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XXIX.—On the Hymenoptera collected by Mr. M. L. Distant in the Transvaal, South Africa, with descriptions of supposed new species

Lieut.-Colonel C.T. Bingham
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the peculiar scales, the shorter soft dorsal and anal, the œsophageal papillæ not toothed, and the pelvis quite separate from the pectoral arch. This suggests that the loose attachment of the pelvis in the Stromateidæ may be a primitive feature, a conclusion strengthened by the fact that they are among the few spiny-rayed fishes known to occur in the Cretaceous, the genera *Platycormus* and *Homosoma* having been referred by Dr. Smith Woodward, apparently with good reason, to this family. The Icosteidæ have been generally regarded as allied to the Stromateidæ; and in *Icosteus*, the only genus I have been able to examine, the pelvic bones do not even approach the pectoral arch, the ventrals being truly abdominal notwithstanding their rather anterior position.

XXIX.—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. ix. p. 353.]

Family Pompilidæ (cont.).

Genus PSEUDAGENIA, Kohl.

Pseudagenia Rossi, sp. n.

♀. Black, the scape and basal four joints of the flagellum of the antennæ and the femora, tibiæ, and tarsi of all the legs ferruginous, the apical two joints of the tarsi more or less shaded with fuscous; wings brownish hyaline, iridescent in certain lights, with in the fore wing two obscure darker brown bars, one along the basal and subbasal nervures, the other spreading from the radial into third cubital and third discoidal cells. Head wider than the thorax, the clypeus very convex, its anterior margin rounded; antennæ filiform, planted low down just above the base of the clypeus; front very flat; the eyes lateral, reaching down to the base of the mandibles, their inner orbits parallel; vertex broad, lightly convex, passing by a gradual curve into the occiput. Thorax short, the pronotum rounded anteriorly; the mesonotum, scutellum, and postscutellum very convex, the latter two prominent; median segment rounded posteriorly, with a gradual slope to the apex; legs very long and slender, the posterior tibiæ minutely spined. Wings ample, the basal

and subbasal nervures in the fore wing not interstitial; the second cubital cell measured on the cubital nervure twice as long as high and longer than the third cubital cell; the second cubital cell receives the first recurrent nervure in the middle, the third cubital cell receives the second recurrent nervure before the middle. Head and thorax very minutely and closely punctured, opaque, the median segment very finely transversely striate. Abdomen subpetiolate, fusiform, very minutely aciculate, but shining.

Length, ♀ 12; exp. 25 millim.

Hab. Durban, Natal (*A. Ross*).

Allied to and resembling *P. commendabilis*, Kohl; but that species has the mandibles, part of the clypeus, scape of the antennæ, and pedicel ferruginous, the wings clear hyaline, also with two bars, and the second cubital cell smaller than the third.

Pseudagenia flavotegulata, sp. n.

♀. Black, the mandibles, clypeus, antennæ, tegulæ of the wings, legs, and abdomen bright ferruginous; the apical three or four joints of the flagellum of the antennæ, the apex of the tarsi, and the extreme base of the abdomen more or less shaded with fuscous black; wings hyaline, with a short narrow dark brown bar extending on either side of the basal nervure in the fore wing, and a second broader bar extending from the base of the marginal cell obliquely into the third discoidal cell. Head flat, transverse; clypeus strongly convex, transversely oval; antennæ filiform, placed immediately above the clypeus; eyes lateral, reaching down to the base of the mandibles, their inner orbits slightly convergent above. Thorax rather massive, the pro- and mesonotum short, the former rounded anteriorly; the scutellum and post-scutellum large, prominent, median segment elongate, as long as the rest of the thorax, with a gentle rounded slope to the apex; legs long and slender, posterior tibiæ slightly spinose. Wings ample; fore wing with the second cubital cell receiving the first recurrent nervure in the middle and much smaller than the third cubital cell, which receives the second recurrent nervure before the middle, and is remarkably broad at apex, twice as broad there as at base. Head and thorax finely and closely punctured, opaque and pruinose. Abdomen shorter than the head and thorax united, subpetiolate and fusiform.

Length, ♀ 11; exp. 23 millim.

Hab. Nyasaland (Fort Johnston). Collected by Dr. P. Rendall.

Family Sphegidae.

Genus TACHYTES, Panz.

Tachytes natalensis, Sauss.

Tachytes natalensis, Sauss. Mém. Soc. Phys. et Hist. Nat. Genève, xiv. (1854) pt. i. Mél. Hym. p. 21, pl. i. fig. 4, ♂.

One female, Durban (*Distant*).

Tachytes velox, Smith.

Tachytes velox, Smith, Cat. Hym. B. M. iv. (1856) p. 301, ♂.

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

Tachytes hirsutus, Smith.

Tachytes hirsutus, Smith, Cat. Hym. B. M. iv. (1856) p. 300, ♂.

Three females, three males, Pretoria (*Distant*).

Genus LIRIS, Fabr.

Liris hæmorrhoidalis, Fabr.

Pompilus hæmorrhoidalis, Fabr. Syst. Piez. 1804, p. 198.

Lyrops Savignyi, Spin. Ann. Soc. Ent. Fr. vii. (1838) p. 476, ♀.

Liris orichalcea, Dhlb. Hym. Eur. (1843) p. 135, ♂.

Liris hæmorrhoidalis, Kohl, Verh. zool.-bot. Ges. Wien, xxxiv. (1884) p. 256, ♂ ♀.

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

Liris diabolica, Smith.

Larrada diabolica, Smith, Ann. & Mag. Nat. Hist. (4) xii. (1873) p. 294, ♀.

Larra diabolica, Kohl, Verh. zool.-bot. Ges. Wien, xxxiv. (1884) p. 243.

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

Genus NOTOGONIA, Costa.

Notogonia subfasciata, Walker.

Larrada subfasciata, Walker, List Hym. in Egypt, 1871, p. 21.

Larra subfasciata, Kohl, Verh. zool.-bot. Ges. Wien, xxxiv. (1884) p. 247.

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

Genus LARRA, Fabr.

Larra anathema, Rossi.*Sphex anathema*, Rossi, Faun. Etrus. ii. (1790) p. 65.*Larra ichneumoniformis*, Fabr. Ent. Syst. ii. (1793) p. 221.*Tachytes anathema*, Lepel. Hist. Nat. Ins., Hym. iii. (1845) p. 254.*Larra anathema*, Kohl, Verh. zool.-bot. Ges. Wien, xxxiv. (1884) p. 238, ♀ ♂.Two females, Barberton, Transvaal, and Fort Johnston, Nyasaland (*Rendall*).

Genus PALARUS, Latr.

Palarus O'Neili, Brauns.*Palarus O'Neili*, Brauns, Ann. k. k. naturh. Hofmus. Wien, xiii. (1898) p. 408.A pair (male and female), Rustenburg (*Distant*).

Genus STIZUS, Latr.

Stizus fenestratus, Smith.*Larra fenestrata*, Smith, Cat. Hym. B. M. iv. (1856) p. 342, ♂.*Stizus fenestratus*, Handl. Sitzber. Akad. Wiss. Wien, ci. (1892) p. 108, ♀ ♂.Three females, Fort Johnston, Nyasaland (*Rendall*).*Stizus tenuicornis*, Smith.*Larra tenuicornis*, Smith, Cat. Hym. B. M. iv. (1856) p. 351.*Stizus tenuicornis*, Handl. Sitzber. Akad. Wiss. Wien, ci. (1892) p. 173, ♂.One female, Pretoria (*Distant*).*Stizus argentifrons*?, Smith.*Larra argentifrons*, Smith, Cat. Hym. B. M. iv. (1856) p. 339, ♂.*Stizus argentifrons*, Handl. Sitzber. Akad. Wiss. Wien, ci. (1892) p. 43, ♂.One female, Durban (*A. Ross*).

The specimen is in poor condition, so it is with some doubt I refer it to the above species. *S. argentifrons*, Smith, as Handlirsch remarks (*l. c.*), seems to be only a local variety of the Palæarctic *S. tridens*, Fabr.

Genus BEMBEX, Fabr.

Bembex diversipennis, Smith.*Bembex diversipennis*, Smith, Ann. & Mag. Nat. Hist. (4) xii. (1873)

p. 297, ♀ ♂; Handl. Sitzber. Akad. Wiss. Wien, cii. (1893) p. 714, ♂, pl. i. fig. 5, pl. iii. fig. 19, pl. iv. fig. 4, and pl. vi. fig. 3.

Four females, one male, Pretoria (*Distant* and *Zutrzenka*).

Bembex sibilans, Handl.

Bembex sibilans, Handl. Sitzber. Akad. Wiss. Wien, cii. (1893) p. 852, pl. iii. figs. 3 & 27, and pl. vii. fig. 30.

Three females and one male, Pretoria (*Distant*), and Fort Johnston, Nyasaland (*Rendall*).

Bembex undulata, Spin.

Bembex undulata, Spin. Ann. Soc. Ent. Fr. vii. (1838) p. 468; Handl. Sitzber. Akad. Wiss. Wien, cii. (1893) p. 895, ♂.

Five females, two males, Pienaars River (*Distant*); Zomba (*Rendall*).

Bembex olivata, Dhlb.

Bembex olivata, Dhlb. Hym. Eur. i. (1845) p. 491; Handl. Sitzber. Akad. Wiss. Wien, cii. (1893) p. 812, ♀ ♂, pl. ii. fig. 17, and pl. v. fig. 23.

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

Bembex lusca, Spin.

Bembex lusca, Spin. Ann. Soc. Ent. Fr. vii. (1838) p. 467; Gerst. v. d. Decken, Reise in Ost-Afr. 1873, p. 333; Handl. Sitzber. Akad. Wiss. Wien, cii. (1893) p. 802, pl. ii. fig. 13.

Five females, Johannesburg and Waterval-onder (*Ross*).

Bembex ochracea, Handlirsch.

Bembex ochracea, Handl. Sitzber. Akad. Wiss. Wien, cii. (1893) p. 864, ♂, pl. iii. fig. 10.

Three females, one male, Pretoria (*Distant*); Waterval-onder (*Ross*); Durban (*Distant*).

Bembex melanopa, Handlirsch.

Bembex melanopa, Handl. Sitzber. Akad. Wiss. Wien, cii. (1893) p. 797, ♀ ♂, pl. ii. fig. 10, and pl. vii. fig. 7.

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

Bembex sulphurescens, Dhlb.

Bembex sulphurescens, Dhlb. Hym. Eur. i. (1845) pp. 180 & 491; Handl. Sitzber. Akad. Wiss. Wien, cii. (1893) p. 897, pl. ii. fig. 3.

One female, one male, Fort Johnston, Nyasaland (*Rendall*). Indistinguishable from Indian specimens.

Genus GORYTES, Latr.

Gorytes natalensis, Smith.

Gorytes natalensis, Smith, Cat. Hym. B. M. iv. (1856) p. 365, ♀, pl. xi. fig. 3; Handl. Sitzber. Akad. Wiss. Wien, xcvi. (1888) p. 515, ♀.
Lestiphorus africanus, Radosk. Journ. Acad. Sc. math. Lisb. viii. (1881) p. 207, ♀.

One female, Durban (*A. Ross*).

Genus NYSSON, Latr.

Nysson abdominalis, Guér.

Nysson (*Paranysson*) *abdominalis*, Guér. Icon. Règn. anim. vii. (1845) p. 441.

Nysson abdominalis, Gerst. Abh. Naturf. Ges. Halle, x. (1866) p. 122; Handl. Sitzber. Akad. Wiss. Wien, xcv. (1887) p. 318.

Five females and four males, Pretoria (*Distant*).

Genus PHILANTHUS, Fabr.

Philanthus triangulum, Fabr., var. *diadema*, Fabr.

Crabro diadema, Fabr. Spec. Ins. i. (1781) p. 471.

Philanthus diadema, Fabr. Skrivt. naturh. Selsk. Copenhagen, i. pt. i. (1790) pp. 27 & 225; id. Ent. Syst. ii. (1793) p. 289; Latr. Gen. Crust. et Ins. iv. (1809) p. 95; Dhlb. Hym. Eur. i. (1845) p. 495; Smith, Cat. Hym. B. M. iv. (1856) p. 471.

Philanthus triangulum, var. *diadema*, Girard, Traité Elém. d'Ent. ii. 1879, p. 928; Grib. Mem. Ins. Bolog. (5) iv. (1895) p. 129.

Five females, three males, Pretoria (*Distant*); Durban (*Ross*); Brak Kloof, Cape Colony (*Mrs. White*); Fort Johnston, Nyasaland (*Rendall*).

Philanthus innominatus, sp. n.

♀. Mandibles black, punctured, shining red in the middle, with a yellow spot at base above; clypeus, the sides of the face, a crescentic mark between the base of the antennæ, a spot on the back of the scape at apex, and a spot on the cheeks behind the eyes lemon-yellow, the rest of the head and of the antennæ black; eyes reaching the base of the mandibles, the inner orbits emarginate above the base of the antennæ; clypeus, sides of the face below the base of the antennæ, and the cheeks behind the eyes smooth, very sparsely punctured, the rest of the head densely and somewhat coarsely punctured and opaque. Thorax black, a line interrupted in the middle on the pronotum, the anterior half of the tegulæ, a large spot on the flanks beneath the base of the wings, and an elongate lunate spot on the postscutellum

yellow; the whole thorax except the portions marked with yellow and the basal half of the median segment closely finely punctured, the basal half of the median segment highly polished and shining, with a deep, oval, short and broad, depressed median longitudinal hollow at the apex of the polished portion, this hollow transversely punctured inside. Wings fusco-hyaline, pubescent, nervures brown. Legs black, the tarsi reddish towards the apex; the apex of the trochanters, a spot on the anterior and intermediate femora at apex, and a broadish line on the anterior and intermediate tibiae yellow. Abdomen orange-yellow, shining, the basal half of the first segment black, the third and fourth segments shaded with fuscous above.

Length, ♀, 19 millim.

Hab. Pretoria. Collected by Mr. Distant.

This species seems closest to *Philanthus Læfvingii*, Dhlb., but differs both in sculpture and colour.

Philanthus fuscipennis, Guér.

Philanthus fuscipennis, Guér. Iconogr. Règn. anim. vii, Ins. (1845) p. 443; Smith, Cat. Hym. B. M. iv. (1856) p. 472.

Three females, Pretoria (*Distant*); Johannesburg and Durban (*A. Ross*).

Philanthus bucephalus, Smith.

Philanthus bucephalus, Smith, Cat. Hym. B. M. iv. (1856) p. 472.

Five males, Pretoria (*Distant*); Barberton (*Rendall*); Brak Kloof (*Mrs. White*).

I was at first inclined to think that this species was only a light-coloured exceptionally large-headed male of *P. fuscipennis*, Guérin (Smith's type is a male); but I have lately seen an undoubted female of what can be nothing else than *P. bucephalus*. This latter species has cheeks twice as broad as those of *P. fuscipennis*.

Philanthus histrio, Fabr.

Philanthus histrio, Fabr. Syst. Piez. 1804, p. 301.

Philanthus Schonherri, Dhlb. Hym. Eur. i. (1845) p. 496.

Philanthus formosus, Smith, Cat. Hym. B. M. iv. (1856) p. 471.

Two males (typical), Johannesburg (*Cregoe*); two females and two males (var. *formosus*), Johannesburg and Durban (*A. Ross*).

Genus *CERCERIS*, Latr.*Cerceris nasuta*, Lepel.

Cerceris nasuta, Lep. Hist. Nat. Ins., Hym. iii. (1845) p. 6; Lucas, Expl. sc. Algérie, Zool. iii. (1846) p. 250, pl. xii. fig. 8; André, Spec. Hym. Eur. iii. (1890) p. 335, ♀.

One female, Durban (*Distant*).

Indistinguishable from Algerian specimens.

Cerceris latifrons, sp. n.

♀. Black, the mandibles, the antennæ beneath, and the femora, tibiæ, and tarsi of the legs red; the third abdominal segment above and a narrow line on each side of the apical margin of the fourth segment yellow, the yellow on the third segment emarginate anteriorly. Head, thorax, and basal two abdominal segments coarsely, closely, cribrately punctured, the fourth and following abdominal segments with large, shallow, scattered punctures. Head, thorax, and abdomen pubescent, the pubescence pale yellowish white and most dense on the front below the antennæ and the clypeus, entirely hiding the sculpture. Mandibles shining, covered with scattered short hairs; clypeus slightly convex, deeply emarginate anteriorly, front flat, remarkably broad, as broad across at base of mandibles as high; eyes oval, rather small, their inner margins parallel; head above and cheeks behind the eyes broad and flat, the latter sharply truncate posteriorly. Thorax massive, the mesonotum twice as broad as long; the median segment convex, the cordiform area at its base obscurely obliquely striate. Wings fusco-hyaline, nervures brownish black. Abdomen with the basal segment forming a narrow rectangular pedicel about a third as wide as the second segment; beneath the pedicel is briefly carinate at base and with a tubercle on each side at the margin; pygidium oblong, finely rugulose, the sides, but not the apex, margined.

Length, ♀, 14 millim.

Hab. Procured on the Natal border of the Transvaal.

Cerceris orientalis, Smith.

Cerceris orientalis, Smith, Cat. Hym. B. M. iv. (1856) p. 454, ♀ ♂.

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

Identical with specimens from Kurachi in Western India.

Cerceris fulviventris, Guérin.

Cerceris fulviventris, Guér. Iconogr. Règn. anim., Ins. vii. (1845) p. 444.

One female (typical), Delagoa Bay (*Distant*); one female (var. ?), Fort Johnston, Nyasaland (*Rendall*).

The latter has the abdomen bright yellow, not fulvous, and the wings a deeper fuscous brown, but otherwise in shape and sculpture it agrees with Guérin's brief description.

Cerceris mitrata, sp. n.

♂. Clypeus and front to a little above the base of the antennæ and the abdomen bright chrome-yellow; mandibles, antennæ, the posterior half of the vertex, the occiput and upper half of the cheeks, the posterior half of the pronotum, the scutellum and postscutellum, an irregular mark on each side of the median segment at base with a round detached spot on the inner side of it, and the femora, tibiæ, and tarsi of the legs red, the red on the head and thorax dark, on the legs slightly yellowish; the rest of the head and thorax black, the wings fulvous yellow, the apex and apical margin fuscous, the tegulæ fulvous red, the extreme base of the abdomen black. The head, thorax, and abdomen coarsely punctured, the punctures on the head and thorax dense, those on the abdomen more sparse and scattered. The front of the head below the antennæ and clypeus covered with a fairly abundant beautiful golden pubescence hiding the sculpture. Clypeus strongly convex in the middle, the sides anteriorly emarginate, the lateral angle laminate and produced, the head above and the cheeks broad, the occiput and the cheeks posteriorly sharply truncate. Thorax narrower than the head; the scutellum and postscutellum raised gibbous, the median segment convex, the cordiform space at base with divergent oblique striæ from a medial impressed line. Abdomen with the basal segment narrowed, forming a pedicel, which is convex above and twice as broad as long; pygidial area flat, margined at the sides, covered with coarse shallow punctures; hypopygium convex, with an apical short spine on each side.

Length, ♂, 10 millim.

Hab. Collected at Middleburg (*Distant*), and one male at Johannesburg (*Ross*).

Genus *SPHEX*, Linn. (sensu lat. apud Kohl).

Sphex xanthocerus, Illig.

Sphex xanthocerus, Illig. Mag. f. Ins. i. (1801) p. 193.

Chlorion mandibulare, Fabr. Syst. Piez. 1804, p. 218.

Pronæus æneus, Latr. Gen. Crust. et Ins. iv. (1809) p. 56.

Pronæus rufipes, Guér. Voy. Abyss. vi. pt. 4 (1848), p. 357.

Pronæus instabilis, Smith, Cat. Hym. B. M. iv. (1856) p. 240.

Chlorion fulvipes, Tasch. Zeits. f. d. ges. Naturw. liii. (1880) p. 482.

Four females and four males, Zomba and Fort Johnston, Nyasaland (*Rendall*).

Sphex Boehmanni, Dhlb.

Sphex Boehmanni, Dhlb. Hym. Eur. i. (1845) p. 436, ♂; Kohl, Ann. Naturh. Hofmus. Wien, x. (1895) p. 52, pl. iv. figs. 5-7, ♂.

Nine females, seven males, Pretoria (*Distant*); Barberton (*Rendall*); Rustenburg (*Distant*); Durban (*Ross*).

Sphex tyrannus, Smith.

Harpactopus tyrannus, Smith, Cat. Hym. B. M. iv. (1856) p. 264, ♀.

Sphex tyrannus, Kohl, Ann. Naturh. Hofmus. Wien, v. (1890) p. 349, ♀ ♂.

Two females, four males, Fort Johnston, Nyasaland (*Rendall*).

Sphex nigripes, Smith.

Sphex nigripes, Smith, Cat. Hym. B. M. iv. (1856) p. 254, ♀.

Sphex siamensis, Taschenb. Zeits. f. d. ges. Naturwiss. Halle, xxxiv. (1869) p. 413, ♀, var.

Sphex pulchripennis, Mocs. Magy. Akad. Term. Ertek. xiii. (1883) p. 11, ♀, var.

Sphex erythropoda, Cam. Mem. & Proc. Manch. Lit. & Phil. Soc. ser. 4, ii. (1889) p. 20, ♀.

Five females (var. *pulchripennis*), Pretoria (*Distant*); two females, five males (var. *muticus*, Kohl), Pretoria (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

Sphex niveatus, Dufour.

Sphex niveata, Duf. Ann. Soc. Ent. Fr. sér. 3, i. (1863) p. 377, ♂.

Enodia albopectinata, Taschb. Zeits. f. d. ges. Naturwiss. Halle, xxxiv. (1869) p. 410, ♀.

Sphex niveatus, Kohl, Termesz. Füzetek, ix. (1885) p. 182, ♀ ♂; André, Spec. Hym. Eur. iii. (1888) fasc. xxvii. p. 128, ♀ ♂.

Two females, five males, Pretoria (*Distant*); Natal border, Transvaal; Fort Johnston, Nyasaland (*Rendall*); Brak Kloof, Cape Colony (*Mrs. White*).

Sphex pelopæiformis, Dhlb.

Sphex pelopæiformis, Dhlb. Hym. Eur. i. (1845) p. 437; Smith, Cat. Hym. B. M. iv. (1856) p. 245, ♀ ♂; Kohl, Termesz. Füzetek, ix. (1885) p. 193, ♂.

Sphex longiventris, Sauss. Reise Novara, Bd. ii. (1867), Hym. p. 37, pl. ii. fig. 21; Grib. Ann. Mus. Civ. Gen. xxi. (1884) p. 300, ♀ ♂.

A solitary male, Pretoria (*Distant*).

Sphex umbrosus, Christ.

Sphex umbrosa, Christ, Naturg. Ins. 1791, p. 293, pl. xix. fig. 2, ♀.

Sphex rufipennis, albifrons, et unicolor, Fabr. Ent. Syst. ii. (1793) pp. 201, 207, & 203.

Sphex argentata, Dhlb. Hym. Eur. i. (1845) p. 25.

Sphex argentifrons, Lepel. Hist. Nat. Ins., Hym. iii. (1845) p. 337.

Sphex lanatus, Mocs. Magy. Akad. Term. Ertek. xiii. (1883) p. 34,
♂, var.

Sphex umbrosus, Kohl, Ann. Naturh. Hofmus. Wien, v. (1890) p. 406.

Two females, two males (var. *lanatus*, Mocs.), Pretoria (*Distant*); Waterberg (*Wildes*); two females (typical), Fort Johnston, Nyasaland (*Rendall*).

Genus AMPULEX, Jurine.

Ampulex compressa, Fabr.

Sphex compressa, Fabr. Spec. Ins. i. (1781) p. 445.

Chlorion compressum, Fabr. Syst. Piez. 1804, p. 219.

Ampulex compressa, Jur. Nouv. Méth. class. Hym. 1807, p. 134, ♀ ♂;
Smith, Cat. Hym. B. M. iv. (1856) p. 268; Kohl, Ann. Naturh.
Hofmus. Wien, viii. (1893) pp. 473, 483, & 491, pl. xi. figs. 11 & 22,
and pl. xiii. fig. 71.

Ampulex sinensis, Sauss. Reise Novara, Zool. ii. pt. i. (1867), Hym.
p. 325, pl. ii. fig. 25.

Two females, Pemba Island (*Mrs. Burt*).

Ampulex nigrocærulea, Sauss.

Ampulex nigrocærulea, Sauss. Dist. Nat. Transv. 1892, p. 212, ♀, pl. iv.
fig. 6; Kohl, Ann. Naturh. Hofmus. Wien, viii. (1893) p. 497, ♀.

One female, Pretoria.

Genus SCELIPHON, Klug.

Sceliphron spirifex, Linn.

Sphex spirifex, Linn. Syst. Nat. i. (1758) p. 570.

Sceliphron spirifex, Klug, Neu. Schrift. Ges. naturf. Fr. Berl. iii
(1801) p. 564.

Pelopoëus spirifex, Latr. Hist. Nat. Crust. et Ins. xiii. (1805) p. 295.

Nine females, ten males, Pretoria (*Distant*); Zomba and Fort Johnston, Nyasaland (*Rendall*); Beaufort West, Cape Colony (*Cregoe*).

Sceliphron spinolæ, Lepel.

Pelopoëus spinolæ, Lepel. Hist. Nat. Ins., Hym. iii. (1845) p. 307, ♀ ♂.

Pelopoëus Eckloni, Dhlb. Hym. Eur. i. (1845) p. 434.

Sceliphron spinolæ, Sauss. Grandid. Hist. Madag. xx. pt. i. (1892)
p. 440, ♀ ♂.

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

Sceliphron violaceum, Fabr.

Sphex violacea, Fabr. Syst. Ent. 1775, p. 346.

Pepsis violaceus, Fabr. Syst. Piez. 1804, p. 211.

Pelopoeus violaceus, Ach. Costa, Ann. Mus. Zool. Napoli, iv. (1867) p. 76, ♀ ♂.

Sceliphron violaceum, Dalla Torre, Cat. Hym. vii. (1897) p. 392.

One male, Barberton (*Rendall*).

Genus AMMOPHILA, Kirby.

Ammophila ludovicus, Smith.

Ammophila ludovicus, Smith, Cat. Hym. B. M. iv. (1856) p. 212, ♀.

Two females, one male, Pretoria (*Distant*).

Ammophila bonæspei, Lepel.

Ammophila bonæspei, Lepel. Hist. Nat. Ins., Hym. iii. (1845) p. 382, ♀ ♂; Lucas, Expl. sc. Algér., Zool. iii. (1846) p. 276.

Eight males, Pretoria (*Distant*); Durban (*A. Ross*).

Ammophila ferrugineipes, Lepel.

Ammophila ferrugineipes, Lepel. Hist. Nat. Ins., Hym. iii. (1845) p. 383, ♀; Smith, Cat. Hym. B. M. iv. (1856) p. 212; Gribodo, Ann. Mus. Civ. Gen. xxi. (1884) p. 297, ♀.

Five females, nine males, Pretoria (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

Ammophila beniniensis, Pal. Beauv.

Spheg beniniensis, Pal. Beauv. Ins. rec. Afr. et Amér. (1811) p. 48, Hym. pl. vii. fig. 1.

Ammophila beniniensis, Smith, Cat. Hym. B. M. iv. (1856) p. 213.

Five females, two males, Pretoria (*Distant*); Durban (*A. Ross*); Delagoa Bay (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

Genus TRYPOXYLON, Latr.

Trypoxylon confrater, Kohl.

Trypoxylon confrater, Kohl, Ann. Naturh. Hofmus. Wien, ix. (1894) p. 212, ♀, pl. xiii. fig. 11, and pl. xvi. figs. 109 & 110.

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

Tribe DIPLOPTERA.

Family Eumenidæ.

Genus DISCOELIUS, Latr.

Discoelius transvaalensis, sp. n.

♀. Black, pubescent, the mandibles, apical half of the

clypeus, the greater portion of the cheeks behind the eyes, the scape, the basal joint and basal half of the second joint of the flagellum of the antennæ, the prothorax and legs, the pedicel underneath and on the sides, and the apical two abdominal segments deep maroon-red; wings fusco-hyaline, nervures brown, tegulæ red. The head, thorax, and abdomen covered with a soft, white, rather long, semierect pubescence, most dense on the median segment. Head and thorax closely and somewhat coarsely punctured, opaque; pedicel and abdomen more finely but yet closely punctured, shining.

Length, ♀, 18; exp. 38 millim.

Male unknown.

Hab. Collected by Herr Zutzenka at Leydenburg, East Transvaal.

This is a true *Discoelius*, with four joints in the labial palpi and the recurrent nervures in the fore wing both received in the second cubital cell, this latter with a distinct border at the marginal cell.

Genus EUMENES.

Eumenes maxillosa, Degeer.

Vespa maxillosa, Degeer, Mém. Hist. Ins. iii. (1773) p. 577, pl. xxix. figs. 1 & 2.

Spheg tinctor, Christ, Naturg. d. Ins. 1791, p. 311, pl. xxxi. fig. 1.

Eumenes Savignyi, Guér. Icon. Règn. anim. vii. (1845) p. 446, pl. lxxii. fig. 4.

Eumenes tinctor, Sauss. Etud. Fam. Vesp. i., *Eumenes* (1852), p. 49; Smith, Cat. Hym. B. M. v. (1857) p. 27.

Eumenes maxillosus, Sauss. Grandid. Hist. Madag. xx. pt. i. (1891) p. 153.

Thirty-one females, Pretoria (*Distant*); Fort Johnston, Nyasaland, and Barberton (*Rendall*); Durban (*Ross*).

Nine males, Pretoria (*Distant*); Fort Johnston, Nyasaland (*Rendall*).

Eumenes caffra, Linn.

Vespa caffra, Linn. Syst. Nat. 12th ed. (1767) p. 951; Christ, Naturg. d. Ins. 1791, p. 2149.

Vespa cratiata, Weber, Obs. Ent. 1801, p. 101.

Eumenes caffra, Sauss. Etud. Fam. Vesp. i., *Eum.* (1852) p. 45.

Three females, two males (typical), Pretoria (*Distant*).

Eumenes Lepeletieri, Sauss.

Eumenes Lepeletieri, Sauss. Etud. Fam. Vesp. i., *Eum.* (1852) p. 45, ♀, pl. x. fig. 1; Gerst. v. d. Decken, Reise in Ost-Afr. 1873, p. 322; André, Spec. Hym. Eur. ii. (1884) p. 632; Grib. Ann. Mus. Civ. Gen. xxi. (1884) p. 292; Magretti, Ann. Mus. Civ. Gen. xxi. (1884) p. 611.

Seven females, one male, Pretoria (*Distant*); Johannesburg (*A. Ross*); Middleburg (*Distant*); Durban (*A. Ross*).

This species is very distinct, but at first sight is apt to be mistaken for *E. caffra*; the base of the abdomen (excluding the pedicel) is in this species always red, in *E. caffra* always black.

Eumenes Rendalli, sp. n.

♀. Allied to and resembling *E. Edwardsi*, Sauss., in shape and *E. fenestralis*, Sauss., a little in colour. Dull brick-red; the clypeus, a triangular mark on the front, and the antennæ orange-red, the flagellum shaded above towards the apex with black; vertex black; the mesonotum, a broad vertical line on the median segment, and the sutures on the flanks and above on the thorax black; legs pale red. Wings hyaline, shaded with fulvous along the costal margin and with the apical two thirds of the marginal cell in the fore wing dark fuscous. Pedicel and abdomen red, the former with a black mark above towards the apex, the latter with the basal half of the first segment red, the apical half black, the second and following segments black above, red below, with their posterior margins broadly yellow. The head above the base of the antennæ, the thorax, and the median segment very finely and closely punctured; the clypeus, pedicel, and abdomen smooth, but not polished or shining.

♂. Similar; the clypeus, a narrow line behind the eyes, and a broader streak along the lower portion of the emargination of the eyes bright yellow. The yellow on the apical abdominal segments replaced with red.

Length*, ♀, 17; exp. 32 millim. ♂, 13; exp. 26 millim.

Hab. Described from five females and one male from Fort Johnston, Nyasaland (collected by Dr. Rendall), and one female from Barberton, Transvaal.

Eumenes Lucasia, Sauss.

Eumenes Lucasia, Sauss. *Etud. Fam. Vesp.*, i. *Eumen.* (1852) p. 68.

Zethus favillaceus, Walk. *List Hym. Egypt*, 1871, p. 28.

A solitary specimen of this apparently widespread species from Pretoria (*Distant*).

* In the Diptera the measurement of the length is taken only to the apex of the second abdominal segment.

Genus RHYNCHIUM, Spinola.

Rhynchium synagroides, Sauss.

Rhynchium synagroides, Sauss. Etud. Fam. Vesp. i., *Eumen.* (1852) p. 103, pl. xiv. fig. 2, ♂.

Three males, Johannesburg (*A. Ross*); Barberton (*Rendall*).

Rhynchium cyanopterum, Sauss.

Rhynchium cyanopterum, Sauss. Etud. Fam. Vesp. i., *Eumen.* (1858) p. 108, ♀ ♂.

Rhynchium cyanopterum, André, Spec. Hym. Eur. ii. (1884) p. 649, ♀ ♂; Mayr, Ann. Mus. Civ. Gen. xxi. (1884) p. 613; Sauss. Grandidier, Hist. Madag. xx. pt. i. (1891) p. 159.

Nine females, two males, Pretoria and Rustenburg (*Distant*); Fort Johnston and Zomba, Nyasaland (*Rendall*).

Rhynchium fallax, Sauss.

Rhynchium fallax, Sauss. Etude Fam. Vesp. iii., *Masar.* (1856) p. 175, ♀.

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

Genus ODYNERUS, Latr.

Odynerus punctatipennis, Sauss.

Odynerus (Leionotus) punctatipennis, Sauss. Etud. Fam. Vesp. i., *Eumen.* (1852) p. 210, ♀.

Two females and one male, Fort Johnston, Nyasaland (*Rendall*); Durban (*A. Ross*).

Absolutely inseparable from Indian specimens.

Odynerus carinulatus, Sauss.

Odynerus (Hypodynerus) carinulatus, Sauss. Etud. Fam. Vesp. iii., *Masar.* (1856) p. 259, pl. xiv. fig. 3.

Four females and one male, Pretoria (*Distant*); Johannesburg (*A. Ross*).

Odynerus capensis, Sauss.

Odynerus (Ancistrocerus) capensis, Sauss. Etud. Fam. Vesp. iii., *Masar.* (1856) p. 214.

One female and one male, Pretoria (*Distant*).
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Odynerus rubroniger, sp. n.

♀. Dull red, the upper margin of the clypeus, the flagellum of the antennæ, the front (except a spot between the base of the antennæ and a spot in the emargination of the eyes), the vertex and cheeks (except an elongate spot on the latter), the lower portion of the thorax, the mesonotum, the margins all round of the scutellum and postscutellum, a broad line down the middle of the median segment, a large oval spot at the base of the first abdominal segment above, the base and two comma-shaped marks on the disk of the second abdominal segment and the apical four segments entirely black; wings dark fuscous; the coxæ, trochanters, and base of the femora of the legs black. The head, thorax, and abdomen closely cribrately punctured; the mandibles long and pointed, with broad teeth on the inner margin; clypeus circular, bidentate anteriorly; prothorax truncate anteriorly; postscutellum strongly bituberculate; tegulæ very large, median segment with sharp lateral margins not rounded.

Length, ♀, 12; exp. 26 millim.

Hab. A single specimen procured by Mr. Distant at Pretoria.

Belongs to the subgenus *Pterochilus*, Herrich-Schäffer.

Odynerus simplex, sp. n.

♂. Allied to and resembling *O. silaos*, Sauss., but much larger and somewhat differently coloured. Black, the clypeus, a broad line on the scape of the antennæ in front, and the posterior margins of the basal two abdominal segments above pale yellowish white; the femora, tibiæ, and tarsi of the legs ferruginous. Head, thorax, and base of the abdomen closely cribrately punctured and covered with abundant soft white, rather long pubescence, the rest of the abdomen very smooth and shining, non-pubescent, and very finely and sparsely punctured. Wings hyaline, fulvous brown along the costal margin. Abdomen beneath with a deep broad furrow between the first and second segments, the anterior margin of the latter tuberculate or dentate in the middle.

Length, ♂, 13; exp. 28 millim.

Hab. One specimen procured at Pretoria (*Distant*).

The antennæ in this specimen are curled at the apex, as in the subgenus *Hoplopus*, Wesmael.

[To be continued.]