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On the Hymenoptera of the Albany Museum.—Second Paper.
By P. CAMERON.

On some New Genera and Species of Hymenoptera, collected by
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On some South African Species of *Aloe*, with special reference to
those contained in the Herbarium of the Albany Museum. II.
By S. SCHÖNLAND.

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On some new Genera and Species of Hymenoptera collected by the Revd. J. A. O'Neil, S.J., chiefly at Dunbrody, Cape Colony.

BY P. CAMERON.

This paper is in continuation of my "Descriptions of New Genera and Species of Hymenoptera from Dunbrody, Cape Colony," published in the *Records of the Albany Museum*, i. No. iii., pp 125-160. The specimens come from Dunbrody, unless another locality is mentioned.

ICHNEUMONIDÆ.

Ichneumon? Johannis, sp. nov.

Black, the thorax red, the centre of metanotum, lower part of pleuræ (the lower half of the meta-) and the breast black; the face, clypeus, labrum, orbits narrowly, a narrow line on the upper edge of the pronotum, tubercles, a narrow line on the sides of the scutellum, its keels, post-scutellum, a small mark on the sides of the metanotum at the base, a larger mark, transverse on the inner, roundly narrowed on the outer side, and longer than broad, on the sides of the apex whitish yellow. Abdomen black; the apex of the basal 3 segments, and of the 5th narrowly, and the whole of the apical two, whitish yellow. Four front legs whitish yellow, their femora and tibiæ fuscous and black behind: hind legs black, the spurs yellow. Wings hyaline, the stigma and nervures black. Antennal scape black, yellow below: the flagellum fuscous, black on top: they are short, thick, serrate. Male.

Length 10-11 mm.

Closely punctured, covered with short white pubescence. Scutellum roundly convex, keeled to near the apex. Areola coffin-shaped, fully twice longer than wide, open behind: the basal, lateral and middle lateral areas separated. Post-petiole slightly aciculated and with scattered punctures.

This species does not fit into any of the subgenera of *Ichneumon*. Characteristic are the keeled scutellum and the long coffin-shaped areola.

Lienella, gen. nov.

Male. First transverse cubitus short, not much more than twice longer than thick: the 2nd entirely absent. First joint of flagellum fully longer than the second: the antennæ have at least 19 joints. Eyes large, parallel, not converging above or below: only the ocelli project above them: the hind ocelli are separated from the eyes by more than half the distance they are from each other. Malar space nearly as long as the antennal scape. Metanotum regularly areolated, the areæ large, distinct: the base smooth, depressed, bounded behind by a keel; the spiracles small, roundish-oval. Face thickly covered with long white hair: the clypeus distinct from it, more convex.

The discoidal cellule is closed at the apex: the transverse median nervure in hind wings angled below the middle, almost unbroken, the longitudinal nervure being almost obliterated, the radius and cubitus being also very faint. Legs normal, longish. Parapsidal furrows not reaching to the apex of mesonotum, but beyond the middle: the middle lobe furrowed down the middle: anal valves large, prominent. Clypeus projecting, rounded at the apex, hiding somewhat the mandibles, which have 2 unequal teeth. Discoidal cellule closed at the apex. Basal abscissa of radius more than half the length of the second. Postpetiole bi-carinate.

This genus of *Hemitelini* comes close to *Allocota* and *Alastomenura*, which may be known by the 1st transverse cubitus being entirely wanting, the disco-cubital nervure being interstitial with the radius, while here they are clearly separated, although the transverse cubitus is very short.

Lienella nigriceps, sp. nov.

Black : the pro-mesonotum with the scutellum, the pro- and mesopleuræ and the greater part of the metapleuræ, red, the middle segments of the abdomen of a more obscure red. Legs rufo-testaceous, the hinder of a darker, more distinct red : the apical joints of their tarsi paler : all the coxæ and trochanters black, thickly covered with glistening white pubescence. Wings hyaline, a fuscous-black cloud extends from shortly behind the radius to near the middle of the basal abscissa of the radius, and backwards to shortly beyond the sub-discoïdal nervure : the stigma and nervures black. Male.

Length 5 mm.

Base of antennæ rufo-testaceous. Front irregularly transversely, stoutly striated, the striæ roundly curved : the vertex finely, more obscurely striated. Face closely rugose : the clypeus more distinctly punctured. Mandibles broadly rufous at the base. Palpi yellow. Mesonotum closely, strongly, transversely striated, less strongly on the outer edges : on the apex laterally the striæ are oblique. Scutellar depression large, deep, striated in the middle. Scutellum almost smooth at the base, the rest rather coarsely punctured. Areola large, longer than broad, 6-angled, narrowed obliquely from close to the base to the apex, which is transverse : at its base are three rows of transverse striæ : the basal lateral areae are irregularly rugose, the spiracular irregularly rugosely striated, as is also, but more finely, the posterior median. Propleuræ punctured above, striated at the apex below, the rest smooth. Mesopleuræ punctured and irregularly striated in the middle, the meta- closely, coarsely rugosely punctured. Petiole not quite so long as the following two segments united : its apex not very strongly or regularly striated : the second and third segments are closely, strongly, longitudinally striated. Legs covered with white pubescence : the hind coxæ rugosely punctured.

Canoaulax, gen. nov.

Second transverse cubital nervure absent, the first very short, as broad as it is long : the recurrent nervure received clearly beyond it. Transverse median nervure received shortly behind

the transverse basal. Transverse median nervure in hind wings broken far below the middle. Basal 3 segments of abdomen closely, strongly, longitudinally striated; their centre with a transverse, broad furrow, the second having at the base, on the sides, a transverse one; the furrow on the 2nd segment is deeper and more clearly defined than it is on the other two. Ovipositor projecting, short. Median segment with one transverse furrow; the spiracles small, round. Eyes large, parallel, not converging. Malar space moderate. Hind ocelli separated from the eyes by a less distance than they are from each other. Parapsidal furrows shallow, wide, not extending much beyond the middle. Antennæ 25-jointed, the basal 2 joints of flagellum equal in length. Face separated from the clypeus, densely covered with longish, white pubescence.

The absence of areæ on the median segment separates this genus from the normal *Hemitelini*; but there is one genus without areæ in the group. Its venation is similar to *Lienella* here described; but the form of the abdomen, with its deep transverse furrows and the strongly striated basal segments of the abdomen separates it from all known *Cryptina*. The form of the abdomen reminds one strongly of the Braconid genus *Iphiaulax*.

Caenocaulax striatus, sp. nov.

Black, the thorax rufous, the abdomen of a darker rufous colour, the apical 3 segments white. Legs black; the apex of the fore femora, tibiæ and tarsi testaceous, a white band near the base of the hind tibiæ. Wings clear hyaline, the nervures and stigma black. Female.

Length 6, terebra 1 mm.

Grahamstown.

Thickly covered with white pubescence. Vertex and upper part of front coarsely, rugosely punctured; the lower part of front striated; the vertex behind the ocelli on the sides strongly obliquely striated. Mandibles rufous, black at the apex. Palpi long and yellow. Mesonotum strongly transversely striated; the furrows wide, crenulated; there is a narrow furrow on the middle lobe. Scutellum raised, rounded, rugosely punctured, the sides

keeled on the basal half. Metanotum finely rugose, the transverse keel directed obliquely backwards in the middle; there are 2 irregular keels on the outer edge of the outer slope. First abdominal segment roundly curved; the striæ commence near the base; it is broader at the base than it is in the other genera; the striæ become weaker towards the apical segments; the apical 3 segments are smooth: the basal are longer than broad: the 3rd is produced bluntly at the apex below. Pleuræ closely, finely rugose; the apex of the pro-striated. Antennæ not quite so long as the body; the scape rufous.

Mesostenus basimacula, sp. nov.

Black, the thorax, except the breast, red, the lower edge of the mesopleuræ and of the metapleuræ more broadly, black, as is also the basal half of the propleuræ; a conical mark (the broad end above) in the centre of the face, extending from the top to the bottom, the upper half of the clypeus, a short line in the centre of the inner orbits and the palpi, pale yellow, a broad black band of equal width on the base of the metanotum; a mark on the sides of the second abdominal segment and the whole of the sixth and seventh yellowish white. Legs black, the anterior in front, the apical half of the middle femora below, the middle tibiæ behind, the base of the hind tibiæ all round and the calcaria, white. Wings hyaline, the nervures and stigma black. Male.

Length 7 mm.

February.

Vertex below the ocelli strongly, obliquely striated. Face closely rugosely, the clypeus sparsely punctured. Middle lobe of mesonotum closely, strongly punctured, its apex irregularly reticulated; the lateral irregularly transversely striated, the apex on the innerside punctured. Scutellar depression large, deep, stontly closely striated. Scutellum shining, sparsely punctured along the sides. Base of metanotum smooth, the rest rather strongly and closely reticulated. Propleuræ strongly irregularly striated. Mesopleuræ closely, coarsely punctured, the upper part at the base and the lower at the apex striated. Metapleuræ

rugosely punctured, more or less striated and reticulated. Post-petiole covered with elongated punctures which run into striæ in the centre: the sides irregularly reticulated. The abdominal segments 2-5 closely punctured. Areolet small, square. Hind coxæ closely, rugosely punctured.

Mesostenus mimeticus, sp. nov.

Rufous, the abdomen darker coloured, the fourth and following segments white, flagellum of antennæ black, a band of four white joints in the middle. Legs black, more or less brownish in front, the fore tibiæ white anteriorly, spurs white, wings hyaline, the nervures and stigma black. Female.

Length 9 mm.: terebra 2 mm.

Head closely, rugosely punctured; the front depressed in the centre, strongly, closely transversely striated; the sides smooth; clypeus more shining and more sparsely punctured. Basal half of mandibles reddish yellow. Mesonotum closely strongly transversely striated; the centre at the apex. Metanotal area not very distinctly defined; basal transverse keel distinct, the apical indistinct, especially laterally, the part behind the keel closely rugose: the apical part more coarsely, rugosely reticulated. Propleuræ rugosely punctured above, the rest rather strongly, but not closely obliquely striated. Mesopleuræ closely rugose, the base coarsely irregularly obliquely striated. Metapleuræ coarsely, irregularly, obliquely striated. Post petiole coarsely longitudinally punctured, the sides more coarsely than the centre. The second and third segments are closely strongly punctured. The under side of the thorax is black.

The type of colouration of this species is common in South Africa in the *Cryptine* and *Pimpline*. It is very similar to *M. O'Neili*, Cam., but that species has not the mesonotum or any part of the thorax striated; and its ovipositor too is much longer.

Nototrachus flavomaculatus, sp. nov.

Rufo-testaceous, the face, clypeus, mandibles, except the teeth, palpi, orbits, prothorax, except near the apex of the propleuræ, 2 lines on mesonotum, dilated on the outerside at the

apex, a line at the tegulae, scutellums, the apical slope of metanotum, a line in the centre at the base, the greater part of the mesopleurae, and the base narrowly above and the apex more broadly below, yellow. Legs coloured like the body, the 4 front coxae and trochanters yellow. Wings clear hyaline, the nervures and stigma black. Female.

Length 8-9, terebra 4 mm.

February.

Head smooth and shining; the front transversely striated in the middle, keeled down the centre. Mesonotum strongly, irregularly, transversely striated, the sides distinctly punctured. Scutellum roundly convex, the sides keeled at the base; it is reticulated, with 2 short stout keels in the apex in the middle. Post-petiole keeled at the sides and apex; the depression at its sides strongly, closely striated. The base of the metanotum behind the keel with scattered punctures; the rest of the segment reticulated. Propleurae, except at the apex above, closely, strongly striated, the striae curved; the meso- rugose, striated round the smooth apical part; metapleurae coarsely, irregularly reticulated. Antennae black, rufous at the base. Apical half of 1st abdominal segment dilated, smooth and shining; the other segments blackish above; on the apex of the 1st are some stout striae.

Lissonota interstitialis, sp. nov.

Black, the abdomen red, the apices of the basal two segments narrowly edged with yellow; the orbits (the outer more narrowly than the inner), the face, clypeus, mandibles, except at the apex and palpi, yellow; there is a black line down the middle of the face, which curves, more broadly round the top of the clypeus, a line on the pronotum, angularly turned downwards at the base, a curved line in the centre of the mesopleurae, commencing near the base, and extending to the apex, 2 lines on the mesonotum dilated outwardly at the base, curved slightly inwardly and dilated at the apex, a broad curved line on the apex of the mesonotum, dilated backwards in the middle, a short line under the hind wings, and an ovate one on the apex of the metapleurae in the centre, yellow. Legs rufous, the 4 anterior in front and their coxae and trochanters

yellow ; the hind coxæ and trochanters black ; hind tarsi blackish. Wings hyaline, the apex narrowly smoky ; areolet with a long pedicle : the recurrent nervure interstitial with the 2nd transverse cubital. Female.

Length 11 mm. : terebra 6 mm.

December.

Front and vertex rather strongly punctured, the face less strongly, the clypeus only sparsely. Thorax strongly and closely punctured, the metanotum more rugosely than the rest. Abdomen smooth.

BRACONIDÆ.

Iphiaulax ornatcollis, sp. nov.

Black, a spot on the malar space, the upper part of the propleuræ and a spot on the apex, orange yellow ; wings yellowish-orange hyaline, to the end of the stigma : the stigma and nervures similarly coloured, the former with a black spot at the base ; beyond the stigma dark fuscous : hind wings similarly coloured, the dark part commencing near the apical third. Female.

Length 13 mm. ; terebra 2 mm.

Grahamstown. April. On Acacia.

Smooth and shining, except the face which is finely, closely punctured ; the face with a deep longitudinal furrow on the apical half. Clypeus irregularly rugose. Antennal scape short, covered with longish black hair. Abdomen as long as the head and thorax united, smooth (including the furrows), impunctate, shining. The 1st segment is bluntly keeled on the basal half in the centre. The area on the 2nd segment is triangular, the sides slightly curved, its length slightly more than the width at the base ; the bordering furrows wide, shallow ; on the sides is a deep furrow, roundly curved inwardly, the suturiform articulation, oblique laterally, straight, narrowed in the centre. Head cubital, the temples not narrowed, the occiput transverse.

PROCTOTRYPIDÆ.

BETHYLINÆ.

Paralælius, gen. nov.

Female. Antennæ 13-jointed, fully twice longer than the head. Head twice longer than its width across the eyes, roundly narrowed behind, obliquely in front. Eyes of moderate size, placed in the centre, and about one-third of the length of the head; they are bare. Antennal scape about one-fourth of the length of the head, as long as the following two joints united; stout; the pedicle clearly longer than the 1st joint of flagellum, narrowed at the base. Prothorax about three times longer than the mesonotum, gradually widened towards the apex. Mesonotum without furrows. Scutellum with a large fovea on either side at the base. Metanotum long, transverse at the apex; in the centre are 3 complete longitudinal keels; the sides are bordered by a keel; and there is a short one inside it, on the base. There are 2 closed basal cellules in the fore wings, the anterior clearly longer than the posterior; the bounding apical nervure is obliquely sloped, so that it is wider in front than behind; there is a distinct marginal vein, about 3 times longer than wide; the stigmal vein about the length of the marginal, dilated towards the apex; the apex of the wings shortly ciliated. The basal segment of the abdomen sessile, slightly longer than the 2nd, the following 3 equal in length. The outer tooth of the mandibles is acute, distinct; the others I cannot make out satisfactorily. Tarsi longer than the tibiæ.

May be known from *Lælius* (an American genus), its nearest ally, by the longer head, by the smaller, not hairy, eyes, and by the clavate stigmal vein.

Paralælius firmipennis, sp. nov.

Black; the antennal scape and pedicle testaceous, the legs dark red, the coxæ and trochanters black; wings smoky, paler at the base, the nervures testaceous. Female.

Length 3.5 mm.

Head, pro- and mesonotum smooth, shining, with some longish black hairs. Basal 3 joints of flagellum about as long as the pedicle, which is narrowed at the base. Metanotum finely transversely rugose; the lateral central keels converge slightly at the base. Mesopleuræ with a round fovea in the centre; the meta- finely, closely obliquely aciculated, opaque. Abdomen shorter than the thorax, acutely pointed at the apex; the ovipositor shortly projecting.

SPHEGIDÆ.

Ampulex capensis, sp. nov.

Head and thorax dark purple, the metanotum tinged with indigo blue, the pleuræ dark blue; the abdomen blue, the apical segments testaceous, the mandibles bright rufous. Wings hyaline, the radial cellule, the apex of the 1st, the 2nd cubital cellule, and a cloud beyond it dark fuscous.

Length 13 mm.

February.

Head coarsely, rugosely punctured. Eyes converging above, separated there by the length of the pedicle and following joint united. Hind ocelli separated from the eyes by the length of the penultimate antennal joint. Frontal keels clearly diverging above. Apex of clypeus with 2 stout teeth on either side of the apex, the outer slightly stouter than the inner. Temples roundly narrowed. Pronotum not much longer than its width at the apex, its base without a distinct neck; closely rugosely punctured; the mesonotum less closely and strongly all over and the scutellum still less closely and strongly punctured, its middle being almost smooth. Central area of metanotum stoutly irregularly striated, the basal striae more oblique and regular than the apical; the 2nd area closely, stoutly obliquely striated, the 3rd reticulated; the apical slope closely, stoutly, irregularly reticulated all over; the teeth short and broad. Pleuræ closely and strongly punctured. Head

and thorax thickly covered with long black hair. Basal segment of abdomen large, the apical part more than half the length of the 2nd, which is about one-third longer than its width at the apex; it does not project much in the middle: below its base projects straight down from the first, somewhat as in *A. cognata*, Kohl, and *A. latifrons*. Cf. Kohl's figures pl. xii, f. 34 and 43, Ann. K.K. Hof Mus. viii. The 2nd cubital cellule is clearly shorter than the length of the 2nd transverse cubital nervure. Fourth tarsal joint not much shorter than the 3rd, largely dilated towards the apex.

Comes near to *A. cyanura*, Kohl, in Kohl's system.

Ampulex spiloptera sp. nov.

Violaceous, slightly tinged with blue: the centre of mesonotum, scutellum and the 3rd and following segments of the abdomen black, the mandibles and the antennal scape, except above, rufous; the 4 front tarsi testaceous, the posterior fuscous; wings hyaline, a fuscous cloud along the transverse median and transverse basal nervures, the radial cellule and a broad cloud of almost its width extending from it to the opposite side of the wings and the apex of the hind wings dark fuscous; legs, except the tarsi, black. Flagellum of antennae black. Female.

Length 15 mm.

Third transverse cubital nervure received two-thirds of the length of the transverse cubital nervure from the apex of the radius, as in *A. laevigata* Kohl. Cf. Kohl. Annal. K.K. Hofmus VIII. Taf. XI; f. 15. 2nd cubital cellule in front less than the length of the transverse cubital nervures; somewhat wider behind than in front; 2nd recurrent nervure received at the apex of the basal fourth of the cellule. Head closely and strongly punctured; the temples roundly narrowed behind. Frontal keels stout, commencing shortly behind the middle, parallel, not converging, straight. Hind ocelli separated by the length of the 4th antennal joint from the eyes. Apex of clypeus with a stout, longish, straight tooth on either side of the apex; outside this and clearly separated is a short, broader oblique one. Pronotum clearly longer than its width at the apex: its base with

an oblique slope, the apex in the centre produced into a conical protuberance; the basal slope is longer than the apex, straight, oblique; the apical slope is oblique and much steeper and shorter; it is sparsely punctured; the base deeply furrowed to near the middle in the centre; the apical protuberance is smooth and black above: on the sides below are some curved furrows. Mesonotum sparsely, deeply punctured; the scutellum almost impunctate. Metanotum closely, transversely striated; the sides at the apex project into long, sharply-pointed teeth, which are about one-half longer than the base, and obliquely pointed; the 4 outer keels are parallel and separated by the same width from the base to the apex; the 2nd does not reach much beyond the middle. Propleuræ sparsely and weakly punctured and with a striated band below; the meso- much more strongly and uniformly punctured; the meta- irregularly reticulated above, the apex below with 5 stout curved keels. The apical slope is stoutly reticulated all over: it has a steep slope. Apex of 1st abdominal segment large, fully two-thirds of the length of the 2nd which is as long as the 1st with the narrowed basal part; they are smooth, impunctate. Base of 2nd ventral segment broadly rounded at the base. The 1st joint of flagellum almost twice the length of the 2nd. Penultimate joint of tarsi half the length of the 3rd and last.

In Kohl's arrangement this species would come in near *A. lazulina*, Kohl and *A. spectabilis*, Kohl.

Ampuler africana, sp. nov.

Dark green, the lower part of the vertex, front and the pleuræ dark blue, the antennæ and mandibles black; legs dark blue, mixed with green, the tibiæ in front and the tarsi black, wings hyaline, the radial cellule, the 2nd cubital and a cloud beyond it light fuscous; the 2nd abscissa of radius slightly longer than the 1st transverse cubital; the 2nd cubital cellule slightly narrower in front than behind; the 3rd transverse cubital nervure received at a distance from the apex of the radius—the length of the transverse cubital nervures; the 2nd recurrent nervure received near the apex of the basal third of the cellule. Metanotal spines short, conical. Male.

Length 10 mm.

February.

Head and upper part of the thorax covered with long fuscous hair; the apical slope of the metanotum with white hair, the pleuræ with white pubescence. Head rugosely punctured; on the front the punctures run into striations; the eyes converge slightly above; the hind ocelli separated from the eyes by half the length of the 3rd antennal joint, which is about one fourth longer than the next. Temples broad, roundly narrowed behind. Sides of apex of clypeus broadly, roundly projecting. Upper half of frontal keels roundly projecting outwardly. Labrum with a pyriform depression in the centre; the sides obliquely sloped; the narrowed end at the top. Pronotum as long as it is wide at the apex, coarsely punctured, deeply furrowed in the centre. Mesonotum and scutellum as strongly, but not so closely punctured, the scutellum smooth in the middle. The middle area of metanotum not very closely, transversely striated; the longitudinal central keel reaches to the apex; the 2nd area is closely and regularly striated; the 3rd has the keels widely separated, forming squarish areæ. The longitudinal keels are twisted; the 2nd is roundly curved and unites with the 3rd at the apex; the apical slope is irregularly areolated and striated. Pro- and mesopleuræ coarsely punctured; the meta- at the base almost smooth; the middle sparsely punctured, the apex reticulated. The basal 4 segments of the abdomen closely, coarsely punctured, the apical brownish and smooth. Apical part of 1st abdominal segment wider than long, half the length of the 2nd; the base of 2nd ventral segment broadly roundly sloped, somewhat as in *A. novaræ*. Cf. Kohl, Ann. d.K.K. Hof Mus. VIII., Taf. XII, 39. The upper part of the abdomen is somewhat as in *A. neotropica*, Kohl, l.c. Taf. XI., f. 10. In Kohl's table the species would come in near *A. compressiventris*, which may be known from it by the shorter basal segment of the abdomen and by the 2nd and 3rd keels of the median segment not uniting in a sharp point at the apex.

Astata melanaria, sp. nov.

Black, thickly covered with white hair; tegulæ and base of fore tibiæ yellowish white; fore wings to the end of radial cellule,

slightly, but distinctly fuscous, with a slight violaceous tinge, the apex and hind wings clear hyaline, the nervures and stigma black. Male.

Length 9-10 mm.

Front and vertex closely punctured, the upper part furrowed down the centre. Clypeus closely, strongly punctured, obliquely sloped at base and apex, the centre being raised; the apical part becomes gradually narrowed to a point. Mesonotum closely punctured, the apex more sparsely in the middle; the sides and apex of scutellum somewhat closely punctured. Metanotum closely reticulated, except in the centre; the apical slope much more closely and regularly reticulated. Pro- and mesopleuræ closely punctured; the latter more strongly and not so closely as the former. Metapleuræ closely reticulated, the base not so closely as the apex. Abdomen obscurely punctured; pygidium shagreened, with 3 foveæ along the sides; these become successively larger, the apical being also shallower. Hypopygium with a large oval depression in the centre. Radial cellule as long as the space bounded by the 1st and 3rd transverse cubital nervures.

Astata fuscistigma, sp. nov.

Black, the apical half of the 1st, 2nd and 3rd abdominal segments red; the head, thorax, base of abdomen, and to a less extent, the ventral surface, densely covered with longish white hair; wings hyaline, the stigma testaceous, the nervures and costa black. Metanotum closely longitudinally striated, with some finer, very irregular transverse striæ; the apical slope almost smooth on the sides, the centre with some striæ minutely broken up. Front and vertex closely, minutely punctured, the face and clypeus shining, almost smooth. A broad dark rufous band behind the apex of the mandibles. Mesonotum closely and distinctly punctured, less closely and more shining in the middle near the apex. Basal half of scutellum and its centre impunctate, the sides of the apex punctured; the centre of the apical half with a fine longitudinal furrow. Propleuræ very closely punctured; opaque, thickly covered with long white hair: mesonotum more shining, less pilose and much strongly and less closely punctured: the longitudinal furrow in its centre clearly defined, deep. Meta-

pleuræ closely, irregularly, strongly, obliquely striated. Abdomen smooth; the epipygium at the apex transverse, the hypopygium rounded. Radial cellule as long as the space bounded by the 1st and 3rd transverse cubital nervures. Male.

Length 12-13 mm.

February.

This species agrees closely with *A. boops*, which may be known from it by the much more strongly reticulated metanotum, the transverse keels being distinct and form, with the longitudinal ones, more or less regular area; the apical slope is more regularly reticulated, the metapleuræ much more regularly and strongly reticulated, the wings not clear hyaline, and the radial cellule is clearly shorter than the space bounded by the 1st and 3rd transverse cubital nervures.

Crabro erythrotoma, sp. nov.

Black, the basal 5 joints of the flagellum, pronotum broadly behind, tubercles, tegulæ, mandibles except at the apex and apical segment of the abdomen, red; the antennal scape, post-scutellum, a mark on the 1st abdominal segment commencing near the middle, dilated more broadly inwardly at the apex, a large mark, 3 times broader than long, on the 3rd, and the apical half of the 5th, yellow. Two front legs red, their coxæ black; middle legs red, the coxæ, base of trochanters, femora to near the apex above and the tarsi black, the trochanters yellow below; hind legs black, the tibiæ dark red, the trochanters yellow below. Wings hyaline, the nervures and stigma black. Female.

Length 10 mm.

Face and clypeus thickly covered with silvery pubescence, apex of clypeus bluntly, shortly trituberculate in the middle. Mandibles bidentate, the upper tooth longer, sharper, and not so broad as the lower. Front and vertex closely punctured, the former covered with golden pubescence. Mesonotum opaque, alutaceous, the scutellum more shining, closely, but not strongly punctured. Metanotal area shining, aciculated, the centre with 2 keels; the space between with transverse keels, all clearly separated; the rest is minutely punctured, and thickly covered with white hair. Pleuræ smooth. Basal segment of abdomen about

3 times longer than it is wide at the apex, nearly as long as the 2nd and 3rd segments united. Apical segment sparsely, but distinctly, punctured above and on the sides, the top clearly margined laterally. Radial cellule short, reaching half way between the stigma and the apex; the apical abscissa of radius straight, not oblique, transverse cubital nervure received in the middle of the radial cellule; the transverse discoidal shortly, but clearly beyond the middle.

Has the form of a *Dasyproctus*, but the petiole is not quite so long as it is in that group, and in it the mandibles are tridentate.

Trypoxylon capense, sp. nov.

Black, the mandibles rufous, the palpi pale testaceous; wings hyaline, the apex narrowly clouded, the stigma and nervures black. Face, clypeus and pleuræ thickly covered with silvery pubescence. Front opaque, obscurely striated; from the upper part of the eye incision it becomes gradually narrowed to a point at the apex, but is not keeled; in the centre is a furrow which is more distinct above than below. Eyes slightly converging below. Hind ocelli separated from each other by a less distance than they are from the anterior. Above the eyes are separated by slightly more than the length of the 3rd antennal joint. Last antennal joint slightly shorter than the preceding two united. Thorax almost smooth. Median segment with a wide central, bordered by equally wide curved lateral furrows; the central is closely striated, except at the top and bottom; the lateral have some irregular striæ; apical slope irregularly striated and thickly covered with silvery pubescence. Petiole slightly longer than the thorax and the following 3 segments united. Radial cellule long and narrow; the apical abscissa of radius fully 3 times longer than the basal. Fore legs brownish in front; the last joint of fore tarsi and the 4 front calcaria pale testaceous, the hind calcaria black. The 2nd abdominal segment is more than double, the 3rd and 4th not double so long as wide at the apex. Third antennal joint distinctly longer than the 4th, more than twice the length of the pedicel.

Comes near to *T. leptogaster*, Kohl. It may be known from the Cape *T. foveatum*, Cam. by the front and vertex being without an area bordered by keels.

Pison iridipennis, sp. nov.

Black, the head, thorax and basal segment of abdomen rugosely strongly punctured, the rest of the abdomen more closely and less strongly punctured, the punctuation becoming closer towards the apex: the pubescence on the head and thorax silvery, on the abdomen silvery, distinctly tinged with golden. Wings hyaline, tinged with fuscous, very highly iridescent; the first recurrent nervure received shortly beyond the transverse cubital, the 2nd interstitial. Male.

Length 8 mm.

Clypeus becoming gradually narrowed towards the apex, ending there in a stout, distinct tooth. Hinder ocelli separated from the eyes by about the same distance they are from each other; the anterior is separated from the posterior by a greater distance than these are from each other. On the centre of the basal half of the metanotum is a wide deep furrow; its basal half irregularly striated, the apical smooth; the apical furrow is narrower and deep. Legs covered with silvery pubescence.

Oxybelus striatiscutis, sp. nov.

Black, scape of antennæ yellow, the flagellum rufous; mandibles yellowish at the base, the middle piceous red, the apex black. Tegulae, tubercles, a mark on the basal half of the scutellum on the sides, the lateral spines, broad bands on the sides of the basal 4 abdominal segments and a narrow band on the apex of the 5th, pale yellow. All the tarsi and the fore tibiae rufous, the middle tibiae yellowish in front, rufous behind, the base of the hind tibiae marked with yellow. Apex of pronotum yellow, transverse. Tegulae yellow in front, blackish behind. Wings hyaline, the nervures black. Female.

Length 8-9 mm.

Head rugose, thickly covered with silvery pubescence. Thorax closely rugosely punctured. Scutellum as strongly, but not so closely punctured as the mesonotum; its apical two-thirds keeled down the centre, its apex depressed, the central keel dividing the depression into two; on either side are 4 or 5 stout keels. Lateral plates large, triangularly produced laterally at the apex; the inner part roundly narrowed. The apical plate is large, about 3 times longer than wide, the basal roundly depressed, the sides raised; roundly curved outwardly, not straight, the apex roundly incised, the incision longer than it is wide at the apex; the centre is keeled, and, from the central keel, others run obliquely to the sides. Abdomen closely and strongly punctured. Pygidial area roundly narrowed gradually from the base to the apex, which is slightly roundly incised; it is irregularly wrinkled; the apical half covered with golden pile. Epipygium coarsely punctured in the middle, more finely laterally. Metapleuræ closely longitudinally striated.

Comes near to *O. ruficaudis*, Cam. The two may be separated thus :—

Scutellar plate small, not reaching to the middle of the 1st abdominal segment, not striated, the apical incision wider than long; the apical segment rufous.

ruficaudis, Cam.

Scutellar plate large, reaching to the middle of the 1st abdominal segment, stoutly striated, the apical incision longer than wide the apical segment black.

striatiscutis, n. sp.

CEROPALIDÆ.

Anoplus mimeticus, sp. nov.

Length 12 mm. Male.

March.

This species is very similar to *A. hirtiscapus*, Cam., having like it, the body black, the head and thorax densely covered with long pale hair, the hair on the scape long and black, the abdominal

segments with broad bands of silvery pubescence, the last segment white and the wings hyaline, smoky round the apex from the 3rd transverse cubital cellule. The two species may be separated thus :

Temples roundly obliquely narrowed, the occiput being also rounded, the two forming one rounded curve; apical abscissa of radius roundly curved; 2nd cubital cellule in front longer than the 3rd, behind equal in length with it; 3rd transverse cubital nervure roundly curved in front.

mimeticus, n. sp.

Temples obliquely narrowed, the occiput transverse, apical abscissa of radius straight, oblique; 2nd cubital cellule before and aft shorter than the 3rd, 3rd transverse cubital nervure straight, oblique in front.

hirtiscapus, Cam.

The mandibles are ferruginous, black at the apex; the 3rd antennal joint is slightly longer than the 4th; the antennæ stout, as long as the thorax; the eyes are parallel, not converging; the head, pro- and mesothorax distinctly punctured; the median segment opaque, alutaceous, narrowly furrowed down the middle; the apex with rounded slope. The long spur of the hind tibiæ extends beyond the middle of the metatarsus (in *hirtiscapus* it does not extend to the middle); the tarsi sparsely spined; the claws bifid.

Anoplus bretoni, Guér.

Mr. O'Neil has taken, what I make out to be this widely ranging species at Dunbrody. The inner eye orbits are broadly dark, the outer more narrowly of a brighter brown colour; and there is a broad brown band in front of and at the sides of the ocelli. It belongs probably to the genus *Aphiloctenus* Ashmead. *Pompilus solanus*, Kohl appears to be the same or a closely allied species.

VESPIDÆ.

Odynerus (Leionotus) melanodontus, sp. nov.

Black; the apex of the clypeus rufous; an oblique spot on either side of its top above, a spot above the antennæ, broader than

long, slightly incised in the middle below and dilated above, a line on the lower part of the eye incision, a small line on the outer orbits above, a small irregular mark on the sides of the scutellum near the apex ; a line on the apex of the 1st abdominal segment, the line largely dilated backwards at the sides and the apex of the 2nd segment more broadly, yellow ; the apices of the other segments brownish. Four front legs yellow, their coxæ and trochanters black ; the tarsi and apex of tibiæ dark rufous ; hind femora for the greater part black ; tibiæ yellow, their apex and the tarsi dark rufous. Antennæ blackish above, the scape below yellow, the flagellum brownish. There is a narrow rufous line on the edge of the pronotum ; the tegulæ and tubercles rufous. Wings fuscous-violaceous ; the nervures and stigma black. Male.

Length to end of 2nd abdominal segment 8 mm.

Clypeus as long as it is wide in the centre ; coarsely and closely punctured, its apex depressed and with a shallow incision. Mandibles rufous, tinged with yellow at the base, the teeth black. Head closely, rugosely punctured, a longitudinal depression behind the ocelli. Thorax, except the metapleuræ, coarsely, rugosely punctured. Sides of post-scutellum projecting into stout teeth at the base. Abdominal segments closely punctured. The 2nd cubital cellule much narrowed in front.

This species closely resembles *O. Schönlandi*; the two may be separated thus :

A continuous curved line on the top of the clypeus ; post-scutellar spines testaceous.

Schönlandi.

Two spots on the top of the clypeus ; post-scutellar spines black.

melanodontus.

Odynerus dunbrodyensis, sp. nov.

Black, the upper and lower third of the clypeus, the sides in the middle narrowly, a small mark, obliquely narrowed above the apex transverse, above the antennæ, a narrow, roundly curved line on the centre of the apex of the pronotum, a curved mark near the inner edge of the tegulæ, the apex of the 1st abdominal segment narrowly above, and of the 2nd more broadly all round, yellow ; a

narrow line on the apex of the pronotum, continued from the central yellow one, tegulæ, more than the apical third of the scutellum, the sides of the 1st abdominal segment, a broad band in the middle, the sides and the hinder edge of the yellow apical line on the 2nd abdominal segment, rufous. Legs reddish; the anterior coxæ and trochanters black, a mark on the lower side of 4 posterior coxæ, a line on the outside of the middle, the apical third of the fore tibiæ below, and a more obscure line on the middle of the intermediate, yellow; the hind femora black below; the hind tibiæ and base of tibiæ and base of tarsi blackish. Wings fuscous-violaceous, the stigma and nervures black. Female.

Length 9 mm.

Antennal scape and underside of flagellum rufous. Clypeus about twice longer than wide, widest above, the sides stoutly keeled, the apex roundly incised. Head closely, strongly punctured. Apex of pronotum transverse, raised. Mesonotum coarsely rugosely reticulated; in the centre of the apical two-thirds are 2 stout longitudinal keels, with 2 shorter ones in the centre; the latter almost unite with the lateral keels on the scutellum, which diverge towards the apex. Scutellum irregularly, longitudinally reticulated. Post-scutellum rugosely punctured, the sides sharply toothed. Apex of metanotum broadly rounded. Base of meso- and metapleuræ smooth. First and second segments of abdomen closely, strongly punctured; the base of the 2nd depressed; its middle with a longitudinal keel in the centre. The 3rd and following segments are smooth.

The keel between the antennæ is stout and extends on to the oblique basal slope of the clypeus. First abdominal segment short, cup-shaped, without a transverse keel; there is a short yellow line on the outer orbits; the small mark below the tegulæ is yellow above, rufous below.