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## On the Hymenoptera collected by Mr. W. L. Distant in the Transvaal, South Africa, with Descriptions of supposed new Species.

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Although these animals are quite interesting, especially the shrimp, I am afraid that they are of little or no value for the explanation of the origin of the fauna of the Elephant Lake. Both species occur in other fresh waters \* in the Cameroons. The crab may easily ascend a river, although its water should run somewhat swiftly, and even cataracts might be avoided by them in walking on land. The shrimp may not have the same faculty, but my friend Professor Y. Sjöstedt, who, from his two years' stay in the Cameroons, is thoroughly acquainted with the prevailing conditions, has told me that the shrimps are much esteemed by the negroes, who catch and eat them, transporting them alive in baskets from one place to another. The possibility is therefore not excluded that the shrimps have been introduced into the Elephant Lake by the natives.

III.—On the Hymenoptera collected by Mr. W. L. Distant in the Transvaal, South Africa, with Descriptions of supposed new Species. By Lieut.-Colonel C. T. BINGHAM.

[Continued from vol. x. p. 222.]

Family Eumenidæ (cont.).

Genus ODYNERUS (cont.).

*Odynerus (Pterochilus) insignis*, Sauss.

*Pterochilus insignis*, Sauss. Etud. Fam. Vesp. iii. (1856) p. 324, pl. xv. fig. 12, ♀.

A single male without locality. Described originally from the Cape.

Genus SYNAGRIS, Latr.

*Synagris cornuta*, Linn.

*Vespa cornuta*, Linn. Syst. Nat. ed. xii. (1767) p. 951.

*Apis cornuta*, Drury, Illustr. Nat. Hist. ii. (1773) p. 88, pl. xlviii. fig. 3.

*Synagris cornuta*, Latr. Hist. Nat. Crust. et Ins. iii. (1802) p. 360.

*Synagris cornuta*, Latr. Hist. Nat. Ins. xiii. (1805) p. 344.

One female, Isubu.

\* From the Meme River I received at the same time specimens of the same species of shrimp, although not so large, together with examples of *P. (B.) acanthurus* and *Olfersi*.

This species is included in the collection from the Transvaal, although the locality given (Isubu) is in West Africa.

*Synagris mirabilis*, Guér.

*Synagris mirabilis*, Guér., Lefebvre, Voy. Abyss. vi. (1848) p. 359, pl. viii. fig. 8; Sauss. Etud. Fam. Vesp. i. (1852) p. 82.

Seventeen females, nine males (typical), from Pretoria, Masil Nek, Rustenburg, and Durban (*Distant*), and Johannesburg (*A. Ross*). Five females and four males, Pretoria (*Distant*), with the apical white segments of the abdomen turning to red in certain lights.

*Synagris analis*, Sauss.

*Synagris analis*, Sauss. Etud. Fam. Vesp. i. (1852) p. 86.

Four females, Pretoria (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

*Synagris emarginata*, Sauss.

*Synagris (Hypagris) abdominalis*, Sauss.

Five females, Fort Johnston, Nyasaland (*Rendall*).

Family Vespidae.

Genus BELONOGASTER, Sauss.

*Belonogaster filiventris*, Sauss.

*Rhaphigaster filiventris*, Sauss. Etud. Fam. Vesp. ii. (1853) p. 16, pl. ii. fig. 5.

*Belonogaster filiventris*, Smith, Cat. Hym. B. M. v. (1857) p. 194.

Sixteen workers, Pretoria and Waterval-onder (*Distant*); Barberton (*Rendall & Harrison*); Fort Johnston, Nyasaland (*Rendall*); Durban (*A. Ross*).

*Belonogaster grisea*, Fabr.

*Vespa grisea*, Fabr. Syst. Ent. (1775) p. 322; Oliv. Encycl. Méth., Ins. vi. (1791) p. 673.

*Vespa macilenta*, Fabr. Spec. Ins. i. (1781) p. 468; Guér. Linn. Syst. Nat. ed. xiii. (1790) p. 2754.

*Belonogaster rufipennis*, Sauss. Etud. Fam. Vesp. ii. (1853) p. 235.

*Belonogaster griseus*, Smith, Cat. Hym. B. M. v. (1857) p. 94.

Twenty-one workers, Pretoria (*Distant*); Waterval-onder (*A. Ross*); Zomba (*Rendall*); Delagoa Bay (*Distant*); Fort Johnston, Nyasaland (*Rendall*); Brak Kloof, Cape Colony (*Mrs. White*).

*Belonogaster juncea*, Fabr.

*Vespa juncea*, Fabr. Spec. Ins. i. (1781) p. 468; Gmelin, Linn. Syst. Nat. ed. xiii. (1790) p. 2754.

*Rhaphigaster junceus*, Sauss. Etud. Fam. Vesp. ii. (1853) p. 14, pl. ii. fig. 2.

*Belonogaster junceus*, Gerst. Pet. Reise n. Mossamb., Zool. v. (1862) p. 468; Magr. Ann. Mus. Civ. Gen. xxii. (1884) p. 599.

Twenty-one workers, Durban (*Ross & Distant*); Barberton (*Distant & Rendall*); Fort Johnston, Nyasaland (*Rendall*).

## Genus ICARIA, Sauss.

*Icaria clavata*, Sauss.

*Icaria clavata*, Sauss. Etud. Fam. Vesp. ii. (1853) p. 40.

A solitary ♀ from Durban.

*Icaria cincta*, Lepel.

*Epipona cincta*, Lepel. Hist. Nat. Ins. Hym. i. (1836) p. 541.

*Icaria cincta*, Sauss. Etud. Fam. Vesp. ii. (1853) p. 39, pl. v. fig. 9; Gerst. v. d. Decken's Reise in Ost-Afr. (1873) p. 324.

A solitary rather small specimen of var. A (*Saussure*) of the insect from Waterval-onder (*Distant*).

## Genus POLISTES, Latr.

*Polistes maculipennis*, Sauss.

*Polistes maculipennis*, Sauss. Etud. Fam. Vesp. ii. (1853) p. 61, pl. vi. fig. 4.

Five workers, Fort Johnston, Nyasaland (*Rendall*).

*Polistes marginalis*, Fabr.

*Vespa marginalis*, Fabr. Syst. Ent. (1775) p. 367.

*Polistes marginalis*, Fabr. Syst. Piez. (1804) p. 272; Sauss. Etud. Fam. Vesp. ii. (1853) p. 62, pl. vi. fig. 2; Gerst. v. d. Decken's Reise in Ost-Afr. (1873) p. 325; Grib. Ann. Mus. Civ. Gen. xvi. (1881) p. 238.

*Polistes africana*, Pal. Beauv. Ins. Afr. et Amér. (1821) p. 207, Hym. pl. viii. fig. 4.

Eight workers, Pretoria (*Distant*); Zoutpansberg (*Kessner*); Durban (*A. Ross*).

*Polistes Smithi*, Sauss.

*Polistes Smithi*, Sauss. Etud. Fam. Vesp. ii. (1853) p. 60, pl. vii. fig. 3; Gerst. Peters's Reise n. Mossamb., Zool. v. (1862) p. 470; Grib. Ann. Mus. Civ. Gen. xxi. (1884) p. 287; Sauss. Grand. Hist. Madagasc. xx. pt. i. (1891) p. 146.

Three workers, Pretoria (*Distant*).

*Polistes fastidiosus*, Sauss.

*Polistes fastidiosus*, Sauss. Etud. Fam. Vesp. ii. (1853) p. 60; Gerst. Peters's Reise n. Mossamb., Zool. v. (1862) p. 470; Magr. Ann. Mus. Civ. Gen. xxi. (1884) p. 607.

Three workers from Cape Colony (*Mrs. White & Schönland*).

## Tribe ANTHOPHILA.

## Family Colletidæ.

## Genus PROSOPIS, Fabr.

*Prosopis pernix*, sp. n.

♀. Black; a broad vertical line on the clypeus, a spot at the base of each mandible, the orbits of the eyes anteriorly and posteriorly, broadly interrupted at the vertex; and a broad short transverse line on the scutellum yellow; pilosity reddish yellow, long and sparse except on the sides and front of the pronotum, where it is dense and forms a broad transverse streak; head in front closely punctured, the punctures shallow; the face round the base of the antennæ slightly concave, opaque; vertex, occiput, sides of the head behind the eyes, and thorax smooth, with a few scattered punctures; the cordate area at base of median segment above concave and minutely rugulose; legs polished, pilosity fairly abundant, dense on the posterior pair of tibiæ and on the tarsi, giving them a reddish appearance. Wings hyaline, slightly fuscous; nervures, stigma, and tegulæ brown. Abdomen slightly shining, covered somewhat thickly with small piligerous tubercles and punctures, the apical margins of the segments testaceous.

♂. Similar in sculpture, form, and pilosity, but the mandibles are entirely yellow; the vertical streak on the clypeus broadens and coalesces anteriorly with the yellow on the inner orbits; no transverse yellow streak on the scutellum.

Length, ♀ 8-10, ♂ 7; exp., ♀ 16-19, ♂ 14 millim.

*Hab.* Recorded from Durban (*A. Ross*).

Twelve females and two males. One specimen (a female) has the disk of the apical two abdominal segments red, but in sculpture and form is identical with the rest.

*Prosopis sandaracata*, sp. n.

♀. Black, the anterior four fifths of the clypeus, the posterior margin of the pronotum broadly, a spot beneath the

tegulae, the basal half of the scutellum, and the apices of all the femora bright yellow; the tibiae and tarsi of all the legs, the apical margins and sides broadly of the basal two, and the disks of the remaining abdominal segments red. Wings fusco-hyaline; nervures, stigma, and tegulae brownish yellow. Head posteriorly, the thorax, legs, and apical three abdominal segments with yellowish-white pilosity, the hairs soft, rather curled, and long on the back of the head and the thorax, and short, stiff, rather oblique on the legs and abdomen; head and thorax smooth and shining, with a few scattered minute punctures; abdomen transversely finely rugulose, subopaque, not shining.

Length, ♀, 6; exp. 12 millim.

Male unknown.

*Hab.* Recorded from Durban (*A. Ross*).

Nearest to *P. purpurisata*, Vachal, from Algeria.

*Prosopis gracilis*, sp. n.

♀. Black, the clypeus with a T-shaped yellow mark, the lateral arms of the T very short, the down stroke very broad, the yellow not reaching the upper margin of the clypeus; head, thorax, and abdomen covered with a short, fairly dense, soft, dingy, white pilosity, longer and stiffer on the tibiae and tarsi of the posterior legs; the apical four joints of the tarsi and the claws reddish yellow, entirely smooth, polished, and shining, with a few scattered minute punctures. Head with the front slightly concave. Thorax: the mesonotum convex, with three short, longitudinally impressed, parallel lines; cordate area at base of median segment broad, concave, and minutely rugulose within. Wings hyaline and iridescent; nervures, stigma, and tegulae yellowish brown. Abdomen strongly depressed and attenuate at base, clavate posteriorly.

Length, ♀, 4.5; exp. 8.5 millim.

*Hab.* Recorded from Durban (*A. Ross*).

Family Apidae.

Genus HALICTUS.

*Halictus jucundus*, Smith.

*Halictus jucundus*, Smith, Cat. Hym. B. M. i. (1853) p. 54; Sauss. Grandid. Hist. Madagasc. xx. (1893) p. 51.

Four females, Pretoria (*Distant*); Durban (*A. Ross*).

*Halictus albidus*, Lepel.

*Halictus albidus*, Lepel. Hist. Nat. Hym. ii. (1841) p. 281.

A solitary male from Pretoria (*Distant*) answering entirely to Lepeletier's description.

*Halictus terminalis*?, Smith.

*Halictus terminalis*, Smith, Cat. Hym. B. M. i. (1853) p. 54, ♀.

A single female from Durban (*A. Ross*).

I am somewhat doubtful about the identification of this. The specimen agrees with the type in the British Museum collection, but differs from Smith's description in having the antennae entirely black, not "rufo-testaceous beneath," and the sides of the anal rima also black, not "bright ferruginous."

*Halictus communis*, Smith.

*Halictus communis*, Smith, Descr. New Spec. Hym. Brit. Mus. (1879) p. 33.

A solitary male, Pretoria (*Distant*).

Genus NOMIA, Latr.

*Nomia tridentata*, Smith.

*Nomia tridentata*, Smith, Trans. Ent. Soc. (1875) p. 64.

Two males (typical) from Fort Johnston, Nyasaland (*Reyndall*).

*Nomia armatula*, Dalla Torre.

*Nomia armata*, Smith (nec Oliv.), Trans. Ent. Soc. (1875) p. 67, pl. ii. fig. 14.

*Nomia armatula*, Dalla Torre, Cat. Hym. x. (1896) p. 164.

A single female, Pretoria (*Distant*).

Smith described and figured the posterior leg of the male. This insect, which I take to be the female of Smith's species, resembles the male (the type of which is in the British Museum collection) in size, colour, sculpture, and pubescence, differing only in the coxae, femora, and tibiae of the legs being entirely black, and only the basal two joints of the flagellum of the antennae being fulvous beneath.

*Nomia crocisaeformis*, sp. n.

♀. Black, the apical margins of the abdominal segments 1-4 with broad non-pubescent bands of bluish white above,



very widely interrupted in the middle; the whole head, the pronotum posteriorly, sides of the thorax and of the median segment, the outside of the tibiae and tarsi of the four anterior legs, the femora, tibiae, and tarsi of the posterior legs, and the apical two segments of the abdomen covered mostly with rather long snow-white pubescence, turning to rusty yellow on the apical margin of the clypeus and on the underside of the tarsi; on the apical two abdominal segments it is yellowish tipped with black. Head finely and rather closely punctured, from the front circular, with the inner orbits of the eyes convergent anteriorly; face rather flat, with a well-marked medial carina, distinct under the pubescence, running from the anterior ocellus to the base of the clypeus. Thorax and the basal halves of all the abdominal segments finely and closely punctured; mesonotum large, gently convex; scutellum transverse, rounded and convex above, with a somewhat spoon-shaped mucro on each side; postscutellum with a broad concave double mucro at base, projecting backwards and overhanging the rest of the postscutellum and the median segment. Wings fusco-hyaline, the posterior wings clear hyaline at base; nervures dark brown, black towards the base; tegulae black. Legs black, the apical joint of the tarsi reddish brown. Abdomen massive; segments 1-4 with a deeply impressed transverse line, dividing each segment into an anterior and posterior portion, the posterior halves smooth or minutely rugulose.

♂. Very similar, differing only in having the femora of the posterior pair of legs incrassate, somewhat triangular in outline, and the tibiae strongly flattened, broad, with the interior apical angle produced.

Length, ♀ 12, ♂ 13; exp., ♀ 25, ♂ 28 millim.

*Hab.* Two females from Fort Johnston, Nyasaland (*Rendall*); the male a solitary specimen in the British Museum collection from Abyssinia.

The bluish-white lateral markings on the abdomen and the dark fore with a hyaline hind wing give this insect a very *Crocisa*-like appearance. The neuration of the wings, the form of the clypeus and legs, however, are those of the genus *Nomia*.

*Nomia scitula*, sp. n.

♂. Black, the scape of the antennae, the apical half of the femora, the tibiae, and tarsi of the legs pale yellow; the flagellum of the antennae red; the apical halves of the first to fifth abdominal segments yellowish or ivory white; the face with dense, the rest of the head, the thorax, and a fringe

along the apical margins of the abdominal segments with somewhat sparse yellowish-white pubescence; the head above, the thorax, and the basal halves of all the abdominal segments closely and not very finely punctured, opaque, the apical halves of the abdominal segments nearly smooth, very minutely transversely rugulose. Head from the front orbicular, the vertex rounded, transverse, and short; thorax short and massive; scutellum, postscutellum, and median segment roundly and steeply sloped, the postscutellum without a mucro. Wings hyaline, nervures and tegulae reddish yellow. Legs: the femora of the posterior pair of legs immensely swollen, somewhat flat; the tibiae very broad, with the inner angle at apex produced and acute. Abdomen massive, somewhat elongate and oval.

Length, ♂, 12; exp. 24 millim.

*Hab.* A single male from Fort Johnston, Nyasaland (*Rendall*).

*Nomia zonaria*, Walker (var.).

*Nomia zonaria*, Walk. List Hym. Egypt, 1871, p. 43.

Two males from Fort Johnston, Nyasaland (*Rendall*).

I am a little doubtful as to whether these are identical with Walker's insect, but they so closely resemble the type of *N. zonaria* in the British Museum that I prefer to consider them merely a variety of that species. They differ in having the inner angle of the enlarged and flattened tibiae of the posterior pair of legs acutely but shortly produced, and not with a long curved spine.

*Nomia amœnula*, Gerst.

*Nomia amœnula*, Gerst. Arch. f. Naturg. xxxvii. i. (1870) p. 350, ♂; id. v. d. Decken's Reise in Ost-Afrika, Glied. (1873) p. 321, ♂, pl. xiii. fig. 11.

A male and a female from Waterval-onder (*Ross*).

Genus *XYLOCOPA*, Latr.

*Xylocopa caffra*, Linn.

*Apis caffra*, Linn. Syst. Nat. ed. xii. (1767) i. 2, p. 959, ♀.

*Apis olivacea*, Fabr. Mant. Ins. (1787) p. 300, ♂.

*Xylocopa caffra*, Latr. Hist. Nat. Crust. et Ins. xiv. (1805) p. 62;

Lepel. Hist. Nat. Hym. ii. (1841) p. 197; Smith, Trans. Ent. Soc. 1874, p. 258; Sauss. Grandid. Hist. Madagasc. xx. pt. i. (1891) p. 33.

*Xylocopa* (*Koptorthosoma*) *caffra*, Gribodo, Bull. Soc. Ent. Ital. xxvi. (1894) p. 272.

Nine females, three males, Fort Johnston, Nyasaland (*Rendall*).

*Xylocopa inconstans*, Smith.

*Xylocopa inconstans*, Smith, Trans. Ent. Soc. (1874) p. 264; Radoszk. Hor. Soc. Ent. Ross. xii. (1876) p. 128; Gribodo, Ann. Mus. Civ. Gen. xvi. (1881) p. 233; Magretti, Ann. Mus. Civ. Gen. (1884) p. 629.

Twelve females, Pretoria, Waterberg, Masil Nek (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

Mr. Distant notes, under date Pretoria, August 1896, "All procured from one old post." The specimens from Nyasaland have the pubescence on thorax posteriorly and basal segment of abdomen yellow, not white.

*Xylocopa olivacea*, Spin.

*Xylocopa olivacea* (Klug), Spin. Ann. Soc. Ent. Fr. vii. (1838) p. 519; Smith, Trans. Ent. Soc. (1874) p. 259; Gribodo, Ann. Mus. Civ. Gen. (1881) p. 231; Sauss. Grandid. Hist. Madagasc. xx. pt. i. (1891) p. 32. *Xylocopa luteola*, Lepel. Hist. Nat. Hym. ii. (1841) p. 199.

Three females, one male, Pretoria, Waterberg, Delagoa Bay (*Distant*). Sixteen females, Fort Johnston, Nyasaland (*Rendall*).

*Xylocopa hottentotta*, Smith.

*Xylocopa hottentotta*, Smith, Cat. Hym. Ins. Brit. Mus. ii. (1854) p. 349; id. Trans. Ent. Soc. 1874, p. 256; Gribodo, Ann. Mus. Civ. Gen. xxi. (1884) p. 350.

Five females, Durban (*Distant* & *A. Ross*).

*Xylocopa Sichei*, Vach.

*Xylocopa Sichei*, Vach. Ann. Soc. Ent. Fr. lxvii. (1898) p. 92.

Two females, Pretoria (*Distant*); Barberton (*Rendall*).

*Xylocopa tarsata*, Smith.

*Xylocopa tarsata*, Smith, Cat. Hym. Ins. Brit. Mus. ii. (1854) p. 348; id. Trans. Ent. Soc. 1874, p. 265.

A solitary female from Pretoria (*Zutrzenka*).

*Xylocopa nigrita*, Fabr.

*Apis nigrita*, Fabr. Syst. Ent. (1775) p. 379. *Xylocopa nigrita*, Fabr. Syst. Piez. (1804) p. 340; Lepel. Hist. Nat. Hym. ii. (1841) p. 179; Smith, Trans. Ent. Soc. 1874, p. 261. *Xylocopa conjuncta*, Smith, Cat. Hym. Ins. Brit. Mus. ii. (1854) p. 350. *Xylocopa* (*Koptorthosoma*) *nigrita*, Gribodo, Bull. Soc. Ent. Ital. xxvi. (1894) p. 272.

Five females and one male, Durban (*Distant*); Zomba and Fort Johnston, Nyasaland (*Rendall*).

*Xylocopa modesta*, Smith.

*Xylocopa modesta*, Smith, Cat. Hym. Ins. Brit. Mus. ii. (1854) p. 352; id. Trans. Ent. Soc. (1874) p. 255.

Two females, six males, Barberton and Fort Johnston, Nyasaland (*Rendall*).

*Xylocopa flavorufa*, de Geer.

*Apis flavorufa*, de Geer, Mém. Hist. Ins. vii. (1778) p. 605, pl. xlv. fig. 1.

*Xylocopa trepida*, Fabr. Syst. Piez. 1804, p. 340; Smith, Trans. Ent. Soc. iii. (2) 1856, Proc. p. 130.

*Xylocopa flavorufa*, Lepel. Hist. Nat. Hym. ii. (1841) p. 177; Smith, Trans. Ent. Soc. (1874) p. 254.

*Xylocopa* (*Koptorthosoma*) *flavorufa*, Gribodo, Bull. Soc. Ent. Ital. xxvi. (1894) p. 272.

Seventeen females, Waterberg (*Distant*); Durban (*A. Ross*); Zomba; Fort Johnston, Nyasaland; Barberton (*Rendall*); Albany.

*Xylocopa calens*, Lepel.

*Xylocopa calens*, Lepel. Hist. Nat. Ins. Hym. ii. (1841) p. 196, ♀; Smith, Trans. Ent. Soc. (1874) p. 261; Taschb. Zeits. f. d. ges. Naturw. lii. (1879) p. 595.

Three females and ten males, Pretoria (*Distant*); Natal border (*A. Ross*).

*Xylocopa divisa*, Klug.

*Xylocopa divisa*, Klug, Mag. Ges. naturf. Fr. Berlin, i. (1807) p. 264; Smith, Trans. Ent. Soc. 1874, p. 259; Gribodo, Ann. Mus. Civ. Gen. xxi. (1884) p. 281.

Two females and a male, Pretoria, Durban (*Distant* & *Ross*).

## Genus PODALIRIUS, Latr.

*Podalirius acraensis*, Fabr.

*Apis acraensis*, Fabr. Ent. Syst. ii. (1793) p. 329. *Anthophora acraensis*, Smith, Cat. Hym. Brit. Mus. ii. (1854) p. 343; Gribodo, Bull. Soc. Ent. Ital. xxv. (1893) p. 283.

Two females, Barberton and Waterberg (*Distant*).

*Podalirius plumipes*, Fabr.

*Apis plumipes*, Fabr. Spec. Ins. i. (1781) p. 480. *Anthophora atrocincta*, Lepel. Hist. Nat. Hym. ii. (1841) p. 35; Dours, Mon. icon. Anthoph. (1869) p. 91. *Anthophora plumipes*, Smith, Cat. Hym. Brit. Mus. ii. (1854) p. 334. *Podalirius plumipes*, Dalla Torre, Cat. Hym. x. (1896) p. 282.

A single female, Waterberg (*Wildes*).

*Podalirius concinnus*, Klug.

*Megilla concinna* et *crocea*, Klug, Symb. Phys. dec. 5 (1845), Ins. pl. xlix. fig. 11, ♂, and pl. l. fig. 1, ♀ ♂.

*Anthophora concinna*, *crocea* et *vestita*, Cat. Brit. Mus. i. (1854) pp. 329, 330, & 334.

*Anthophora concinna*, Dours, Mon. icon. Anthoph. (1869) p. 180; Radoszk. Hor. Soc. Ent. Ross. xii. (1876) p. 126.

Nine females, two males, Pretoria (*Distant*); Zomba (*Rendall*); Natal border (*A. Ross*).

*Podalirius zonatus*, Linn.

*Apis zonata*, Linn. Syst. Nat. ed. x. (1758) i. p. 576.

*Andrena zonata*, Fabr. Syst. Ent. (1775) p. 377.

*Anthophora zonata*, Latr. Gen. Crust. et Ins. iv. (1809) p. 178; Lepel. Hist. Nat. Hym. ii. (1841) p. 25; Dours, Mon. icon. Anthoph. (1869) p. 57.

Two females and a male, Barberton (*Harrison & Rendall*).

A beautiful variety, the transverse bands of blue scales on the abdomen so broad as to give the entire abdomen a metallic-blue appearance.

*Podalirius fallax*, Smith.

*Anthophora fallax*, Smith, Descr. New Spec. Hym. B. M. (1879) p. 120.

One female and two males, Pretoria (*Distant*); Cape Colony (*Mrs. White*).

*Podalirius rapidus*, Smith.

*Anthophora rapida*, Smith, Descr. New Sp. Hym. B. M. (1879) p. 121.

Three females, four males, Pretoria and Waterval-onder (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

*Podalirius bipartitus*, Smith.

*Anthophora bipartita*, Smith, Cat. Hym. Brit. Mus. ii. (1854) p. 333; Dours, Mon. icon. Anthoph. (1869) p. 81.

One female, one male, Pretoria (*Distant*).

## Genus CROCISA, Jurine.

*Crocisa scutellaris*, Fabr.

*Nomada scutellaris*, Fabr. Spec. Ins. i. (1781) p. 487.

*Melecta scutellaris*, Latr. Hist. Nat. Fourm. (1802) p. 427.

*Crocisa scutellaris*, Jur. Nouv. Méth. class. Hym. (1807) p. 241; Tasch.

Hym. Deutsch. (1866) p. 259; Kirby, Ann. & Mag. Nat. Hist. (5) iii. (1884) p. 412; Radoszk. Bull. Soc. Nat. Moscou (1893), p. 169, pl. iv. fig. 9; Friese, Bienen Eur. i. (1895) p. 174.

Six females, eight males, Pretoria, Johannesburg, and

Waterberg (*Distant*); Fort Johnston, Nyasaland (*Rendall*); Grahamstown.

*Crocisa picta*, Smith.

*Crocisa picta*, Smith, Cat. Hym. Ins. B. M. ii. (1854) p. 277.

Two males, Barberton (*Rendall*); Durban, Natal.

This species is barely distinguishable from the Oriental *C. emarginata*, Lepel.

## Genus MEGACHILE, Latr.

*Megachile caelocera*, Smith.

*Megachile caelocera*, Smith, Cat. Hym. Ins. B. M. i. (1853) p. 161.

*Chalicodoma caelocera*, Smith, Trans. Ent. Soc. (2) iii. (1856) Proc. p. 129; id. ib. (3) ii. pt. 5 (1865), p. 399, ♂, pl. xxi. fig. 7.

Three females, Johannesburg (*Cregoe*); Barberton (*Rendall*); Durban (*A. Ross*).

*Megachile nasalis*, Smith.

*Megachile nasalis*, Smith, Descr. New Spec. Hym. B. M. (1879) p. 61.

A solitary female from Fort Johnston, Nyasaland (*Rendall*).

*Megachile consanguinea*, Smith.

*Megachile consanguinea*, Smith, Descr. New Spec. Hym. B. M. (1879) p. 63.

Three females, Pretoria and Johannesburg (*Distant*); Barberton (*Rendall*).

*Megachile rufiventris*, Guér.

*Megachile rufiventris*, Guér. Bélant. Voy. Ind. Orient. (1834) p. 502, pl. iv. fig. 5, ♀; Smith, Cat. Hym. Ins. B. M. i. (1853) p. 178; Sauss. Grandid. Hist. Madagasc. xx. pt. i. (1891) p. 36, ♀ ♂, pls. ii. & iii. figs. 21 a & 21.

*Megachile larvata*, Gerst. Monatsber. Akad. Wiss. Berl. (1857) p. 461, ♂.

Four females, four males, Pretoria (*Distant*); Zomba (*Rendall*); Pemba Island (*Mrs. Burtt*).

*Megachile felina*, Gerst.

*Megachile felina*, Gerst. Monatsber. Akad. Wiss. Berl. (1857) p. 461; id. Peters's Reise n. Mossamb., Zool. v. (1862) p. 454, pl. xxix. fig. 9, ♀.

Five females, Waterberg (*Distant*); Fort Johnston, Nyasaland (*Rendall*).



*Megachile cordata*, Smith.

*Megachile cordata*, Smith, Descr. New Spec. Hym. B. M. (1879) p. 62, ♀.

Four females and three males, Pretoria, Lydenburg, and Masil Nek (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

*Megachile maxillosa*, Guér.

*Megachile maxillosa*, Guér. Iconogr. Règn. anim. vii., Ins. (1845) p. 449; Grib. Ann. Mus. Civ. Gen. xxi. (1884) p. 282.

Four females, one male, Pretoria (*Distant*); Durban (*A. Ross*); Fort Johnston, Nyasaland (*Rendall*).

*Megachile apiformis*, Smith.

*Megachile apiformis*, Smith, Cat. Hym. Ins. B. M. i. (1853) p. 162.

A female and male? from Waterval-onder (*Ross*).

I am somewhat doubtful whether I have rightly identified the male; a description of it is subjoined, Smith having only described the female.

♂. Black, finely and closely punctured all over; pubescence yellowish white on the head and abdomen, white on the thorax and legs. Head broader than long; eyes very large, their inner orbits convergent anteriorly; mandibles rather narrow, with the apical tooth long and acute; clypeus truncate anteriorly, vertex broad and somewhat flat, the occiput slightly emarginate. Thorax more or less globose, convex above; the scutellum, postscutellum, and median segment with a rounded curve posteriorly. Wings hyaline; nervures brown; tegulæ black. Legs normal, the anterior tibiæ not dilated; abdomen short and broad, the sides slightly convergent posteriorly, the basal face of the first segment deeply concave, the remaining segments depressed at their bases, the apical segment with numerous teeth along its rounded posterior margin.

Length, ♂, 8.5; exp. 17 millim.

*Megachile tricarinata*, sp. n.

♀. Black, very closely and somewhat coarsely punctured, the punctures running into reticulations on the face in front, on the vertex of the head, and on the scutellum; the sides of the face along the inner orbits of the eyes, the sides of the thorax beneath the wings, a transverse line at the junction of the mesonotum and scutellum, the median segment, and narrow transverse bands, slightly broadened laterally, at the base and apical margin of the first and on the apical margins

of the second to fourth abdominal segments covered with snow-white pubescence; pollen-brush yellowish white; the legs with scattered snow-white hairs, the tarsi with shining ferruginous pubescence. Head from the front nearly circular; eyes large, but not prominent; face flat in front, the inner orbits of the eyes parallel; mandibles grooved and punctured, armed with four teeth; clypeus broad, slightly convex, truncate anteriorly, and with a well-marked medial carina, which is produced upwards nearly to the anterior ocellus; starting one on each side of the anterior ocellus two other vertical carinæ run parallel to the medial one, but terminate at the base of the clypeus. Thorax, the mesonotum gently convex; scutellum semicircular, with a sharp posterior free margin overhanging the postscutellum and median segment, the latter two smooth, shining, and polished, not punctured. Wings hyaline; nervures dark brown; tegulæ black. Legs stout, the apical joint of the tarsi and claws deep yellowish brown. Abdomen rounded and very convex above, the basal face of the first segment concave, smooth, and shining.

Length, ♀, 8; exp. 17 millim.

*Hab.* Pretoria (*Distant*).

## Genus ANTHIDIUM, Fabr.

*Anthidium modestum*, sp. n.

♀. Black, the legs dark castaneous brown; an oblique spot on each side of the first, a transverse similar spot on each side but more to the middle on the second, and an oval larger macula on each side of the third, fourth, and fifth abdominal segments yellow, these larger spots not in the same line with the spots on the second segment, but more to the middle of the disk of the segments; pilosity long and abundant, whitish on the face and front, tinged with fulvous on the legs and on the abdominal brush beneath, and rufo-ferruginous on the thorax. Wings fusco-hyaline; a darker streak along the upper half of the radial cell; nervures and tegulæ dark brown; apical joints of the tarsi deep red. Head, thorax, and abdomen minutely but closely punctured, the former two opaque, the latter shining, the tibiæ on the outer side more coarsely punctured than the rest of the body.

Length, ♀, 11; exp. 23 millim.

*Hab.* A single specimen recorded from Pretoria (*Zutrzenka*).

This species very closely resembles *A. nigriceps*, Smith, from the Polish Ukraine. It differs, however, in being more stoutly built and in the slightly more close punctuation. The yellow markings on the abdomen are also different.



## Genus SERAPIS, Smith.

*Serapis denticulata*, Smith.

*Serapis denticulatus*, Smith, Cat. Hym. Ins. B. M. ii. (1854) p. 218, ♀ ♂, pl. vii. fig. 2.

Three females, Transvaal, Natal border, and Cape Colony.  
One bred in the Albany Museum.

## Genus EUSASPIS, Gerst.

*Eusaspis abdominalis*, Fabr.

*Thynnus abdominalis*, Fabr. Ent. Syst. ii. (1793) p. 245.

*Anthophora gastrica*, Illig. Mag. f. Insectk. v. (1806) p. 118.

*Stelis rufiventris*, Lepel. Encycl. Méth., Ins. x. (1825) p. 480.

*Anthidium abdominale et africanum*, Smith, Cat. Hym. Ins. B. M. ii. (1854) p. 209, ♀ ♂, pl. vii. fig. 1.

*Eusaspis abdominalis*, Gerst. Monatsber. Akad. Wiss. Berl. (1857) p. 461; id. Peters's Reise n. Mossamb., Zool. v. (1862) p. 453.

One female, no locality.

*Eusaspis rufiventris*, Gerst.

*Eusaspis rufiventris*, Gerst. Monatsber. Akad. Wiss. Berl. (1857) p. 461, ♀ ♂; id. Peters's Reise n. Mossamb., Zool. v. (1862) p. 453, pl. xxix. figs. 7, ♀, & 8, ♂.

One female, Fort Johnston, Nyasaland (*Rendall*).

## Genus CÆLIOXYS, Latr.

*Cælioxys penetratrix*, Smith.

*Cælioxys penetratrix*, Smith, Descr. New Spec. Hym. B. M. (1879) p. 106, ♀.

One male, Pretoria (*Distant*); one female, Barberton (*Harrison*).

Smith described only the female. The male is similar, black, with the legs red, the scutellar spines or teeth stout, and the abdomen with narrow fasciæ of white pubescence on the apical margins of the segments, but the abdominal segments are strongly constricted at their bases, and the sub-apical and apical segments are armed with spines or teeth, the former with two, one each side on the apical margin laterally, the latter with six, one on each side laterally at base, four at apex, of which the upper ones are broad and dentiform.

Length, ♂, 11.5 millim.

## HETEROGYNA.

## Family Formicidæ.

## Subfamily DORYLINÆ.

## Genus DORYLUS, Fabr.

*Dorylus helvolus*, Linn.

*Vespa helvola*, Linn. Ludov. Ulric. (1764) p. 412.

*Dorylus helvolus*, Fabr. Ent. Syst. ii. (1793) p. 365; Lepel. Hist. Nat. Ins. Hym. i. (1836) p. 228; Emery, Bull. Soc. Ent. Ital. xix. (1887) p. 350, pl. xi. figs. 1-5.

Six males, Pretoria (*Distant*); Zomba, Barberton, Fort Johnston, Nyasaland (*Rendall*).

As is well known, the ♀ of *Dorylus* differs so greatly from the male that for a considerable time it was placed in an entirely different genus—*Typhlopone*, Westw.

*Dorylus juvenculus*, Shuck.

*Dorylus juvenculus*, Shuck. Ann. of Nat. Hist. v. (1840) p. 318; Emery, Bull. Soc. Ent. Ital. xix. (1887) p. 350.

*Typhlopone oraniensis*, Lucas, Explor. Sc. Alg., Zool. iii. (1846) p. 302, pl. xvi. fig. 11.

Four males, Pretoria (*Distant*).

*Dorylus attenuatus*, Shuck.

*Dorylus attenuatus*, Shuck. Ann. of Nat. Hist. v. (1840) p. 322.

Two males, Pretoria (*Distant*).

*Dorylus (Rhognus) fimbriatus*, Shuck.

*Rhognus fimbriatus*, Shuck. Ann. of Nat. Hist. v. (1840) p. 325; Smith, Cat. Hym. B. M. vii. (1859) p. 4, pl. i. fig. 2; Gerst. v. d. Decken's Ost-Afr. (1873) p. 347.

Four males, Fort Johnston, Nyasaland (*Rendall*).

## Subfamily MYRMICINÆ.

## Genus CAREBARA, Westw.

*Carebara vidua*, Smith.

*Carebara vidua*, Smith, Cat. Hym. B. M. vi. (1858) p. 179.

*Carebara dux*, Smith, l. c.

*Carebara colossus*, Gerst. Monatsber. Akad. Wiss. Berl. (1858) p. 263.

One male and five females, Pretoria (*Zutrzenka*); Barberton (*Rendall*).

## Genus MYRMICARIA, W. Saunders.

*Myrmicaria eumenoides*, Gerst.

*Heptacondylus eumenoides*, Gerst. Monatsber. Akad. Wiss. Berl. (1858) p. 263.

*Physatta natalensis*, Smith, Cat. Hym. B. M. vi. (1858) p. 172.

*Myrmicaria eumenoides*, Mayr, Verh. zool.-bot. Ges. Wien, xvi. (1866) p. 905.

A single worker, Barberton (*Rendall*).

## Subfamily CAMPONOTINÆ.

## Genus CECOPHYLLA, Smith.

*Cecophylla smaragdina*, Fabr.

*Formica smaragdina*, Fabr. Syst. Ent. (1775) p. 828.

*Formica macra*, Guér. Voy. Coq., Zool. ii. (1830) p. 202, pl. viii. fig. 1.

*Cecophylla smaragdina*, Smith, Journ. Linn. Soc. iv. (1860) Suppl. p. 102; Emery, Ann. Soc. Ent. Fr. lx. (1891) p. 564.

Four males, Pemba Island (*Burt*).

## Genus FORMICA, Linn.

*Formica rufibarbis*, Fabr.

*Formica rufibarbis*, Fabr. Ent. Syst. ii. (1793) p. 355; E. André, Rev. et Mag. Zool. (3) ii. (1874) p. 185; id. Spec. Hym. Eur. ii. (1882) p. 182, pl. ii. fig. 7; Forel, Bull. Soc. Vaud. sc. nat. (2) xx. (1884) p. 379, pl. xi. figs. 8, 9, & 19.

*Formica cunicularia*, Latr. Ess. Hist. Fourm. Fr. (1798) p. 40; Smith, List Brit. Anim. B. M. pt. 6, Acul. (1851) p. 116.

Three workers and a female, Pretoria (*Distant*).

## Genus CAMPONOTUS, Mayr.

*Camponotus sylvaticus*, Olivier.

*Formica sylvatica*, Oliv. Encycl. Méth., Ins. vi. (1791) p. 491.

*Formica castaneipes*, Leach, Zool. Journ. ii. (1825) p. 290.

*Camponotus sylvaticus*, Roger, Berl. ent. Zeit. vi. (1862) p. 291; Emery, Ann. Mus. Civ. Gen. xxiv. (1887) p. 212.

Several workers, two females, Pretoria (*Distant*); Barberton (*Rendall*).

*Camponotus maculatus*, Fabr.

*Formica maculata*, Fabr. Spec. Ins. i. (1781) p. 491; Smith, Cat. Hym. B. M. vi. (1858) p. 28.

*Formica thoracica*, Fabr. Syst. Piez. (1804) p. 397.

*Camponotus maculatus*, Mayr, Verh. zool.-bot. Ges. Wien, xii. (1862) p. 654; Forel, Grandid. Hist. Madagasc. xx. (1891) p. 29.

*Camponotus sylvaticus* st. *maculatus*, Forel, Bull. Soc. Vaud. sc. nat. (2) xvi. (1879) p. 64.

Several workers, males and females, Pretoria, Johannesburg (*Distant*); Barberton (*Rendall*).

A common and very variable species, found through a great part if not all over Africa.

*Camponotus cosmicus*, Smith.

*Formica cosmica*, Smith, Cat. Hym. B. M. vi. (1858) p. 34.

*Camponotus cosmicus*, Mayr, Verh. zool.-bot. Ges. Wien, xxxvi. (1886) p. 355.

Two workers, Waterval-onder (*Ross*).

*Camponotus natalensis*, Smith.

*Formica natalensis*, Smith, Cat. Hym. B. M. vi. (1858) p. 113.

*Camponotus natalensis*, Roger, Verz. d. Form. (1863) p. 2; Forel, Bull. Soc. Vaud. sc. nat. (2) xvi. (1879) p. 81; Mayr, Verh. zool.-bot. Ges. Wien, xxxvi. (1886) p. 355.

A single worker, Pretoria (*Distant*).

*Camponotus fulvo-pilosus*, de Geer.

*Formica fulvo-pilosa*, de Geer, Mém. Hist. Ins. vii. (1778) p. 613, pl. xlv. figs. 13 & 14.

*Camponotus fulvopilosus*, Mayr, Verh. zool.-bot. Ges. Wien (1862), p. 668; Forel, Bull. Soc. Vaud. sc. nat. xvi. (1879) p. 108; Emery, Bull. Soc. Ent. Ital. xviii. (1886) p. 356.

Eight worker maj., four worker min., Tulbagh, Cape Colony.

A remarkably handsome and conspicuous species.

*Camponotus sericeus*, Fabr.

*Formica sericea*, Fabr. Ent. Syst., Suppl. (1793) p. 279.

*Camponotus sericeus*, Mayr, Verh. zool.-bot. Ges. Wien, xii. (1862) p. 675, pl. xix. fig. 4; Forel, Bull. Soc. Vaud. sc. nat. xvi. (1879) p. 94; André, Spec. Hym. Eur. ii. pt. 13 (1882) p. 149; Forel, Ann. Soc. Ent. Belg. xxx. (1886) p. 192; id. Grandid. Hist. Madagasc. xx. (1891) p. 56.

A single worker, Salisbury, Mashonaland (*Marshall*).

## Genus POLYRHACHIS, Smith.

*Polyrhachis schistacea*, Gerstaecker.

*Hoplomyrmus schistaceus*, Gerst. Monatsber. Akad. Wiss. Berl. (1858) p. 262.

*Polyrhachis schistacea*, Gerst. v. d. Decken's Ost-Afrika (1873) p. 342.

Several workers, Pretoria (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

## TUBULIFERA.

## Family Chrysididæ.

## Genus STILBUM, Spinola.

*Stilbum cyanurum*, Forst., var. *splendidum*, Fabr.

*Chrysis splendida*, Fabr. Syst. Ent. (1775) p. 357.

*Chrysis spinolæ*, Montrouzier, Ann. Soc. Linn. Lyon, (2) xi. (1864) p. 249.

*Stilbum variolatum*, Costa, Ann. Mus. Zool. Napoli, ii. (1864) p. 67.

*Stilbum splendidum*, Rits. Tijdschr. v. Ent. xvii. (1874) p. 181; Mocs. Monogr. Chrys. (1889) p. 193.

One male, six females, Pretoria (*Distant*); Transvaal, Natal border (*A. Ross*); Fort Johnston, Nyasaland (*Rendall*).

The male is very dark, almost typical *cyanurum*.

*Chrysis lyncea*, Fabr.

*Chrysis lyncea*, Fabr. Syst. Ent. (1775) p. 357.

*Pyria armata*, Lepel. Encycl. Méth., Ins. x. (1825) p. 495.

*Chrysis lyncea*, Dahlb. Œfvers. Svensk. Vet.-Akad. Förh. vii. (1850) p. 141.

*Chrysis (Hexachrysis) lyncea*, Mocs. Monogr. Chrys. (1889) p. 582.

Nine males and twelve females, Pretoria (*Distant*); Barberton and Fort Johnston, Nyasaland (*Rendall*).

A variable species. Two specimens—one from Barberton and one from Nyasaland—are of a beautiful bright golden-bronze.

*Chrysis modica*, Dahlb.

*Chrysis mediocris*, Dahlb. Despos. Méth., Hym. ii. (1845) p. 14 (nec Dahlb. Hym. Eur. ii. 1854, p. 162).

*Chrysis modica*, Dahlb. Œfvers. Svensk. Vet.-Akad. Förh. vii. (1850) p. 140.

*Chrysis (Hexachrysis) modica*, Mocs. Monogr. Chrys. (1889) p. 556.

One male and one female, Pretoria (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

*Chrysis stilboides*, Spin.

*Chrysis (Pyria) stilboides*, Spin. Ann. Soc. Ent. Fr. vii. (1838) p. 446.

*Stilbum sexdentatum*, Guér. Rev. Zool. (1842) p. 145.

*Chrysis nobilis*, Klug, Symb. Phys. pt. 5 (1845), Ins. pl. xlv. fig. 2; Dahlb. Hym. Eur. ii. (1854) p. 347.

*Pyria stilboides*, Gerst. Pet. Reise n. Mossamb., Zool. v. (1862) p. 519.

*Chrysis (Hexachrysis) stilboides*, Mocs. Monogr. Chrys. (1889) p. 590.

Two females and one male, Pretoria (*Distant*); Transvaal, Natal border (*Ross*).

*Chrysis spina*, Brullé.

*Chrysis spina*, Brullé, Hist. Nat. Ins. Hym. iv. (1846) p. 29.

*Chrysis abyssinica*, Radoszk. Hor. Soc. Ent. Ross. xii. (1876) p. 148, pl. iii. fig. 3.

*Chrysis (Pentachrysis) spina*, Mocs. Monogr. Chrys. (1889) p. 521.

A pair, male and female, Pretoria (*Distant*).

## SUPPLEMENTARY LIST.

Since the commencement of this series of papers on the Transvaal Hymenoptera Mr. Distant has received from time to time, and kindly handed over to me for examination, several additional specimens. A list of such as came to hand too late for incorporation in the families and genera as they were worked out is appended below.

## Tribe FOSSORES.

## Family Scoliidæ.

## Genus MYZINE, Latr.

*Myzine capitata*, Smith, Cat. Hym. B. M. iii. (1855) p. 74.

Two males, Waterval-onder (*Ross*).

*Myzine* sp.

A single broken specimen of an entirely black species, possibly new, Waterval-onder (*Ross*).

## Genus SCOLIA, Fabr.

*Scolia (Discolia) hottentotta*, Sauss. Ann. Soc. Ent. Fr. (3) vi. (1858) p. 206.

A single female (typical), Johannesburg (*A. Ross*).

## Genus ELIS, Fabr.

*Elis (Dielis) undulata*, Smith; vide Ann. & Mag. Nat. Hist. (7) ix. (1902) p. 348.

A single male from Barberton.

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## Family Pompilidæ.

Genus POMPILUS, Fabr. (sens. lat. apud Kohl).

*Pompilus diversus*, Dhlb.; vide Ann. & Mag. Nat. Hist. (7) ix. (1902) p. 348.

A male, Waterval-onder (A. Ross).

*Pompilus vindicatus*, Smith; vide Ann. & Mag. Nat. Hist. (7) ix. (1902) p. 349.

A female, Durban (Ross).

*Pompilus Distanti*, Bingham; vide Ann. & Mag. Nat. Hist. (7) ix. (1902) p. 349.A female, Transvaal, Natal border. Not typical: the clypeus and the apical half of the femora, the whole of the tibiae and tarsi are reddish; absolutely identical, however, in form and sculpture with Saussure's type of *Homonotus cærulans* (nec *Pompilus cærulans*, Lep.).*Pompilus festivus*?, Klug, Symb. Phys. (1834), Ins. pl. xxxviii. fig. 8.

A single broken specimen of a male from Johannesburg (Ross), which, with some doubt, I refer to the above species.

Genus SALIUS, Fabr. (sens. lat. apud Kohl).

*Salus (Hemipepsis) imperialis*, Smith (*Mygnemia*), Cat. Hym. B. M. iii. (1855) p. 188.Five females, Barberton (*Distant & Rendall*); Waterval-onder and Durban (Ross).*Salus (Hemipepsis) atropos*, Smith; vide Ann. & Mag. Nat. Hist. (7) ix. (1902) p. 353.

A single female without locality.

## Family Sphegidae.

Genus LIRIS, Fabr.

*Liris diabolica*, Smith; vide Ann. & Mag. Nat. Hist. (7) x. (1902) p. 209.A single female, Barberton (*Rendall*).

## Genus STIZUS, Latr.

*Stizus tenuicornis*, Smith; vide Ann. & Mag. Nat. Hist. (7) x. (1902) p. 210.A single female, Figtree Creek, Barberton (*Rendall*).*Stizus argentifrons*, Smith; vide Ann. & Mag. Nat. Hist. (7) x. (1902) p. 210.A fine female, in good condition, identical with the type, Johannesburg (*Fry*).

## Genus CERCERIS, Latr.

*Cerceris albifrons*, Smith, Cat. Hym. B. M. iv. (1856) p. 449.A single female, Johannesburg (*Fry*). Identical with the type in the British Museum.

## Genus AMPULEX, Jurine.

*Ampulex compressa*, Fabr.; vide Ann. & Mag. Nat. Hist. (7) x. (1902) p. 217.A single female, Pemba Island (*Burt*).

## Genus AMMOPHILA, Kirby.

*Ammophila hirsuta*?, Scop. Ent. Carn. (1763) p. 292, pl. xlii. fig. 772.

A single female, Johannesburg (Ross), which seems identical with European examples, except that the colours are brighter. Possibly a new species.

## Tribe DIPLOPTERA.

## Family Eumenidae.

## Genus EUMENES.

*Eumenes Lepeletieri*, Sauss.; vide Ann. & Mag. Nat. Hist. (7) x. (1902) p. 219.

A single male, Johannesburg (Ross).

## Genus RHYNCHIUM, Spin.

*Rhynchium cyanopterum*, Sauss.; vide Ann. & Mag. Nat. Hist. (7) x. (1902) p. 221.



*Rhynchium laterale*, Fabr. (*Vespa*) Spec. Ins. i. (1781) p. 466.

A single male, Pretoria (*Donovan*). A small variety, with the lateral yellow stripe along the abdomen reduced to separate spots on each segment.

Genus ODYNERUS, Latr.

*Odynerus hottentottus*, Sauss. Étud. Vesp. iii. (1856) p. 244.

A single female, Johannesburg (*Fry*).

*Odynerus eumenoides*, Smith, Cat. Hym. B. M. v. (1857) p. 71.

A single male, Johannesburg (*Fry*).

Genus SYNAGRIS, Latr.

*Synagris mirabilis*, Guér.; *vide supra*, p. 47.

Two females, Pretoria (*Donovan*); Pemba Island (*Burt*).

*Synagris analis*, Sauss.; *vide supra*, p. 47.

Two females, Figtree Creek, Barberton (*Rendall*).

*Synagris emarginata*, Sauss.; *vide supra*, p. 47.

One female, Figtree Creek, Barberton (*Rendall*).

*Synagris dentata*, Sauss. Étud. Vesp. i. (1852) p. 80, pl. xiii. fig. 3.

A single female without locality.

Family Vespidae.

Genus BELONOGASTER.

*Belonogaster filiventris*, Sauss.; *vide supra*, p. 47.

Genus POLISTES, Latr.

*Polistes fastidiosus*, Sauss.; *vide supra*, p. 48.

A single worker, Figtree Creek, Barberton (*Rendall*).

Genus ICARIA, Sauss.

*Icaria clavata*, Sauss.; *vide supra*, p. 48.

A single worker, Figtree Creek, Barberton (*Rendall*).

Tribe ANTHOPHILA.

Family Apidae.

Genus XYLOCOPA.

*Xylocopa olivacea*, Spin.; *vide supra*, p. 54.

A single female, Uganda (*Crabtree*).

Genus PODALIRIUS, Latr.

*Podalirius rapidus*, Smith; *vide supra*, p. 56.

A single female, Johannesburg (*Ross*).

Genus CROCISA, Jurine.

*Crocisa scutellaris*, Fabr.; *vide supra*, p. 56.

A single male, Figtree Creek, Barberton (*Rendall*).

Genus MEGACHILE, Latr.

*Megachile consanguinea*, Smith; *vide supra*, p. 57.

A single male, Johannesburg (*Ross*).

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IV.—Descriptions of new Genera and Species of New Zealand Coleoptera. By Capt. T. BROWN, F.E.S.

[Concluded from vol. xi. p. 618.]

Group Opatridæ.

*Syrphetodes simplex*, sp. n.

*Opaque*, fuscous; sides of thorax and elytra, the legs, and antennæ rufescent; densely clothed with variegate fuscous and ochraceous setæ.

*Antennæ* rather elongate and slender, club densely pubescent. *Thorax* nearly as long as broad, the anterior angles project as far as the front of the eyes, but are not widely distant from them; the broadest part is behind the middle; the sides in front are nearly straight, but they are a little sinuously narrowed towards the rectangular hind angles; there is a slight median impression in front, and the disk behind the middle is obtusely elevated. *Elytra* oblong,