whole of the folded antennae. Eyes prominent and convex. Head usually very steep in front. Frontal carinae wide apart, divergent, prolonged backwards as the upper boundaries of the scrobes. Thorax generally short; the pro-mesonotum forms a single disc, and overhangs the epinotum behind. The anterior and posterior angles of the pro-mesonotum usually bidentate or bispinose. Epinotum vertical or very steep, generally bispinose, sometimes unarmed, the dorsum and declivity not differentiated, the upper surface of the epinotum forming

a single plane. First node usually cuneiform. Second node cuboid or globose. Pilosity long, abundant and woolly.

♀. Antennae 9-jointed. Pro-mesonotum not spined nor dentate. Wings with 1 cubital, 1 discoidal and 1 closed radial cell.

♂. Antennae 13-jointed, the scape short, the 2nd joint of the flagellum not much longer than the scape. Mayrian furrows usually well defined. Nodes flattened, not cuneiform, sometimes with the anterior angles subdentate.

The ants of this genus are slow and timid insects, often feigning death when handled. The nests of all our S. African species are placed in the ground, usually with several entrances, which are surrounded by irregular masses of excavated material. As far as my observations go, they appear to be mainly carnivorous in their diet, but are also fond of sugary substances, and attend aphids and coccids on plants.

Key to the ♂ ♀ of Meranoplus.

- (4) 1. Epinotum unarmed.
- (3) 2. Posterior margin of mesonotum feebly festooned . . . *inermis*, Emery.
- (2) 3. Posterior margin of mesonotum deeply festooned . . . *nanus*, André.
- (1) 4. Epinotum armed.
- (10) 5. Mesonotum with short teeth at the posterior angles, much shorter than the epinotal spines.
 - (7) 6. First node of petiole bispinose above *spininodis*, Arnold.
 - (6) 7. First node of petiole unarmed above.
 - (9) 8. Lateral margins of pro-mesonotum deeply excised between the pro- and mesonotum, strongly lobate on each side of the excision; head longitudinally striate anteriorly *excisus*, Arnold.
 - (8) 9. Lateral margins of the pro-mesonotum feebly excised, hardly lobed on each side of the excision; head reticulate-rugose in front and behind *Peringueyi*, Emery.
- (5) 10. Mesonotum spined at the posterior angles, the spines as long as those of the epinotum.
 - (12) 11. Abdomen dull *Simoni*, Emery.
 - (11) 12. Abdomen more or less shining.
 - (14) 13. Pro-mesonotal suture visible, linear var. *suturalis*, Forel.
 - (13) 14. Pro-mesonotal suture obsolete.
 - (16) 15. Abdomen very shining; pro-mesonotum paler than the head and abdomen, more or less yellowish-red var. *springvalensis*, Arnold.
 - (15) 16. Abdomen moderately shining; thorax as dark as the rest of the body, or nearly so var. *nitidiventris*, Mayr.

I have not seen *inermis*, Emery, which has the epinotum unarmed, like the race *nanior*, Forel, of *nanus*, André. I have some specimens which have been named as this race by Dr. Santschi, but they do not

agree in size with Forel's description, being 2.5 mm. long instead of 1.9. The two species, *inermis* and *nanus* with its varieties, are evidently very closely allied, and in the circumstances, it appears safest to repeat here the authors' original descriptions.

M. INERMIS, Emery.

Ann. Soc. Ent. France, vol. 63, p. 41, ♂, 1895.

"♂. 2-2.2 mm. Fuscous, with an abundant but not long pilosity, scantier on the legs and thorax than elsewhere; head and thorax coarsely reticulate, less shining than the abdomen, which with the petiole is very shining and punctate; disc of pro-mesonotum transverse, the anterior angles acute, obtusely 6-lobate posteriorly; epinotum unarmed; nodes of petiole cuneiform."

"Very closely allied to *M. nanus*, André, from which it differs more especially by the absence of the epinotal spines. The pro-mesonotum is a little shorter, the festoons or lobes of the posterior margin less prominent. The sculpture and pubescence are identical. The nodes of the petiole are still more squamiform. Makapan (Simon)."

M. NANUS, André.

Rev. d'Ent., 2, p. 55, ♂, 1892.

"♂. 2.75-3.25 mm. The pro- and mesonotum together form a transverse rectangle, much wider than long; the anterior angles of the pronotum acute, the sides straight, separated from the mesonotum by narrow and deep lateral excisions, and by a suture which is superficial but distinct. Mesonotum shorter than the pronotum and of the same width; its posterior angles are dentiform but blunted, and its posterior margin bears 4 short, obtuse and triangular teeth, of which the two exterior are a little larger than the internal pair. Epinotum armed with 2 small, acute and spiniform teeth. Petiole short, its two segments having the form of fairly high scales; the scale of the 1st segment, seen from the side, cuneiform, the summit very thin; the 2nd segment is hardly thicker at the base than at the summit, which is less trenchant and rounder. More or less dark reddish-brown, the legs and antennae testaceous, the abdomen nearly black behind. Head and thorax fairly shining, fairly strongly reticulate-rugose; clypeus, frontal area and the vertical face of the epinotum nearly smooth; 1st abdominal segment fairly coarsely and shallowly reticulate-punctate, the other segments nearly smooth. Pilosity whitish, long and abundant all over. Gaboon."

Race NANIOR, Forel.

Ann. Mus. Nat. Hong., vol. 5, p. 12, ♀, 1907.

“♀. 1.9 mm. Apart from its smaller size, this form differs from the type of the species by its sculpture, which is much more feeble everywhere, by the more obtuse lobes or denticulations of the margin of the thorax, by the thinner and more squamiform nodes, and by the shorter thorax, which is one and three-quarter times wider than long. The head is narrower than the thorax (equally wide in the type species). Epinotal spines entirely absent, the epinotum being absolutely unarmed. The woolly and abundant pilosity is a little shorter. Mto-ya-kifaru, East Africa.”

Specimens taken near the Victoria Falls have been named for me by Dr. Santschi as being of this race. Excepting their greater size, they agree well with the above description, but not more so than they do with Emery's description of *inermis* and with his figure of the same. Emery does not mention the pro-mesonotal suture, which is well defined in these specimens, and ends at each side in a deep pit, which appears to have been formed by the fusion of the opposed outer angles of a former excision.

(S.A.M., R.M., G.A. colls.)

M. SPININODIS, n. sp.

♀. 2.7-2.9 mm. Head, thorax, and nodes yellowish-brown, abdomen dark brown, legs, antennae, and mandibles ochreous-yellow. Pilosity pale yellowish, fairly long and abundant. On the legs it is short, oblique, and intermixed with a sparse pubescence. Head longitudinally rugose, the posterior fourth reticulate. Scrobes deep, smooth, and shining, faintly and vertically striate over their posterior half. Mandibles longitudinally striate, quadridentate. Thorax and 2nd node rugoso-reticulate, the reticulations on the node closer and finer than on the thorax. Declivity of the epinotum and the 1st node smooth and shining. Head and thorax moderately shining between the reticulations. Abdomen nitidulous, very finely reticulate or alutaceous; here and there the reticulations are closer and stronger, forming more or less rosette-like points. Head as wide behind as long, not much narrowed in front, the posterior margin convex, the posterior angles sharp. Eyes moderately large, placed behind the middle of the sides. The frontal carinae and the scrobes extend back as far as and end at the posterior angles. Median area of clypeus margined laterally by a raised line or carina, between them

are 2 or 3 shorter lines; the anterior margin is straight, slightly produced forwards. Club of antennae as long as the rest of the flagellum. Pro-mesonotum nearly one and two-thirds wider than long, not much wider in front than behind, only very slightly narrowed behind the pronotal region, shallowly incised in front of the mesonotal teeth. The latter are fairly acute, subparallel, a little longer than their basal width. The epinotal spines are very long, quite two and a half times longer than the mesonotal, and two and a half times longer than their width at the base, subparallel, acute, directed obliquely upwards. They are placed very close to the posterior margin of the mesonotum, so that the clathrate space between the latter and their bases (*i. e.* the dorsum of the epinotum) is very short.

First node of petiole cuneiform, the anterior face vertical, the posterior face nearly so; the trenchant dorsal edge of the node bears on each side a sharp and vertical spine, a little longer than wide at the base. The 1st node is slightly wider than the 2nd. The latter is subglobose; seen from the side it is somewhat flattened above, wider above than below, the anterior face inclined forwards, obtusely angulated below. Abdomen deeply emarginate at the base at its junction with the petiole.

This is a very distinct species, easily distinguished from all our other species by the bispinose 1st node of the petiole and the very long epinotal spines.

Hillside, Bulawayo. The entrance to the nest is a very small hole surrounded by a tiny mound of earth. (S.A.M., R.M., G.A. colls.); type in my collection.

M. excisus, Arnold.

Proc. Rhod. Sc. Asscn., vol. 13, part 3, p. 29, ♀, 1914.

♀. 3-3.3 mm. Head, thorax, petiole, legs, and antennae yellowish-brown, the head, scape, and club of antenna a little darker, abdomen brownish-black. The pilosity is very dense and composed of long pale hairs, more abundant than in *Simoni-nitidiventris*. The legs and antennae more sparsely clothed with short and oblique hairs. Head and clypeus longitudinally rugose, the spaces between the rugosities smooth and slightly shining. Thorax reticulately rugose, the rugae emphasised longitudinally, the spaces between them slightly shining. Face of the 1st node of the petiole smooth and shining, the 2nd node reticulate-rugose above. First segment of the abdomen shining, very finely rugose and feebly punctured. Legs smooth and moderately shining.

Head very little wider behind than in front, as long as wide. Eyes very convex and prominent, placed a little behind the middle of the sides. Clypeus subtriangular, wider behind than in front, the anterior margin slightly convex, the posterior margin not clearly defined. Mandibles longitudinally and sharply striate, armed with 5 small teeth, the apical tooth subacute and larger than the rest. Antennal scrobes smooth and shining, extending back almost to the posterior angles of the head. Scapes dilated in the apical half, as long as flagellum less the apical joint. First joint of flagellum as long as wide, 3rd-5th joints wider than long. The anterior margin of the pro-mesonotal disc convex, produced at the anterior corners into a sharp angle on each side; on each side, in the middle, the margin of the disc is semicircularly and rather abruptly excised, and in front and behind this excision the margin is slightly concave. The posterior angles of the disc are produced into 2 small acute teeth, which are a little longer than they are wide at the base. Between the lateral teeth the posterior margin also bears 2 smaller triangular teeth. The epinotum is margined laterally and produced on each side into a sharp spine, which is at least twice as long as it is wide at the base. First node of the petiole cuneiform, almost linear above, as wide at the base as it is high, the anterior face vertical; 2nd node globose, as wide as the 1st. Sides of the thorax and epinotum transversely and sparsely rugose.

Estecourt, Natal (R. C. Wroughton). (S.A.M., R.M., G.A. colls.); type in my collection.

M. PERINGUEYI, Emery. (Plate VIII, figs. 115, 115a.)

Bull. Soc. Ent. Ital., vol. 18, p. 365, ♀, 1886.

♀. 2.7-4.2 mm. Black; tarsi and antennae more or less brownish-black. Head and thorax subopaque, nodes and abdomen dull, legs slightly shining. Pilosity abundant and woolly, composed of fairly long whitish hairs, erect on the body, oblique, less dense and shorter on the legs and scapes. Flagellum moderately pubescent. Head, thorax, and nodes coarsely reticulate-rugose, the spaces between the reticulations slightly shining and roughened; the rugae more or less longitudinal on the head, on the nodes finer and closer. The abdomen is very closely and fairly finely reticulate-punctate. Epinotum shallowly rugulose and shining above, striate laterally between the epinotal spines and the posterior margin of the mesonotum. Sides of thorax irregularly and shallowly rugose.

Head, excluding the mandibles, as long as wide behind, narrowed

gradually from back to front, the posterior margin convex, the posterior angles rounded. Eyes very convex, large, placed behind the middle of the sides. Scrobes extend back almost as far as the occipital margin, shining and nearly smooth, with a few vertical striae posteriorly. Frontal carinae very divergent. Median area of clypeus longitudinally rugose, wider behind than in front, the sides somewhat raised, the anterior margin convex. Mandibles closely and fairly strongly striate, armed with 5 stout teeth. Pro-mesonotum in front as wide as the head, one-fifth wider than long, the anterior angles acute and dentiform. Lateral margins of pronotum feebly concave; there is a slight excision between the pro- and mesonotum, the suture obsolete. Mesonotum as long as the pronotum, its lateral margins slightly concave, the posterior lateral angles armed with a tooth, which is hardly longer than wide at the base; between the lateral teeth, the posterior margin is produced into two much smaller and triangular teeth, the space between them concave. Epinotum armed with two acute, divergent spines, much longer than their basal width, and longer than the mesonotal teeth. The upper face of the epinotum is shallowly concave transversely, and nearly vertical. First node of petiole cuneiform, the anterior and posterior faces meeting in a trenchant edge above, the ventral surface convex and bearing a small tooth in front. Second node globose, a trifle longer than wide, not wider than the 1st. Abdomen globose, emarginate at the junction with the petiole, much wider than the thorax.

Cape Prov. (Peringuey); Willowmore, Cape Prov. (Brauns).

The specimens from Willowmore measure 4-4.2 mm. in length, greatly exceeding in size the types of Emery, which measure 2.7-3.5 mm. (S.A.M., R.M., G.A. colls.)

M. SIMONI, Emery.

Ann. Soc. Ent. France, vol. 63, p. 41, ♂, 1895.

“♂. 3 mm. Fusco-ferruginous, abdomen piceous; head, dorsum of thorax and petiole coarsely reticulate, the abdomen punctulate, dull, evenly clothed with a long pilosity; pre-mesonotal suture obsolete, anterior angles of pronotum acutely produced, the posterior margin of mesonotum deeply emarginate, with a strong, large and acute spine on each side; epinotum bispinose; 1st node cuneiform, 2nd node subglobose. Vrijburg (Simon).”

“In the shape of the thorax the species approaches *M. Magrettii*, André, from which it differs more especially by the greater development of the mesonotal teeth, which form strong spines, longer than

they are wide at the base. Between them, the posterior margin is deeply and arcuately emarginate, with a little and deeper excision in the middle. The anterior angles of the pronotum are acute and produced forwards; the lateral margins of the pronotum converge gradually and almost in a straight line, from the anterior angles backwards to the position of the suture, where they are abruptly constricted. The sides of the mesonotum converge in the same way as far as the apex of the spines. The head and thorax are very sharply reticulate-rugose; on the head the sculpture tends to form longitudinal ridges, especially in front, but this arrangement is less noticeable than in *Magrettii*. The surface of the head is, moreover, also finely punctulate. The abdomen is very densely punctulate and dull, and sprinkled with small piligerous punctures. The hairs are long, and all of about the same length."

Race *SUTURALIS*, Forel.

Ann. Soc. Ent. Belg., vol. 54, p. 424, ♀, 1910.

"♀. 3-3.3 mm. Head and abdomen brown; thorax, petiole and limbs reddish. Clypeus without the 2 very small teeth in front which are to be seen in the race *nitidiventris*, Mayr. The sides of the thorax are emarginate between the pro- and mesonotum, and the pro-mesonotal suture is visible as a transverse line. Mesonotal spines much wider, longer and more robust than in the race *nitidiventris*, longer than the thin spines of the epinotum. Otherwise identical; abdomen shining as in *nitidiventris*. Natal (Haviland)."

(S.A.M. coll.) The reticulations on the pro-mesonotum are much smaller than in *nitidiventris*.

Race *NITIDIVENTRIS*, Mayr.

Ann. K.K.N.H. Mus. Wien, vol. 16, p. 26, ♀, 1901.

♀. 3.1-3.6 mm. Brownish-black, thorax and nodes dark reddish-brown, legs dark brown, bases and apices of the femora and tibiae, the tarsi, mandibles and the first five joints of the flagellum paler, more or less ferruginous. The anterior three-fourths of the head longitudinally rugose, becoming more reticulate posteriorly, the posterior fourth reticulate. Epinotum irregularly rugose and partly reticulate between the spines and the posterior margin of the mesonotum. Abdomen moderately shining, very shallowly, closely and finely reticulate, more strongly reticulate over the basal third. The thorax is duller than in

the type of the species, but nevertheless fairly shining between the reticulations. The posterior margin of the mesonotum lacks the little median excision which is present in the type. Meso- and epinotal spines equal in length, but the latter are thinner and more acute than the former, which are slightly curved upwards at the apex. Otherwise like the type of the species,

♀. 6.1 mm. (hitherto undescribed). Colour as in the ♂, but the scutellum, epinotum, and petiole more or less dark red or reddish-brown. Sculpture like that of the ♂, but the superimposed reticulations on the base of the abdomen are stronger than in the ♂, and the meshes more elongate. Eyes not much larger than in the ♂, the ocelli small and depressed. Pronotum very little exposed above in the middle, more exposed at the sides, the shoulders subangular. Mesonotum moderately convex in front, rather flat behind, one-third wider across the tegulae than long. Scutellum subtriangular, the sides feebly convex, narrowly rounded behind, projecting somewhat over the very short metanotum. Dorsum of epinotum obsolete between the teeth. The latter are triangular, acute, as long as wide at the base; the declivity vertical, smooth and shining. Nodes as in the ♂. Abdomen emarginate at the base, ovoid, longer than wide. Wings rather long (the front wing 6 mm. long), tinged with yellow, the nervures and stigma brownish-yellow. Otherwise like the ♂.

♂. 5.3 mm. (hitherto undescribed). Black, the articulations of the legs reddish, the tarsi, antennae and mandibles pale dirty yellow. Head, thorax and nodes slightly shining, abdomen very shining. Pilosity thinner, less abundant and less woolly than in the ♀. Head and thorax very coarsely reticulate-rugose, the rugae becoming more longitudinal on the posterior third of the mesonotum; epinotum longitudinally rugose above, the declivity transversely striate, the sides of the thorax and epinotum more or less rugoso-striate. Nodes finely striate longitudinally, abdomen smooth except at the extreme base round the articulation with the petiole, where it is fan-wise striate. Seen from the side, the head is almost angular above at the ocellar region, the anterior and posterior surfaces falling steeply downwards from that point. The head is wider than long, widest across the eyes, the outline behind the eyes almost semicircular. Eyes very large and hemispherical, occupying the anterior half of the sides of the head; the ocelli large and prominent. Mandibles small, elongate, with an acute apical tooth and minutely denticulate behind. Scapes short, half as long as the distance between their sockets and the anterior ocellus; 1st joint of flagellum slightly longer than wide, the 3rd and following joints all somewhat swollen and thicker at their basal third. Meso-

notum very convex in front, hiding the pronotum almost entirely from above. The scutellum is very convex lengthwise, and is separated from the mesonotum by a deep and clathrate groove. Dorsum of epinotum very oblique, twice as wide as long, sharply marginate at the sides, a little longer than the vertical declivity. Both segments of the petiole somewhat flattened dorso-ventrally, wider than deep. The 1st segment, seen from above, more or less trapezoidal, almost as long as wide in front, convex and widest in front, the anterior lateral angles acute and produced. Second segment like the 1st but shorter, the anterior margin less convex transversely. First abdominal segment widened towards its apex. Wings as in the ♀ but shorter. Legs fairly long and slender.

S. Rhodesia, fairly common on the granite and schist formations. Types of ♀ and ♂ in my collection. (S.A.M., R.M., G.A. colls.)

Var. *SPRINGVALENSIS*, n.v.

♀. 3.1 mm. Head and abdomen very dark brown, the base of the latter a little paler. Thorax and nodes yellowish-red. Legs and antennae brownish-yellow, the scape and club brown. This variety differs from the description of the type of the species only in the almost smooth and very shining abdomen. From the race *nitidiventris* it may be distinguished by the smaller size, paler thorax, and the much thinner epinotal spines.

Springvale, S. Rhodesia. (S.A.M., R.M., G.A. colls.); type in my collection.

TRIBE DACETINI, Forel.

Including the following genera: *Strumigenys*, Smith; *Microdaceton*, Santschi; and *Epitritus*, Emery. All the species are easily recognised by the shape of the head, which is strongly cordate and often deeply emarginate behind.

GENUS *STRUMIGENYS*, Smith.

Journ. Ent., I, p. 72, 1860.

Characters.

♀. Antennae 6-jointed, club 2-jointed and usually much longer than the rest of the flagellum. Head cordate, narrowed considerably in front, and higher behind than in front, the posterior margin often

deeply emarginate. Mandibles elongate, the internal and external margins often much longer than the masticatory, which is generally armed with acute teeth. A complete scrobe present. Eyes small and placed low down on the sides. Frontal carinae widely divergent, forming the upper boundary of the scrobes. Thorax widest in front, narrowed laterally and depressed above at the meso-epinotal suture, both thoracic sutures more or less defined. Epinotum often bidentate or bispinose. Declivity of epinotum often furnished with a foliaceous or membranaceous margin on each side. Petiole generally covered, at least at the sides, with a spongy mass of material, probably formed by a coalescence of spatulate hairs. First segment of petiole with the peduncular and nodal portions distinct; 2nd node wider than the 1st, transverse. Abdomen generally very convex below, flattened above. Legs fairly long and slender, the middle and posterior tibiae without calcaria. Pilosity usually composed of clavate and spatulate hairs.

♀. Like the ♂, except the usual sexual differences in the structure of the thorax. Eyes larger than in the ♂; ocelli present. Wings with an open radial cell and one median cell, the cubital and discoidal cells absent.

♂. Antennae 13-jointed.

Distribution. Both hemispheres.

Key to the ♂♀ of *Strumigenys*.

- (14) 1. Mandibles distinctly toothed.
- (11) 2. Mandibles armed with 3 or 4 teeth near the apex; all, or at least three of them very long, acute and spiniform.
- (10) 3. Mandibles half as long as the head, or very nearly so.*
- (5) 4. Last joint almost twice as long as the rest of the flagellum.
Traegaordhi, Santschi.
- (4) 5. Last joint not more, or less than one-third longer than the rest of the flagellum.
- (7) 6. Sides of the head very convex *irrorata*, Santschi.
- (6) 7. Sides of head not very convex, obliquely rectilinear or slightly concave in the median third.
- (9) 8. Mesonotum distinctly depressed behind; dorsum of epinotum horizontal *Arnoldi*, Forel.
- (8) 9. Mesonotum not depressed behind, merely feebly convex over its whole length; dorsum of epinotum oblique *Havilandi*, Forel.
- (3) 10. Mandibles distinctly less than half the length of the head.
Havilandi, race *Marleyi*, Arnold.

* N.B.—In this key, and in the subsequent descriptions, the head is measured along the median line, from the anterior margin of the clypeus to the middle of the occipital margin. The measurement of the mandibles excludes the portion hidden beneath the clypeus.

- (2) 11. Mandibles with numerous small and distinct teeth, not spiniform.
- (13) 12. Colour dark ochreous; anterior margin of clypeus shallowly concave; 2nd and 3rd joints of flagellum as long as wide . *emarginata*, Mayr.
- (12) 13. Colour dark yellowish-brown; anterior margin of clypeus straight; 2nd and 3rd joints of flagellum wider than long . *transversa*, Santschi.
- (1) 14. Mandibles practically edentate, the masticatory margin being very long and furnished with minute denticulations which are visible only under a very high magnification.
- (16) 15. Pronotum dull, reticulate-punctate.
Escherichi, Forel, race *boerorum*, Santschi.
- (15) 16. Pronotum shining, almost smooth.
- (18) 17. 1.7 mm. long; dorsum of epinotum flat *Simoni*, Emery.
- (17) 18. 2.1-2.4 mm. long; dorsum of epinotum convex.
Escherichi, race *limbata*, Forel.

S. TRÆGAORDHI, Santschi.

Göteborgs Kungl. Vetensk. och Vitterh. Handl. XV, 2, p. 28, ♀, 1914.

“ ♀. 2 mm. Dark reddish-yellow, sometimes brownish; the middle of the abdomen brown. Mandibles, antennae, and legs yellowish. Dull. Reticulate-punctate. The front of the 2nd node and the abdomen smooth and shining, except a few striae on the base of the latter. Pilosity spatulate, elongate, and abundant, symmetrical and oblique on the sides of the head and the inferior margin of the scape; on the latter there are 6 or 7 hairs directed outwards. On the thorax there are only short, erect, and truncate hairs, together with 4 or 6 much longer and clavate hairs; these occur again more abundantly over the whole abdomen. Pubescence fine and more or less decumbent, sparse on the head and thorax, more abundant on the mandibles, antennae, legs, and abdomen. Head one-fifth longer than wide, emarginate behind, the posterior angles widely rounded. Eyes with 3 or 4 facets. The scape, very little dilated, reaches the posterior fourth of the head, as also the scrobe. Fourth joint of flagellum distinctly longer than the 1st; 2nd and 3rd joints wider than long; 5th joint nearly twice as long as the rest of the flagellum. Mandibles linear, slightly curved, with 4 teeth, of which 3 are spiniform and subequal, 2 apical, and 1 placed at the distal third of the mandibles. The 4th tooth is smaller, placed between the innermost and the apical pair, separated by a wide interval. Pronotum twice as wide as long, marginate and arcuate in front, the anterior angles slightly prominent. The pro-mesonotal suture not very distinct. Mesonotum constricted and impressed in its middle, its anterior half forming with the pronotum a fairly strong convexity. Meso-epinotal suture well defined. Dorsum of epinotum marginate, narrower in front than

behind, and on the same level as the posterior half of the mesonotum. Epinotal spines a little longer than their basal width, as long as one-third of the interval between them. Declivity of epinotum concave, margined at the sides with a band of spongy tissue. First node higher and wider than long, rounded at the summit, which, seen from above, has a transversely rectangular shape, barely arcuate anteriorly. The anterior face is hardly convex, oblique, and a little shorter than the dorsal face. Second node twice as wide as long, convex in front, nearly straight behind. A spongy mass covers the lower surface and also the sides of the petiole.

“ Pietermaritzburg and Sweetwaters, Natal. (Traegaardh).”

S. IRRORATA, Santschi.

Loc. cit., p. 29, ♀.

“ ♀. 1.5 mm. Reddish-yellow. Antennae and legs of a paler yellow. Finely reticulate-punctate. Dull. Nodes and abdomen smooth and shining, except a few striae at the base of the latter, and some longitudinal striae on the pronotum. Head clothed with spatulate hairs, short and white; forming a row on the lower margin of the scape and directed outwards, also on the margin of the clypeus. Pronotum also with spatulate hairs, but less abundant. In addition, there are also some long hairs, with or without clavate ends. Mandibles, legs, and antennae fairly pubescent. Head one-sixth longer than wide, emarginate behind, the sides very convex. Eyes with 4 or 5 facets. The scape and its scrobe extend a little beyond the posterior fourth of the head, the scape fairly dilated. First and 4th joints of the flagellum subequal, the 4th wider than the 1st, the 2nd and 3rd wider than long, the last joint one-fourth longer than the rest of the flagellum. Mandibles linear and moderately curved, distinctly shorter than half the length of the head, with 3 long teeth feebly incurved above, the 3rd placed at the distal fourth of the mandible, the teeth crossing when the mandibles are closed. Pronotum (without the neck) twice as wide as long, marginate and arcuate in front, the shoulders rectangular, well defined but obtuse; the sides straight, submarginate and convergent behind. Pro-mesonotal suture distinct, concave behind. Mesonotum twice as long as wide in the middle, twice as wide in front as behind, submarginate. Epinotum marginate, the dorsum narrower in front, a little longer than it is wide behind. Epinotal spines as long as they are wide at the base, nearly as long as one-third of the interval between them. Declivity margined with a band of spongy tissue. First node

obtusely angular, wider than long, more convex transversely in front than behind. The anterior face straight and inclined, a little shorter than the peduncle. Second node two and a half times wider than long, feebly emarginate in front, surrounded by a large mass of spongy tissue which extends below the 1st node.

“Lake Sibayi, Zululand. (Traegaordh).”

S. ARNOLDI, Forel. (Plate VIII, figs. 117, 117a-d.)

Ann. Soc. Ent. Belg., vol. 57, p. 114, ♀, 1913.

♀. 1.8 mm. Reddish-ochreous; legs, antennae, and mandibles a little paler. Head dull, very densely reticulate-punctate. Dorsum of thorax and the 1st node subopaque and reticulate-punctate, but much more shallowly than the head; the pronotum longitudinally and irregularly striate in addition. Sides of thorax, 2nd node, and abdomen smooth and shining. The abdomen with 4 or 5 strong and oblique striae on each side of the base, extending beyond the basal third of the 1st segment. Legs and scapes closely reticulate-punctate and dull. Mandibles rugulose. Pilosity on the head composed of whitish-yellow spatulate hairs (see fig. 117b), fairly abundant and evenly disposed. A row of 7 hairs, directed outwards, lies on the outer margin of each scape. The pilosity of the thorax, nodes, and abdomen very sparse and irregular, composed of long clavate hairs (see fig. 117a). Femora and tibiae more sparsely pilose, the hairs smaller and more decumbent and less distinctly spatulate. Mandibles, tarsi, and flagellum with a sparse decumbent pubescence.

Head, excluding the mandibles, one-fifth longer than wide (or including the posterior lateral lobes, two-fifths longer), a little more than twice as wide at its greatest width as it is across the anterior margin of the clypeus; fairly convex at the sides over the posterior third, almost parallel-sided in front, the posterior margin concave, deeply and widely emarginate. Scrobes deep, distinctly margined above and below, and divided in the basal half by a strong and longitudinal ridge. Eyes small, composed of 4 or 5 facets, placed below the lower margin of the scrobe and not visible from above. Clypeus triangular, equilateral, the anterior margin straight. Frontal carinae convex outwardly above the antennal sockets, thence widely divergent. First and 4th joints of the flagellum subequal, 2nd and 3rd wider than long, 5th joint one-third longer than the rest of the flagellum. Mandibles linear, half as long as the head, almost parallel, feebly convex externally, armed with 4 long and spiniform teeth. Two of these subequal and placed at the apex, the innermost at about

the distal third; between the latter and the apical pair lies a smaller tooth. Pronotum submarginate at the sides, feebly carinate in the middle, a little longer than wide, the anterior margin very convex transversely, sloping downwards and forwards. Promesonotal suture obsolete above. Mesonotum longer than wide, the posterior half narrower than the anterior and depressed. The dorsum of the epinotum a little longer than wide, feebly convex lengthwise, merging by a short curve into the declivity. The latter is margined on each side by a spongy band, which reaches the lower edge of the epinotal spines. The latter are longer than their basal width, nearly as long as the interval between them. Peduncle of the petiole longer than the node; the latter cuboid, as wide as long, a little wider behind than in front. Second node transversely oval, twice as wide as the 1st, two-thirds wider than long. Both nodes margined behind and below (including the peduncle) with spongy tissue, which also extends over the sides of the base of the abdomen. Under the 2nd node this spongy tissue is deeper than the node itself and covers a spinose process. Abdomen flattened above, very convex below.

Bulawayo. Taken on one occasion only, under a stone and in the nest of *Bothroponera Krugeri*, Forel. Apparently very rare. (R.M., G.A. colls.)

S. HAVILANDI, Forel.

Mitth. Mus. Hamburg, vol. 22, p. 13, ♂, 1905.

“ ♂. 2.4–2.6 mm. Mandibles half as long as the head, feebly curved outwardly near the base and thence almost straight or barely convex, so that a space is left between them which is a little wider than the width of the mandible itself. The latter is narrow, at first parallel-sided, then gradually attenuated in the apical half, quadridentate. Two long sharp teeth are placed on the inner margin behind the apex. The two apical teeth are long, thin, and widely divergent, the upper one longer than the lower. The mandibles are dull, with a long, yellowish and adpressed pubescence, and a row of longer and outstanding hairs on the inner margin before the apex. Head cordiform, much longer than wide . . . with a feeble semilunar emargination posteriorly. Not emarginate laterally. Clypeus wider than long, emarginate in front, fairly flat. Frontal carinae dilated in front. Scapes curved, feebly spindle-shaped. Last joint somewhat longer than the rest of the flagellum. The anterior part of the head, in front of the antennal sockets, transversely rectangular much wider than long. Eyes fairly small. Pronotum convex in,

front, behind which the dorsal profile of the thorax is straight and without any emargination. Pro-mesonotal suture indistinct. Mesoepinotal suture very clearly defined. Dorsum of the epinotum distinctly marginate, about one and one-third times longer than wide, a little wider behind. Epinotal teeth short, about as long as two-thirds of the interval between them. Declivity of the epinotum with a feeble translucent band on each side. Both nodes wider than long, the 2nd twice as wide as the 1st, the latter shorter than its peduncle. There is a ribbon of spongy tissue below the 1st segment of the petiole, and a mass of the same tissue around the ventral projection of the 2nd node. There is very little of it above and behind the nodes. Legs fairly long and thin. Sides of thorax, 2nd node, and abdomen smooth; the latter almost without basal striae. Head dull, densely reticulate-punctate. All the rest very finely reticulate, at the most only slightly shining, in part dull. On the dorsum of the thorax the meshes are partly converted into longitudinal rugae. On the body there is a scanty pilosity composed of very short clavate hairs. There is also a row of such hairs on the anterior margins of the clypeus and scapes, and along the sides of the frontal carinae. Similar clavate hairs, shining and decumbent, are plentiful on the head, scanty on the rest of the body. In addition, there is a fine adpressed pubescence on the body and the limbs, the latter without outstanding pilosity. Rusty yellowish-red. The vertex and a cloudy transverse band on the abdomen yellowish-brown."

"Natal, 5300 ft. (Haviland)."

Race *MARLEYI*, Arnold.

Proc. Rhod. Sc. Assn., vol. 13, part 3, p. 31, ♀, 1914.

♀. 2.6 mm. Differs from the type of the species as follows: The mandibles are shorter, much less than half as long as the head. The head, measured from the anterior margin of the clypeus to the apices of the posterior angles, is two and a half times as long as the mandibles. The last joint of the flagellum is not longer than the rest of the flagellum. The dorsum of the epinotum is slightly shining, wider than long. The sides of the thorax are not smooth as in the type species, but distinctly reticulate-punctate and dull. The base of the abdomen distinctly striate at the sides, the striations covering a fan-shaped area. Otherwise like the type.

Durban. Two specimens in a nest of *Pheidole punctulata* (H. B. Marley); type in my collection.

S. EMARGINATA, Mayr.

Ann. K.K.N.H. Mus. Wien, vol. 16, p. 26, ♂, 1901.

♂. 2-2.2 mm. Ochreous; the abdomen and mandibles slightly brownish-yellow. Abdomen and 2nd node moderately shining, the rest of the body dull. Head, thorax, excepting the pronotum, dorsum of epinotum, and 1st node finely and closely reticulate-punctate; the declivity of the epinotum, the 2nd node, and the abdomen smooth, the basal third of the latter strongly and obliquely striate on each side (about 6 striae on each side). Head, pro-, and mesonotum clothed with curved spatulate hairs, very scantily on the pro- and mesonotum, fairly abundantly on the head. Anterior margin of the scape with a row of such hairs, directed outwards. The anterior margin of the clypeus with a dense row of scale-like hairs. The rest of the body very sparsely and irregularly pilose, the hairs fairly long and acuminate, not clavate. Legs with adpressed and simple hairs. Head not quite half as long again as wide, at its widest point two and two-fifths wider than the width of the anterior margin of the clypeus, the posterior margin widely and fairly deeply emarginate, not very convex at the sides. The scapes and the scrobes do not extend back beyond the eye by a distance greater than the long diameter of the latter. The scrobes much shallower than in *Arnoldi* or *Havilandi*, the upper and lower margins not very clearly defined. First joint of the flagellum a little longer and thinner than the 4th, 2nd and 3rd joints about as long as wide, 5th joint nearly one-third longer than the rest of the flagellum. Eyes fairly large, composed of 20 or more facets. Posterior margin of clypeus angular, the anterior margin shallowly concave. The mandibles are more than half hidden under the clypeus, the exposed apical portion feebly convex externally, the internal margin armed with numerous small teeth. The dorsal profile of the thorax is almost flat, the pronotum slanting very slightly downwards and forwards, the mesonotum feebly depressed in the middle. The pronotum is longer than wide, rounded at the sides and in front, faintly striate. Pro-mesonotal suture very feeble, the meso-epinotal a little more distinct. Dorsum of epinotum widest between the spines, as long as wide. Epinotal spines long and acute, almost parallel, quite as long as the interval between their bases. First node, seen from above, more or less hemispherical, rounded and narrower in front; 2nd node twice as wide as long, a little more than twice as wide as the 1st, transversely oval or lenticular, the anterior margin more convex than the posterior. Abdomen distinctly depressed in the middle near the base. Both nodes covered behind and below

with masses of spongy tissue, very large below the peduncle of the 1st node. A very narrow band of the same tissue margins each side of the vertical declivity of the epinotum. Ventral surface of abdomen very convex.

Port Elizabeth (Brauns). (G.A. coll.)

S. TRANSVERSA, Santschi.

Göteborgs Kungl. Vetensk. och Vitterh. Handl., XV, 2, p. 31, ♀, 1914.

“♀. 2.2 mm. Dark yellowish-brown. Mandibles, antennae and legs of a lighter brown. Head covered with curved spatulate hairs. A regular fringe of similar hairs borders the clypeus and the lower margins of the scapes, but on the latter the five inner hairs are directed inwards, and the two outer ones outwards. A few rare hairs of the same kind occur on the pronotum. Epinotum and abdomen with simple hairs, fairly scanty. Legs, antennae and abdomen pubescent. Reticulate-punctate and dull. Declivity of the epinotum, 1st segment of the petiole and the abdomen smooth and shining, except a few striae on the basal fourth of the latter.

“Head one-quarter longer than wide, emarginate behind. Clypeus pentagonal, the anterior margin straight (concave in *emarginata*, Mayr), partly covering the mandibles. The latter denticulate on the front half, the exposed part a little shorter than the length of the clypeus. First and 4th joints of the flagellum subequal, 2nd and 3rd a little wider than long, the 5th as long as the rest of the flagellum. Pronotum much wider than long, the anterior margin forming a narrower triangle. Pro-mesonotal suture very distinct. Mesonotum slightly convex, continued behind on the same level as the dorsum of the epinotum, which is marginate and parallel-sided. Epinotal spines wide at the base, longer than half the interval between them, slightly divergent. Declivity of epinotum concave, margined with spongy bands. First node low, the anterior face only slightly oblique, the summit rounded and wider than long. Second node twice as wide as the 1st, and twice as wide as long, convex. A fairly large spongy mass surrounds the nodes. Allied to *emarginata*, Mayr, from which it differs chiefly in the colour and the clypeus, which is not emarginate.

“Pietermaritzburg (Traegaordh).”

S. SIMONI, Emery.

Ann. Soc. Ent. France, vol. 63, p. 42, ♀, 1895.

“♀. 1.7 mm. Testaceous, reticulate-punctate, dull, the dorsum of

the pronotum shining, 2nd node of petiole and the abdomen smooth and very shining. Head elongate, emarginate behind, narrowed in front, clypeus convex, arcuate in front, mandibles porrect, the masticatory margin very long and nearly straight from the clypeus to the apex, minutely denticulate; 4th joint of the flagellum hardly shorter than the preceding three taken together. Thorax evenly convex over the pro-mesonotum, the dorsum of the epinotum depressed, the spines short, the declivity margined with spongy bands. Peduncle of the 1st joint of the petiole long, the node subglobose, reticulate; 2nd node transversely ovate and shining.

“Makapan (Simon).”

“This species is remarkable on account of the very elongate form of the mandibles (the teeth of which are numerous and excessively minute). . . . The head, mesonotum, epinotum and the 1st node are very closely reticulate-punctate and dull, the rest is shining. There are no striae at the base of the abdomen. The spongy appendage of the petiole is only feebly developed. The head bears some small curved and squamiform hairs; clavate hairs occur only on the petiole and abdomen.”

S. ESCHERICH, Forel, race LIMBATA, Forel. (Plate VIII, fig. 118.)

Zool. Jahrb., vol. 29, p. 261, ♀, 1910.

(Race) Deutsch. Ent. Zeitschr. (Beiheft), p. 222, ♀, 1913.

♀. 2.1–2.4 mm. Dark brownish-red, legs, antennae and mandibles dark yellow. Head, meso- and epinotum and 1st node reticulate-punctate and dull; pronotum moderately shining, sparsely and feebly striate, narrowly carinate in the middle. Declivity of the epinotum, 2nd node and abdomen smooth and shining, the latter longitudinally striate over the basal third. Pilosity fairly sparse on the head, very sparse on the nodes and abdomen, the epinotum glabrous. The pilosity consists of clavate hairs, curved and flattened on the head, longer and erect elsewhere. The broad spatulate hairs present in the other species are absent. The two outermost hairs on the anterior margin of the scape are directed outwards, the rest inwards. On the thorax there are only two clavate hairs, one on each side of the middle of the mesonotum. Head, measured from the anterior margin of the clypeus to the middle of the occipital margin, very little longer than wide, the sides not very convex, the posterior margin fairly deeply but not widely emarginate. The scrobes are well defined and fairly deep, and with the scapes extend back almost to the end of the posterior angles. Frontal carinae prominent. Eyes small, composed of about

12 facets. Clypeus more or less triangular, the anterior margin convex. Mandibles edentate, less than half as long as the head; their external margins converge towards the apex, so that the mandibles form an isosceles triangle with a small space between them at the base. First and 4th joints of the flagellum subequal, 2nd and 3rd about as long as wide, 5th joint as long as the rest of the flagellum. Pronotum wider than long, fairly convex in front and at the sides, the shoulders subangular; pro-mesonotal suture faintly defined. The posterior half of the mesonotum rather abruptly depressed; meso-epinotal suture thin but fairly distinct. Dorsum of epinotum a little longer than wide, convex transversely and longitudinally over the basal half, oblique and flat over the apical half. Epinotum and posterior half of mesonotum finely submarginate. Epinotal teeth short, hardly longer than their basal width, moderately divergent, directed obliquely upwards. A narrow and transparent band margins each side of the declivity, starting from the lower side of the teeth. The peduncle of the petiole is much longer than the node; the latter, seen from above, a little longer than wide (not including the portion behind, which is more or less hidden by spongy tissue), rounded in front and at the sides, fairly flat above. Second node twice as wide as the 1st, transversely oval, furnished below with a long perpendicular spine which is hidden by spongy tissue. The latter is not plentiful.

♀. 3.1 mm. (hitherto undescribed). Eyes larger than in the ♂, occupying about one-fifth of the sides of the head. Ocelli small. Shoulders of pronotum subangular, exposed above. Mesonotum higher than the pronotum, the anterior margin narrowed in front and angular, but with the apex of the angle somewhat rounded, as long as it is wide across the tegulae. Scutellum semicircular, nearly half as long as the mesonotum, much higher than the dorsum of the epinotum, which is steep and wider than long. Epinotal teeth triangular, shorter than in the ♂. Sides of mesothorax smooth and shining. Dorsum of epinotum shorter than the declivity. Peduncle of the petiole twice as long as the node; the latter, seen from above, transversely rectangular, twice as wide as long. Second node transversely oval, two-thirds wider than long, one-third wider than the 1st. The spongy tissue occurs as a narrow band on the lower surface of the peduncle and also surrounds the 2nd node behind and below. Basal third of the abdomen strongly and longitudinally striate. Otherwise like the ♂. Dealted.

Bulawayo, a small nest of about 18 ♂♂ under a stone; Durban, ♂♂ and ♀ (H. B. Marley). Type of ♀ in my collection. (S.A.M., R.M., G.A. colls.)

Race BOERORUM, Santschi.

(As race of *cognata*), Bull. Soc. Ent. France, p. 258, ♀, 1913.

Göteborgs Kungl. Vetensk. och Vitterh. Handl., XV, 2, p. 32, ♀, 1914.

“♀. 2.2 mm. Reddish-yellow, mandibles, antennae and legs paler. Basal segment of abdomen tinged with brown in the middle. Pilosity as in the type. Sculpture stronger. The pronotum is subopaque and more strongly longitudinally striate than in *cognata*. It is also reticulate-punctate and dull, like the rest of the dorsum of the thorax and the 1st segment of the petiole. The sides of the thorax, 2nd segment of the petiole and the abdomen smooth and shining, the abdomen with about 20 striae at the base. Head as in *cognata*, the mandibles hardly shorter. Second and 3rd joints of the flagellum distinctly longer than wide. Pronotum with a feeble median carina. Mesonotum with the anterior angles more prominent, marginate; the dorsum of the epinotum also feebly marginate. Spongy tissue as in the type.”

This race is unknown to me in nature. The illustration accompanying the author's text shows the mandibles half as long as the head, the posterior margin shallowly emarginate, the 5th joint as long as the rest of the flagellum.

“♀. 2.5 mm. Vertex, tegulae and scutellum blackish-brown. The rest of the dorsum of the thorax reddish-brown. Second node brown like the abdomen, the rest as in the ♀. Dull, reticulate-punctate. Second node and the abdomen smooth and shining, the base of the latter striate as in the ♀. . . . Deälated.

“Stamford Hill, Natal and Dukudu, Zululand (Traegaordh).”

GENUS MICRODACETON, Santschi.

Göteborgs Kungl. Vetensk. och Vitterh. Handl., XV, 2, p. 33, 1914.

Characters.

♀. Small insects. Antennae 6-jointed. The 1st-4th joints of the flagellum subequal and elongate, the 5th forming the club. Head cordiform. Mandibles linear, dentate at the apex. No scrobes present. The scapes are hidden at the base by the lobes of the frontal carinae. Head, thorax and 1st joint of the petiole dentate or spinose. No spongy tissue present.

Distribution.—South Africa. Monotypic.

M. EXORNATUM, Santschi.

Loc. cit. ♀.

“♀. 2.8 mm. Reddish-yellow. Middle of the abdomen tinged with brown. Mandibles, antennae, and legs yellow. Pubescence very fine and sparse on the body, a little more abundant on the legs and antennae. Pilosity absent. Head and thorax coarsely and evenly reticulate, with little pits or punctures between the meshes. Both nodes and the abdomen very finely striolate-rugose and slightly shining. Head cordiform, very deeply emarginate behind, a little longer than wide, bearing three pairs of teeth as follows: 1. A fairly short spine near the posterior angle. 2. A similar spine placed above, at the posterior fourth of the head. 3. A longer spine, external to the insertion of the antennae and directed outwards. The eyes, placed a little in front of the middle of the sides, are very convex, their diameter equalling the length of the 1st joint of the flagellum. The scape extends back as far as the posterior fourth of the head. Anterior margin of clypeus emarginate in the middle. Mandibles linear, two-thirds as long as the head, dilated at the base and ending at the apex in three spiniform teeth. Thorax much narrower than the head. Sides of pro-mesonotum rounded, without shoulders in front. The pronotum and front of the mesonotum is abruptly and step-like depressed towards the meso-epinotal suture, with a tooth at the angles. Epinotum marginate, concave transversely, armed with strong spines directed outwards and upwards and as long as the dorsum of the epinotum. First segment of the petiole with a long peduncle in front, the node low and armed with three spines, two lateral ones in front and a median one behind. Second segment three times wider than long, and three times wider than the 1st, the sides lamelliform, emarginate and narrower in front than behind; the posterior margin biconcave. The ventral surface of both nodes unarmed, flattened, and without any spongy tissue. Abdomen oval, as wide as the head.

“Dukudu, Zululand (Traegaordh).”

GENUS EPITRITUS, Emery.

Bull. Soc. Ent. Ital. I., p. 136, 1869.

Characters.

“♀. Head subcordiform, wide behind, narrowed in front, the posterior margin emarginate. Clypeus triangular. Mandibles more or less elongate and straight, sometimes curved at the apex, without a masticatory margin, the inner margin more or less strongly denticu-

late. Labrum acuminate, produced like a beak between the mandibles. Maxillary and labial palpi 1-jointed. Antennae 4-jointed, the scape fairly short, the last joint of the flagellum oval and very large. Eyes small and placed low down at the sides. Thorax wide in front and narrowed behind, hardly constricted between the meso- and epinotum, the latter bidentate. First segment of petiole pedunculate in front, the node sometimes furnished with spongy tissue; 2nd node very wide, transverse, furnished above and at the sides with spongy tissue. Abdomen oval, longitudinally striate at the base. Middle and hind tibiae without calcaria.

“ ♀. Ocelli present, eyes larger than in the ♂. Pronotum exposed above, wide, with distinct and obtuse shoulders. Epinotum bidentate. A little larger than the ♂.

“ ♂. Head longer than wide, narrowed in front of the eyes, rounded behind them. Mandibles narrow, feebly arcuate, diminishing gradually in width from the base to the apex, and ending in a sharp point, edentate. Eyes large and convex, placed in front of the middle of the sides. Ocelli of medium size. Antennae 13-jointed, scape very short and fairly thick, about as long as the 2nd joint of the flagellum, the 1st joint very short, hardly longer than wide, the following joints cylindrical and subequal except the last, which is about as long as the preceding two together. Thorax short, as high as wide. Mayrian furrows feeble. The dorsum and declivity of the epinotum not distinctly delimited, the former unarmed or with only a trace of teeth. First joint of petiole subconical when seen from the side; widest behind; 2nd joint low, wide, and transverse. Wings with one cubital and a radial cell, discoidal cell absent.”

The above generic characters have been extracted from Andre's 'Spec. Hymen. Europe,' pp. 402-4, 1883, and, being more complete, are reproduced here in preference to Emery's original diagnosis, which is based on the ♀ sex only.

E. MANDIBULARIS, Szabo.

Arch. Zool. Budapest, I., p. 27, ♂, 1909.

Santschi, Göteborgs Kungl. Vetensk. och Vitterh. Handl. XV, 2,
p. 34, ♀, 1914.

“ ♂. Fuscous testaceous, dull, closely punctured, finely pubescent, antennae and legs paler, abdomen shining and finely striate at the base, erect hairs sparse and barely clavate. Head broadly subcordi-

form, arcuately emarginate behind between the vertex and occiput. Clypeus long, slightly emarginate in front, covering about two-thirds of the mandibles. Mandibles subparallel, arcuate apically, armed with 7 very acute and unequal teeth. Scape of antenna short, of unequal width, its lower margin bearing clavate hairs, 2nd and 3rd joints of flagellum (1st and 2nd of flagellum? G.A.) very small, the last joint hardly twice as long as the two preceding together. Disc of thorax convex, meso-epinotal suture absent, epinotal spines acute, wide at the base, moderately divergent. First segment of the petiole pedunculate in front, widening into a node behind, 2nd segment much wider but shorter than the 1st, seen from above trapeziform. Both nodes furnished at the sides and below with spongy tissue. Length, 1.5-1.6 mm.

“Mto-ya-kifaru, German East Africa.”

“♀. 1.9 mm. Colour and sculpture as in the ♂. The striae at the base of the abdomen effaced in the middle. The articulations (tegulae?) of the wings and the vertex slightly brownish. Scutellum dull.

“Stamford Hill, Natal. One ♀.”

TRIBE CATAULACINI, Emery.

Comprising only the following genus:

GENUS CATAULACUS, Smith.

Trans. Ent. Soc. London, II, p. 225, 1854.

Characters.

♂. Antennae 11-jointed, club 3-jointed, the scape curved, dilated in the apical half. Well-defined scrobes present, capable of receiving the whole of the folded antennae, and placed below and external to the eyes (differing therein from all our other Myrmicine genera). The very divergent frontal carinae do not border the scrobes except at the base of the latter. Margins of the upper surface of the head more or less denticulate, the posterior angles more or less dentiform. Clypeus triangular, the posterior limits feebly defined. Mandibles rather small and stout, armed with 4 or 5 small teeth or edentate. Eyes large and rather flat. Margins of pro-mesonotum denticulate; thoracic sutures obsolete. Epinotum armed with broad and dorso-

ventrally flattened teeth. Nodes of petiole stout, the 1st node usually cuboid or somewhat conoid, the dorsal face sometimes tectiform, the ventral surface produced into a laminate process; 2nd node globose, the ventral surface bearing a blunt tubercle in front. Abdomen oblong, the sides not very convex, the 1st segment forming the whole of the dorsum. Femora and tibiae thick.

♀. Antennae 11-jointed. Abdomen usually more elongate and less convex laterally than in the ♂. Wings with 1 cubital cell and a closed radial cell. Otherwise like the ♂.

♂. Antennae 11-jointed. Eyes larger than in the ♀, ocelli small. Epinotum generally bidentate. Nodes longer than in the ♀. Scrobes present as in the ♂ and ♀.

I have not drawn up a key to the few species which I have seen, as the majority of our species are unknown to me in nature. Moreover, a perusal of the literature concerning this genus plainly indicates that many of the so-called species and races are very closely allied, so much so that I believe a study based on more abundant material will later on serve to reduce the present number of species to a much smaller figure. A marked general uniformity in colour, sculpture, and main structural features exists in all our species. They are all black, with the scapes, tarsi, and tibiae more or less reddish. In all, the sculpture of the head consists of a coarse reticulation; sometimes the rugae are sharp, in other cases flattened or abraded, and are also frequently emphasised in the longitudinal direction. The thorax, at least anteriorly, is more coarsely reticulate than the head. The nodes are very strongly rugose, and the abdomen has a fundamental sculpture of very regular and small reticulations. This fundamental sculpture also occurs on the head and thorax in the spaces between the larger reticulations, but is usually less distinct than on the abdomen. The length of the epinotal spines compared with the length of the interval between their bases is of some diagnostic value, but their degree of divergence is less reliable, being subject to an appreciable degree of variation even in examples taken from the same nest. The denticulations of the margins of the thorax, and their number, are also somewhat variable. The length of the abdomen and the degree of convexity of its sides are perfectly useless characters, since a wide range of variation exists in the various specimens from one nest, and it is therefore most regrettable that species have been erected partly on such characters.

All the species of this genus are tree-ants, usually forming medium-sized nests in hollow twigs and stems, or more rarely, under the bark,

They are timid and slow-moving insects, often feigning death or dropping rapidly to the ground when disturbed. As Bingham has remarked in connection with this genus (Fauna Brit. India, *Formicidae*), these ants have the habit of wandering over the trunks of trees and the leaves in what appears to be a very aimless and languid manner. I have occasionally seen them breaking open the earthen tunnels constructed by termites over the trunks of trees and attack the inmates. I have not yet observed any of the species attending on aphids or scale insects, although it is quite probable that they do so.

(N.B.—It is usually necessary to use a magnification of not less than 35 diameters to appreciate the character of the fundamental sculpture.)

C. BAUMI, Forel.

Mitth. Schweiz. Ent. Ges., vol. 10, p. 304, ♀, ♀, ♂, 1901.

“ ♀. 4.5–4.8 mm. Very similar to *hararicus*, Forel, but the head is by no means so much narrowed in front, and the frontal carinae are wider. The body is dull; the sculpture much coarser, reticulate, or reticulate-rugose on the head, with almost pit-like and dull meshes, coarsely and longitudinally rugose on the thorax and petiole. Abdomen fairly finely and evenly rugose longitudinally (more strongly so than in *hararicus*), and also densely reticulate-punctate and dull. The femora are black. Otherwise like *hararicus* and also very similar to *Johannae*, but without the tooth on the head behind.

“ ♀. 6 mm. The pits on the head are entirely separated, discrete; duller, narrow, and net-like strands run between them. The dull mesonotum is sparsely pitted. Rugosity of the elongate abdomen weaker than in the ♀. Deälated.

“ ♂. 4.3 mm. Also dull, the abdomen shallowly reticulate and shining. There is a small tooth on each of the posterior angles of the head. Sculpture on the head and thorax more superficial than in the ♀. Mesonotum with some sparse and shallow pits; Mayrian furrows present. Head and thorax dull and more strongly sculptured. Head strongly convex and gibbous above. Epinotal teeth wide, short and blunt. Wings short, yellowish, the nervures pale. Antennae almost the same as those of the ♀, also the scrobes and legs.

“ Cubango-Cuito, Mossamedes. This species differs from *rugosus*,

Forel, in the much shorter epinotal teeth, the finer rugosity of the abdomen, and particularly in the general sculpture."

So far not recorded from our region.

Var. *BATONGA*, Forel. (Plate VIII, figs. 119, 119a.)

(As race) *Ann. Soc. Ent. Belg.*, vol. 57, p. 114, ♀, 1913.

♂. 3.8-5 mm. Black; tibiae, tarsi, and scapes ferruginous, the metatarsus of the middle and hind legs a little darker. Flagellum piceous. Pilosity scanty, composed of regularly disposed and very short, blunt, and thick whitish hairs, erect on the body, oblique on the legs and scapes. Below each eye there are three longer and thinner hairs of a brownish colour. Pubescence present only on the club of the flagellum. The sculpture of the head consists of a close network, the strands of which are somewhat flattened and accentuated longitudinally (this is due to the longitudinal strands being continuous, whereas the transverse ones are short and broken); the floor of the meshes is shallowly rugulose, and the meshes are rarely twice as wide as the strands which bound them. In the type of the species, on the other hand, the strands are sharper, less flattened, and the meshes are quite three times or more wider than the strands, and their floor is reticulate rather than rugulose. The thorax is longitudinally rugose and partly reticulate, except in front, where it is transversely and irregularly rugose. The sculpture of the thorax in front and behind is very strong, forming sharp outstanding ridges, and between the epinotal spines there are three or four equally strong transverse rugae. Sides of the thorax reticulate-punctate and sparsely sulcate. Declivity of the epinotum smooth. Both nodes are very coarsely and more or less longitudinally rugose above, deeply sulcate between the rugae. Legs and abdomen very closely, finely, and evenly reticulate-punctate (appearing granulate under a low power). The basal third of the abdomen is also longitudinally and moderately rugose, the rugae diminishing apically. Tibiae and femora also partly rugose.

Head a trifle wider behind than long, narrowed slightly and gradually in front of the eyes, the clypeal area sloping steeply downwards, the posterior margin very shallowly emarginate. There is a strong tooth at each posterior angle, and another tooth of the same size placed nearer the middle of the posterior margin. The latter and the sides, as far as the anterior border of the eyes, denticulate. Just in front of the eye the margin is produced into a broad and obtuse tooth, and ends in front, near the base of the mandibles, in another tooth, which is usually obtuse, but sometimes fairly angular

and prominent. The outline of the clypeus behind is semicircular and indistinct, the anterior margin feebly impressed in the middle. Mandibles oblong, armed with 4 or 5 small and blunt teeth, strongly striato-punctate and dull. The eyes are large, oval, placed behind the middle of the sides and occupying about one-third of the same. The scrobes are deep and oblique, placed outside and below the eyes. Scapes flattened and dilated in the apical half, not extending back beyond the hind margin of the eyes. Flagellum short and thick, all the joints, except the 1st and last, much wider than long. Thoracic sutures obsolete above, sharply defined at the sides. Thorax narrower than the head, the anterior margin arcuate; the sides of the pronotum subparallel. From the posterior end of the pronotum the thorax is gradually narrowed as far as the base of the epinotal teeth. There is a moderately prominent and triangular tooth at the middle of the lateral margins of the mesonotum, and a slightly longer tooth on each side of the base of the epinotum. The sides of the pronotum are denticulate, the denticles varying in size and number, but usually from 7 to 8. The mesosternum on each side has a blunt, short tooth at the lower and anterior angle. The epinotal teeth are flattened, slightly divergent, directed very obliquely upwards and backwards, not quite as long as the interval between their bases, narrowed abruptly at the apical third. Declivity quadrate, wider than long, shallowly concave from above to below. First node of petiole convex transversely, subquadrate, narrower behind; seen from the side, it has a subvertical anterior face and a longer and oblique posterior-dorsal face. The ventral surface bears a strong tooth, widely truncate and pointing forwards. The 2nd node, hardly wider than the 1st, is wider and higher in front than behind and a little wider than long. Abdomen arcuately emarginate at the base, the sides feebly convex, a little longer than wide.

I have one specimen of the type of the species taken at Mossamedes and kindly given to me by Dr. Forel. From this example *batonga* differs by the sculpture of the head and also by the much feebler sculpture of the pronotum, which is a little wider. The denticulations of the lateral margins of the thorax are stronger than in *Baumi*, i. sp., and the epinotal teeth are shorter, less divergent, and less acute. In all my specimens of *batonga* the head is wider in front than in the example of the type, not narrower, as stated by Dr. Forel.

This form cannot be considered as more than a variety. I have given the description in some detail in order to use it as a basis of comparison and to avoid prolixity in the descriptions of the other species.

Var. BULAWAYENSIS, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 218, ♂, ♀, 1914.

♂. 4.5–5.2 mm. This differs from *batonga* as follows: The head is less narrowed in front of the eyes. The marginal teeth on each side of the angles of the clypeus are slightly larger but not more acute. The sculpture of the head is stronger, both the reticulations and spaces between them being wider. This also applies to the thorax, in which the reticulations are more distinctly accentuated longitudinally, and are more coarse in the anterior half of the pronotum. The teeth at the base of the lateral margins of the epinotum are prominent and much larger, the epinotal spines more divergent. Otherwise like *batonga*.

♀. 6.1–6.4 mm. The sculpture differs from that of the ♂ in having the reticulations less distinct; this is due to the surface being deeply pitted and the space between the pits rather flattened. On the pronotum the sculpture is stronger, and on the mesonotum the pits are elongate and sparser. The dorsum of the epinotum is very coarsely and transversely rugose. The fundamental sculpture of the thorax and nodes consists of a very fine and close reticulation. The head is more parallel-sided than in the ♂, and the lateral margins behind the eyes are only feebly denticulate. The ocelli are inconspicuous and level with the surface. The pronotum is widely exposed above and hardly lower than the mesonotum. The latter, excluding the paraptera and scutellum, is roundly triangular. Dorsum of epinotum moderately convex transversely, almost horizontal, and about twice as wide as long. Epinotal teeth shorter than in the ♂, their inner margins truncate at the apex. The abdomen, except towards the base and apex, parallel-sided, about three-fifths longer than wide. Wings tinged with yellow. Otherwise like the ♂.

Bulawayo; nesting in hollow twigs of *Acacia horrida*. (R.M., G.A. colls.)

C. INTRUDENS, Smith.

Trans. Ent. Soc. London, p. 609, ♂, ♀, ♂, 1879.

“♀. 3 lines (=6.2 mm.). Opaque black; the scape of the antennae, the base and apex of the flagellum, the tips of the femora, the tibiae, anterior tarsi, and the apical joints of the intermediate and posterior pairs, light ferruginous; the wings flavo-hyaline, the nervures rufo-testaceous.

"Head, thorax and nodes of the pèduncle with rugose confluent punctures; the head longer than broad, slightly narrowed before the eyes; the posterior margin of the vertex broadly emarginate. The anterior margin of the prothorax arched; the thorax about the same length as the head, narrowed behind the insertion of the wings; the metathorax (epinotum) with two blunt spines. Abdomen oblong and very finely shagreened, emarginate at the base and rounded at the apex.

"♀. Only differs from the ♀ in being rather shorter and in the form of the thorax; the abdomen shorter, with the sides less parallel.

"♂. $2\frac{1}{2}$ lines. The colour and sculpture as in the ♀. Head wider than the thorax, much narrowed before the eyes; the lateral angles of the posterior margin of the vertex subspinose. Thorax anteriorly arched; the mesothorax with two curved, deep, broad channels that curve inwards and unite at the base of the scutellum (= Mayrian furrows); the scutellum, the spines of the epinotum and the nodes of the petiole grooved longitudinally; the wings as in the ♀; the abdomen subovate, slightly emarginate at the base and pointed at the apex.

"*Hab.*—Weenen district, Natal; (in thorns of *Acacia*). Some of the ♀♀ have the legs more or less ferruginous."

As is so frequently the case in Smith's descriptions, the diagnosis is confined to what are mainly generic characters, and the specific ones are conspicuous by their absence. The description of the ♀ is hopelessly inadequate.

C. RUGOSUS, Forel.

(As race of *intrudens*), Mitth. Schweiz Ent. Ges., vol. 9, p. 78, ♀, 1894.

Mayr, Ann. K.K.N.H. Mus. Wien, vol. 10, p. 129, ♀, 1895.

"♀. 4.8 mm. Larger than *intrudens*. Epinotal spines stronger, longer, and more divergent. Thorax and head strongly and longitudinally rugose; pronotum in front, the head behind and the epinotum between the spines coarsely and transversely rugose. Abdomen longitudinally striate, very distinctly so at the base, indistinctly elsewhere. Petiole coarsely longitudinally rugose.

"Delagoa (Dr. A. Muller)."

"♀. Not larger or hardly larger than *intrudens*. The head is coarsely and longitudinally rugose, the rugae connected together, the meshes irregular and elongate; the posterior angles of the head are dilated in a dentate form, and the two little teeth on the posterior

margin are very small. The 2nd node of the petiole is twice as wide as long, and seen from above, has a short dilatation on each side which resembles a very small hook, bent backwards (often less distinct in the ♀)."

Delagoa Bay (Brauns).

Var. SUBRUGOSUS, Santschi.

Göteborgs Kungl. Vetensk. och Vitterh. Handl., XV, 2, p. 26, ♀, 1914.

"♀. Differs from the type from Delagoa Bay by the finer sculpture of the abdomen (connecting it with *intrudens*, Smith). It is almost as strong and coarse on the dorsum of the thorax as in the type, but more regular and more parallel. The spines of the epinotum are a little shorter and the lateral teeth of the dorsum smaller.

"Junction of the Umfolozis, Zululand (Traegaordh)."

C. MICANS, Mayr.

(As race of *rugosus*), Ann. K.K.N.H. Mus. Wien, vol. 16, p. 27, ♀, ♀, ♂, 1901.

Forel, Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 219, 1914.

"♀. 3.4-3.7 mm. Smaller than *rugosus*. The head not much narrowed in front, more so in *rugosus*. The thorax above, a little more arched lengthwise over its posterior half than in *rugosus*. The mesosternum on each side has a forwardly directed and acute tooth at the lower and anterior corner, just in front of the articulations of the middle pair of coxae; in *rugosus* this tooth is shorter, as long as, or shorter than its basal width. The epinotal spines are shorter than in *rugosus*, and their apices more or less distinctly obliquely truncate and rounded, whereas in the other species they are simply acute. The 2nd node rounded at the sides, hardly wider in front than the 1st (in *rugosus* the 2nd is distinctly wider than the 1st, and there is often a small tooth at the sides). Abdomen glossy or moderately shining (dull in *rugosus*), and much more shallowly sculptured."

Dr. Forel separates this form from *rugosus* on account of its smaller size, and the shape of the 1st node of the petiole. This is almost conical, with an anterior-dorsal face which is smooth; its summit behind is emarginate in the middle. In *rugosus* the node is cubic,

with the dorsal face less inclined forwards, coarsely rugose transversely.

“ ♀. 5-5.2 mm. The shape of the head and petiole as in the ♂. The abdomen narrower than in *rugosus*, sculpture and glossiness as in the ♂.”

“ ♂. 4.3 mm. Black, the apical half of the mandible, the antennae, tibiae, tarsi, and the external genitalia rusty or brownish-red. The pilosity as in the ♀. The head, like that of *intrudens*, strongly narrowed in front, so that when the mandibles are closed it appears fairly triangular; it is somewhat wider than the thorax, coarsely rugose lengthwise, finely and closely punctured between the rugae, the posterior angles bearing a small tooth. The lateral margins of the head, from the posterior end of the scrobes to the posterior angles, are denticulate. Eyes much more convex than in the ♀. The sculpture of the thorax is about the same as that of the head; the epinotal teeth are smaller than in the ♀, wide at the base, thin near the apex. The mesosternum has a dentiform anterior angle. The petiole is very coarsely and longitudinally striate, and, in addition, very closely and finely punctate; the 2nd node hardly wider than long. The 1st abdominal segment is very finely reticulate and nitidulous, near the base also longitudinally striate.

“ Port Elizabeth (Dr. H. Brauns).”

Race DURBANENSIS, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 219, ♂, 1914.

♂. 3.9-4.2 mm. The sculpture of the head is more or less reticulate and composed mainly of longitudinal strands with short transverse bars. The sculpture is stronger than in *Baumi* var. *batonga*. The denticulations round the margins of the head are fairly prominent, and the 2 teeth near the posterior angles are proportionately much larger than in *batonga*. The spaces between the reticulations on the head and thorax are feebly shining and microscopically rugulose. The thorax is longitudinally rugulose, more transversely reticulate-rugose on the anterior half of the pronotum. The fundamental sculpture of the abdomen is densely and finely reticulate-punctate; the coarser sculpture is longitudinally rugose, the rugae wide, extending from base to apex, deeply sulcate between the rugae. The sulcate abdomen distinguishes this from our other two small species, *brevisetosus* and *Marleyi*. The mesosternal teeth are much larger, longer, and more acute than in either of those two species or *Baumi*

and its varieties; they are directed outwards and forwards and are plainly visible when the insect is looked at from above. The characters distinguishing this race from the type of the species are given by Dr. Forel as follows:

“The race *durbanensis* is distinguished from the type of *micans* by its dull abdomen, which is strongly and longitudinally rugose (almost shining and finely reticulate, with only a few feeble rugae, in the type of *micans*). In addition, the sides of the abdomen are much more convex, and it is a little shorter. The head is much narrower in front, and like the sides of the prothorax has much stronger denticulations. The epinotal spines are also a little longer and less elevated. The epinotum itself is narrower and the dorsum longer. Its lateral tooth near the base is much more feeble and very slightly apparent. The 2nd node of the petiole is much shorter and narrower. The hairs on the body are longer and less obtuse.”

♀. 6 mm. (hitherto undescribed). The head is very little narrowed in front of the eyes, which are flatter than in the ♂. The sculpture of the head is coarser and more distinctly reticulate than in the ♂, the spaces between the rugae somewhat excavated, without forming distinct pits. The denticles on the lateral margins of the head are more or less effaced, but the 2 teeth near the posterior angles are much larger than in the ♂. Head only slightly wider behind than the prothorax. The pronotum is very coarsely rugose, the rugae very prominent and trenchant. Mesonotum, scutellum, and epinotum irregularly and coarsely rugose, the rugae on the mesonotum between the parapsidal sutures more or less effaced. The lower anterior corner of the mesosternum is merely angular, not spinose as in the ♂. Epinotal teeth parallel, horizontal, truncate at the apex, barely half as long again as their basal width, much shorter than the interval between them. The 1st node is as long as wide in front, the anterior half of the sides parallel, the posterior half converging inwards. Second node subglobose, a little more than one-fifth wider than the 1st, and a little wider than long. Both nodes strongly rugose lengthwise and deeply grooved between the rugae. The 1st node has a broad, oblong, and laminate projection below which ends in front and behind in dentate angles. Abdomen long, parallel-sided, emarginate at the base and broadly rounded at the apex, one and three-quarter times longer than wide. Deälated. Otherwise like the ♂.

♂. 4.4 mm. (hitherto undescribed). Colour as in the ♀; pilosity longer, less obtuse, and a little more abundant. Head and thorax longitudinally rugose, very coarsely rugose on the epinotum and nodes, much more finely on the head and mesonotum. The pronotum

somewhat transversely rugose and reticulate. The spaces between the rugae on the mesonotum, epinotum, and nodes slightly shining. The fundamental sculpture all over consists as usual of a very fine and close reticulation. Abdomen moderately shining, feebly longitudinally striate near the base.

Head, including the closed mandibles, subtriangular, a little longer than wide behind. The posterior margin slightly concave, the posterior angles dentate, the lateral margins behind the eyes distinctly denticulate, narrowed in front of the eyes. The latter, placed for the greater part behind the middle of the sides, are very convex and occupy about one-third of the sides. The ocelli are fairly apparent and not flattened, as in the ♀. The lower anterior angles of the pronotum dentate, rectangular. Mayrian furrows on the mesonotum deep and wide. The paraptera of the mesothorax are produced posteriorly into flattened and horizontal lobes, rounded at their apices (this character is absent from the only other ♂ of the genus which I have seen, *brevisetosus-lujae*). The profile of the dorsum of the thorax forms a low convexity, the pro- and epinotum not much lower than the mesonotum. The dorsum of the epinotum is about as long as the scutellum, widest at its base. Epinotal teeth triangular, wider than long, moderately divergent, the margin between them, *i. e.*, the brow of the declivity, arcuate. On each side of the base of the dorsum of the epinotum there is a small dentiform angle. First node of the petiole less convex transversely above than in the ♀; the anterior lateral angles rounded, not rectangular as in the ♀. The 2nd node more or less trapezoidal, the anterior margin convex, wider in front than behind, wider than the 1st node, one and a half times wider than long, the anterior lateral angles subacute and prominent. Abdomen oval, narrowed towards the apex, the sides fairly convex, one and a half times longer than wide. The 1st node has a ventral projection as in the ♀, but it is not so long from back to front, and less sharply dentate at its free angles.

Durban. (S.A.M., R.M., G.A. colls.); types of ♀ and ♂ in my collection.

In the opinion of Dr. Santschi (see *Ann. Soc. Ent. France*, vol. 84, p. 508, 1916), *brevisetosus* and *lujae* are but races of *pygmaeus*, André; the form described above, and so determined by Forel himself, differs from *lujae* in some minor features according to Dr. Santschi, who has, therefore, named it var. *plebeja* of race *lujae*. These slight differences come within the limits of variation which, as I have remarked before, may be found in a single nest, and for that reason I have not considered it advisable to adopt Dr. Santschi's revision.

C. BREVISETOSUS, Forel, race LUJAE, Forel.

Mitth. Schweiz. Ent. Ges., vol. 10, p. 305, ♀, 1901.

(Race) Deutsch. Ent. Zeitschr, p. 311, ♀, 1911.

♂. 3.2–4 mm. Colour and pilosity as in *batonga* and the preceding species. Whole body fairly dull. Head reticulate, the reticulations raised and sharply defined and much narrower than the spaces between them. Thorax and nodes longitudinally and coarsely rugose. The rugae on the thorax have short transverse branches, which barely meet the rugae on either side, the spaces between them very finely reticulate. Abdomen closely and finely reticulate-punctate, with a few fine longitudinal striae superimposed near the base, sometimes extending beyond the middle of the abdomen. Head quadrate, rounded and very slightly narrowed in front of the eyes, barely longer than wide, the sides in greater part parallel, the posterior margin straight. The two teeth on each side of the posterior margin fairly strong and prominent, the side margins of the head feebly denticulate, the tooth in front of the eye small and inconspicuous. Eyes large, more oblong than in the preceding species, placed in greater part behind the middle of the sides and occupying about two-fifths of their length. The anterior margin of the clypeus has a shallow and fairly wide emargination in the middle, behind which the surface of the clypeus is slightly depressed. Prothorax narrower than the head. Lateral margins of the pro-mesonotum strongly denticulate, the pronotum nearly twice as wide as long. Mesonotum not much narrower at the base than in front (considerably narrower in *durbanensis* and *Marleyi*). Dorsum of epinotum twice as wide in the middle as long, the lateral teeth near the base wide and obtuse; epinotal spines fairly divergent, flattened, nearly twice as long as their basal width and longer than the interval between their bases, which is deeply arcuate. Nodes of petiole similar to those of *batonga*, but the 2nd node is much higher in front than behind and higher than the 1st. Abdomen longer than wide, rounded at the apex, emarginate at the base. The degree of convexity of the sides of the abdomen is rather variable, in some specimens it is fairly great, in others the sides are almost parallel.

♀. 4.6 mm. Ocelli small. The teeth on the posterior margin of the head smaller than in the ♂. Mesonotum longitudinally rugose (the fundamental sculpture is densely reticulate-punctate), the rugae fine and parallel. Epinotal teeth shorter and broader than in the ♂, and more obtuse at the apex. The 1st node of the petiole is less wide in front, almost parallel-sided. Abdomen parallel-sided, quite twice as long as wide. Deãlated. Otherwise like the ♂.

♂. 4 mm. Black, tibiae, tarsi, scapes, and 1st joint of the flagellum bright ochreous, the rest of the flagellum piceous. Dull, reticulate-punctate. The head also finely reticulate-rugose, mostly longitudinally. Epinotum and nodes coarsely rugose. Abdomen moderately shining, finely and feebly reticulate. Head, seen from above and excluding the convexity of the eyes, triangular, with the apex of the triangle widely truncate. The portion of the head in front of the eyes is much shorter in this species than in *durbanensis*. The sides of the head without denticulations, the teeth on the posterior margin very small. The head is a little longer than wide, wider behind than the anterior margin of the thorax, but narrower than the middle of the same. Mayrian furrows much deeper than in *durbanensis*, and more coarsely clathrate. Dorsum of epinotum not much narrowed apically; the spines triangular, not longer than wide at the base, the brow of the declivity shallowly arcuate. The 1st node is widest in front, a trifle longer than wide, the middle of the sides slightly angular. Second node without the subacute anterior lateral angles which are seen in *durbanensis*. Wings hyaline, faintly tinged with yellow. Pilosity longer and less obtuse than in the ♀ or ♂.

This race differs from the type, which has not yet been recorded from our region, in the wider pro-mesonotum and the stronger denticulations of the lateral margins. The meshes on the head are also smaller and deeper.

Bulawayo, in hollow twigs of *Acacia*; Kimberley (Power). (S.A.M., R.M., G.A. colls.)

C. MARLEYI, Forel.

Bull. Soc. Vaud. Sc. Nat., vol. 50, p. 219, ♀, 1914.

♀. 3.6-3.9 mm. Colour as in the preceding species. Pilosity longer than in *micans-durbanensis*. Head and abdomen with a faint gloss, thorax fairly shining. Head longitudinally and not closely striato-rugose, barely reticulate. The sculpture of the thorax like that of the head but stronger. The rugae on the pro-mesonotum number about 10-12, and are rather wide apart, the spaces between them feebly rugulose. Nodes fairly strongly rugose and sulcate. Abdomen densely reticulate, with a few longitudinal rugae superimposed. Head very gradually narrowed from the posterior angles to the apex. The teeth on the posterior angles and on the sides behind the eyes acute

and prominent (larger than in *lujae* or *durbanensis*). The teeth in front of the eyes and at the anterior corners of the clypeus are fairly prominent. The denticulations of the lateral margins of the thorax are fairly large and acute. The tooth on each side of the mesonotum small, that on the sides of the epinotum almost obsolete. Thorax narrowed between the meso- and epinotum. Epinotal spines much more divergent than in *durbanensis* and *lujae*, nearly three times longer than their basal width, almost twice as long as the interval between their bases, fairly acute at the apex. The lower anterior angle of the mesosternum is only bluntly angular, not spinose as in *micans* and its race *durbanensis*. First node cuboid, a little higher and wider in front than behind, the anterior face feebly concave transversely. Second node trapezoidal, widest in front, slightly wider than the 1st, the anterior lateral angles rounded. Abdomen very shallowly emarginate at the base, the sides convex.

♀. 5 mm. (hitherto undescribed). Head finely and longitudinally rugose, with a few transverse strands, most of which are short and do not meet the rugae on either side. The sculpture of the thorax is similar to that of *lujae* but stronger. The head is much more narrowed in front of the eyes than in *lujae* or *durbanensis*, and the teeth at the anterior lateral angles of the clypeus are much larger and more prominent. The epinotal spines are much longer than in those two species, more divergent, and nearly twice as long as their basal width. The 1st node is a little longer than wide in front, not much wider in front than behind. Second node less convex than in *lujae*, more convex than in *durbanensis*. The emargination at the base of the abdomen has the angles on each side of it widely rounded, not obtusely rectangular as in *lujae*. The abdomen is closely and finely reticulate, slightly shining, feebly and longitudinally striate, two-thirds longer than wide, the sides parallel. Wings hyaline, the nervures pale yellow. Otherwise like the ♀.

Durban (H. B. Marley). (S.A.M., G.A. colls); type of ♀ in my collection.

C. TRAEGAORDHI, Santschi.

Göteborgs Kungl. Vetensk. och Vitterh. Handl., XV, 2, p. 24, ♂, ♀, ♂, 1914.

“♂. 3.5 mm. Black, scapes, tibiae and apices of the femora red or reddish-yellow. Pilosity yellow, shorter than in *Wissmanni*, Forel, and longer than in *Ebrardi*, Forel, evenly distributed. Dull. Head

reticulate-rugose, the meshes wider than in *Ebrardi* and *Wissmanni*. The rugae feeble, longitudinal on the head, transverse on the neck, coarse on the thorax, and rather irregular on the front of the pronotum, elsewhere longitudinal. The spaces between the rugae finely reticulate and fairly shining. Both nodes coarsely rugose and sulcate lengthwise. Abdomen closely and finely reticulate-punctate, also with superficial rugae which extend over the whole surface, becoming stronger towards the base.

“Head as wide as long, the sides convex, fairly narrowed in front, the posterior margin almost straight. The posterior angles and the sides behind the eyes denticulate; a tooth is present in front of each eye. Eyes fairly convex, nearly as long as the space between them and the anterior angles of the head. Clypeus emarginate in the middle. Thorax a little narrower than the head, two-thirds longer than wide, without dorsal sutures, moderately convex. Sides of pronotum parallel and denticulate. Epinotal spines as long as the interval between their bases. First node hardly longer than wide, higher than long; 2nd node lower and a little wider than the 1st, one-third wider than long, the anterior angles rounded. Abdomen distinctly longer than wide, the sides a little convex (shorter than in *Wissmanni* and longer than in *otii*, Forel).

“♀. 5 mm. Rugae on the pronotum oblique behind, fairly parallel and longitudinal on the mesonotum and scutellum (much more irregular in *Ebrardi*). Stronger and also longitudinal on the dorsum of the epinotum and on the two nodes (transverse on the 1st node in *Ebrardi*). The head is a little longer than in the ♀, distinctly narrower in front. The eyes are half as large again as the space between them and the posterior angles of the head. Thoracic sutures very distinct. Epinotal spines shorter than the interval between them, but slightly longer than in *Ebrardi*. First node a little longer than wide, nearly as long as in *Ebrardi*. Abdomen narrowly emarginate at the base, a little shorter than in *Ebrardi*. Wings hyaline, tinged with yellow, nervures yellow, stigma brownish. Otherwise like the ♀.

“♂. 4.3 mm. Sculpture finer than in the ♀, considerably effaced on the abdomen, which is fairly shining and has a few rudimentary striae near the base. Head narrowed in front, half as wide in front as behind. Eyes convex, one-third longer than the space between them and the posterior angles. Mayrian furrows well defined. Epinotal spines shorter and thicker than in the ♀. Otherwise like the ♀.

“Dukudu, Zululand; Umfolozi, Natal (Traegaordh).”

C. OTII, Forel, race FRICATIDORSUS, Santschi.

Loc. cit., p. 26, ♀.

“♀. 3 mm. Black; margins of the mandibles, flagellum and tarsi brownish-red. Scape, tibiae and apices of the femora red-yellow. Dull, dorsum of thorax and the abdomen subopaque. Sculpture much less coarse than in *Wissmanni* and *otii*, the rugae on the head finer and closer together, the spaces between them punctate and fairly shining. The rugae are effaced on the middle of the thorax, thus forming a space more weakly rugose, which is bordered by a network of thicker rugae which tend to become concentric. The rugae are transverse on the pronotum, longitudinal on the mesonotum, and again more or less transverse on the dorsum of the epinotum. Declivity finely punctured, with a few striae between the spines. Both nodes longitudinally rugose and sulcate. Abdomen reticulate-punctate, striate over the basal fourth or fifth. Pilosity very short and sparse, a little more so than in *Wissmanni*, Forel. Head nearly as wide as long, narrowed in front, the posterior margin straight, the posterior angles armed with two teeth which are stronger than in *Wissmanni*. Eyes fairly convex, one-third longer than the distance between them and the posterior angles, margined on the inner side by a stronger rugosity. Mandibles finely rugose (striate in *Wissmanni*). Thorax short, hardly one-quarter longer than wide (nearly one-half in *Wissmanni*), without sutures, strongly dentate on the lateral margins. Dorsum of epinotum shortened, the spines shorter and more elevated than in *Wissmanni*. First node as long as wide in front, with a foot-shaped ventral lobe. Second node one-third wider than long, twice as high as long, the sides rounded. Abdomen short, the sides convex, emarginate in front.

“Dukudu, Zululand (Traegaordh).”

C. WISSMANNI, Forel.

Mitth. Schweiz. Ent. Ges., vol. 9, p. 78, ♀, 1894.

“♀. 3.5 mm. Allied to *intrudens*, but smaller and narrower, the oval eyes much larger, flatter and more prominent outwardly. They are not emarginate in front, and are as long as the distance between them and the base of the mandibles. Head longer than wide, very moderately narrowed in front, nearly straight behind, with two small teeth near each posterior angle. Pro- and mesonotum together almost circular, the margins dentate. Epinotal spines slightly divergent, as

long as two-thirds of the width of the epinotum. Nodes of the petiole wider than long, the 2nd node twice as wide as long. Abdomen much longer than wide, concave in front, the sides almost parallel. The thorax is not much narrower than the head or abdomen, the whole body elongate and narrow. Limits of the clypeus distinctly defined. There is a small ridge on the margin of the head, extending from the base of the mandibles to near the eyes, where it is depressed and ends in a tooth. Dull, partly nitidulous, closely and finely reticulate-punctate. In addition, the head, thorax and petiole are coarsely, more or less irregularly and longitudinally rugose. Abdomen coarsely regularly and longitudinally striate, the striae almost entirely effaced in the middle. Legs and scapes reticulate. The whole body, including the legs and scapes, clothed with short truncate hairs. Pubescence nearly obsolete. Black; legs, flagellum and mandibles brown; scapes, tibiae, apices of the femora, and the tarsi brownish reddish-yellow.

“Mossambique (Dr. A. Muller).”

C. PARALLELUS, Smith.

Trans. Ent. Soc. London, p. 226, ♀, 1853.

“♀. $3\frac{1}{2}$ lines (= 7.2 mm.). Black; the head longitudinally rugoso-striate, the vertex emarginate, the emargination transversely rugoso-striate, the scape of the antennae and extreme apex of the flagellum ferruginous. Thorax longitudinally rugoso-striate; the metathorax (epinotum) on each side produced into a stout, sharp, bent spine, beneath which it is transversely sulcate; wings tinged with yellow, the nervures pale testaceous; the tibiae and tarsi ferruginous. The 1st node coarsely sculptured transversely, the 2nd longitudinally so. Abdomen oblong quadrate, finely aciculate at the base, beyond which it is delicately shagreened, and has towards the apex a few short, scattered and pale setae.

“Cape of Good Hope.”

This species is unknown to me, and it does not appear to have been recorded again since Smith's time. The type requires re-examination and further description as the species is insufficiently characterised by Smith. The above description is altogether too vague, as it could apply equally well to the ♀♀ of several other species.