

ON THE ACULEATE HYMENOPTERA COLLECTED BY
MR. A. J. T. JANSE, NORMAL COLLEGE,
PRETORIA, IN THE TRANSVAAL.

BY P. CAMERON.

IN this paper I have, with the exception of a few critical species left over for further examination, enumerated and described the Aculeate Hymenoptera collected by Mr. A. J. T. Janse, chiefly in the neighbourhood of Pretoria (Transvaal). The number of new species is large, a fact not to be wondered at considering how little we know about the hymenoptera, as a whole, of Cape Province and of the Transvaal. As it is, the collection does not contain many species already recorded from the Transvaal. Thus, for example, Col. C. T. Bingham, in his paper in the Annals and Magazine of Natural History, September, 1902, pp. 210, 211, records six species of *Bembex* from the Transvaal, besides two from Nyassaland, while Mr. Janse has only captured three species. There are also numerous widely distributed species enumerated by Col. Bingham which have not yet been taken by Mr. Janse. Nevertheless, Mr. Janse's collection, comparatively small though it is, forms a very valuable and welcome addition to our knowledge of the South African hymenopterous fauna.

In recording the known species I have, to save space, given only the reference to the original description, and to the works or papers wherein their African distribution is given.

TIPHIIDAE.

TIPHIA FAB.

Tiphia transvaalensis, sp. n.

Black mandibles; the apex of antennal scape, the flagellum, except above towards the apex, the tegulae, apex of femora narrowly, and the tibiae and tarsi rufous, the apex of the coxae and trochanters more or less rufous; wings hyaline, very iridescent; the stigma and nervus black, the stigma of a deeper black than the nervures. Head, antennal scape, body, and legs covered with stiff long white hairs. Metanotum with three keels, the outer slightly converging towards the apex, finely, closely shagreened. Female.

Length, 7 mm.

Vertex sparsely, irregularly, the front closely and more strongly punctured. Face and clypeus above shagreened, the apex of the latter smooth. Basal slope of pronotum shagreened, the rest with scattered punctures, especially in the middle. The mesonotum and scutellum are more strongly punctured. The post-scutellum bears smaller scattered punctures. Mesopleura with widely scattered punctures, except the apex, which is finely, closely punctured. Propleurae impunctate, smooth, and shining. Metapleurae closely, obliquely striated. Abdomen finely punctured, the punctures becoming closer and stronger towards the apex; the apical half of the last segment piceous and smooth.

MYZIINIDAE

MYZINE LATR. NON AUCT. = MEIRA AUCT.

Myzine (Meira) immaculatus, sp. n.

Black; the mandibles, except at the apex, labrum, antennal scape, tegulae, and legs rufo-testaceous, the basal three or four joints of the antennae of a darker rufous colour; the coxae black, except at the apex; wings fuscous-violaceous, the posterior pair paler, especially at the base. The antennal scape, occiput, apex of pronotum covered with short, the pleurae with longer rufo-fulvous hair; the apices of the ventral abdominal segments fringed with similar hair. Head smooth and shining, except the clypeus, which is opaque and closely, rugosely punctured. Pronotum closely, irregularly punctured. Mesonotum and scutellums smooth and shining. Metanotum closely, rugosely punctured, a furrow—smooth, deep, gradually narrowed towards the apex—down the middle of the basal half. Pro- and mesopleurae strongly, but not closely punctured, the hairs springing from the punctures. Abdomen finely, sparsely punctured, and with a transverse band of punctures across the apex; the last segment is aciculated and obscurely rufous or piceous towards the apex. Female.

Length, 13 mm.

Myzine (Meira) erythrostomus, sp. n.

Black, smooth, and shining. The head red, the tarsi of a darker red; an irregular transverse oval white mark on the sides of the second, third, fourth, and fifth abdominal segments, the marks becoming successively smaller; wings fuscous-violaceous, the posterior paler than the anterior; the nervures and stigma black; the pedicle of the second cubital cellule a little longer than the transverse cubital nervures, which are roundly curved; the recurrent nervure is interstitial; the antennal scape and base of pronotum covered thickly with longish fuscous hair; the pleurae, base of abdomen, its ventral surface more sparsely, and the legs thickly with white hair; mesopleurae closely, strongly punctured; the apex of metapleurae irregularly striated. The sides and apex of the metanotum somewhat strongly, broadly striated, the striae more or less curved; the smooth central basal part distinctly furrowed down the centre. Female.

Length, 16 mm.

Waterval No. 211, Zoutpansberg. November.

Mandibles and palpi black. Mesonotal furrows deep, converging slightly at the apex; the space between them, except in the centre at the base, punctured, the punctures large and clearly separated. Eyes slightly converging above; the hinder ocelli separated from each other by one-third the distance they are from the eyes. Scutellum strongly punctured, the apex smooth. Base of mandibles strongly, closely punctured; there is a wide furrow in front, near the middle. Calcaria pale, the tarsal spines pale rufous. Pedicle of basal abdominal segment twice longer than wide. Scutellum as long as the mesonotum, longer than it is wide at the base. The middle dorsal abdominal segments are tinged with piceous red. The

radius at its junction with the cubitus curves inwardly; the cubitus projects beyond it; the second recurrent nervure is obliquely sloped towards the stigma from below the middle; below the middle it is roundly curved; it is received at the base of the apical third.

Allied to *M. violaceipennis* Cam.*; in that species the mesonotal furrows commence near the base, the hair is black, as is also the oral region, and there is no white mark on the fifth abdominal segment.

PLESIA JUR.

Plesia reticulata Cam.

Records Albany Museum, i, 300.

Waterval No. 211, Zoutpansberg. December.

Plesia pacificatrix, sp. n.

Black; the head and thorax densely covered with longish white pubescence, the abdomen with the white pubescence shorter and sparser, shorter and denser on the back in the centre; clypeus, mandibles except at the apex, a longish line, narrowed inwardly, on the sides of the pronotum, a narrower, continuous line of equal width on the apex, tegulae, an irregular, longish, triangular mark on the base of the mesopleurae, the narrow end above, the base straight, the apex irregular, with two slight rounded projections above the middle, the lower part straight; lines, dilated laterally towards the base, on the basal six abdominal segments, a broad curved line, rounded above on the sides of the seventh, nearer the apex than the base, and lines, dilated laterally, on the second to sixth, the central part of the first line narrow, the lateral dilatation triangular, straight, longitudinal on the inner side, the lines on the inner side roundly narrowed from the outer side towards the centre, and two small spots on the centre of the seventh, bright yellow; legs bright yellow; the coxae, trochanters, the basal half of the four front femora above, and the hinder more narrowly all round, and a line on the inner side of the tibiae, black; wings hyaline; the stigma rufo-testaceous; the nervures black; the third and fourth abscissae of radius equal in length; the recurrent nervures received at the same distance from the transverse cubital, the second recurrent roundly curved outwardly in the middle; the transverse cubital nervure in hind wings sharply, angularly broken above the middle. Male.

Length, 14 mm.

Waterval No. 211, Zoutpansberg. November.

Head and thorax closely, strongly punctured, densely covered with white pubescence; the mesonotum less and the metanotum more closely punctured than the head; clypeus with the apex broadly rounded; base of abdomen smooth, the rest punctured, the puncturation becoming gradually stronger towards the apical segment, which has the incision large, about one quarter longer than it is wide at the apex. The ventral segments are strongly punctured, the basal more closely, less strongly, and more regularly than the others.

* Records Albany Museum, i, 301.

Plesia transvaalensis, sp. n.

Black ; the head and thorax densely covered with long white hair, mandibles except at apex, a small spot between the antennae, clypeus, a line on the base of the pronotum narrowed in the middle, a broader one of equal width on its apex, lines, dilated laterally, on the apices of the basal six segments, that on the second slightly, irregularly dilated in the middle, a line on the seventh, projecting at the apex along the incision, and with a small projection on the inner side in the middle, between the lateral lines, which are roundly curved and end in a sharp point at the base, the apex being broadly, roundly narrowed ; the yellow lines on the apices of the second to fifth ventral segments are broadly dilated laterally, that on the sixth is of almost equal width ; there are two small spots on the seventh, all bright yellow ; legs bright yellow ; the coxae, trochanters, the four anterior femora, with almost the basal half above, the hinder less broadly all round, black ; and there is a black line on the outer side of the four hind tibiae ; wings clear hyaline, the stigma testaceous ; the nervures black ; the second abscissa of the radius is slightly longer than the third ; the second transverse cubital is roundly curved posteriorly towards the second recurrent nervure, which has the anterior two-thirds and the posterior third slightly, obliquely sloped towards the apex of the wing ; it is received at a distinctly less distance from the transverse cubital than is the first ; the second recurrent curves obliquely outwardly to below the middle, where it is roundly curved ; the lower part is sharply, obliquely sloped. The transverse median nervure in the hind wings is broken shortly above the middle, the lower and larger part is roundly, obliquely sloped. Male.

Clypeus strongly punctured, the punctures clearly separated, the apex with a shallow incision ; front and vertex closely punctured, smooth at the sides of the ocelli ; thorax closely, distinctly punctured ; the metanotum more sparsely at the base, and more finely and closely at the apex ; abdomen finely and closely punctured, the last stronger than the others, its incision large, about one-half longer than wide.

SCOLIIDAE.

DISCOLIA SAUS.

Discolia heterotrichia, sp. n.

Black ; the hair on the head fuscous, on the top of the thorax of a darker fuscous colour ; on the rest of the thorax, basal two dorsal abdominal segments, the apical in the centre, and on the basal ventral, black ; on the sides of the third, fourth, and fifth dorsal, and narrower continuous bands on the whole of the first to fourth ventral, white ; wings bluish-violaceous ; the lower part of the apical cubital, the discoidal, anal, and the apex of the hind wings, hyaline. There is a reddish spot in the inner side of the eye incision, and the pygidium is red. Male.

Length, 19 mm.

Rietfontein No. 24, Pretoria District. December.

Head and thorax finely, closely punctured; the abdomen almost as strongly, but not so closely punctured; the apex of the scutellum is smooth. This species is very like *D. alaris* Saus. The two may be separated thus:—

The hair on the head and top of thorax fuscous, on the sides of the apical four abdominal segments white; a reddish spot on the eye incision; pygidium red *Heterotrichia*.

The hair entirely black, eye incision immaculate, pygidium black. *Alaris* Saus.

Discolia alaris Saus.

Bingham, Ann. and Mag. Nat. Hist., 1902, 344; Cam., Sjostedt's Kilimand. Exped., Hym., 227.

Zoutpansberg District.

Discolia melanaria Burm.

Bingham, Ann. and Mag. Nat. Hist., 1902, 344.

Discolia ruficornis, var. *melanaria* Gribodo.

Mem. Accad. Sci. Bolong. (3), IV, 47.

Waterval No. 211, Zoutpansberg. November. Zusterstroom. February.

Discolia pallidipilosella, sp. n.

Black; the head, body, and legs densely covered with white pubescence; the third and following joints of the antennae red; the eye incision almost entirely, the mark prolonged shortly above and longer below along the outer edges, the mandibles broadly in the middle, and a narrow line on the outer orbits, yellowish-orange; wings fuscous violaceous. Male.

Length, 9–12 mm.

Waterval No. 211, Zoutpansberg. January. Beyns. January.

Upper part of the head sparsely, weakly punctured, the clypeus sparsely and much more strongly punctured. Pro- and mesonotum and the scutellum rather strongly and closely punctured, but with the punctures clearly separated; the centre of the scutellums narrowly smooth; the metanotum more closely and less strongly punctured, more sparsely at the central furrows. The calcaria are blackish, the tarsal spines white.

Looks like a small form of *D. ruficornis* F., but may be readily known by the hair being white instead of black.

Discolia ruficornis F.

Bingham, Ann. and Mag. Nat. Hist., 1902, 344; Gerstaecker, V. d. Decken's Reise in Ost. Afr., 344.

Spits. February.

Pretoria. January.

Discolia erythropyga Burm.

Bingham, Ann. and Mag. Nat. Hist., 1902, 344.

Waterval No. 211, Zoutpansberg. November. Kranspoort. November.

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DIELIS SAUS.
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Dielis thoracica F., var. *aureicollis* Lep.

Waterstr. November.

Dielis capensis Saus.

Pretoria. July.

Dielis transvaalensis, sp. n.

Black ; the front, occiput, and the prothorax above densely covered with longish red hair ; the rest of the thorax and the apices of the basal four abdominal segments covered with clear white hair, as are also the apices of the second, third, and fourth ventral segments ; wings clear hyaline to the first transverse radial nervure, fuscous-violaceous beyond, the cloud roundly narrowed at the base ; there is a cloud in the posterior wings which commences opposite the base of that in the anterior pair. Legs thickly covered with long white hair ; the calcaria white. Female.

Length, 16 mm.

Pretoria. January.

Head with a few scattered punctures at the ocelli and at the end of the vertex. Pronotum smooth ; the mesonotum strongly punctured ; a line of punctures on the base of the scutellum, and a larger, wider one on the sides of the apex ; the middle of the post-scutellum is smooth, the sides at the base punctured, and there is a line of punctures at the apex. Metanotum more closely, but not so strongly punctured as the mesonotum. Abdomen smooth, shining, and with a violaceous tinge ; before the apex of the segments is a transverse line of punctures, each bearing a white hair ; the last segment is strongly, closely, longitudinally punctured.

POMPILIDAE.

SALIUS FAB.

Salius lineaticollis, sp. n.

Black ; the antennae, head, mandibles, palpi, the prothorax, except a black line down the centre of the pronotum, a broader one across its base and a still broader and more irregular one across the base of the prosternum, the mesopleurae, except round the edges, a small curved line in the centre of the metapleurae at the apex, the fifth and following segments of the abdomen, and the legs, yellowish-testaceous ; wings deep fuscous-violaceous ; the nervures black ; the third abscissa of radius as long as the basal two united ; the second recurrent nervure received shortly before the middle, roundly curved outwardly in the middle. Claws with two teeth. An irregular black line across the vertex, enclosing the ocelli and united to the eyes. Female.

Length, 20 mm.

Zusterstoom, Zoutpansberg. February.

The third joint of the antennae is nearly as long as the following two united ; eyes distinctly converging above ; the hinder ocelli separated from each other by about the same distance as they are from the eyes. Apex of clypeus transverse, with the sides broadly rounded ; labrum large, semicircular ; occiput broadly rounded, not much developed ; apex of pronotum broadly rounded, margined with black, a shallow furrow down its centre ; mesonotum and scutellum flat, smooth,

and shining; metanotum closely, transversely, not very strongly striated, the striae extending on to the upper half of the metapleurae; it is densely covered with black hair; the apex is transverse; the apical segments are covered with fulvous hair; the long spur of the hind tibiae does not reach to the middle of the metatarsus; the serration on the tibiae is not very strong; the tarsi are more strongly spinose.

Allied to *S. jamisieri* Guér. That species has no black line across the vertex, the mesonotum and scutellum are rufo-testaceous, the third antennal joint is shorter compared with the fourth, it being not much longer than it, the base of the pronotum is more distinctly rounded, not transverse as in *lineaticollis*, and it is densely covered with golden pile.

Salius dedjas Guér.

Pompilus (Pepsis) dedjas Guér.—Lefebv., Voy. Abyss., VI, Pt. 4, 355, Pl. VII, f. 2.; Bingham, Ann. Mag. Nat. Hist., 1902, IX, 353.

Pinetown, Natal. May. A small specimen, half the usual size.

Salius spectrum Smith.

Mygnumia spectrum Smith.—Cat. Hym. Ins., Brit. Mus., iii, 187.

Salius hirsutus Saussure.—Dist. Nat., Transvaal, 1892, 216, Pl. V, f. 3.

Salius spectrum Bingham.—Ann. Mag. Nat. Hist., 1902, IX, 352.

Waterval. October.

Salius hilaris Sm.

Descr. of New Species of Hymen., 144, 16 (*Pompilus*).

Pietersburg. November.

A male is probably this species, at any rate it agrees with Smith's short description, except that the apex of the abdomen is not ferruginous. The second abscissa of the radius is about one-fourth longer than the third; the third transverse cubital nervure is received near the base of the apical fourth; the second is broadly rounded outwardly, and is received shortly beyond the middle of the cellule; the transverse median nervure is rounded outwardly, and is received about three-fourths of the length of the latter beyond it; the accessory nervure in the hind wings is interstitial. Hinder ocelli separated from each other by one-half less the distance they are from the eyes. Tibiae and tarsi closely spinose; claws with a short tooth near the base; the apices of the tarsal joints are blackish, as are also the palpi. Only the scape of the antennae is present. The labrum is ferruginous.

Salius irenensis, sp. n.

Black; the antennae orange-red; a narrow line on the inner orbits, commencing at the ocelli and extending to the bottom, rufo-testaceous; the greater part of the outer orbits and of the occiput dark rufous; the fore femora from shortly before the middle, the apex of the four posterior, and the tibiae rufo-testaceous, as are also the tarsi, except the apices of the joints, which are black; wings fuscous-violaceous; the stigma and nervures black. The second abscissa of the radius fully twice the length of the third; the first transverse cubital nervure roundly curved; the

second straight, oblique ; the third from shortly below the middle sharply, obliquely bent towards the base of the cellule ; the first recurrent nervure is received close to the apex, the second shortly beyond the middle of the cellule, and is broadly rounded outwardly ; the transverse median nervure is received distinctly beyond the transverse basal ; the accessory nervure in the hind wings received very shortly before the cubitus ; the hind ocelli are separated from each other by about half the distance they are from the eyes ; head and thorax covered with black hair ; claws with a stout basal tooth, shorter than the other ; on the hinder legs this tooth is shorter and more slender. Male.

Length, 12-15 mm.

Irene. November.

Pietersburg. November.

POMPILUS FAB.

Pompilus bretoni Guér.

Mag. de Zool., XIII, 114, 4, Pl. 115, f. 2 ; Kohl, Denkschr. d. Mathem-Naturwiss. Klasse Akad. d. Wissen, 1906, 100 ; Cameron, Sjöstedt's Kilimand.—Meru Exped. Hymen., 252.

Pompilus vindicatus Smith.—Cat. Hym. Ins. iii, 142. 118 ; Cameron Records Alb. Mus., i, 217 ; Bingham, Ann. Mag. Nat. Hist., 1902, 349.

I have an example of this widely spread African species from the Transvaal, and Mr. Janse has taken examples at Rietfontein in September, and at Pretoria, which have only the apical six or seven joints of the antennae rufous below, while in the type the flagellum is entirely rufous. The outer orbits may be lined with rufous.

Pompilus ancyloneurus, sp. n.

Black ; the antennae reddish-vermilion ; the head, except the centre of the vertex and the front broadly, the mark roundly narrowed below, the apical half of the pronotum, tegulax, apex of mesonotum, scutellum, apical two segments of the abdomen, the fore femora except at the base, the apical half of the middle, the apex of the posterior, and the tarsi, ferruginous ; the apices of the tarsal joints narrowly black ; wings yellowish-hyaline ; the apex from the second transverse cubital nervure, the radial cellule from the middle of the second abscissa of the radius, from shortly beyond the second recurrent nervure, and more broadly along the posterior margin, and about the apical fourth of the posterior wings fuscous, slightly tinged with violaceous ; the second abscissa of the radius hardly one-fourth longer than the third ; the first transverse cubital nervure almost straight, obliquely sloped ; the second roundly curved backwards, the posterior part straight, oblique ; the anterior half of the third obliquely sloped towards the base ; the first recurrent nervure received in the apical fourth ; the second in the middle of the cellule ; the transverse median nervure interstitial ; the accessory nervure in hind wings received shortly beyond the cubitus ; hinder ocelli separated from each other by about the same distance as they are from the eyes. Apex of clypeus transverse, with the sides broadly rounded ; apex of pronotum angled in the middle ;

metanotum opaque, densely covered with black hair, the apex rounded; scutellum not much raised above the level of the mesonotum; temples broadly rounded, the occiput transverse. Female.

Length, 14 mm.

Doornfontein. November.

The third joint of the antennae is fully one-quarter longer than the fourth. Pygidium sparsely covered with longish black hairs.

Pompilus erythrourus Cam.

Anoplius (*Pompilogastra* ?) *erythrourus* Cam.—Records Albany Museum, i, 219.

Frischgewaagd. January.

Pompilus desidiosus, sp. n.

Black; the apical two-thirds of the hind femora and the hind tibiae red; the post-scutellum and the sides of the apical slope of the metanotum densely covered with white pubescence; wings fuscous-violaceous; the stigma and nervures black; the third abscissa of the radius one-fourth of the length of the third; the second and third transverse cubital nervures broadly rounded, converging in front; the basal two abscissae of the radius broadly rounded; the third straight, oblique; the first recurrent nervure is received in the apical fourth, the second in the middle of the cellule; the transverse basal nervure interstitial; the accessory nervure in the hind wings received shortly beyond the cubitus, almost interstitial; hinder ocelli separated from each other by a slightly greater distance than they are from the eyes; apex of clypeus transverse; labrum large, semi-circular; the long spur of the tibiae is more than half the length of the metatarsus. Female.

Length, 9 mm.

Rietfontein. January.

Temples very short; the occiput not transverse; apical slope of metanotum depressed in the middle, the sides broadly rounded; claws bifid.

Pompilus jansei, sp. n.

Black; the head, with the mandibles, except the teeth and the antennae, dull-red; the prothorax more or less of a duller red; wings uniformly fuscous violaceous; the stigma and nervures black; the first and third transverse cubital nervures broadly, roundly curved; the recurrent nervures received in the middle of the cellules; the transverse median nervure roundly curved, received distinctly beyond the transverse basal; the accessory nervure in the hind wings received very shortly before the cubitus; the long spur of the hind tibiae one-third of the length of the metatarsus; claws bifid, the shorter claw stouter than the other. Female.

Length, 12 mm.

Waterval No. 211, Zoutpansberg District. November.

Clypeus transverse, the apex margined; labrum distinctly projecting; hinder ocelli separated from each other by the same distance as they are from the eyes; temples broadly rounded, densely covered with a silvery

pile; pubescence sparse and black; apical slope of metanotum finely, distinctly, and closely striated; abdomen as long as the head and thorax united, a little wider than the latter; pygidium finely, closely punctured; tibial and tarsal spines stout, the tarsi with the spines much more numerous and stouter than they are on the tibiae; they are longer on the apices of the joints; on the fore tarsi they are longer than on the others.

Pompilus commodus, sp. n.

Black; a narrow, yellowish-white line on the apex of the pronotum; the spurs brown; wings hyaline, a fuscous-violaceous cloud on the apex, commencing at the apex of the radial cellule; the nervures and stigma black; the second cubital cellule large; the second abscissa of the radius almost four times longer than the third; the first recurrent nervure received in the apical fourth of the cellule; the transverse basal nervure interstitial; the accessory nervure in the hind wings received before the cubitus; pronotum, head, and coxae covered with moderately long, the metanotum more densely with longer white hair; hinder ocelli separated from the eyes by almost the same distance as they are from each other. Male.

Length, 10 mm.

Warmberg, Zoutpansberg District. November.

Very similar to *P. longihirtus*, but readily known by the white line on the pronotum, and by the difference in the alar neurulation; eyes almost incised on the inner side; apex of clypeus broadly rounded; the long spur of the hind tibiae two-thirds of the length of the metatarsus.

Pompilus longihirtus, sp. n.

Black; the mandibles, except the teeth, and the underside of the basal three joints of the flagellum, dull-rufous; the tibiae and tarsi brownish; the spines brownish; wings hyaline, a curved cloud beyond the radius; the stigma and nervures black; the second abscissa of the radius fully one-third longer than the third; the transverse median nervure interstitial; the first recurrent nervure received at the base of the apical third of the cellule, the second very shortly beyond the middle; the second recurrent nervure broadly, roundly curved in the middle; the first and third transverse cubital nervures broadly, roundly curved, the second straight, oblique; the accessory nervure in the hind wings received before the cubitus; head, thorax, and apices of the abdominal segments covered with a silvery pile, the head, pronotum, and metanotum with longish white hair, the hair on the metanotum longer than on the head or pronotum; the eyes distinctly converge above; the ocelli in a curve, the hinder separated from each other by a greater distance than they are from the eyes. Apex of clypeus broadly rounded; the long spur of the hind tibiae almost three-fourths of the length of the metatarsus; the claws sub-bifid. Female.

Length, 11 mm.

Warmberg, Zoutpansberg District. March and November.

Basal joint of fore tarsi with four long spines; pygidium covered with depressed silvery pile.

Pompilus acutiangulatus, sp. n.

Black; the basal two abdominal segments and two large semicircular

marks on the basal half of the third, united at the base, reddish-orange ; the base of the first black ; a pale fuscous mark down the centre, united to a transverse narrower one on the apex ; in the centre of the third is a semicircular fuscous mark ; on the apex a broad transverse line, dilated in the middle, united to the basal central mark ; the basal two ventral segments paler orange ; wings fuscous-violaceous ; the stigma and nervures black ; the second cubital cellule shortly appendiculated ; the first and third transverse cubital nervures roundly curved, the second almost straight, obliquely sloped ; the transverse median nervure received very shortly beyond the transverse basal ; the first recurrent nervure received near the apex, the second in the middle of the cellule ; the anal nervure at the base is turned acutely downwards, forming a sharp angle ; radial cellule wide ; the basal two abscissae roundly curved, the third (which is shorter than the basal two united) straight, obliquely turned upwards ; accessory nervure in the hind wings interstitial. Female.

Length, 11 mm.

Waterval No. 211, Zoutpansberg District. November.

Face and clypeus covered with a grey silky pile ; the apex of clypeus transverse ; eyes distinctly converging above ; the hinder ocelli separated from each other by the same distance as they are from the eyes ; pronotum large, as long as the mesonotum ; metanotum more opaque than the mesonotum, its sides broadly rounded ; tibial and tarsal spines black ; the basal joint of the fore tarsi closely spinose below ; there is no furrow on the metanotum, but its apical slope is slightly depressed, nor is there a furrow on the pronotum ; the mandibles are broadly red in the middle. Allied to *P. proximatus* Sm.

Pompilus leptacanthius, sp. n.

Black ; the basal six or seven joints of the antennae, the apex of the clypeus and of the labrum, mandibles, except the teeth, and the legs, red ; the fore coxae behind, the middle, except broadly on the outer side, and the hinder, black ; palpi dark testaceous ; wings hyaline, distinctly tinged with violaceous ; the stigma and nervures black ; the apex from the end of the stigma clouded ; the second abscissa of the radius hardly one quarter shorter than the third ; the first transverse cubital nervure broadly, roundly, obliquely curved towards the fore part of the second, which is straight and oblique ; the first recurrent nervure received near the base of the apical third, the second in the middle ; the transverse basal nervure and the accessory interstitial. Female.

Length, 11 mm.

Pretoria. January.

Eyes distinctly converging above, separated there by the length of the third antennal joint ; hinder ocelli separated from each other by the same distance as they are from the eyes ; apex of clypeus broadly rounded, as is also the apex of the pronotum ; there is a fine longitudinal furrow outside the middle of the mesonotum ; the apex of the metanotum forms a shallow, semicircular depression ; temples short, broadly rounded ; there are five long spines on the basal joint of the fore tarsi.

HOMONOTUS DBM.

Homonotus spoliatus, sp. n.

Black ; a narrow but distinct line on the inner and outer eye orbits, the prothorax, mesonotum, scutellum, and tegulae, ferruginous ; the wings uniformly fuscous-violaceous ; the first abscissa of the radius longer than the third, which is half the length of the second ; the first and second transverse cubital nervures obliquely sloped, the first more rounded than the second ; the recurrent nervures received in the middle of the cellules ; the transverse basal interstitial ; the accessory nervure in the hind wing received very shortly before the cubitus ; temples almost obsolete, the occiput slightly rounded outwardly ; pronotum as long as the mesonotum and scutellum, the metanotum slightly longer than them ; the third joint of the antennae shorter than the fourth. Male.

Length, 9 mm.

Waterval No. 211, Zoutpansberg District. November.

Metanotum as long as it is wide at the base ; its sides at the apex bluntly, triangularly projecting ; hinder ocelli in pits, separated from each other by a distinctly greater distance than they are from the eyes ; apex of clypeus broadly rounded, the top more bluntly rounded ; the long spur of the hind tibiae three-fourths of the length of the metatarsus ; claws unequally bifid.

AGENIA SCHIODTE.

Agenia varipalpis, sp. n.

Black ; the head and pronotum densely covered with longish fuscous pubescence ; smooth, shining ; the metanotum closely, not very strongly, transversely striated ; the basal five joints of the antennae, apical three-fourths of the mandibles, and the legs, red ; the coxae and trochanters black ; the apex of the second and the whole of the third joint of the maxillary palpi dark testaceous, the joints covered with a white pile ; wings uniformly fuscous-violaceous ; the stigma and nervures black ; the second abscissa of the radius fully one-quarter longer than the third ; the basal two transverse cubital nervures broadly, roundly curved ; the apical abscissa of the radius straight, obliquely turned upwards ; the first recurrent nervure received shortly before the base of the apical third of the cellule, the second broadly, roundly curved outwardly, received near the base of the basal third ; the transverse median nervure is received shortly beyond the transverse basal ; the accessory nervure in the hind wings shortly before the cubitus. Female.

Length, 12 mm.

Button's Kop. October.

Eyes slightly converging above, separated at the top by the length of the basal two joints of the flagellum ; hinder ocelli separated from each other by half the distance they are from the eyes ; temples sharply, roundly narrowed ; the occiput transverse ; clypeus wider than long, gradually narrowed to a point at the apex ; the apical margin smooth and shining,

more broadly so in the middle ; the tibiae and tarsi bear short black spines ; the apical joint of the latter blackish ; the long spur of the hinder calcaria does not reach to the middle of the metatarsus ; third joint of the antennae fully one-fourth longer than the fourth.

Agenia ornaticollis, sp. n.

Black ; the antennae, head, mandibles, palpi, prothorax, mesonotum, scutellums, the apex of the fourth and the whole of the following abdominal segments, and the legs, rufo-testaceous ; wings hyaline ; the stigma and nervures black ; the third abscissa of the radius hardly one-quarter longer than the second ; the first recurrent nervure received shortly beyond the middle, the second near the apex of the basal third of the cellule ; the transverse median nervure distinctly beyond the transverse basal ; the accessory nervure in the hind wings very shortly before the cubitus ; there is a semicircular black spot in the centre of the base of the pronotum, and a smaller, somewhat triangular one in the middle of the propleurae ; metanotum weakly, finely, transversely striated. Female.

Length, 11 mm.

Pretoria. November.

Eyes converging above, separated there by the length of the second and third antennal joints ; hinder ocelli separated from each other by half the distance they are from the eyes ; temples roundly narrowed ; the occiput hardly transverse ; apex of clypeus narrowed to a blunt point ; the long spur of the hind tibiae is one-third of the length of the metatarsus ; the tarsi are more densely covered with short black spines than the tibiae ; the first transverse cubital nervure is oblique, slightly rounded, the second is straight, oblique.

PSEUDAGENIA KOHL.

Pseudagenia brunniceps Lucas.

Die Hymen. Ost. Afrikas., Pompilidae, 60 ; Cameron, Sjöstedt, D. Kilimandjaro, 259.

Warmberg, Zoutpansberg District. September.

APORUS SPIN.

Aporus leucotrichius, sp. n.

Black ; the prothorax, except on the lower part, the mesonotum, and the tegulae, red ; the wings fuscous, darker tinted beyond the second transverse cubital nervure ; the stigma and nervures black ; the transverse median nervure roundly curved outwardly, received shortly beyond the transverse basal ; the two transverse cubital nervures broadly, roundly curved ; the first nervure more bent than the second ; the first recurrent nervure is received near the apex of the basal fourth of the cellule, the second slightly nearer the apex ; the accessory nervure in the hind wings

is received shortly before the cubitus; the inner eye orbits from the antennae to near the top are lined narrowly with pale yellow; the hinder ocelli are separated from each other by almost the same distance as they are from the eyes; temples almost obsolete, the occiput transverse; clypeus, face, scutellums, and the parts bounding them, densely covered with white pile; apical slope of metanotum densely covered with depressed white pubescence; tibial and tarsal spines long and black; the long spur of hind calcaria three-fourths of the length of the metatarsus. Male.

Length, 7 mm.

Pietersburg. December.

The eyes are curved on the inner side, and converge distinctly below; the antennal scape is yellowish-white in the centre below; the third antennal joint is nearly as long as the fourth.

JANSEA, gen. nov.

Wings without a radial cellule; there are two cubital cellules; the two transverse cubital nervures are united to the stigma by a short pedicle, the second cubital cellule being narrowed to a point in front; it receives both recurrent nervures; there is no radius; the cubitus does not extend to the apex of the wings; the discoidal nervure is short; in the hind wings the radial, cubital, and diskoidal nervures are present, and extend to the apex of the wings, but there is no transverse cubital nervure; the accessory nervure is short; head, as in *Pompilus*, wider than the thorax; there is no malar space; tibiae spineless; abdomen sessile; claws simple; ocelli in a wide triangle; hind tarsi long, the basal two joints united as long as the tibiae; the anal nervure is straight, not curved down at the base.

The head and body are as in *Pompilus*. It is a genus easily recognized by the absence of a radius, and by the two transverse cubital nervures being united direct to the stigma. In the described genera they are united to the radius.

Jansea longitarsis, sp. n.

Black, shining, probably when fresh covered with a silvery pile; wings hyaline to the second transverse cubital nervure, fuscous beyond it; the stigma and nervures black; the first transverse cubital nervure is roundly, obliquely curved towards the cubitus; the second is broadly rounded outwardly; apex of clypeus transverse, with the sides at the apex rounded; temples broad, rounded; the occiput not transverse; the third joint of the antennae about one-fourth longer than the fourth; pronotum as long as the metanotum, and a little longer than the mesonotum with the scutellum. Male.

Length, 6 mm.

Pretoria. December.

Palpi long and black; the fore coxae are thicker and longer than the others; apex of metanotum broadly rounded; the first recurrent nervure is received close to the base, the second at double the distance from the apex.

SPHEGIDAE.

ASTATA LATR.

Astata albopilosella, sp. n.

Black ; the first abdominal segment, except the basal slope, the second and third segments, red ; the apices of the others piceous ; the wings hyaline ; the stigma and the nervures beyond its base pallid testaceous ; the head, thorax, and base of abdomen densely covered with white pubescence ; the ventral surface of abdomen, the apices of dorsal segments, and the legs, more sparsely haired ; the hind tibiae and tarsi covered, but not thickly, with stiff black spines ; metanotum closely reticulated, the basal striae roundly curved ; the apical slope is more finely reticulated ; mesonotum and apical half of scutellum closely punctured ; the base of scutellum smooth and shining ; front closely punctured, a wide furrow, with obliquely sloped sides, down its centre ; the clypeus is more shining and closely punctured. Male.

Length, 11 mm.

TACHYTES PANZ.

Tachytes argenteovestita, sp. n.

Black ; densely covered with silvery white hair, the pygidial area with depressed golden pile ; the palpi and calcaria rufo-testaceous ; the tibial and tarsal spines of a paler rufous colour ; wings hyaline ; the stigma and nervures testaceous ; the radius thickened at the base, not much shorter than the second and third united ; the second one-third of the length of the third ; clypeus closely, distinctly punctured, the apical half more strongly than the basal ; mesonotum alutaceous, the scutellum closely, distinctly punctured. Female.

Length, 14 mm.

Pietersburg. December.

The eyes converge above, separated there by the length of the basal two joints of the flagellum united. The silvery pile forms distinct bands on the apices of the abdominal segments. The middle of the clypeus is almost transverse ; there is no distinct puncturation on the front and vertex ; the first joint of the fore tarsi has six, the second and third two, the fourth one spine ; there is no clear appendicular cellule in the fore wings.

NOTOGONIA COSTA.

Notogonia aterrima Sm.

Larrada aterrima Smith.—Cat. Hym. Ins., IV, 282, 27.

Pietersburg. December.

A distinct species. Characteristic is the clearly defined furrow down the basal half of the mesonotum. The wings have the apex clouded ; the first abscissa of the radius is nearly as long as the second and third united ;

the second about half the length of the third ; the radial cellule short and wide, extending to the apex of the cubitus ; the apical abscissa of the radius larger than usual, straight ; the appendicular cellule longer than usual ; there is a distinct, clearly defined furrow down the lower half of the front ; the first transverse cubital nervure is broadly, roundly curved.

Notogonia transvaalensis, sp. n.

Black ; densely covered with silvery pubescence, dense on the face, clypeus, and orbits ; wings hyaline, tinged with violaceous ; the apex with a fuscous margin ; the nervures black ; the second abscissa of the radius about one quarter shorter than the third ; the apex of radius straight, obliquely sloped ; the two recurrent nervures almost united at the cubitus, received at the apex of the basal third ; the lower part of the first transverse cubital nervure is straight, obliquely sloped ; the upper (and longer) is more sharply oblique, and slightly, broadly rounded ; mesonotum and scutellum finely, minutely punctured ; the metanotum with a fine keel down the basal half, the keel becoming finer towards the apex ; it is obscurely, finely, transversely striated, the striae stronger and more widely separated on the sides of the apical half ; the apical slope is more distinctly striated, the striae clearly separated and stronger on the sides ; there is a closely striated belt on the centre of the basal half of the metapleurae, the striae longer on the middle ; pygidium covered with silvery pubescence, closely, rather strongly striated, the lateral striae curved. Female.

Length, 12 mm.

Rietfontein No. 24, Pretoria District. January.

Tibial and tarsal spines stout, black ; the apex of the hind tibiae and the base of the outer hinder spur covered with pale golden pile.

Notogonia brevicarinata, sp. n.

Black ; covered with silvery pile ; the wings hyaline, distinctly tinged with violaceous ; the apical margin in both wings clouded ; the basal abscissa of the radius about one quarter shorter than the following two united ; the second half the length of the third ; the second recurrent nervure is received near the apex of the basal third ; the two recurrent nervures are separated by slightly more than half of the second abscissa of the radius ; the fore half of the first transverse cubital nervure is more obliquely bent than the posterior, and is slightly, roundly curved. On the centre of the basal fourth of the metanotum is a stout longitudinal keel, bordered by fine striae ; the apical slope bears fine, widely separated striae ; the lower apical part of the metapleurae irregularly, obliquely striated ; the third and fourth joints of the antennae are equal in length ; the eyes at the top are separated by the length of the third and half the length of the second antennal joints united ; apex of clypeus broadly rounded ; the vertical and longitudinal furrows on the mesopleurae smooth ; pygidium twice longer than it is wide at the base. Female.

Length, 12 mm.

Pretoria. June.

Notogonia pretoriaensis, sp. n.

Black ; covered with silvery pile, which forms broad bands on the apices of the abdominal segments ; wings hyaline, distinctly tinged with violaceous ; the stigma and nervures black ; the first abscissa of the radius as long as the following two united ; the second fully half the length of the third ; the two recurrent nervures are almost united, and are received very shortly beyond the apex of the basal third ; the first transverse cubital nervure is obliquely sloped, the anterior half slightly rounded, the posterior straight ; it is bullated near the radius and below the middle ; the base of the metanotum is weakly, the sides towards the apical slope more strongly striated ; there is a longitudinal keel down the centre of the basal half ; the apical slope is more strongly and regularly striated ; the metapleurae not striated ; the calcaria, tibial, and tarsal spines black ; the claws without a tooth. Female.

Length, 14 mm.

Pretoria. May.

Base of mandibles densely covered with depressed white pile ; palpi black, covered with white pile ; the second and third joints united are as long as the scape ; the third is a little longer than the fourth ; the eyes at the top are separated by the length of the third antennal joint ; the furrow down the base of the mesopleurae is distinct and closely crenulated ; the longitudinal furrow is distinct and smooth ; apex of clypeus broadly rounded, depressed in the middle ; the wings are uniformly coloured ; the radial cellule moderately long and wide.

LIRIS FAB.

Liris nigropilosellus, sp. n.

Black ; densely covered with black pubescence, which is longer and denser on the metathorax ; wings uniformly fuscous-violaceous ; the stigma and nervures black ; palpi black ; the apices of the joints testaceous ; mesonotum and scutellum closely, distinctly punctured, the punctures distinct and clearly separated ; the punctures on the scutellum more widely separated than they are on the mesonotum ; the metanotum is more closely, regularly, and strongly punctured, as are also the pleurae ; the abdomen is finely and closely punctured ; the pile on the pygidium is black ; eyes distinctly converging above, separated there by less than the length of the second and third antennal joints united ; the first abscissa of the radius as long as the third ; the second as long as the space bounded by the recurrent nervures, which is as long as the space bounded by the first transverse cubital and the first recurrent nervures ; the second recurrent nervure is received shortly beyond the middle ; the first transverse cubital nervure is broadly, roundly curved behind ; the second at its junction with the cubitus is straight, forming an angle with the much larger anterior part ; tibial and tarsal spines black. Male.

Length, 19 mm.

Rietfontein. November.

Liris haemorrhoidalis F.

Kohl, Verh., z-b., Ges. Wien., XXXIV, 256; Bingham, Ann. Mag. Nat. Hist., (7), X, 209; Stadelmann, D. Hymen. Ost. Afr., 44.
Kranspoort. December.

AMMOPHILA KIRBY.

Ammophila ludovicus Sm.

Cat. Hym. Ins., Brit. Mus., IV., 212, 29; Kohl, Ann. Hof. Mus. Wien., IX, 251, 260, pl. IX, f. 44, 65, and 66; Bingham, Ann. Mag. Nat. Hist. (7), X, 218.

Kranspoort. December. One example of this well-marked large species.

Ammophila ferrugineipes Lep.

Hist. Nat. Ins. Hym., iii, 383; Smith, Cat. Hym. Ins., IV, 212; Gribodo, Ann. Mus. Civ. Genova, XXI, 297; Gerstäcker, Peter's Reise, 481; Stadelmann, Die Hym. Ost. Afr., 45; Cameron, Sjostedts, Zool. Exp. d. Kilimand. ü. Meru., Hym., 268; Bingham, Ann. Mag. Nat. Hist., (7), X, 218.

Waterval No. 211, Zoutpansberg District. December.

Ammophila pulchricollis, sp. n.

Black, densely covered with silvery pile; the antennal scape, the second joint, clypeus, mandibles to near the teeth, malar space, pronotum, except for a narrow line behind the middle, propleurae, tubercles, and tegulae, red; the legs and the basal three segments of the abdomen of a more ferruginous red; the hind coxae, except above, narrowly at the apex; their sides, except for a triangular space at the base and the apex narrowly; a broad line on the hind femora, commencing near the base, where it extends all round, and extending above to the base of the apical fourth, black; the hind tarsi of a darker red colour; the base of the second abdominal segment and its apex more broadly, the fourth and following segments, except narrowly at the apex, and the fourth to sixth ventral, black; wings hyaline, slightly tinged with fulvous; the nervures black; the second abscissa of the radius as long as the first and twice the length of the third; the third transverse cubital nervure broadly, roundly curved in a semicircle; the second is slightly, roundly curved, and slopes a little from the front; the first is obliquely sloped and broadly, roundly curved; the first recurrent nervure is received shortly before the middle; the second at the base of the apical fourth; mesonotum irregularly, transversely striated, the scutellum more finely and closely longitudinally striated; the metanotum irregularly, weakly striated laterally. Male.

Length, 22 mm.

Masemola.

Eyes slightly converging above; apex of clypeus broadly rounded, depressed, almost furrowed; the clypeus is short and broad; pronotum as long as the mesonotum; the basal third narrowed.

Ammophila transvaalensis, sp. n.

Black ; the head and thorax densely covered with silvery pubescence and hair ; the antennal scape, mandibles except the teeth, prothorax except at the base narrowly, tubercles, tegulae, and the legs, red ; the anterior femora at the base behind, and the middle coxae, trochanters, femora, tibiae, and the hind legs behind, black ; wings hyaline, distinctly tinged with violaceous ; the nervures black ; the first abscissa as long as the second, the third one-quarter of their length ; the third transverse cubital nervure being obliquely curved from below the middle towards the top of the second ; the first recurrent nervure received near the apex of the basal third ; the second received half the distance from the second ; mesonotum obscurely, transversely striated ; the scutellum longitudinally, finely rugose, a distinct smooth furrow down its centre, the base of the furrow rounded, the apex acute ; post-scutellum rugosely punctured ; metanotum transversely, irregularly striated laterally ; the centre more finely reticulated ; there is no distinct central area ; pleurae closely, not very strongly, punctured, the puncturation hid by the dense white pubescence ; they are more densely pilose than the upper parts of the thorax. Male.

Length, 24 mm.

Eyes slightly converging below ; clypeus longer than wide, its apex slightly, widely incised, or at least not transverse ; there is a smooth tubercle in its centre ; third antennal joint about one-fourth shorter than the fourth and fifth united ; tarsal spines strong.

Allied to *A. ferrugineipes* Lep. ; that species may be known from it by the basal five or six joints of the flagellum being red, by the clypeus being red, by the third transverse cubital nervure being more gradually rounded to the bottom, by the basal abscissa of the radius being about one-fourth longer than the second, and the hind tibiae and tarsi are red, not black, nor is there a distinct smooth furrow down the centre of the scutellum.

Ammophila maculifrons, sp. n.

Black ; the head red, except for a large mark on the front, wider than long, not extending to the lower edge, nor to the eyes, and above extending shortly behind and enclosing the ocelli ; below a line runs down the middle to the antennae ; the basal four joints of the antennae, the fifth except above, the raised apical part of the prothorax, tegulae, and tubercles, red ; the apical four segments of the abdomen blue ; the legs red ; the coxae, trochanters, and femora above, black ; the hinder femora more broadly and longly above, and also broadly below, black ; wings hyaline, the apex tinged with fuscous, the rest more slightly tinged with violaceous ; the nervures black ; the basal three abscissae of the radius of equal length ; the basal two transverse cubital nervures straight, oblique, converging in front ; the third converging in front from below the middle, the rest rounded ; the first recurrent nervure received near the apex of the basal fourth of the cellule, the second at half the distance from the apex ; pro- and mesonotum transversely striated, the metanotum closely reticulated in the middle, and closely, transversely striated ; pleurae obscurely punctured, the lower half obscurely, obliquely

striated; apex of clypeus bluntly rounded, the middle almost transverse; hinder ocelli separated from each other by almost half the distance they are from the eyes. Male.

Length, 18 mm.

Berea Park. December.

The third antennal joint almost as long as the following two united; the metanotal area becomes gradually roundly narrowed to a sharp point from the spiracles.

Ammophila caeruleornata, sp. n.

Black; the third and following segments of the abdomen blue; the mandibles, except the teeth, the propleurae, the sides of the pronotum, the mark narrower than the central black part, and the tegulae, red; the legs, with the coxae, four anterior trochanters, femora, and tibiae, of a darker red; wings hyaline, tinged with violaceous; the costa and nervures testaceous; the basal two abscissae of the radius equal in length, the third very slightly longer; the basal two transverse cubital nervures straight, oblique, converging in front, the third broadly, roundly curved; the first recurrent nervure received at the apex of the basal fourth, the second nearer the apex of the cellule. Male.

Length, 16 mm.

Berea Park. December.

The silvery pubescence dense; the hair on the front, vertex, outer orbits, and pleurae long and dense; eyes distinctly converging below; the hind ocelli separated from the eyes by a distinctly greater distance than they are from each other; pro-, meso-, and metanotum somewhat strongly, transversely striated, the mesonotum not quite so strongly as the rest; the scutellum more strongly and not quite so closely longitudinally striated; the post-scutellum finely rugose, irregularly, longitudinally striated.

Ammophila dolichocephala, sp. n.

Black, densely covered with a silvery pile; the under side of antennal scape, mandibles to the teeth, pronotum, and tegulae, red; the first abdominal segment, the sides, ventral segment, and apex narrowly of the second, the third, the sides of the fourth and following segments and the ventral surface, the legs except the coxae, trochanters, and the femora to near the apex, of a more ferruginous red; the apical three joints of the four anterior tarsi and the hinder, except the basal joint and the base of the second, black; wings hyaline, slightly tinged with violaceous and fulvous; the stigma and nervures black; the first abscissa of the radius slightly longer than the second, which is four times longer than the third; the first recurrent nervure is received at the apex of the basal fourth, the second nearer the apex than it; the second transverse cubital nervure is straight; the third roundly obliquely turned towards its fore part; pronotum smooth, a little longer than it is wide at the apex; the narrowed basal part two-thirds of the length of the apical; metanotum irregularly, not very strongly punctured; a smooth space on either side of the apex; the sides from the tegulae irregularly, transversely striated; there is a narrow but distinct furrow down the centre, from the base to shortly beyond the

middle; scutellum closely, finely, longitudinally striated, the base in the centre smooth and shining; there is a smooth furrow down the middle, not extending to the base and apex; post-scutellum stoutly striated; pleurae sparsely punctured, the puncturation hid by the dense white pile. Male.

Length, 24 mm.

Pretoria. January.

Eyes converging below; there is no malar space; clypeus distinctly longer than wide; the part below the eyes longer than the part above their bottom; the apex narrowed, depressed, and with a shallow incision at the end; in the centre is a longitudinal keel, commencing shortly above the middle and reaching to near the top of the apical fourth; the third antennal joint is fully one-fourth longer than the fourth, slightly shorter than the following two united; there is no blue tint on the apical abdominal segments.

Allied to *A. nasuta* Lep., from Oran., it having the longish clypeus of that species.

Ammophila (*Psammophila*) *tydei* Guil.

Le Guillon, Ann. Soc. Ent. Fr., X, 319; Kohl, Ann. Hof. Mus., XXI, 284; Cameron, Sjöstedts, Zool. Exped. n. d. Kilimand. u. Meru., Hym., 268.

Ammophila argentata Lep.—Hist. Nat. Ins. Hym., iii, 368; André, Spec. Hym. Eur., iii, 85.

Psammophila madeirae Dahlb.—Hym. Eur., i, 21 and 432.

Ammophila capensis Lep.—Hist. Nat. Ins. Hym., iii, 368.

Ammophila klugii.—André, *l.c.* 85.

Middelburg Town. December.

Pietersburg. December.

SCELIPHRON KLUG (PELOPOEUS AUCT.).

Sceliphron spirifex Lin.

Pelopoeus spirifex Smith.—Cat. Hym. Ins., IV, 227; Gribodo, Ann. d. Mus. Civic. di Genova, xvi, 224, 1; *l.c.* (2) i, 298; R. Accd. d. Scien. di Bologna, 1894, 136; Magretti, Ann. d. Mus. Civ. di Storia Nat. di Genova, i, 577.

Sceliphron spirifex Bingham.—Ann. Mag. Nat. Hist., (7), X, 217; Kohl, Denk. d. Mathe.-Natur. Klasse Kais. Akad. d. Wissen, 1906, 21.

Sceliphron aegyptium Kirby.—Forbes Natur. Hist. of Sokótra and Abd-el-Kûri, 240.

I have seen an example of this from the Transvaal.

Sceliphron spinolae Lep.

Pelopoeus spinolae Lep.—Hist. Nat. Ins. Hym., iii, 307; Gribodo, Ann. Mus. Civ. St. Nat. Genova, (2), i, 299.

Pelopoelus spinolae, var. *rufo-pictus* Magretti.—Ann. Mus. Civ. St. Nat., Genova, (2a), i, 57.

Sceliphron spinolae Bingham.—Ann. Mag. Nat. Hist., (7), X, 217.

Lemana. October. Waterval No. 211, Zoutpansberg District. January.

This is probably a variable species in size and coloration; the blue or violaceous tints vary in intensity; the alar nervures may be black or testaceous; only the basal (scape) joint of the antennae may be rufo-testaceous, or the basal six or seven may be so coloured. Saint Fargean calls the coloration of the basal antennal joints "luteous"; in my examples they are distinctly rufo-testaceous; the amount of the rufous coloration on the clypeus and mandibles varies, and it may be suffused with black. In one male the fore tarsi are luteous, with the base of the first joint black; Magretti's var. *rufo-pictus* has the oral region and the thorax red.

Sceliphron chalybeum Smith.

Cat. Hym. Ins., IV, 229 (*Pelopoeus*).

Sceliphron laevigatum Kohl.—Denk. d. Math.-Natur. Klasse, Kais. Akad. d. Wissen., 1906, 21; Verh., z-b., ges. Wien, XXXVIII, 155 (*Pelopoeus*). The antennal joints two to five may be red, or the first three only; the mandibles are usually entirely red; the blue body colour may be variegated with violet or green.

SPHEX L. KOHL.

Sphex luteipennis Mosc.

Moscary, Magy. Akad. Term. Ertek., xiii, 1, 33; Kohl, Ann. K. K. Hof. Mus., V, 225.

Sphex rufipennis.—André, Spec. Hym. iii, 151.
Pretoria.

Sphex pelopiiformis Dbm.

Kohl, Ann. K. K. Hof. Mus., V, 372; Smith, Cat. Hym. Ins. Brit. Mus., IV, 245; Bingham, Ann. and Mag. Nat. Hist., (7), X, 216; Cam., Sjostedts.

Sphex longiventris Saus.—Reise Novara, ii, Hym., 37, pl. ii, 21; Gribodo, Ann. Mus. Civ., Genova, XXI, 300.
Pretoria.

Sphex levilabris, sp. n.

Black; the antennae reddish-brown below; the four front tibiae tinged with brown; the abdomen above distinctly tinged with blue-violaceous; wings fuscous-violaceous; the stigma and nervures black; the second abscissa of the radius a little shorter than the first, and half the length of the third; the second cubital cellule small, along the radius hardly half the length it is along the cubitus; the first recurrent nervure received shortly before the middle, the second almost interstitial, received very shortly beyond the transverse cubital; clypeus short, half longer than it is wide, about half the length of the labrum; its apex transverse, depressed; labrum smooth, shining, bare; the apex of clypeus fringed with long hair; apex of pronotum with a distinct rounded incision in the middle; metanotum finely, closely striated, more strongly on the outer edge than on the centre; the upper part of the metapleurae strongly, obliquely striated; abdominal petiole twice longer than wide. Female.

Length, 23 mm.

Kranspoort. December.

Third antennal joint not quite twice the length of the fourth ; tarsal and tibial spines strong, brownish ; claws unidentate ; the mesopleurae are obscurely, obliquely striated below the furrow ; the lower basal part of the metapleurae finely, closely, obliquely striated ; the metapleurae are tinged with greenish-blue.

Sphex (ParaspheX) albisectus Lep.

Smith, Cat. Hym. Ins. Brit. Mus., IV, 267 ; Kohl, Ann. Hof. Mus. Wien., V, 1890, 334.

Kranspoort. November. Taken also at Dunbrody by the Rev. J. A. O'Neil.

Sphex (ParaspheX) trichionotus, sp. n.

Black ; the head and thorax densely covered with long grey pubescence ; the third and following segments of the abdomen with a white pile ; the seven basal joints of the antennae, the mandibles, except the teeth, the tegulae, the dilated apex of the first, the basal three-fourths of the second abdominal segment, and the legs, except the coxae, the hind trochanters above, and the upper half of the sides, the hind femora above and the sides to shortly below the middle, red ; the apex of the sixth and the seventh abdominal segment of a duller red colour ; wings hyaline, the basal half tinged with fulvous, the middle with violaceous, the apex from the end of the radial cellule clouded with fuscous violaceous ; the costa and the basal nervures rufo-testaceous ; the apical black ; the second cubital cellule in front one-fourth of the length of the posterior part ; the second abscissa of the radius two-thirds longer than the third ; the first transverse cubital nervure obliquely sloped, the posterior half rounded ; the anterior straight and more sharply oblique ; the recurrent nervures are received about the same distance from the transverse cubital. Male.

Length, 19 mm.

Pietersburg. January.

The apex of the clypeus is red, and has a semicircular incision in the middle, with a couple of small depressions on either side ; eyes slightly converging below ; mandibles broadly bidentate ; scutellum flat, its centre impunctate ; metanotum closely, transversely striated ; in addition to the white hair, the head and thorax are covered with a silvery pile ; abdominal petiole as long as the hind femora ; the apices of the second to sixth segments are narrowly banded with obscure white ; the apical ventral segment is gradually narrowed from the base to the apex, which is bluntly rounded.

This is a larger and stouter species than *S. albisectus* Lep. It is easily separated from it by the antennae, legs, and apex of abdomen being red, by the incised apex of clypeus, by the second abscissa of the cubitus being almost of the length of the third, while in *albisectus* it is only half the length, and the basal half of the wings is tinged with fulvous ; in *albisectus* hyaline like the apex, the nervures and stigma being black throughout in the latter.

Sphex (Harpactopus) tyrannus Smith.

Cat. Hym. Ins., Brit. Mus., IV, 264; Kohl, Ann. Hof. Mus., Wien., V, 349; Bingham, Ann. Mag. Nat. Hist., (7), X, 216.

Neighbourhood of Pretoria. February. Westfalia. December.
Zoutpansberg District

Sphex umbrosus Chr.

Kohl, Ann. Naturh. Hof. Mus., Wien., V, 406; Denkschr. d. Mathe.-Naturwiss. Klasse d. Kaiser. Akad. d. Wissen, 1906, 31; Bingham, Ann. and Mag. Nat. Hist., (7), X, 216.

Sphex taschenbergi Magretti.—Ann. Mus. Civ. Stor. Nat., Genova, (2) 1, VI.

Sphex metallica Taschenberg.—Zeits. f. d. g. Naturwiss. Halle, XXXIV, 414.

Sphex erebus Kirby.—Bull. Liver. Mus. iii, 15, 5; Forbes, Nat. Hist. of Sokótra and Abd-el-Kûri, 240, 12, pl. XV, f. 2.

Kranspoort. December.

Both the forms *metallica* and *taschenbergi* occur in Cape Colony. Mr. Krauze's example is the var. *metallica* = *erebus*.

Sphex (Isodonta) jansei, sp. n.

Black; the head, thorax, and base of legs densely covered with longish pale-grey pubescence; the abdomen with a grey pile; mandibles, except the teeth, the apex of clypeus, the centre broadly (the red colour extending near to the middle in the centre), the sides narrowly, antennal scape, tegulae, and the legs, except the coxae, greater part of the trochanters, a streak on the basal outer half of the fore femora, the basal three-fourths of the middle behind, and the hinder with more than three-fourths, black; wings hyaline; the apex infuscated in front from the end of the radial cellule to the lower part of the third transverse cubital nervure, and the second transverse basal; the hind wings have the apex slightly infuscated; the second transverse cubital cellule large, of equal width, the two transverse cubital nervures straight, oblique, parallel, the third roundly, broadly curved from the top; the third abscissa of the radius as long as the first, about one-fourth as long as the second, less than the space bounded by the first recurrent and the second transverse cubital; the first recurrent nervure received near the apical fourth, the second at the apex of the basal third, i.e., at a distinctly greater distance than is the second; abdominal petiole fully four times longer than wide, about one-fourth longer than the hind coxae. Male.

Length, 23 mm.

Pretoria. February.

Eyes slightly, but distinctly converging below; clypeus clearly longer than wide, its apex transverse; hinder ocelli separated from each other by a greater distance than they are from the eyes; puncturation on the head and thorax sparse, minute; the metanotum finely, weakly, transversely striated; tibial and tarsal spines rufous; apical abdominal segment bluntly rounded above and below; the penultimate transverse.

Of the African species known to me the present comes nearest to *I. meruensis* Cam., which may be known from it by the wings, costa, and

basal alar nervures being fulvous, the scutellums rufous, as are also the basal six joints of the antennae; the second cubital cellule is longer along the radius and cubitus than along the transverse cubitals, the third abscissa of the radius distinctly longer than the first, and about one-third of the length of the second, and the pleurae and the ventral surface of the abdomen are largely rufous.

Sphex (Isodonta) transvaalensis, sp. n.

Black; the head, thorax, base of abdomen and of the legs densely covered with black hair; the clypeus with a silvery pile; wings fuscous-violaceous; the nervures black; the second cubital cellule large, oblique, of almost equal width; the first and second transverse cubital nervures oblique, the first slightly curved below the middle, the anterior part straight; the second straight, oblique; the first recurrent nervure received near the apex of the cellule, the second near the apex of the basal third; the second recurrent nervure is broadly curved outwardly with a short straight branch at its junction with the cubitus; claws stoutly bidentate at the base; the last ventral and dorsal segment broadly rounded, the latter with a fine keel down the middle at the apex; the penultimate ventral segment with a large triangular incision extending to its base; scutellum smooth in the centre, where there is a distinct shallow furrow; metanotum alutaceous, the apical slope more strongly than the rest. Male.

Length, 17 mm.

V. d. Merwe. December.

Mandibles bidentate, reddish to the teeth; clypeus with the centre margined and transverse at the apex, the sides broadly rounded; it is slightly longer than it is wide at the apex, the top is obscurely keeled in the middle; eyes distinctly converging above; ocelli separated from each other by a less distance than they are from the eyes; a fine furrow leads down to them, and there is an oblique one running to the outer; the centre of the inner orbits is bordered with silvery pubescence; abdominal petiole three times longer than wide.

AMPULEX JURINE.

Ampulex jansei, sp. n.

Blue; the head, pleurae, scutellum, apical segments of abdomen and legs, black, as are also the antennae; the underside of antennal scape, apex of clypeal keel, and the mandibles, rufo-testaceous; wings hyaline; the nervures black; a longish triangular cloud at the transverse median nervure, a shorter squarish one at the top of transverse basal touching the costa, one filling the basal third of the radial cellule, except in front, one in the apex of the first cubital cellule touching the transverse cubital nervure and filling the anterior three-fourths, the second cubital cellule entirely, this cloud extending into the discoidal, where it is twice its size; the second cubital cellule is about one-fourth longer along the cubitus than along the radius; apex of cubital cellule rounded; the first recurrent nervure is received nearer the first transverse cubital than is the second from the second. Female.

Length, 17 mm.

Pietersburg. November.

A stout keel runs from near the centre of the front to the inner side of the antennae. There is a triangular and a shorter rounded tooth on either side of the centre of the clypeus; the third joint of the antennae is almost as long as the following two united; pronotum longer than it is wide at the apex, which becomes gradually raised in the middle into a bluntly rounded point; the sides are bluntly margined; the central keel on the metanotum runs to the base of the apical fourth; the second converges roundly towards the apex; the third and fourth are united at the base; there is an irregular reticulated part at the apex of the first keel; the rest of the metanotum is closely, transversely striated; the apical slope is irregularly reticulated, the sides at the top projecting into stout, triangular teeth; the upper part of the metapleurae is stoutly, irregularly, obliquely reticulated, the reticulated band gradually widened towards the apex; the rest is smooth; the first abdominal segment has a distinct, twice wider than long, petiole; the second is of the same width at the base as it is at the apex, and has the sides rounded; claws dilated to shortly beyond the middle, the apex narrowed, curved; tarsi closely, strongly spinose; spurs dark-testaceous; on the depressed base of the pronotum are two stout, rounded keels; the silvery pubescence is dense on apex of pronotum, post-scutellum, apex of mesopleurae and of metapleurae, and the apical abdominal segments; the hair on the head, thorax, and legs is long and white.

Allied to *A. nebulosa* Sm.

DOLICHURUS LATR.

Dolichurus denticollis, sp. n.

Black; the apex and centre of clypeus, mandibles, the antennae and tarsi, rufo-testaceous; the apical joints of the antennae darker-coloured than the others; wings hyaline; the nervures and stigma black; a fuscous cloud behind the submedian nervure, and a narrower one, narrowed in front, behind the posterior part of the transverse basal, one filling the radial cellule, one, obliquely narrowed behind, beyond the middle of the first cubital cellule, one almost filling the second, and a semicircular one in front of the second recurrent along its anterior three-fourths; tegulae fuscous; the head, thorax, and legs covered with white down. Female.

Length, 6 mm.

Head opaque, finely, closely punctured, the inner orbits with a narrow, irregularly striated band; hind ocelli separated from each other by half the distance they are from the eyes; pronotum alutaceous, the depressed sides thickly covered with depressed silvery pubescence; the centre from the teeth furrowed, and bearing large, round, clearly separated punctures; the apex transverse, furrowed; the centre of mesonotum with a large, strongly punctured band, nearer the base than the apex; the furrows are complete; metanotum irregularly, transversely striated, with a central and three lateral longitudinal keels; the central straight, the

second converging towards its middle, the outer two more irregular; pro- and mesopleurae opaque, alutaceous, densely covered with white pubescence; the metapleurae smooth, shining, bare, with a stout oblique keel above the middle on the basal half; metanotal spines almost as long as they are wide at the base; abdominal petiole almost twice longer than wide.

HELIORYCTES SMITH.

Helioryctes quadridentatus, sp. n.

Black; the abdomen and the legs, except the coxae and trochanters, rufo-testaceous; the palpi dark-testaceous; the wings dark fuscous-violaceous; the nervures and stigma black; the clypeus with two short stumpy teeth on either side of the middle; the coxal spine three-fourths of the length of the coxa, curved, narrowed towards the apex, which is testaceous; the tibiae with three rows of spines, the central row being the longer; the basal fourth bears no spines; the tarsi thickly, stoutly spinose, the four anterior more thickly than the posterior; the long spur of the hind tibiae extends shortly beyond the middle of the metatarsus the anterior tibiae with the spines shorter and sparser than on the others; outer orbits, lower part of front and clypeus densely covered with silvery pubescence; head and pro- and mesothorax closely, somewhat strongly punctured, the propleurae more weakly, the mesopleurae more strongly than the mesonotum, the latter with a deep, curved, crenulated furrow down the apex of the basal fourth; there is a crenulated furrow between the scutellum and post-scutellum; the depressions bordering the latter irregularly striated; the large semicircular area on the base of metanotum has a longitudinally striated band on the base; the rest is rather stoutly irregularly reticulated; the outer side is more widely, longitudinally striated, the outer keel ending in a short tooth; the apical slope is irregularly, transversely striated, the striae stronger on the outer edge; metapleurae rather strongly, closely, obliquely striated, the striae more widely separated above than below; the abdomen becomes gradually narrowed towards the apex; the basal two segments are weakly, the others more strongly punctured, the last more strongly than the penultimate, and with the sides keeled; ocelli in a triangle, the hinder separated from each other by a slightly greater distance than they are from the eyes, to which they are united by a narrow, oblique furrow; a smooth line runs down from them to the antennae. Female.

Length, 15 mm.

The first transverse cubital nervure is, below the pedicle, roundly curved backwards, the second is longer and obliquely sloped; the third is less roundly, obliquely sloped; mandibles closely, irregularly, obliquely striated.

The generic description given by Smith is defective, in as much as he has omitted to state that there is a spine on the hind coxae. The genus is not mentioned by Kohl in his generic revision of the Fossores, beyond copying Smith's description (Ann. K. K. Hof. Mus., XI, 387). Bingham, in his description of the Indian species (Fauna of Brit. India, Hymen. i,

271) states that Smith's West African *H. melanopyrus* has a long coxal spine. He also states that in the British Museum there is another species which stands in the collection under the name of *Paranysson abdominale* Guér., the description of which is very slight. In the Indian species (*H. assimilis* Bing.) the coxal spines are mere tubercles. There is no mention made by Smith of the four clypeal teeth found in my species, nor by Bingham in his Indian one.

GORRYTES LATR.

Gorytes transvaalensis, sp. n.

Black; covered with a white primrose pile; the antennal scape, and the basal three or four joints of the antennae except on the top, the apex of the clypeus, the sides more broadly than the centre, the basal half of the mandibles, almost the lower third of the inner orbits broadly, a line, widened laterally, on the apex of the pronotum, tubercles, tegulae, apical third of the scutellum, a narrow line down the apex of the propleurae, a band, triangularly widened backwards to near the base on the apex of the first abdominal segment, a narrower one, slightly dilated laterally on the second, a still narrower one, not dilated, on the third, almost the apical half of the fourth, the whole of the fifth and sixth and the sixth ventral, an irregular spot on the mesopleurae close to the tubercles, the legs, except the femora above, the hind tibiae and the basal joint of the hind tarsi, rufo-testaceous; wings hyaline, the radial cellule, except narrowly at the base, the second cubital cellule except narrowly behind, and the anterior fourth of the third, fuscous-violaceous; the stigma testaceous; the transverse anal nervure in the hind wing interstitial. Female.

Length, 6 mm.

V. d. Merwe. December.

Vertex from the posterior ocelli and the front bearing fine, but distinct punctures, which are larger and more numerous on the front than on the vertex; eyes slightly converging above, the hinder separated from each other by a little greater distance than they are from the eyes; mesonotum distinctly, but not very closely punctured; scutellum with a few weak punctures in the centre; metanotal area clearly defined and bearing about thirteen keels, the lateral and central reaching to the apex, the others to shortly beyond the middle; the rest of the metanotum is punctured like the mesonotum, as is also the mesopleurae; the propleural furrow is striated closely on lower half; there is a curved punctured band on the base of the metapleurae, the rest bears fine, scattered punctures; pygidial area smooth at the base, the centre somewhat strongly punctured, the apex more or less irregularly striated; the dorsal segments of the abdomen are weakly, sparsely punctured; the second ventral strongly punctured, the others more weakly punctured, except at the base; there are four long spines on the basal joint of the fore tarsi, and one on the second and third; the hind tibiae and tarsi are sparsely covered with whitish yellow spines; apex of clypeus sinuated, depressed, clearly separated; third antennal joint not quite double the length of the fourth.

Stizus erythraspis, sp. n.

Black ; the greater part of the head, of the prothorax, scutellums, the apices of the third and following dorsal segments of the abdomen, a line down the middle of the fourth and following the greater part of the ventral surface, the antennae and legs, ferruginous ; the antennal scape, face, clypeus, except a ferruginous large mark on the top, roundly narrowed in the middle, labrum, mandibles, except the apex, a line on the apex of the pronotum, an oblique line, narrowed inwardly, in the centre of the first abdominal segment, on the outer third, and larger, wider spots, of almost equal width and rounded on the inner side in the centre of the second, third, fourth, and fifth, and similar spots on the sides of the third and fourth ventral segments, yellow ; head, thorax, and base of abdomen densely covered with longish white pubescence, the rest of abdomen with the pubescence shorter and sparser ; wings hyaline, largely tinged with fulvous, especially in front ; the first transverse cubital nervures straight, oblique, the second and third oblique, roundly curved ; the first recurrent nervure is received shortly before the middle ; the second is broadly, roundly curved outwardly on the front half, and is received close to the apex of the cellule ; the median cellule in hind wings emits two nervures. Female.

Length, 22 mm.

Waterval No. 211, Zoutpansberg District. November.

Head distinctly narrower than the thorax ; clypeus wider than long, but not double ; eyes slightly converging below ; labrum wider than long, raised in the centre ; malar space very short ; the sides of the mesonotum, the top of mesopleurae narrowly, and the tubercles, are ferruginous ; tibiae and tarsi strongly spinose ; hinder ocelli separated from each other by double the distance they are from the eyes ; tegulae ferruginous in front, yellow behind ; mesonotum and scutellum finely and closely punctured ; the lower part of the occiput is black, the line widened in the middle.

This species comes close in some respects to *S. dewitzii* Handl., a Cape species, but is larger ; the two may be separated thus :

Antennae broadly black in the middle, head and prothorax for the greater part black, the scutellums and legs at the base black, the wings tinged with fuscous, the nervures black. *Dewitzii*, Handl.

Antennae, head, and scutellums ferruginous, the legs not black at the base, the wings hyaline, tinged with fulvous, the nervures fulvous. *Erythraspis*.

BEMBEX OLIV.

Bembex olivata Dbm.

Handlirsch, Sitzber. Akad. Wiss. Wien., cii (1893), 812, pl. ii, f. 17, pl. v, f. 23 ; Bingham, Ann. Mag. Nat. Hist., ser. 7, X, 1902, 211.

Olifants River.

Bembex capensis Lep.

Handlirsch, *l.c. supra*, 853, 94, T. iii, f. 4, 26.

Olifants River.

Bembex testaceicauda, sp. n.

Black ; the head, thorax, and base of abdomen densely covered with longish white pubescence, the hair on the front and vertex whiter, more

silver in colour than the rest ; basal three-fourths of the mandibles, labrum, clypeus, a line on the lower inner orbits extending above to the ocelli, the line roundly incised in the middle and obliquely narrowed above, two small transverse lines of equal width below the ocelli, a line on the outer orbits, the upper half obliquely narrowed, the prothorax, except for an interrupted line on the pronotum and two or three small spots on the propleurae, a line along the sides of the mesopleurae, a narrower interrupted one on the sides and apex of the scutellum, a large irregular line on the middle of the mesopleurae, narrowed above, becoming gradually widened below at the base and apex, the basal projection longer than the apical, which is roundly incised above, the whole lower part being roundly, broadly incised ; the metapleurae yellow, with a large oblique mark on the basal half ; the lower part narrowed and roundly curved ; the yellow on the pleurae is tinged with rufous ; abdomen with pale olive-yellow bands on the apical half of the segments ; the last segment is entirely rufous ; the basal black bands on the second and third segments are dilated semi-circularly on either side of the middle ; the apical bands are dilated at the base in the centre, those on the third and fourth longer and more sharply so ; ventral surface black ; the first segment with a broad transverse yellow band on the outer edge, the second to fifth with smaller triangular ones, also on the outer side ; the last with the apical half rufous ; legs yellow ; the tibiae and tarsi tinged with rufous ; the coxae and trochanters more or less black behind, the fore knees slightly, the four hinder more distinctly, a line on centre of the fore femora behind on the lower part, a short one on its base, and a broader line on the posterior femora above, and the pulvillus, black ; antennal scape pale-yellow ; the flagellum rufous, black above ; wings clear hyaline ; the nervures black ; the centre of the clypeus is rufous, with two irregularly pyriform black spots on the upper half.

This species is not unlike *B. capensis* Lep. That species may be known by the clypeus being for the greater part black, by the mesopleurae being black, by the yellow on the abdomen not being pallid olive, and by the ventral segments having continuous yellow bands.

PHILANTHUS LATR.

Philanthus triangulum F., v. *diadema* F.

Bingham, Ann. and Mag. Nat. Hist., (7), X, 212.

Pretoria. January and November. Stellenbosch (Broom). The Stellenbosch example wants the central branch of the frontal mark.

Philanthus spilaspis, sp. n.

Black ; the clypeus, except its lower side, the face, the cheeks ; the mark on the latter sharply projecting upwards on the outside and more shortly and broadly in the middle ; basal two-thirds of the mandibles ; a line on the lower half of the outer orbits, narrowed slightly and gradually below, broadly, bluntly bilobed above ; a line on the sides of the pronotum, slightly narrower than the dividing central part, tegulae, a small squarish spot on the middle of the scutellum, and three small marks on

the lower part of the front ; the central broader and irregular ; the lateral more transverse and curved, pale yellow ; abdomen red ; the basal segment black, except at the apex broadly in the middle ; the black lateral apical part projecting inwardly at the apex ; the sides and ventral surface largely suffused with orange yellow ; legs yellow, suffused with rufous ; all the coxae and trochanters, the basal half of the fore femora, the middle to near the apex and the whole of the hinder, the hind tibiae, and the basal half of the basal joint of the hinder tarsi, black ; wings fuscous-violaceous ; the stigma and nervures black ; the first and third abscissae of the radius almost equal in length and about one-fourth longer than the second ; the first recurrent nervure is received shortly beyond the middle ; the second at less than half the length of the third abscissa of the radius from the second transverse cubital nervure ; the area on metanotum closely, somewhat strongly, transversely reticulated, with a stronger keel running down the centre ; it is triangular, and is as long as it is wide at the base ; the pubescence is pale and is longer on the metanotum and ventral surface of the abdomen than elsewhere ; the fine furrows bordering the clypeus are broadly rounded at the sides above and below ; apex of clypeus broadly rounded ; the sides not projecting. Female.

Length 15 mm.

Pretoria. January.

Head, thorax, and abdomen at the base closely and somewhat strongly punctured ; the third and following segments of the abdomen with the puncturation weaker and becoming gradually weaker towards the apical. This species, of those known to me, comes nearest to *P. loeflingii* Dbm., or what I make out that species to be. The main difference between them may be best shown in synoptical form.

The yellow on the face projecting at the sides obliquely on to the front, which is immaculate ; the furrows bounding the clypeus forming acute angles ; the metanotal area smooth and shining ; the yellow on the outer orbits ; a small oblique mark twice wider outwardly than it is along the eyes ; the mandibles with a small yellow mark ; the greater part of the scutellum and a line on the post-scutellum roundly narrowed behind and a longish mark on the upper half of the mesopleurae ; only the basal half of the first abdominal segment black, the black trilobate at the apex, the legs black, except for a line on the apical half of the fore femora and one on the middle tibiae below. *Hoeflingii* Dbm.

The yellow on the face not projecting laterally on to the front, which bears three small yellow spots ; the furrows bordering the clypeus rounded at the angles ; more than the basal half of the mandibles yellow ; metanotal area reticulated, opaque, the outer orbits with a long broad yellow line ; scutellum with small squarish mark in the middle ; post-scutellum and mesopleurae immaculate ; the first abdominal segment black to near the apex ; the legs with the four front femora in part ; the four front tibiae and the greater part of the tarsi rufous-yellow. *Spilaspis* Cam.

Philanthus trichiocephalus, sp. n.

Black ; the head densely and, to a less extent, the thorax covered with white pubescence, the hair on the metanotum longer and denser than it is on the rest of the thorax ; the clypeus, except for a small squarish mark on the centre of the apex, which is prolonged laterally into a curved line ; on the sides is a large mark, as long as it is wide above, the top with a rounded incision on the innerside ; it is narrowed below and is separated from the lateral projection by a narrow black line narrowed outwardly ; above the central mark on the face is a small mark, rounded

above, transverse below, and closely united to the clypeal mark—all pale yellow. On the lower half of the front is a large mark, gradually, roundly narrowed below from the top, and with an incision in the centre below, longer than wide and slightly narrowed below; a narrow continuous line on the apex of the pronotum; a narrow line on the post-scutellum; a large transverse mark on the sides of the second abdominal segment, the apex roundly, irregularly narrowed from the outside to the base, the two marks extending close to the middle of the segment; a narrow line on the apex of the second; a slightly broader one on the third; a still broader one, dilated in the middle, and one of equal width, and twice wider than long, on the centre of the fourth—pale yellow. The basal three joints of the flagellum, the apical joint, a broad line on the outer orbits, roundly narrowed in front, commencing on the outer half of the vertex and extending halfway down the eyes; the mandibles, tegulae, and the basal and apical segments of the abdomen, red. Legs of a similar red colour, the coxae, trochanters, and the base of the femora narrowly and irregularly, black; the outside of the four hinder tibiae and the tarsi pale yellow; the apices of the tarsal joints red. Wings fuscous-violaceous, the hinder pair paler; the radial cellule darker tinted; the stigma rufo-testaceous; the second abscissa of the radius one-half of the length of the first, and hardly one-fourth of the length of the third; the first recurrent nervure is received at the apex of the basal third, the second at the apex of the basal sixth of the cellule; the cubital nervure in the hind wings interstitial. Male.

Length 12 mm.

Middelburg town.

Head and thorax closely, rugosely punctured; the vertex more strongly than the front and the scutellum and metanotum more strongly than the mesonotum. Clypeus sparsely punctured. There is a narrow, distinct, roundly curved furrow shortly above the middle of the mesopleurae. Eyes converging above, separated there by the length of the basal three joints of the antennae; they are margined on the innerside and have a slight incision above the middle.

The affinities of this species are with *P. flavolineatus* Cam., from Kilimandjaro; the two may be separated as follows:—

Two short lines on the lower part of the front; the flagellum entirely reddish below; the clypeus immaculate; the third abscissa of radius fully one-half the length of the third; the first recurrent nervure received beyond the apex of the basal third; a narrow yellow line on the apex of the second abdominal segment; the line on the fifth not dilated broadly in the middle, not wider than on the fourth, that on the fifth small and rounded at the base; the legs without yellow.

Flavolineatus Cam.

A large mark, widened above, on the lower part of the front; the flagellum only reddish at the base; the clypeus with a black mark in the centre below; the second abscissa of the radius one-fourth of the length of the third; the first recurrent nervure received at the apex of the basal third; no line on the apex of the second abdominal segment; the line on the fifth widened and wider than on the fourth; that on the fifth large and transverse at the base; the legs largely yellow.

Trichiocephalus.

Philanthus transversus, sp. n.

Black; the head in front below the antennae; the yellow laterally continued upwards above the antennae; the line obliquely narrowed

upwards, the top transverse; a three-pronged mark above the face on the front, its base broad, large, the central line longer, narrower, and straighter than the others, the greater part of the scutellum, and post-scutellum, whitish-yellow; a broad mark on the outer apical third of the first abdominal segment wider transversely than longitudinally; the sides of the second, the mark narrowed to a small square at the base, clearly separated; from this it becomes gradually, roundly widened to the apex; a broad transverse mark, rounded at the base, on the third and fourth, the third united by a narrow line along the apices of the segments; the apical segments and the second and following ventral segments, except for brownish lines on the apices, bright orange-yellow; the antennal scape below; the malar space; the outer orbits entirely below, more broadly above; the line continued along the vertex to near the outer ocelli; the line separated from the eyes on the upper half; the tegulae, a narrow line on the apex of the first abdominal segment; the second broadly in the middle, more narrowly on the outer side, where it separates the black in two, red; four front legs red, the middle tibiae yellow; the hind coxae, trochanters, and femora black; the tibiae yellow; the tarsi pale red; wings hyaline; the apex narrowly and slightly smoky; the costa, stigma, and nervures pale testaceous; the second abscissa of the radius shorter than the first and one-half the length of the third; the first recurrent nervure is received very shortly before the middle of the cellule. Male.

Length, 8-9 mm.

Densely covered with a short white pile; closely, rather strongly, punctured, the clypeus much more weakly than the rest; apex of clypeus transverse; area on metanotum large, opaque, punctured like the other parts; the bounding furrows weakly indicated, and there is a shallow, indistinct furrow down the middle; base of metapleurae aciculated, the rest closely reticulated; the head is less closely punctured than the thorax, and the abdomen not so closely as the latter.

This species may be separated from the known South African forms by the transverse apex of the clypeus.

CERCERIS LATR.

Cerceris erythrospila, sp. n.

Black; the underside of the antennal scape, a band on the apex of the third abdominal segment, narrowed in the middle, laterally occupying the half of the segment, and the sixth, except at the sides, yellow; the underside of the antennal flagellum, mandibles except the teeth, tegulae, the sides and the apex, more widely of the first abdominal segment, and the greater part of the four hinder coxae, rufous; the four front tibiae anteriorly and the tarsi pale yellow; the apical joints of the four anterior tarsi tinged with rufous; the hinder tarsi black, except the basal three-fourths of the basal joint; wings hyaline; the apex with a smoky violaceous cloud at the apex of the radius and more broadly beyond the apex of the

third transverse cubital nervure; metanotal area strongly, longitudinally striated; pygidium strongly, irregularly punctured, the apex smooth, depressed. Male.

Length, 8 mm.

Face and clypeus densely covered with silvery pubescence; the rest of the head and the thorax densely covered with white hair; apex of clypeus in the centre almost trilobate; the lateral lobes yellow; puncturation strong and close, except on the ventral surface of the abdomen, where it is fine and sparse, the segments being also more or less aciculated; first abdominal segment three times longer than wide; the hypopygium widely incised, the lateral margins longish, triangular; there is a semi-circular spot on the sides of the third ventral segment at the apex.

Cerceris armaticeps, sp. n.

Ferruginous; the apical abdominal segments darker coloured, the antennal keel, a broad line, slightly narrowed towards the top, on the lower half of the inner orbits, the clypeus, except the central part all round and the inner half of the outer, a broad line on the inner half of the mandibles, a line on the apex of the pronotum, post-scutellum, a spot on the basal half of the tegulae, the sides of the first abdominal segment, the line gradually widened towards the apex, a line on the apex of the second, narrowed gradually inwardly, the centre of the segment with a row of dots, a broad band on the third, narrowed towards the centre, laterally extending to the apex of the basal fourth, the greater part of the second ventral and a broad line, narrowed inwardly, on the outer third of the third; wings hyaline; the radial cellule and the outer cubital fuscous-violaceous, the costa and stigma fulvous, the nervures blackish; both the basal two transverse cubital nervures are roundly curved; the first recurrent nervure is received at the apex of the basal third of the cellule. Female.

Length, 12 mm.

Warmberg. December.

The central upper part of the clypeus armed with a distinct triangular tubercle or tooth; tripartite, the upper part projecting outwardly, the lower (and larger) obliquely sloping inwardly; the labrum semicircular, bordered by a stout clearly separated keel, the central part flat; metanotal area stoutly, obliquely striated, except at the apex, where the striae are transverse; head and thorax closely, rather strongly, punctured; propleurae with curved striae; mesonotum longitudinally striated, the scutellum more strongly striated; the upper basal part of the metapleurae with fine curved striae, the lower half aciculated; abdomen strongly, closely punctured; the pygidium about four times longer than wide, closely punctured, the centre finely, irregularly reticulated, the ventral incision wide, widened towards the apex, commencing shortly behind the middle; the sixth to the eleventh joints of the antennae are black above.

Cerceris jansei, sp. n.

Rufous; the apical third of mandibles, the front, the mark extending as a small triangle behind and between the ocelli, a large mark on the outer

three-fourths of the outer orbits on the lower third, base of pronotum, mesonotum, the metanotal area except the outer basal half narrowly, a smaller triangular mark above it, the narrowed end above, the propleurae except at the apex above, the mesopleurae except the tubercles and an oval mark immediately below them; the mesosternum, meta-pleurae, a large irregular spot in the centre of the fourth and fifth segments; the apex of the pygidium, a line, rounded at the base, on the apical two-thirds of the fourth ventral; a large triangular one on the fifth and the greater part of the sixth, black; the basal four dorsal segments are tinged with yellow; wings hyaline, distinctly tinged with fulvous; the costa, stigma, and nervures rufo-fulvous; the first recurrent nervure is received shortly before the middle; the apex of the wings, from the apical transverse nervures, fuscous-violaceous; metanotal area at the base obliquely, at the apex transversely, striated. Male.

Length, 15 mm.

Waterval No. 211, Zoutpansberg District. November.

The clypeus projects roundly and obliquely on the lower three-fourths; the base is flat and is bordered above by a semicircular furrow; it becomes narrowed towards the apex, which is transverse and depressed; the sides are densely covered with pale golden pile from the top of the face, which is sparsely, weakly punctured and tinged with yellow on the inner half; the head, except the oral region, is closely, strongly punctured; the lower part of the outer orbits is more or less striated; propleurae with a few longitudinal striae, the rest of the thorax closely, strongly punctured, the punctures on the pleurae running into reticulations; abdomen sparsely punctured, the punctures becoming weaker towards the apex; pygidium almost impunctate, the basal two-thirds becoming slightly narrowed, the apex more distinctly narrowed; the incision in the hypopygium extends close to the middle; it becomes slightly, gradually narrowed inwardly, the base being rounded.

This species is nearly related to the Cape *C. melanospila** Cam.; they may be separated thus:—

The black on the front extending behind the eyes; the metathorax entirely black; the metanotal area entirely, obliquely striated. *Melanospila.*

The black on the front not extending to the end of the eyes; the metanotum laterally red; the metanotal area not entirely, obliquely striated. *Jansei.*

Cerceris O'Neili Cam.

Trans. South Afr. Phil. Soc., XV, 220.

Pretoria. November.

Cerceris heterospila, sp. n.

Black; the clypeus, a broad line extending from shortly above the middle of the eyes to the mandibles, the antennal tubercle, basal half of mandibles, a spot near the middle of the antennal scape, a transverse oval mark on the sides of the apex of the pronotum, tegulae, post-scutellum, an irregular spot on the base of the second abdominal segment, a larger transverse one on the sides at the apex, the three forming a triangle,

* Transactions South African Phil. Soc., XV, 221.

a band on the apex of the third, narrowed in the middle, broadly, roundly dilated, laterally, the greater part of the sixth, the band rounded laterally, and a small spot on the sides of the second to fifth ventral segments, yellow; legs black; the greater part of the apical half of the fore femora, the apical fourth of the middle, and the tibiae and tarsi lemon-yellow; the apical joints of the fourth front tarsi, and the apex of the basal joint of the hinder, rufous; the apical three-fourths of the second joint of the hinder tarsi and the whole of the others black; wings hyaline; the apex from the third transverse cubital nervure black; the stigma and nervures black; metanotal area rugosely reticulated, furrowed down the centre; the third to eighth and the apical joint of the antennae rufo-fulvous. Female.

Length, 8 mm.

Strongly, closely punctured, densely covered with white pubescence; clypeus longish bell-shaped, transverse below, minutely tuberculate in the middle; first abdominal segment three times longer than wide; basal two-thirds of the pygidium strongly, deeply punctured, the punctures distinctly separated; following the punctures is an aciculated space, there being a row of punctures on the apex, which is transverse; the sides and apex are bordered by a depression.

The spot on the base of the second abdominal segment may be absent, and there may be narrow—more or less narrow—lines on the sides of the fourth and fifth segments.

CRABRO FAB.

Crabro simillimus Sm.

Cat. Hym. Ins. Brit. Mus., IV, 393, 7.

Pretoria. March to July.

Probably common. The species is a *Rhopalum*, and is no doubt variable as regards the yellow markings, e.g. there may be a transverse irregular line on the scutellum, and the lines on the fourth and fifth segments may be absent; there is a stoutly crenulated furrow at the base of the metanotum, which has an indistinct triangular area; the sides are bordered by a furrow; the area may be more or less striated; the mandibles may be entirely black or have a reddish band near the apex; ocelli in a triangle, the hinder placed opposite the end of the eyes; they are separated from each other by about the same distance as they are from the eyes; the pubescence on the head and thorax is dense.

PASSALÆCUS SHUCK.

Passaloecus striatifrons, sp. n.

Black; the antennal scape except above tubercles, the fore tibiae in front and the base of the four posterior pallid yellow; wings hyaline; the nervures and stigma black; front slightly depressed, covered closely with roundly curved striae; there is an irregular keel outside it, united to the eyes by some weak transverse striae; the face, clypeus, and outer orbits covered with silvery pile; on the apex of the clypeus, in the centre, is a short tubercle; at the base of the scutellum is a wide, crenulated furrow, with a keel in its centre, dividing it into two; metanotum, except

the apical slope, irregularly reticulated, the central and basal reticulations larger than the others; the apical slope opaque, surrounded by a stout keel, which forms a semicircular area; abdominal petiole stout, as long as the dilated apical part of the segment, along the ventral part of which it is continued as a stout keel; base of thorax transverse, stoutly keeled, the keel clearly separated behind; ocelli in a curve, the hinder separated from each other by double the distance they are from the eyes. Female.

Length, 4.5 mm.

The first transverse cubital nervure is obliquely sloped, a little rounded; the second is roundly curved outwardly; the second recurrent nervure is received near the middle of the cellule. Parapsidal furrows complete.

TRYPOXYLON LATR.

Trypoxylon lissonotum, sp. n.

Black; smooth, shining, the head, thorax, and femora covered with long, white pubescence; the face and clypeus densely with depressed silvery pile; wings hyaline, the nervures black; base of metanotum bare, smooth, and shining; from its outer edge run two oblique keels, which unite at the apex, forming a longish triangular area; a wide, smooth, not very deep, furrow commences at the end of the smooth part; from the outerside of the triangular area runs a shallow oblique furrow, with some transverse keels, the two not uniting at the apex; the space enclosed by them is irregularly, not very strongly, striated; the apical slope is opaque, deeply, widely furrowed, the furrow widest above; the sides are irregularly, obliquely striated; metapleurae with a smooth, shallow furrow below; above this it is somewhat strongly, closely, obliquely striated, the striae more or less intertwining; upper half of front with distinct, shallow, round, clearly separated punctures, this part having a shallow furrow down the centre; first abdominal segment as long as the thorax and not much shorter than the following three segments united. Female.

Length, 10 mm.

Pretoria. April.

Palpi blackish, fusous towards the apex; the apex of the cubitus is roundly curved downwards; the recurrent nervure being received at the base of this curve; calcaria black.

PISON SPIN.

Pison transvaalensis, sp. n.

Black; covered with silvery pubescence, dense on the clypeus and forming bands on the apices of the abdominal segments; wings hyaline, the nervures black; the second cubital cellule triangular; the pedicle slightly longer than the lower branches; the first broadly rounded; the second straight, oblique; the first recurrent nervure received shortly beyond the first transverse cubital; the second interstitial; the second abscissa of radius one-fourth of the length of the first; the first and second united are hardly so long as the third; the metanotal furrow with the basal and apical branches wide, the latter extending to the apex; the basal branches strongly, the apical not quite so strongly, distinctly, and

more closely transversely striated; the triangular part separating the basal furrows is prolonged as a stout keel down the basal half of the apical furrow; the rest of the basal part of the base is coarsely alutaceous, almost punctured, the apex irregularly, transversely striated; the apical slope is more strongly, transversely striated; the metapleurae closely, rather finely striated; head, pro- and mesothorax closely, distinctly punctured; the clypeus more finely than the front, its apex smooth and shining, broadly rounded; the hinder ocelli are separated from each other by a less distance than they are from the anterior; mandibles with a red band near the middle; the third and fourth joints of the antennae are equal in length; the abdomen is more finely and more closely punctured than the thorax; the basal segments more distinctly than the apical. Male.

Length, 7 mm.

Pretoria. July and November.

In one example the first recurrent nervure is received in the apex of the first cubital cellule.

This species may be known from the others known to me from the Cape by the apex of the clypeus being broadly rounded, not pointed or toothed.

Pison denticeps, sp. n.

Black; covered with silvery pubescence; the apex of the clypeus with a distinct triangular tooth in the middle; wings hyaline, the nervures black; the first transverse cubital nervure roundly oblique; the short second either entirely obliterated or indicated by a stump in front; the first recurrent nervure received in the apex of the first cubital cellule; the second interstitial broadly, roundly curved; the second abscissa of the radius about one-fourth of the length of the first; the metanotum has on either side of the base a strongly crenulated furrow, narrowed outwardly; the longitudinal furrow is wide, longish triangular, finely, closely, obliquely striated, and with a fine keel down the middle; the apical slope is more strongly, transversely striated; the sides bordering the basal furrow are finely, closely, rugosely punctured and irregularly striated, especially on the basal half; metapleurae finely, closely striated, the striae rounded at the base; head, pro- and mesothorax finely, closely punctured; the base of the abdomen is finely, closely punctured. Male.

Length, 5 mm.

Transvaal.

The third and fourth joints of the antennae are equal in length; the spurs are fuscous, at least at the base.

Pison clypeatus, sp. n.

Black; covered with silvery pubescence; the apical three or four joints of the tarsi rufo-testaceous; the tegulae fuscous; wings hyaline; the stigma and nervures black; the pedicle of the second cubital cellule shorter than the nervures, which are roundly curved, the first a little longer than the second; the cellule is moderately large and is longer along the transverse cubitals than along the cubitus; the first recurrent nervure is received very shortly before the transverse cubital; the second is interstitial and broadly, roundly curved; the first abscissa of the radius

is twice the length of the second ; base of metanotum with a straight central and four or five irregular stout oblique striae ; the central furrow is about four times longer than wide and is aciculated ; the basal part of the metanotum is strongly aciculated, and the metapleurae strongly, closely, obliquely striated ; pro- and mesonotum finely, closely punctured ; their pleurae much more strongly punctured ; the longitudinal furrow on the mesopleurae wide, slightly curved, closely punctured ; there is a narrower furrow at its base, extending above and below it ; base of abdomen very finely, minutely punctured. Female.

Length, 7 mm.

Warmberg No. 211, Zoutpansberg District. October.

Clypeus in the centre gradually narrowed to a sharp point ; the sides broadly, roundly curved inwardly, mandibles broadly red in the middle ; the third joint of the antennae is fully one-fourth longer than the fourth.



Cameron, Peter. 1910. "On the Aculeate Hymenoptera collected by Mr A.J.T. Janse, Normal College, Pretoria, in the Transvaal." *Annals of the Transvaal Museum* 2(3), 116–154.

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