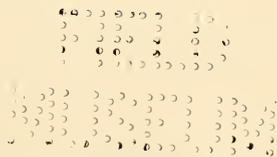


TRANSACTIONS
OF THE
SOUTH AFRICAN PHILOSOPHICAL
SOCIETY.

VOLUME XVI.

1905-1907.

WITH FOURTEEN PLATES.



— 32734

CAPE TOWN:
PUBLISHED BY THE SOCIETY.

—
1907.

DESCRIPTIONS OF SOME NEW SPECIES OF
HYMENOPTERA FROM PEARSTON, CAPE COLONY.*

By P. CAMERON.

(Read June 27, 1906.)

ANTHOPHILA.

GEN. OSMIA, Panz.

OSMIA CAPENSIS, sp. nov.

Black, smooth, and shining; the underside of the antennal flagellum bright rufous below; the pubescence on the body pale (perhaps fulvous on fresh specimens); on the apex of tibiæ and on the underside of the tarsi rufous; wings hyaline, the stigma fuscous, the nervures black. ♀.

Length 7 mm.

Front and vertex obscurely shagreened, shining, the ocelli in a curve (· ·); the hinder separated from each other by a distinctly less distance than they are from the eyes. Clypeus very smooth and shining, the apex slightly curled up, brownish. Labrum fringed with fulvous pubescence. Mandibles piceous for the greater part; the apical tooth long, becoming gradually narrowed towards the apex. Mesonotum obscurely, minutely punctured; the scutellum and post-scutellum closely, finely, but distinctly punctured; the latter, if anything, more strongly than the former; the scutellum is depressed slightly in the middle on the apical half. Pronotum very smooth and shining. Basal area of metanotum smooth, shining, not very clearly defined; the depression on the apical slope is wide, deep; it is obliquely narrowed above; below it is much widened; the top of the widened part is roundly curved and extends close to

* The species described in this paper were captured by my old friend, Professor Robert Broom, of Victoria College, Stellenbosch.

the outer edge. Calcaria testaceous; tarsal claws bright rufous. The middle of the front at the antennæ projects into a keel, which becomes widened below.

This is certainly not *O. globicola* Stadel. (also from the Cape of Good Hope); the distinct furrow leading from the ocelli to the antennæ (absent in the species here described) should separate the two; if Stadelmann's figure is correct, the fore ocellus is separated by a greater distance from the posterior than it is in my species. *O. fervida* Sm. from Natal appears to be, so far as can be made out from the incomplete description, a different and larger species. Only its ♂ has been described. In *capensis* the apices of the abdominal segments, under the hair bands, are lead-coloured.

GEN. PROSOPIS, Fab.

PROSOPIS ROBERTIANA, sp. nov.

First recurrent nervure interstitial, the second received near the apex of the second cubital cellule. Black; the head below the antennæ, *i.e.*, the face, cheeks, and clypeus, the anterior tibiæ in front, the hind tibiæ to near the middle and the basal joint of the hind tarsi, bright yellow. Flagellum of antennæ from the pedicle brown, black above. Wings hyaline, the nervures black. The yellow mark on the face broad above, not extending to the base of the antennæ, shortly obliquely narrowed; the central mark on the face small, square. ♂.

Length 5 mm.

Head closely punctured, the punctures on the face and clypeus more widely separated than they are on the front and vertex. The lower half of the front is raised in the centre, the raised part extending between the antennæ, widened below, bordered by fine keels, and bearing two longitudinal striæ. Mesonotum closely and rather strongly punctured; the scutellum is as strongly, but not so closely punctured. Metanotal area stoutly, irregularly, closely reticulated; it is bordered behind by a keel. Metapleuræ more strongly and distinctly punctured than the mesopleuræ. Abdomen shining, sparsely finely punctured.

Is not unlike *P. curvicarinata* Cam.; which species may be known by the first recurrent nervure being received in the apex of the first cubital cellule; it is also larger; the labrum and mandibles are yellow, not black; the lateral yellow marks on the sides of the face are longer, project more above, and, instead of being gradually narrowed to a point above, have the upper part narrowed, it being

only half the width above, of its base; the yellow, too, is paler, not so orange-tinted. In *P. curvicarinata* the yellow mark on the face is twice longer than wide, not square.

GEN. HALICTUS, Latr.

HALICTUS ATROVIRIDIS, sp. nov.

Dark green, the apices of the apical three abdominal segments broadly rufo-testaceous; the four anterior tibiæ and tarsi, the base and apex of the hind tibiæ and the hind tarsi, except the middle of the metatarsus, rufo-testaceous, the rest of the legs black and covered with white pubescence; wings hyaline, the costa and stigma testaceous, the nervures black. ♀.

Length 3-5 mm.

Flagellum of antennæ rufo-fulvous, blackish above, apical half of clypeus bronzy coloured. Mandibles testaceous, black at the apex; the front is brassy tinted; the punctuation on the front and vertex is fine and close. Metanotal area closely punctured at the apex, the base more strongly reticulated, its apex bordered by a broad, smooth and shining band. Abdomen closely, finely punctured; the apical segments (perhaps also the basal) with bands of white pubescence on their apices; the apical segment is entirely rufo-fulvous; the middle area of a darker rufous colour. The second cubital cellule is of equal width throughout; the third abscissa of the radius is about one-fourth longer than the second.

The green colour is not so conspicuous as it is in the common *H. jucundus* Sm., which is a much larger, much more densely haired species, and its apical segments of the abdomen are not rufo-fulvous. In the larger examples of *atroviridis* the metanotal area is more distinctly reticulated-striated than it is in the smaller; in fresh examples the rufous colour on the apices of the abdominal segments is hid by depressed white pubescence; the basal abdominal segment may be largely tinted with violaceous; the mandibles may be black.

MASARIDÆ.

GEN. CERAMIUS, Latr.

CERAMIUS RUFOMACULATUS, sp. nov.

Black, the clypeus, except for a narrow black border on the sides and apex, almost the basal half of the mandibles, a broad transverse mark over the antennæ, its upper sides irregularly indented, the

lower with an incision in the middle, the incision widest below, a broad line filling the eye incision, extending above and below it, below extending to the malar space, where it is united to an oblique mark; the temples for the greater part, the mark obliquely dilated upwards from the eyes towards the vertex, below obliquely narrowed downwards, a broad band on the upper side of the pronotum, the band gradually dilated towards the apex, a broad irregular mark on the mesopleuræ below the tegulæ and almost united at the bottom to a longer, narrower one, a short line on the sides of the mesonotum near the tegulæ, a longer, broader one in the centre near the end of the parapsidal furrows, the scutellar basal keels broadly, the sides behind them, the scutellum from shortly behind the middle, the post-scutellum, the part on either side of it broadly, the metanotum, the yellow extending on to the pleuræ, except on the two furrows on the apex, and an irregular mark on the apex between them; a broad band—dilated outwardly at the apex laterally and reaching close to the base of the segment—a line on the apex of the second to fifth segments, narrow in the centre, broadly dilated backwards on the sides, and the greater part of the sixth segment, yellow. The yellow on the upper part of the eye incision and on the pronotum is largely suffused with rufous. The fourth segment is rufous except for the yellow lines and for a broad line in the centre of the basal half; the fifth and sixth are for the greater part rufous; the ventral surface is rufous, except that the basal three segments are broadly yellow at the apex. Antennæ rufous, the scape yellow below. Legs rufous, the greater part of the coxæ and about the apical two-thirds of the femora, yellow. Wings hyaline, the base suffused with yellow, the rest with fuscous-violaceous, the nervures black. ♀.

Length 15 mm.

Head large, as wide as the thorax, deeply, roundly incised behind; the front and vertex closely finely punctured, almost bare; the clypeus more strongly but not so closely punctured; its apical part from near the middle depressed, more shining and more strongly punctured than the base; its greatest width is somewhat greater than its greatest length; the apex is broad, transverse, the extreme apex keeled, and bordered behind by a distinct furrow. Labrum rufous. The yellow on the base of the mandibles runs into rufous at their middle, the upper margin and the teeth are black. Pro- and mesothorax, with the scutellum closely and strongly punctured, almost bare above, the pleuræ and sternum thickly covered with white pubescence, which is longest on the latter. Parapsidal furrows distinct. Scutellum large, slightly higher than the mesonotum, clearly longer than broad, narrowed and rounded at the apex, the

base slightly raised and with a large smooth space in the middle; the sides are keeled, the apex has an oblique slope. Post-scutellum smooth and slightly raised in the middle. First abdominal segment with the apex raised, the raised part with an oblique slope and clearly separated from the base of the second; down its centre is a narrow furrow, which is less distinct in the middle and more distinct at the apex than at the base. Radial cellule sharply pointed at the apex; the second cubital cellule in front is about one-fourth of the length behind and not much more than the length of the space bounded by the recurrent nervures; the second of the latter is received distinctly behind the middle.

The yellow is paler on the metanotum and on the base of the abdomen than elsewhere.

The curved furrow uniting the antennæ is deep and clearly defined; above it, bordering the top of the black mark, is a \blacktriangle -shaped furrow, narrow, but distinct. On the top of the metanotum is a broad, curved keel, its sides curving distinctly downwards; from its centre a straight keel, as long as the lateral curves, runs straight down, it becoming narrowed below; these keels are one-third of the length of the metanotum, which has its sides broadly rounded; its apex is raised, roundly curved, narrowed laterally.

The coloration of the abdomen is not unlike that of *C. macrocephalus*, and it has also a large head like that species. The claws have a small, sharp, almost upright tooth near the base. The fine punctuation of the abdomen is as in *C. andrei* Br., with which it appears to be related in some respects.

VESPIDÆ.

GEN. BELONOGASTER, Saus.

BELONOGASTER PICTUS, Kohl.

Cf. Ann. k.k. Hofmus. Wien, ix., 324.

A very pale example, the black being only on the sides and apex of mesonotum, on the meso- and metapleuræ, and on the sides of the third and fourth abdominal segments; the yellow marks on the second abdominal segment are larger than usual; and there is no black on the legs.

This is the species usually named *B. rufipennis* and *B. griseus*.

SPHEGIDÆ.

GEN. OXYBELUS, Latr.

OXYBELUS ÆTHIOPICUS, sp. nov.

Black, a mark, sharply narrowed on the inner side, on either side of the apex of the pronotum, a spot on the outer edge opposite the tegulæ, an oval, oblique mark on the base of the scutellum at the sides, the apical lateral angles, forming a triangular large mark, two large semi-circular marks on the apex of the first abdominal segment, two longer, narrower ones, obliquely dilated on the inner third, and transverse lines on the apices of the following three segments, the lines becoming gradually wider, lemon-yellow. Legs black, the apex of the fore femora narrowly, of the middle more broadly below, and the base of all the tibiæ, lemon-yellow; the enlarged apical joint of the tarsi rufous; the calcaria pale fulvous; the tibial spines darker coloured. Wings hyaline, the nervures black. Apical half of the antennal flagellum rufous. Middle of mandibles broadly rufous. Scutellar spines large, longer than the width at the base; their apex with a rounded incision, longer than the width at the apex; the post-scutellar spine nearly three times longer than wide, roundly bent above, of almost equal width throughout, the apical incision triangular, large, as long as the width at the apex; in its centre is a moderately stout longitudinal keel, bordered by a few oblique ones; its sides yellowish, tinged with rufous. Scutellum strongly, but not very closely punctured; mesonotum more closely, but not so strongly punctured. Metanotum shagreened, opaque, irregularly transversely striated, except the basal area and the keels bordering and leading from it; the area is depressed, triangular, the length longer than the width at the base, which is closed by a transverse keel; the lower part of the spine is bordered by two keels between which are a few transverse ones; the two longitudinal keels are bordered at the bottom by a transverse one, which extends laterally beyond them; above it is a stout transverse one forming with the keel of the large area a smaller, somewhat triangular area. Pro- and mesopleuræ strongly, closely punctured; the metapleuræ closely obliquely striated. Abdomen strongly and closely punctured; the apex of the segments depressed, the depression clearly defined, closely striated, more or less reticulated and pale-yellow. Last segment black, closely striated above, the sides keeled; below it is smooth and shining down the centre. Apex of clypeus depressed, smooth, shining, transverse.

The long scutellar spine of almost equal width and with the sides yellow distinguishes this species. In *capensis* the spine is black to shortly beyond the middle, the apex yellowish testaceous; in *spini-ferus* it is much broader compared with the width, and is narrowed at the base; there is a stout keel down the middle of the scutellum; the central area on the metanotum is large and reticulated, the apex of the clypeus is not transverse, and the legs are largely bright lemon-yellow.

In *æthiopicus* the keel leading from the metanotal area is broad above, becoming narrower below; it is flat, smooth and shining.

ICHNEUMONIDÆ.

Hemitelini.

GEN. XENOLYTUS, Först.

XENOLYTUS RUFIPES, sp. nov.

Black, the abdomen from the second segment and the legs rufous; the legs darker in tint than the abdomen, the hind coxæ black; the basal four or five joints of the antennæ dark red; wings hyaline, the nervures and stigma black. ♀.

Length 5; terebra fully 1 mm.

Antennæ 19-jointed, stout, as long as the abdomen, the third joint slightly longer than the fourth; the last not quite so long as the preceding two united. Head and thorax shining, covered with a minute pile. Face closely, minutely punctured, opaque; the clypeus smooth and shining. Mandibles dark red, the teeth black; the upper is distinctly longer than the lower. Palpi dark testaceous. Thorax shining, closely, minutely punctured, the mesonotum more closely and strongly than the rest; the base of metanotum distinctly depressed; the basal area large, almost square; the areola large, 6-angled, transverse at base and apex; the basal half obliquely narrowed, about one-third narrower than the apex; there are two large basal lateral area; the apical is broad at the base, narrowed to a point at the apex; its inner side roundly curved; it forms almost a triangle; posterior median area occupies the entire apical slope; it is 6-angled. The middle of the mesopleuræ is smooth and shining; below it is obscurely, finely longitudinally striated.

Abdomen shining; the post-petiole finely, longitudinally striated. Areolet 5-angled; the recurrent nervure is received in the middle; the disco-cubital nervure has a minute stump behind the middle; the transverse median is received beyond the transverse basal. In the hind wings the transverse median nervure is broken distinctly below the middle.

Phygadeuonini.

GEN. LEPTODEMAS, Först.

LEPTODEMAS CARINISCUTIS, sp. nov.

Black, shining, the underside of the antennal scape, the face, clypeus, mandibles except the apex, and palpi, yellow, tinged with orange; the second and following segments of the abdomen red, largely tinged with black in the middle; the legs of a brighter rufous colour, their coxæ black except at the apex; the apex of the hind tibiæ and the hind tarsi infuscated. Wings hyaline, the nervures black, the stigma fuscous. ♂.

Length 5 mm.

Antennæ stout, tapering towards the apex; the basal half of the flagellum fuscous below. Face closely and distinctly; the clypeus less closely, punctured; it is clearly separated from the face by a furrow. Front and vertex distinctly punctured; the former is more opaque and more closely punctured than the latter. Thorax shining, closely punctured, sparsely pilose; the parapsidal furrows are on the basal third; the mesosternal furrow is wide, crenulated; the upper, apical part of the mesopleuræ is almost smooth. Scutellum prominent; its sides keeled on the basal half. Basal slope of metanotum depressed, oblique, smooth, with only lateral keels; the areola large, roundly narrowed to a rounded point from shortly beyond the middle to the base; in its centre is a stout longitudinal keel; the sides are irregularly longitudinally striated; the apex is slightly rounded inwardly; there are five clearly defined apical areae, all strongly striated, except the posterior median at the top; the spiracular area is clearly defined and closely striated; the metapleuræ are irregularly striated towards the apex; below is a stout curved keel, there being also a stout keel between the coxæ. Abdomen closely and rather strongly punctured, including the post-petiole, which has prominent spiracles; the sides behind these are keeled, the keels extending slightly on to the post-petiole beyond them. Areolet 5-angled,

narrowed in front; the recurrent nervure is received in the middle; the transverse median is almost interstitial; the disco-cubital angled and bullated in the middle.

BRACONIDÆ.

GEN. CARDIOCHILES, Nees.

CARDIOCHILES NIGROMACULATUS, Cam.

One example. The size and form of the black markings on this species vary. For example, the black mark on the base of the mesonotum may be of equal width or it may be gradually narrowed towards the apex, *i.e.*, triangular; there may be a black mark on the base of the abdomen. The antennæ may be 37-jointed. The post-scutellum is flat, stoutly keeled laterally. The South African species may be grouped thus:—

- | | |
|---|---|
| 1 (2) Back of abdomen, pleuræ, sternum, and mesonotum black | <i>fulviventris</i> , Cam. |
| 2 (1) Back of abdomen and mesothorax not entirely black | |
| 3 (4) Thorax entirely black | <i>nigricollis</i> , Cam. |
| 4 (8) Thorax only maculate with black | |
| 5 (8) Mesonotum with three large black marks | |
| 6 (7) Pleuræ largely and the base of the legs black .. | <i>nigromaculatus</i> , Cam. |
| 7 (6) Pleuræ immaculate | <i>trimaculatus</i> , Cam.,
<i>testaceipes</i> , Cam.,
olim <i>testaceus</i> .
Cam., non Kreich.,
non Szép. |
| 8 (4) Thorax not maculate with black | <i>testaceus</i> , Kriechb.
(Cameroons.) |

I fancy that a series of specimens would show that the size and number of the black markings on the maculate species vary.

EVANIIDÆ.

GEN. EVANIA, Fab.

EVANIA BROOMI, sp. nov.

Black; the apex of the fore femora and the tibiæ and tarsi obscure testaceous; wings hyaline, the nervures pale testaceous, the basal ones black; the metasternal process not forked at the apex. Pro-

and meso-notum shining, impunctate, as is also the scutellum; the parapsidal furrows deep, extending from the base to the apex. ♀.

Length nearly 4 mm.

Head shagreened, opaque, the front more coarsely shagreened than the rest. Malar space more than half the length of the antennal scape, not furrowed. Lower part of clypeus bordered by deep furrows, its apex smooth, brown. Antennæ placed shortly below the middle of the eyes; the scape is shorter than the second joint of the flagellum; the latter is nearly as long as the following two united. Hinder ocelli separated from each other by a distinctly greater distance than they are from the eyes—by almost twice the length of the antennal pedicle. Pro- and meso-pleuræ opaque, coarsely shagreened; the raised upper part of the latter shining, almost smooth. Base of metanotum shining, almost entirely smooth, the apex with some distinct transverse striæ; the rest of the median segment closely, finely, mostly longitudinally reticulated; the longitudinal striæ stronger and more distinct than the transverse. Abdomen, including the petiole, smooth and shining; the petiole slender, about twice the length of the upper part of the metanotum. The recurrent nervure is received shortly beyond the transverse cubital; the transverse median distinctly beyond the transverse basal; there is no distinct angle in the apical part of the radius. Hind tibiæ and tarsi with a few pale golden spines; the long spur of the hind tibiæ is two-thirds of the length of the metatarsus, which is as long as the following two joints united; the last is as long as the penultimate, but not so long as the third. The antennæ are longer than the body; are slender and fuscous below towards the apex.

Comes close to *E. levigena*, Kieffer, which has also an unforked metasternal process.

BETHYLIDÆ.

GEN. TRISSOMALUS, Kief.

TRISSOMALUS TRANSVAALENSIS, Dub.

Dr. Broom sends a Bethylid, which is certainly a *Trissomalus*, Kieffer (Ann. de la Soc. Scient. de Bruxelles, xxix., 105), and which is probably identical also with the type of that genus, namely, *Goniozus transvaalensis*, Dubuysson.* As, however, it does not quite agree with the description, I give one of it here.

Black, the scape and the pedicle of the antennæ, the mandibles,

* Ann. Soc. Ent. Fr., lxvi., 1897, 354.

the anterior tibiæ and tarsi and the four hinder legs, except their coxæ, bright red; wings hyaline to near the base of the stigma, dark fuscous, slightly tinged with violaceous beyond the stigma and nervures black. ♀.

Length 6 mm.

The third joint of the antennæ is almost twice the length of the second, *i.e.*, the pedicle; its base is pale rufous. Head above the antennæ distinctly, uniformly, but not closely, punctured; a stout keel between and below the antennæ; the space bordering it opaque, impunctate; there is a smooth line below the ocelli; which are arranged thus ··; the anterior separated from the posterior by a distinctly greater distance than these are from each other; they are separated from each other by about one-fourth the distance they are from the eyes. Mesonotum sparsely punctured, the apex almost impunctate; the furrows indicated only close to the apex. Scutellum very smooth and shining. Base of metanotum opaque, alutaceous, the centre almost obscurely finely obliquely striated; the apical slope smooth and shining, as are also the metapleuræ, except at the base where there are a few striæ.

Head slightly wider than the thorax, transverse behind, as wide there as the length of the eyes and temples united; the latter slightly shorter than the eyes. Prothorax short; mesonotum wider than long. Scutellum large, wider than long, narrowed behind; bounded by a wide shallow furrow at the base, the furrow widened into foveæ at the outer edges. The metanotum is not so long as the mesonotum and the scutellum united. The first abdominal segment is furrowed down the middle on the basal half; the third abdominal segment is longer than any of the others. Sides of head and thorax covered sparsely with white pubescence. Antennal scape as long as the following two joints united; the third joint is shortly but distinctly longer than the fourth.