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Report on a Collection of South African Bees, Chiefly from Natal

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Report on a Collection of South African Bees,
chiefly from Natal.

By T. D. A. Cockerell.

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PLATE XIX.

- Fig. 1.—x 220. Cross-section through the distal portion of hydranth showing the five endodermal ridges.
- Fig. 2.—x 220. Longitudinal section through hydranth showing nematocyst-ring round the mouth.
- Fig. 3.—x 220. Longitudinal section through hydranth sucking blood.
- Figs. 4, 5.—x 550. Vertical sections through gonostyles showing branching processes of mesoglea and the peculiar endoderm.
- Fig. 6.—x 550. Vertical section through manubrium of developing medusa showing the numerous yolk-globules in the endoderm.
- Figs. 7, 8.—x 1480. Nematocysts, discharged and undischarged.

PLATE XX.

- Figs. 1-8.—x 275. Developing medusæ in longitudinal and cross sections.
- Fig. 9.—x 660. Portions of hyphæ of parasitic fungus showing the vegetative non-septate condition (a) and the septate condition (b) prior to the production of chain-gemmæ (c).

XIV.—Report on a Collection of South African Bees chiefly from Natal,

by

T. D. A. Cockerell, University of Colorado.

THE present report enumerates the bees recently sent to me by Mr. E. C. Chubb, Curator of the Durban Museum, nearly all of which were collected in Natal. I have tried, by means of a synoptical key or table, to make it possible for any future collector to determine the species now recorded, or at least to refer specimens to their probable species, leaving final confirmation to comparisons with named material or with detailed descriptions. The arrangement of the genera is more or less artificial, following a dichotomy designed merely to facilitate determination. It is hardly necessary to remark that any energetic collector will find many additional species, including a fair number new to science. The habits of Natal bees are scarcely at all known, so any information on this subject will be of value.

- 1A. Large, robust bees, usually with dark wings; three submarginal cells in anterior wings, the third large, the second greatly produced and pointed basally. Carpenter bees, nesting in wood, often seen about houses. There are two genera or subgenera. In *Mesotrichia* the hind part of the thorax is flattened, the scutellum having a sharp rim, and this posterior thoracic truncation meets a similar basal truncation of the abdomen. The basal segment of the abdomen contains a pouch, which opens on the anterior face and in this pouch will be found mites of the genus *Paragreenia* Ckll. (family Gamasidæ). The scutellar rim is not always evident in the males. In the other group, true *Xylocopa*, the hind part of the thorax is rounded as in other bees, and the first abdominal segment also lacks a sharp or angular rim above its basal declivity.

- 2A. Black bees, with broad bands of dense white hair on thorax posteriorly and base of abdomen.

(1).—*MESOTRICHIA CAFFRA MOSSAMBICA*, Gribodo. ♀.

1005. Bulawayo, Rhodesia, E. C. Chubb.

(188)

- 2B. Black bees, much smaller than the last, the posterior part of thorax covered with bright yellow hair; the base of abdomen with a variable but always small amount of yellow hair, sometimes hardly noticeable; wings black, shining purple.

(2).—MESOTRICHIA DIVISA, Klug. ♀.

1007. (37) Stella Bush, Durban, 1915, H. W. Bell Marley.

1008. Durban, iii. 1915, H. W. Bell Marley.

- 2C. Very large black bees (anterior wing 24 mm.), with very bright fox-red hair on thorax, especially in front, and red hair at apex of abdomen; wings very dark, with green tints.

(3).—MESOTRICHIA FLAVORUFA, De Geer. ♀.

1001. Stella Bush, Durban, ii. 1915, H. W. Bell Marley.

- 2D. Thorax above covered with very bright lemon-yellow hair; abdomen yellow-haired, with a dark line down the middle; wings subhyaline.

(2).—MESOTRICHIA DIVISA, Klug. ♂.

1006. Clairmont, 1915, H. W. Bell Marley. For female see above.

- 2E. Unlike any of the above, and with the structural characters of typical *Xylocopa*.

- 3A. Thorax with light hair above; face below antennæ yellow.

- 4A. Hair of thorax pale grey.

(4).—XYLOCOPA CARINATA, Smith (FRATERNAL, Vachal). ♂.

1002. (222) Stella Bush, Durban, ii. 1915, H. W. Bell Marley.

- 4B. Hair of thorax reddish fulvous.

(5).—XYLOCOPA CARINATA FULVOPILOSA, Friese. ♂.

1021. From wood, Stella Bush, 20. vi. 1914, H. W. Bell Marley.

This is about 20 mm. long, and the hair of the thorax is bright reddish fulvous. It is a more slender insect than typical *carinata*, and the hind tibia is shorter. It is not exactly identical with *fulvopilosa* as described by Friese, but it seems not to be separable.

3B. Entirely black bees.

5A. Larger, anterior wing 18 mm. long; wings black, with strong purple tints.

(4).—*XYLOCOPA CARINATA*, Smith (NATALENSIS, Vachal). ♀

Durban, January 1915, H. W. Bell Marley.

1003. From wood, Stella Bush, 20. vi. 1914, H. W. Bell Marley.

5B. Smaller, anterior wing about 15 mm. long; flagellum of antennæ bright ferruginous beneath, except basally.

(6).—*XYLOCOPA HOTTENTOTTA*, Smith. ♀.

1009. Durban, 24. ii. 1915, H. M. Millar.

This I take to be the true *hottentotta* Smith, agreeing with the original description. Smith and others later confused with it a different species (larger, with dark antennæ) from Aden and other northern localities. This latter is apparently to be called *X. taschenbergi* Vachal. It is not identical with *X. fenestrata* Fabr., under which Friese has placed it as a synonym.

5C. Still smaller, anterior wing less than 15 mm.; abdomen less strongly punctured than in the last; hind basitarsus with red hair on outer side.

(7).—*XYLOCOPA TARSATA*, Smith. ♀.

1010. Bulawayo, Rhodesia, E. C. Chubb.

There is another species very like this, but with the hair of hind basitarsus all black; namely *X. rufitarsis* Lepeletier, of which I have received a variety with dark tarsi, collected by Mr. C. K. Brain at Devil's Peak, S. Africa, Dec. 15, 1907.

1B. Bees unlike *Xylocopa*; smaller or less robust, and if with three submarginal cells, the second not greatly elongated basally.

6A. Eyes hairy.

7A. Three submarginal cells, the second greatly elongated apically. Honey bees.

(8.)—*APIS UNICOLOR*, Latreille (worker).

1056. Durban, 24. ii. 1915, H. M. Millar.

1053. Stella Bush, Durban, i. 1915, H. W. Bell Marley.

"This bee flies with the common species, but appears more spiteful.—H.W.B.M."

This is the form in which the abdomen is black, without fulvous bands or pale hair. The honey-bees sent by Mr. C. K. Brain from Cape Colony (Rosebank and Muizenberg) have the abdomen variably fulvous banded near the base, and the bases of the third and fourth segments with more or less pale tomentum. This is *A. unicolor adansoni* Latreille; it is smaller than *A. mellifera*, the honey-bee of Europe.

7B. Two submarginal cells. Parasitic bees, with pointed abdomen in the female.

8A. Large, anterior wing about 10.5 mm., the apical half dark fuscous, the base hyaline; a strong longitudinal keel between antennæ.

(9.)—*COELIOXYS DURBANENSIS*, sp. nov. ♀.

Length about 16 mm.; black, including the antennæ and legs, with the hair-markings white; hair of face scanty, mainly fuscous, but glittering white between clypeus and eye, of front dark fuscous, of vertex black, on mesothorax and scutellum very scanty but black; hair of eyes short (much shorter than in *C. capensis* Sm., though that is a much smaller species), brownish; a strong keel between antennæ, but it does not reach middle ocellus; clypeus closely punctured, the upper part with a smooth line, hardly a keel; mesothorax and scutellum coarsely and extremely densely punctured; scutellum

obtusely angulate behind, but with no keel; axillar teeth long and stout; tegulae dark rufous; wings with the apical half dark fuliginous, the base clear; a conspicuous tuft of white hair on each side behind the wings; disc of mesopleura sparsely hairy, the surface showing; abdomen shining, sparsely but distinctly punctured; first segment broadly white-haired at sides, second to fifth with pure white hair-bands, broadening at sides, but broken or reduced to a mere line in middle, these bands curve round at sides, connecting with anterolateral white hair-patches; sixth segment finely punctured, obscurely subcarinate dorsally, formed much as in *C. acanthura*, but not so broad, and the apical narrowed part is shorter, and not pointed; sixth ventral segment very long and narrow, also of the *acanthura* type, but the end is narrowly truncate, even a little emarginate, and the part before the apex is covered with fuscous hair; ventral segments two to four strongly and sparsely punctured, fifth dull and granular except at base.

1033. Durban, 24. ii. 1915, H. M. Millar.

This fine species runs in Friese's table (*Die Bienen Afrikas*) to *C. furcata* Friese, but the frontal keel is not furcate above, and the sixth dorsal abdominal segment is different. The colour of the wings readily separates it from *C. maculata* Friese.

8B. Much smaller; no evident keel between antennae; the face covered with hair.

9A. Legs red; scutellum without a median raised line.

(10).—*COELIOXYS CAFFRA*, Friese. ♀.

1037. Krantz Kloof, ii. 1915, H. W. Bell Marley.

9B. Legs black, suffused with red; scutellum with a delicate median raised line.

(11).—*COELIOXYS LORICULA*, Smith. ♂.

1035. Durban, 24. ii. 1915, H. M. Millar.

Identified from Smith's description, which seems entirely applicable. It is possibly the male of *C. caffra*. It appears to be allied to *C. auriceps* Friese, but distinct.

- 6B. Eyes not hairy.
- 10A. Anterior wings with only two submarginal cells.
- 11A. Large bees, at least 18 mm. long, the abdomen largely or wholly covered with bright red hair.
- 12A. Larger, at least 20 mm. long; thorax and first abdominal segment with black hair; flagellum of male antennæ thickened, and grooved beneath.

(12).—GRONOCERAS COMBUSTA, Smith.

♂. 1012, 1013, 1016. Durban, 24. ii. 1915, H. M. Millar
1019. (97) Stella Bush, Durban, 1915, H. W. Bell
Marley.

1020. Durban, Jan. 1915, H. W. Bell Marley.

♀. 1015, 1011. Durban, 24. ii. 1915, H. M. Millar.
1018. (187) Durban i. 1915, H. W. Bell Marley.

Smith described the male as *Megachile coelocera*. The nest resembles that of *Chalicodoma*.

- 12B. Smaller, about 18 mm. long; hair of abdomen red, including the first segment; mandibles short and broad, wholly different from those of *G. combusta*.

(13).—MEGACHILE COGNATA, Smith. ♀.

1017. Durban, 24. ii. 15, H. M. Millar.

Smith's description is ambiguous when he seems to say that the thorax and femora beneath are ferruginous. He probably intended to refer to some ferruginous hair on the femora and lower part of thorax. The insect, as he remarks, looks like *M. rufiventris*, so much so that on superficial examination they appear to be the same.

- 11B. Large bees, fully 18 mm. long; hair grey mixed with black, giving a tabby-cat effect; abdomen with pale bands on a dark ground.

(14).—GRONOCERAS FELINA, Gerstäcker. ♀.

1029. (186) Congella, iii. 1915, H. W. Bell Marley.

- 11c. Smaller bees; when rather large (16.5 mm.) the abdomen not red haired or pale banded on a dark ground.

- 13a. Abdomen with white hair at base, then black with very little hair, sixth dorsal segment and apical half of fifth with ferruginous tomentum.

(15).—MEGACHILE BITUBERCULATA, Ritsema. ♂.

1052. Stella Bush, Durban, 1915, H. W. Bell Marley.

This is *M. sjoestedti* Freise, which Meade-Waldo finds to be identical with *bituberculata*.

- 13b. Abdomen otherwise; if white-haired at base, then apical dorsal segments not red-haired.

- 14a. Face with light (not black) tegumentary markings.

- 15a. Abdomen with red or yellow lateral markings; short compact bees with yellow or red clypeus.

- 16a. Clypeus and lateral face-marks yellow; sides of abdomen not toothed.

(16).—DIANTHIDIUM (ANTHIDIELLUM) COMPACTUM, Smith. ♀.

1059. Umbilo, Durban, L. Bevis.

All the tibiae are bright yellow. The feet are without pulvilli. According to the definition, *Pachyanthidium* Freise, 1905, is the same as *Anthidiellum* Cockerell, 1904. If it is considered desirable to separate the species lacking pulvilli, *Pachyanthidium* can be retained for these. It is parallel with the neotropical *Hypanthidium*, but I think an independent development.

- 16b. Only the clypeus light; abdomen with lateral teeth; second submarginal cell extremely long.

(17).—DIANTHIDIUM (ANTHIDIELLUM) CUCULLATUM, Friese.

♂. 1060. Stella Bush, Durban, i. 1915, H. W. Bell Marley. Clypeus yellow and face with white hair.

- ♀. 1058. Umbilo, 22. xi. 1914, L. Bevis. The female, as well as the male, has teeth at the sides of abdomen. Pulvilli are present in the male, but apparently absent in the female.

- 15B. Abdomen without red or yellow lateral markings, though some of the segments may be red; stigma of anterior wings well developed.
- 17A. Scutellum entirely black.
- 18A. Abdomen entirely black.

(18).—*ALLODAPE STELLARUM*, sp. nov. ♀.

Length about 7 mm.; black, with the following ivory-coloured markings on the head, a stripe down middle of clypeus (slightly, but not conspicuously widened above), lateral face-marks (about as wide as clypeal stripe, ending above about level of middle of front), and narrow stripe along posterior orbits; labrum very densely punctured; clypeus with punctures of two sizes; pubescence scanty, greyish-white, a pale reddish tuft on outer side of hind tibiae; thorax without light markings; mesothorax sparsely punctured near margins; scutellum with very fine scattered punctures; tegulae hyaline in front, piceous behind; wings greyish hyaline, stigma dark, apical margins of abdominal segments obscure reddish.

1083. Umbilo, 6. vi. 1914, L. Bevis.

(18A).—*ALLODAPE STELLARUM*, variety a. ♀.

Clypeal mark reduced to a short narrow stripe; wings strongly brownish.

1064. (212) Stella Bush, Durban, i. 1915, H. W. Bell Marley.

Closely allied to *A. panurgoides* Smith, but that has red hair, and the mesothorax and scutellum more strongly and profusely punctured. Also resembles *A. quinquelineata* Cameron, but the metathorax is different.

The African species of *Allodape* appear to be very numerous and of restricted distribution. Thus a series of species from Algoa Bay and Willowmore, kindly sent by Dr. H. Brauns, does not include a single one common to the Natal collection. While on this genus I will take occasion to note that *Allodape humeralis* Lepeletier is not identical with *A. rufogastra* Lepeletier, as has been supposed. *A. humeralis*, according to Lepeletier's figure, has a quadrate yellow mark on scutellum, a line on postscutellum, and the border of prothorax with tubercles yellow. It is a species I have never seen.

18B. Abdomen partly or mainly red.

19A. Clypeus with a very large light yellow mark, suddenly and greatly broadened above, like a heavy hammer; wings hyaline, scarcely dusky.

(19).—*ALLODAPE MALLEIFERA*, sp. nov. ♀.

Length about 6.5 mm., rather slender, head and thorax black with yellow markings, abdomen black and red; coxæ, trochanters and femora black, tibiæ and tarsi clear red, except the hind tibiæ, which are largely dark; head shining, eyes converging below; clypeus sparsely and very minutely punctured, its upper part and a broad stripe down middle yellow; lateral face-marks and post-ocular stripes wholly absent; flagellum ferruginous beneath; hair of head and thorax dull white, scanty; tubercles and a stripe on upper border of prothorax (not nearly reaching tubercles) yellow; mesothorax smooth and shining, median and parapsidal grooves distinct; scutellum large and polished; area of metathorax without evident sculpture, dull except at sides; tegulæ piceous; wings clear; stigma and nervures rather dilute red-brown; first recurrent nervure joining second submarginal cell; legs with pale hair, golden on tarsi; abdomen shining, roughened apically; first segment black, second ferruginous with a very broad arched transverse black band (not reaching sides), third ferruginous with the transverse (slightly oblique) black marks, fourth dark red, fifth and sixth black; greater part of venter red.

1071. (81) Krantz Kloof, 1915, H. W. Bell Marley.

Resembles *A. pungens* Brauns, but easily known by the heavy clypeal mark, the black scutellum and the abdominal markings.

- 19B. Clypeal mark bar-like, of uniform width (female) or pyriform, broadened below (male); wings brownish.

(20).—*ALLODAPE PYRIFERA*, sp. nov.

Male. Length nearly 7 mm.; rather robust, black, head with yellow markings, thorax black without markings, legs black (tarsi reddened apically), abdomen black with the second and third segments, and apical margin of first, bright red; pubescence greyish-white; eyes large, converging below; face sulcate on each side; clypeus with a large pyriform mark; lateral marks present, following orbital margin to near middle of front, broadened below; stripes along posterior orbits; ocelli ruby-colour; a smooth impunctate space on each side of ocelli; antennæ black; mesothorax rather dullish, impunctate, except for sparse punctures toward margins; scutellum extremely minutely punctured; tegulæ hyaline in front, rufopiceous behind; wings strongly brownish, stigma dusky red, first recurrent nervure joining second submarginal cell; hind trochanters with a small acute tooth; abdomen broad, truncate apically, with shining white hair.

Type. 1091. Umbilo, L. Bevis.

Female. Face broader, with three ivory-coloured stripes, the clypeal mark a bar of even width, from base to apex; first abdominal segment almost all black; wings paler, but still brownish.

1079. Durban, 24. ii. 1915, H. M. Millar.

- 17B. Scutellum with a yellow or cream-coloured band.

- 20A. Abdomen with second and third segments red.

(21).—*ALLODAPE MEDIORUFA*, sp. nov. ♂.

Length about 8.5 mm.; like *A. pyrifera*, but considerably larger; the long and narrow clypeus red (perhaps originally yellow), punctured, without the delicate median line seen in *pyrifera*; lateral face-marks obscure red, evanescent above; scutellum with a broad yellow band; metathorax posteriorly with a fovea, the sides of which have a dentiform aspect; lower section of basal nervure much more oblique (in *pyrifera* the basal nervure is strongly arched, its lowest part almost vertical); first recurrent nervure joining second submarginal cell much further from base. The abdomen is coloured as in *A. pyrifera*.

1090. Umbilo, L. Bevis.

Very close to *A. rufogastra* Lepeletier, but that has the clypeus broadly black at sides, the first abdominal segment with more than apical half red, hair of pleura light fulvous (dull white in *mediorufa*), etc. In both species, the hind trochanters have two processes, the more basal one dentiform, the other finger-like. The second submarginal cell is considerably longer in *A. mediorufa* than in *A. rufogastra*.

- 20B. Abdomen black, at most with the hind margins of segments reddened.

(22).—ALLODAPE CORDATA, Smith.

1076, 1057, 1078, 1077. Durban, 24. ii. 1915, H. M. Millar

1086, 1087. Greenwood Park, 25. x. 1914, D. R. Boyce.

1080. Umbilo, 7. vi. 1914, L. Bevis.

1068. (131) Stella Bush, Durban, 1915.

1089. (1322).

Close to *A. panurgoides*, but that has a black scutellum, with no band.

- 14B. Face without light tegumentary markings.

- 21A. Feet with a small pad (pulvillus) between the claws; small black bees with strong punctures.

- 22A. Wings hyaline, faintly greyish, but not brown; first recurrent nervure joins second submarginal cell very near its base.

(23).—*HERIADES BEVISI*, sp. nov. ♂.

Length about 5 mm.; black, with dull white hair; head circular seen from in front; face with much long loose white hair; mandibles and antennæ black; punctures of vertex, mesothorax and scutellum strong and dense, and of practically the same size; base of metathorax with a linear shining transverse groove, crossed by little ridges, so as to be divided into a series of pits; tegulæ dark; wings hyaline, slightly dusky, stigma and nervures piceous; second submarginal cell long, narrowed more than half above; legs black; spurs very pale reddish; abdomen shining, strongly and regularly punctured; first segment with a very broadly interrupted white hair-band, second with a narrow entire band, third with no band, fourth with a weak band, fifth and sixth thinly covered with white hair; venter simple, without any process. Clypeus strongly and densely punctured; mandibles with two strong teeth; scape closely punctured; antennal joints measuring in microns (length), third, 96, fourth, 128, fifth and sixth, each 160; axillar spines long and slender.

1082. Umbilo, 14. vi. 1914, L. Bevis.

Very like the American *H. carinatus* Cresson, but more robust. Easily known from *H. clypeatus* Friese by the absence of a keel on the clypeus, and the wholly black abdomen.

- 22B. Wings brownish.

- 23A. Length about 7.3 mm.; first recurrent nervure joins second submarginal cell far from base, more than twice as far as second from apex, second joining very near apex; second submarginal cell broader above; marginal cell broader (deeper).

(24).—*HERIADES MARLEYI*, sp. nov. ♀.

Black, robust, with dull white hair; strongly, closely and nearly uniformly punctured; head large; clypeus very densely punctured, not at all keeled, its lower margin crenulated, with a pair of minute undulations in middle, a comparatively large

lobe on each side of these, and minute undulations on each side beyond; sides of face with loose white hairs; mandibles and antennæ black; antennal joints in microns (length), second, 192, third, 128, fourth, 96, fifth, 128; axillary spines well developed; punctures of mesothorax and scutellum alike; tegulæ black; wings dilute fuliginous; anterior wings 5.5 mm. long; legs black; abdomen strongly and evenly punctured; hind margins of segments with thin hair-bands, on the second and third with scales instead of hairs; ventral scopa pale yellowish.

1065. (336) Durban, 14. ii. 1915, H. W. Bell Marley.

Very close to *H. truncorum* L. (which occurs as far south as Abyssinia), but stouter, with broader head, and abdomen more coarsely and densely punctured. It is larger than *H. freygessneri* Schletterer, and the antennæ are different. Compared with *H. ekivensis* Ckll., the mesothorax is much more densely punctured, and scutellum is entirely different.

- 23B. Length about 6.3 mm.; first recurrent nervure joins second submarginal cell some distance from base, but little more than second from apex; second submarginal cell narrower above; marginal cell more slender, longer in proportion to its width; length of anterior wing 4.5 mm.

(25).—*HERIADES CHUBBI*, sp. nov. ♀.

Black, moderately robust, with dull white hair; very close to *H. natalensis*, but smaller, with different venation as indicated above, and axillar spines not developed. The ventral scopa is strongly tinged with pale orange, a character which separates it from the allied *H. albiscopanus* Strand. It is also considerably larger than *H. albiscopanus*. The head is much larger and broader than that of *H. wellmani* Ckll. It differs from *H. freygessneri* by the lack of axillar spines.

The margin of cypeus is minutely crenulate or subnodulose; the punctures of mesothorax are of the same size as those of scutellum, and there are excessively minute punctures here and there on the shining ridges between the large punctures. Length of antennal joints in microns, third, 96, fourth, 88, fifth, 112.

1066. (167) Stella Bush, Durban, 1915, H. W. Bell Marley.

The closely allied species of *Heriades* described above probably have different flower-visiting habits, which should be ascertained and recorded.

21B. Feet without pulvilli; mostly larger bees; when small, the end of male abdomen is strongly bidentate.

24A. Base of abdomen and hind part of thorax with dense white hair covering the surface; a swelling on each side of scutellum.

(26).—*MEGACHILE MEDIOCANA*, sp. nov. ♀.

Length about 16 mm.; black, robust, with the postscutellum, metathorax and first abdominal segment dorsally covered with dense pure white hair; ventral scopa very bright red, white only at base, but black on apical half of last segment; head broad; mandibles massive, broad, obtusely multidentate; clypeus strongly punctured, flattened in middle, with a smooth line, lower margin obtusely bituberculate; antennae black; hair of cheeks and sides of thorax brownish-white, of face and front mixed fuscous and grey, of vertex fuscous with a little pale intermixed, of mesothorax and scutellum thin and pale brownish mixed with fuscous; looking at the insect from above, the hair on mesothorax is hardly visible; mesothorax closely punctured, but shining between the punctures; punctures of scutellum much larger than those of metothorax; on each side of scutellum a polished swelling; tegulae finely and closely punctured, dark reddish; wings hyaline basally, but the apical two-fifths dilute fuliginous; legs black, with mostly pale hair; hind basitarsi very broad, with rufous hair on inner side; spurs dark rufous, anterior spur of hind legs ending obtusely (like a finger); abdomen beyond the base appearing black without markings (the second segment has a narrow brownish-white hair-band, broadly interrupted), finely and closely punctured, segments two to four with arcuate smooth transverse ridges; lateral margins with black hair; sixth segment with black hair.

1036. Durban, iv. 1915, H. W. Bell Marley.

Closely related to *M. bituberculata*, but the hair at base of abdomen is white instead of yellow, and the mesothorax is less densely punctured. It is perhaps a subspecies of *bituberculata*.

24B. Not thus marked.

25A. Length about 7 mm.; face with cream-coloured hair, contrasting with the pure white of that on cheeks.

(27).—*MEGACHILE BARBATA*, Smith. ♂.

1075. Durban, 24. ii. 1915, H. M. Millar.

25B. Much larger.

26A. Abdomen red.

(28).—*MEGACHILE MELLIFERINA*, sp. nov. ♀.

Length 11–12 mm.; form and colour deceptively like an Italian honey-bee; black, the abdomen, except last segment, with the tegument dull ferruginous, the legs variably dark reddish, the flagellum dark rufous beneath; mandibles massive, produced, outer margin very strongly curved, apical part with two large sharp teeth; face densely covered with white (slightly creamy) hair, hiding the surface; upper margin of front, and region in front of anterior ocellus with seal-brown hair, varying to practically white; vertex with seal-brown hair, cheeks with creamy-white; mesothorax and scutellum dull, densely and minutely rugosopunctate; area of metathorax dull, depressed in middle; tegulae dark rufous, the outer margin somewhat produced; wings brownish-hyaline; second submarginal cell long; legs with pale hair, orange-fulvous on inner side of tarsi; all the tarsi broad, the hind basitarsi extremely broad; spurs bright ferruginous; abdomen with broad bands of orange-fulvous hair on first four segments, fifth with short fuscous hair and a marginal fringe of whitish; sixth segment with scanty dark hair; ventral scopa cream-colour, black on last segment.

1039 (type). Stella Bush, Durban, ii. 1915, H. W. Bell Marley. "Burrows and nests in ground."

1038. (106) Stella Bush, Durban, i. 1915. H. W. Bell Marley.

Resembles *M. eurymera* Smith, but the tarsi are not testaceous; it is possibly a subspecies of *eurymera*. Also resembles *M. arundinacea* Taschenberg, but that has the thorax black-haired, and nests in reed-stems.

- 26B. Abdomen black.

- 27A. Ventral scopa red.

(29).—*MEGACHILE INFRAPICTA*, sp. nov. ♀.

Length about 11 mm.; black, the hair on head and thorax above pale ochreous, that on face, cheeks, pleura, metathorax, base and sides of abdomen white; ventral scopa entirely bright orange-fulvous; mandibles broad, with three teeth (not counting inner corner), the inner (cutting) margin dark red; clypeus densely punctured, not keeled, lower margin angular in middle; antennæ black, flagellum very short; mesothorax strongly and densely punctured, shining on disc between the punctures; area of metathorax convex, polished and shining; tegulae rufofuscous, margin pallid; wings short, hyaline, stained with reddish; first recurrent nervure joining second submarginal cell unusually far from base; legs black with pale hair, orange-fulvous on inner side of tarsi; hind basitarsi slender, half width of tibiae; spurs very pale reddish; abdomen shining, well-punctured, with thin greyish hair, and poorly defined hair-bands. C. K. Brain, Grangezicht, Cape Colony, 30. xi. 1907.

This may be compared with *M. temora* Cam., from which it differs by the form of the clypeal margin and a variety of other characters. There is also some resemblance to *M. imitata* Smith, but the hair of the face is quite differently coloured.

- 27B. Ventral scopa white, black at end.

(30).—*MEGACHILE FAMILIARIS*, sp. nov. ♀.

Length 12–13 mm.; black, robust, aspect of the European *M. maritima*; hair of head, thorax and first two abdominal segments above ochreous, mixed with fuscous on face and

front, and very strongly on mesothorax and scutellum; hair on lower part of cheeks and under side of thorax white; ventral scopa white, tinged with reddish, on penultimate segment it is fuscous, and on the apical one black; head broad; mandibles broad, multidentate, the basal part clothed with pale hair; clypeus with punctures of different sizes, largely concealed by hair, a vaguely indicated median smooth line; lower margin of clypeus obtusely emarginate; ocelli large (is the species perhaps crepuscular?); antennæ black; thorax above with copious long hair; mesothorax dullish, closely punctured; area of metathorax with a sericeous surface, strongly depressed in middle; tegulæ fuscous with pallid margin; wings hyaline, faintly dusky; legs black, with pale hair, bright orange-fulvous on inner side of hind basitarsi, which are nearly as broad as tibiæ; spurs pale reddish; abdomen shovel-shaped, with ochreous hair on first two segments and mostly black on the others, but hind margins of segments with narrow inconspicuous hair-bands.

Rosebank, Cape Colony, 7. xi. 1910, C. K. Brain.

This looks so much like some of the ordinary European species, that I wondered whether it could have been introduced; but on closer examination it is evidently a native insect.

- 10B. Anterior wings with three submarginal cells.
- 28A. Scutellum broad and flat, with two salient angles; abdomen ornamented with patches of scale-like pubescence; parasitic bees.
- 29A. Anterior wing over 11 mm. long; ornaments of abdomen brilliant blue.

(31).—CROCISA GUINEENSIS, Radoszkowski. ♂.

1031. Umbilo, 22. xi. 1914, L. Bevis.

This is *guineensis* on the male characters indicated by Friese. According to Meade-Waldo, *guineensis* is a synonym of *C. picta* Smith, which was described from a female. I have been able to separate these species as I understood them, but it may be that both names really belong to one of the species, leaving the other nameless.

- 29B. Smaller, abdominal markings white or very pale bluish.
- 30A. Basitarsi with much white hair.
(32).—CROCISA CALCEATA, Vachal. ♀.
1032. Umbilo, 29. xi. 1914, L. Bevis.
- 30B. Basitarsi with hair all black.
(33).—CROCISA MERIPES, Vachal. ♀.
1034. Krantz Kloof, ii. 1915, H. W. Bell Marley.
- 28B. Scutellum ordinary, without projecting angles.
- 31A. Clypeus greatly produced, snout-like; males with a patch of black hair in the second and third submarginal cells.
- 32A. First two abdominal segments red, broadly banded with black; first recurrent nervure meeting second transversocubital.
(34).—THRINCHOSTOMA TORRIDUM, Smith. ♀.
1072. Durban, 24. ii. 1915, H. M. Millar.
Described by Smith as *Halictus torridus*; I have a specimen from his collection. *T. nomiaeformis* Ckll., which agrees in the venation, is perhaps the male of this species. *T. sjoestedti* Friese, var. *rufescens* Friese, appears to be *T. torridum*, judging from the description.
- 32B. First two abdominal segments black, with the hind margin pallid; first recurrent nervure joining third submarginal cell a short distance from its base.

(35).—THRINCHOSTOMA MILLARI, sp. nov.

Male. (Type). Length about 11 mm.; black, slender, with clavate abdomen; hair of head and thorax pale ochreous, on mesothorax and scutellum fulvous; clypeus and adjacent parts greatly produced; clypeus shining, sparsely punctured, the lower margin broadly whitish; labrum pallid; mandibles curved, rufous apically; tongue linear, very long; malar space

long; flagellum very long (about 5 mm.), ferruginous beneath, the last joint curved and produced to a needle-like point; mesothorax and scutellum dull, densely rugosopunctate; area of metathorax triangular, with longitudinal plicæ, slightly inclining to reticulation; tegulæ pale testaceous; wings hyaline, slightly greyish, apical margin darker; first recurrent nervure joining second submarginal cell; the usual patch of black hair in the submarginal cells present; legs black, with the anterior tibiæ reddish in front, all the basitarsi white, the small joints of tarsi reddish stained with blackish; abdominal segments black with broad hyaline margins; fourth ventral segment dull, emarginate; fifth shining, with raised area forming a reversed V. The hind tibiæ have the usual pale expanded apical lamina, ending in a sharp point.

Female. Clypeus all black; antennæ darker, flagellum not elongated; basitarsi dark; abdomen conspicuously pubescent. This differs from *T. torridum* not only in colour and venation, but also in the smaller size, and the more produced oral region.

1074 (♂), 1073 (♀). Durban, 24. ii. 1915, H. M. Millar.

1084 (♂). Umbilo, 22. xi. 1914, L. Bevis.

- 31B. Clypeus not snout-like; no such patch of black hair on male wings.
- 33A. First discoidal cell conspicuously longer than marginal cell; lower section of basal nervure straight (or nearly so); swift-flying bees.
- 34A. Abdomen black, without bands, but the apical part with white hair.
- 35A. Male with scape black, and end of abdomen bispinose.

(36).—*ANTHOPHORA ADVENA*, Smith.

♀. 1022. Krantz Kloof, 8. i. 1915, H. W. Bell Marley.

♂♂. 1025, 1026. Durban, 24. ii. 1915, H. M. Millar.

♂. 1024. Stella Bush, Durban, ii. 1915, H. W. Bell Marley.

♂. 1023. Krantz Kloof, i. 1915, H. W. Bell Marley.

This is not *A. albocaudata* Dours, which (female) has yellow (instead of white) face markings, and hair of head fulvous, black on vertex.

- 35B. Male with scape white in front; end of abdomen with a pair of small tubercles, not long enough to be called spines.

(37).—*ANTHOPHORA MIMADVENA*, sp. nov. ♂.

Looks exactly like *A. advena*, but wings are shorter (length hardly 11 mm.); there are long black hairs at base of fourth abdominal segment, and scattered pale ones on apical margin of third; the end of abdomen is bituberculate instead of bispinose; the scape is white in front, and the black marks on clypeus are smaller. The fulvous hair of the thorax above is not very bright; that on the under side of thorax is pure white.

1027. Durban, 24. ii. 1915, H. M. Millar.

I have two other species of this group from Port Natal (F. Smith's collection). Of these, *A. terminata* Smith is known by the ashy-grey (really mixed black and white) hair of thorax above; *A. acraensis* Fabricius by the black hair of pleura and lesser amount of white at end of abdomen.

- 34B. Abdomen with conspicuous white or pale fulvous-tinted hair-bands.
- 36A. Hair of thorax above appearing reddish-ashy, not bright fulvous; median light band on clypeus of female narrow.

(38).—*ANTHOPHORA CIRCULATA*, Fabricius. ♀.

1041, 1043. Durban, 7. vi. 1914, E. C. Chubb.

1047. (59). Bluff, Durban, H. W. Bell Marley.

I also have one from Grangezicht, Cape Colony, 30. xi. 1907, C. K. Brain.

- 36B. Hair of thorax above bright fulvous; median light band on clypeus of female broad.

(39).—*ANTHOPHORA CALIGATA*, Gerstaecker.

- ♀ ♀. 1040, 1042. Durban, 7. vi. 1914, E. C. Chubb.
 ♀. Tegwani, S. Rhodesia, 1. i. 1909, C. K. Brain.
 ♂. 1044. Umbilo, 21. ii. 1915, L. Bevis.
 ♂. 1046. Stella Bush, Durban, ii. 1915, H. W. Bell
 Marley.

The male has the clypeus yellow with a small black band on each side; the scape has a yellow mark in front, and the flagellum is red.

A. caligata has been considered a synonym of *A. circulata*, but it is probably distinct. I have a female *A. caligata* from the Berlin Museum, collected by Stuhlmann at Dar-es-Salaam; it is in very poor condition, but apparently represents the form recorded above. *A. caligata*, as I have interpreted it, is superficially exactly like *A. torrida* Smith, but the latter has large black marks on the male clypeus, and the hind basitarsus is nearly without light hair. They are, however, very closely related, and may be only subspecifically distinct.

The matter is further complicated by the fact that *A. torrida* is almost certainly a synonymy of *A. calens* Lepeletier.

A. fallax Smith, recorded from Natal, has the male clypeus with large black patches (i.e. not essentially different from that of the female), as in *A. calens* or *torrida*, to which it is very closely allied. The abdominal bands are all of the same pale tint, whereas in *calens* or *torrida* the first three are pale fulvous and the last two dull white, contrasting.

A. quadrifasciata Villers greatly resembles *A. caligata*, as here interpreted, having the same face-markings in the male, but it has the flagellum black instead of red, and the hind basitarsi (as in *torrida*) have the hair nearly all black. My material which I take as typical of *quadrifasciata* is from Oran.

In the bees of this group the various characters noted (presumably represented by determiners in the germ-plasm) are shuffled to form different combinations, which may or may not have specific value. It remains for the field naturalist to decide whether, when two or more types fly in the same general region, they should be regarded as closely allied species or varieties of a single dimorphic or polymorphic one.

33B. First discoidal cell not longer (often shorter) than marginal cell.

37A. Tegument of abdomen green; basal nervure strongly bent or arched.

38A. Length over 7 mm.; abdomen with dense very pale ochreous hair-bands.

(40).—*HALICTUS JUCUNDUS*, Smith. ♀.

1069. (134) Krantz Kloof, 1915, H. W. Bell Marley.

Rosebank Experiment Station, Cape Colony, 9. xii. 1909, C. K. Brain.

38B. Length a little over 6 mm.; abdominal hair-bands very thin and weak.

(41).—*HALICTUS EXPERTUS*, sp. nov. ♀.

Head and thorax rather dark (not at all brassy) green, abdomen obscure green; pubescence dull white, faintly ochraceous dorsally; head large, broader than thorax, round seen from in front, facial quadrangle considerably broader than long; mandibles clear ferruginous, except at base and apex; clypeus low and broad, with scattered punctures, the apical half (except at sides) black; flagellum obscure reddish beneath; mesothorax finely but distinctly punctured; area of metathorax minutely rugulose, apically finely cross-striate; tegulae testaceous; wings hyaline, faintly dusky, stigma and nervures testaceous; legs black, with the knees, tarsi, and anterior tibiae in front ferruginous; hind spur of hind tibia with four blunt spines; abdomen shining, with excessively fine punctures, thinly hairy (as if dusty), and with hardly noticeable very thin hair-bands. Rosebank Experiment Station, Cape Colony (on flowers), 9. xii. 1909, C. K. Brain.

Allied to *H. hotoni* Vachal, but larger, with dark tibiae.

37B. Tegument of abdomen black.

- 39A. Stigma very little developed ; end of marginal cell away from costa ; male antennæ long.

- 40A. Head with white hair ; thorax and abdomen above with bright fulvous hair ; pleura with black hair ; hind basitarsi peculiarly formed.

(42).—*TETRALONIA SHEFFIELDI*, Meade-Waldo. ♂.

1030. Krantz Kloof, 1915, H. W. Bell Marley.

A few notes may be added to supplement Meade-Waldo's description of *T. sheffieldi*. Head extremely broad ; eyes diverging below ; clypeus and labrum with tegument wholly black ; hind tibiæ broadened at end, with the hind spur bent near base ; hind basitarsi broadly excavated (arcuate) on inner side. It is a very remarkable species.

- 40B. Thorax and abdomen not covered with fulvous hair.

- 41A. Over 12 mm. long ; hind legs with black hair.

(43).—*TETRALONIA NIGROPILOSA*, Friese. ♀.

1048, 1051. (96) Durban, 15. i. 1915, H. W. Bell Marley.

This differs a little from Friese's description, in having the hair on first abdominal segment dull whitish.

- 41B. Much smaller ; hind legs with hair pale fulvous (female) or white (male).

(44).—*TETRALONIA RUPICOLA*, Cockerell.

The male has clypeus and labrum pale yellow ; mandibles with no yellow basal spot ; antennæ long (flagellum 7 mm.), black or very faintly reddish ; hair of thorax above yellowish-grey, very pale ; abdomen not distinctly banded, but the segments narrowly pallid apically, sixth and seventh segments dentate at sides ; small joints of tarsi red.

Rosebank, Cape Colony, 9. xii. 1909, both sexes, C. K. Brain.

- 39B. Stigma well developed ; end of marginal cell on costa.

- 42A. Marginal cell narrow and pointed at end; first recurrent nervure meeting second transversocubital.

(45).—*HALICTUS DIVERSIFORMIS*, sp. nov. ♀.

Length about 9.5 mm.; black, with dull white hair, very pale ochreous on mesothorax; mandibles dark reddish in middle; flagellum dark red beneath, except basally; mesothorax shining, minutely punctured, the punctures distinctly separated; tegulae piceous; wings hyaline, faintly dusky, stigma and nervures dull ferruginous; legs black, with pale hair, fulvous tinted on inner side of hind tarsi; small joints of tarsi more or less reddened; hind spur with minute saw-like teeth; abdomen minutely roughened, hind margin of first segment (but not the others) very narrowly reddish; segments two to four with broad basal bands of greyish-white tomentum, broadly interrupted on second; caudal hair whitish or very faintly yellowish. Close to *H. diversus* Smith, but larger, with head broader, hair of face longer, mesothorax much less hairy; area of metathorax very much shorter, with a distinct minute reticulation; third and fourth abdominal segments less hairy, the apical bands very thin.

Rosebank, Cape Colony, on flowers, 9. xii. 1909, C. K. Brain. Two specimens.

- 42B. Marginal cell broad and obtuse at end.

- 43A. Abdomen with broad orange tegumentary bands.

(46).—*NOMIA SPECIOSA*, Friese. ♀.

1028. (448) Congella, iii. 1915, H. W. Bell Marley.

A large and handsome species.

- 43B. Abdomen without such bands.

- 44A. Abdomen red, except at base.

(47).—*NOMIA FAUSTA*, Smith. ♀.

1062. (287) Krantz Kloof, 2. viii. 1915, H. W. Bell Marley.

Smith described this as an *Andrena*.

44B. Abdomen not red.

45A. Thorax above with fulvous hair.

46A. First abdominal segment with a well-defined hair-band.

(48).—*NOMIA VULPINA UMBILOENSIS*, sub-sp. nov. ♂.

Length about 12 mm.; head and thorax with fulvous hair, bright fox-red on thorax above, white on under side of thorax; first three abdominal segments with fulvous hair, very long on first; fourth and fifth segments with scanty whitish (black in *vulpina*) hair on disc; segments one to five with pale hair-bands, becoming successively broader, that on first very narrow, fulvous, those on four and five broad, pure white, the tegument of the margin white beneath the hair; tegulae fulvous; wings brownish subhyaline, the apex not especially darkened (darkened in *vulpina*); stigma small; legs black, with dull white hair; middle tarsi long, the basitarsi gently curved; hind femora enormous, triangular, excessively broad, flattened beneath, posteriorly near apex with a rounded incision, which is opposed (when the tibia is flexed) to a large triangular tooth on basal part of tibia; hind tibia short and thick, humped behind, apically produced into a long but extremely broad rufous lamina; fourth ventral segment of abdomen with an apical tooth; fifth (except a long-triangular area in middle) densely beset with golden or reddish points, forming a very peculiar pattern.

1045. Umbilo, 21. ii. 1915, L. Bevis.

This is evidently close to *N. vulpina* Gerstaecker, and I place it as a subspecies; but I have no material of *vulpina*, and it may be that actual comparison of specimens would indicate that we have a distinct species, to be called *Nomia umbiloensis*.

46B. First abdominal segment without such a hair-band.

47A. Abdomen with three fulvous bands.

(49).—*NOMIA PERORNATA*, sp. nov. ♀.

Length about 10 mm.; black, the head and thorax above with dense bright fox-red hair, the face, sides and under part of

thorax with pale yellowish hair; clypeus shining, strongly and densely punctured; flagellum short but not especially thick, ferruginous beneath at base and apex; mesothorax dull, very minutely and densely rugosopunctate; area of metathorax finely roughened, with a basal impressed line; tegulae fulvous; wings hyaline, faintly yellowish, the apical margin broadly dark fuliginous; stigma and nervures dilute dusky reddish; second submarginal cell square, third longer than first; legs black, with pale hair; anterior tibiae dark red at apex; hind femora reddened at apex; hind tibiae light rufo-fulvous except at base, and with an abundant clear white beautifully plumose scopae; hind basitarsus broad and flat, longer than the remaining joints together; abdomen broad, dullish, not distinctly punctured, first segment not banded; segments two to four with golden-fulvous bands, consisting of hair rather thinly covering the concolorous tegument, that on two rather narrow, the others very broad; fifth segment densely fringed with brown-black hair; venter with fulvous hair.

1054. (492) Howick, iii. 1915, H. W. Bell Marley.

- 47B. Abdomen without fulvous bands; hind femora with three teeth on lower side.

(50).—*NOMIA TRIDENTATA NATALENSIS*, sub-sp. nov. ♂.

Length about 9 mm.; wings dusky apically; abdominal segments two to five with brownish margins, but no hair-bands; pale lamella at end of hind tibia much more than half length of tibia; antennae black, only the third joint red beneath.

1085 (type). Umbilo, 22. xi. 1914, L. Bevis.

1061. (227) Stella Bush, Durban, ii. 1915.

This species has several subspecific forms in different parts of Africa.

- 45B. Thorax above without fulvous hair.

- 48A. First abdominal segment feebly and sparsely punctured; tegulae enlarged.

(51).—*NOMIA MEGALEPIS*, sp. nov. ♀.

Length about 7 mm.; robust, black, with very pale ochreous-tinted hair; head broad; clypeus shining, with strong well separated punctures, more or less in rows; front striate and punctured; antennæ ordinary, flagellum dull red beneath except at base; mesothorax with hardly any hair (in a lateral view a thin dust-like pruinosity is visible), dullish (minutely sculptured), with scattered punctures; scutellum dull, with scattered punctures; postscutellum covered with pale tomentum; area of metathorax dull, deeply depressed in middle, without evident sculpture, except a transverse narrow sulcus, crossed by weak little ridges; tegulæ greatly enlarged, produced behind, the disc piceous, but the margin and posterior lobe whitish; wings dusky, darker apically; stigma ferruginous; marginal cell very broadly truncate; basal nervure very strongly bent, so that its lower end is actually less basal than the part a short distance above; first recurrent nervure meeting second transversocubital; third submarginal cell much longer than first; legs black, with pale hair, tarsi more or less red; hind tibial scopa wholly pale; abdomen shining, sparsely and irregularly punctured; first segment with short pale hair at base, and a very broadly interrupted thin apical hair band; second to fourth segments with hair-bands, increasing in width and distinctness, third and fourth also with pale (yellowish-grey) basal tomentum; apical segments with pale hair. The hind tibiæ are more or less ferruginous, but the surface is almost hidden by the dense scopa.

1063. (211) Stella Bush, Durban, 1915, H.W. Bell Marley.

48B. First abdominal segment well and closely punctured.

49A. Tegulæ enlarged; scutellum with two long flattened spines.

(52).—*NOMIA (STICTONOMIA) MEGACANTHA*, sp. nov. ♂.

Length about 8.5 mm.; black, without conspicuous hair, except that the face is densely covered with pale yellowish hair, entirely hiding the surface; mandibles black; antennæ black, the flagellum very long; vertex strongly punctured, but a small punctureless space on each side of the ocelli; mesothorax dull, with strong distinctly separated punctures; scutellum

coarsely and very densely punctured, with a long spine on each side; area of metathorax of the same type as that of *N. megalepis*; tegulae very large, piceous, conspicuously punctured, with a broad dilute brown expansion behind; wings strongly dusky; stigma very dark reddish; second submarginal cell narrow; first recurrent nervure joining second transversocubital; legs mainly black; anterior tarsi white, broad and flat (but less modified than in *N. patellifera*), joints two to four elongated on one side; middle basitarsi white with a brown stripe; hind femora moderately swollen, obtusely humped above near apex, the lower side with a long fringe of pure white hair; hind tibiae subarcuate, the posterior face with a very fine silvery tomentum, the apex prolonged into a very long white (suffused with red apically) lamina; hind basitarsus with a little more than the basal half white; abdomen shining, extremely coarsely punctured, the punctures on first segment largest; hind margins of segments broadly depressed, impunctate, more or less brownish; fifth ventral segment with two small shining tubercles.

1055. Durban, 24. ii. 1915, H. M. Millar.

Related to *Nomia cameroni* n.n. (*Stictonomia punctata* Cameron; not *Nomia punctata* Smith), but differing by the dark antennae and many other characters.

49B. Tegulae ordinary; scutellum without spines.

50A. Hair of face bright golden; anterior tarsi broad, flattened, white.

(53).—*NOMIA PATELLIFERA*, Westwood. ♂.

1067. (123) Stella Bush, Durban, ii. 1915, H. W. Bell Marley.

50B. Hair of face white.

(54).—*NOMIA PYRURA*, sp. nov. ♀.

Length about 10 mm.; black, robust, with thin pale hair, slightly ochreous dorsally; head broad; clypeus densely punctured, its lower margin fringed with orange hairs;

mandibles black; flagellum short and stout, obscure ferruginous beneath; face and cheeks with white hair; front and vertex very densely punctured; a band of greyish-white tomentum above prothorax; mesothorax entirely dull, with distinct well separated punctures; scutellum closely punctured; metathorax dull, with a rather broad basal transverse sulcus, crossed by fine plicæ; pleura coarsely punctured; tegulæ piceous, with a pallid spot on outer margin; wings strongly infuscated, especially on apical margin; stigma dull ferruginous; third submarginal cell not yet longer than first; second submarginal cell very broad, receiving first recurrent nervure beyond the middle; legs black, with pale hair, the tarsi ferruginous apically; hair on inner side of tarsi orange-fulvous, and brushes of the same on under side of middle femur and tibia; hind tibiæ with the tegument clear ferruginous apically; hind basitarsi flattened but rather short, with a broad brush of orange-fulvous hair at apex; abdomen shining, with punctures of different sizes; second segment suffusedly marked with chestnut red near base; first segment with hair of basal part short and thin, surface rather closely punctured, the submarginal punctures minute, but those before them rather large and very distinct; second segment with minute punctures basally and in the submarginal region, but the middle region with relatively large well separated punctures; third and fourth segments finely punctured; hind margins of segments two to four testaceous; apical hair dense and bright orange-fulvous; venter with light reddish hair.

1088. Umbilo, L. Bevis.

Resembles *N. wellmani* Cockerell, but has the mesothorax much less closely punctured.

Nomia testacea Friese, Deutsch. Ent. Zeits., 1914, p. 630, from Kigonsera, is to be renamed *Nomia friesei* n.n., there being an earlier *N. testacea*, described by Smith as a *Tetralonia*.

