

that this variety will be found mingling with the other forms, and I would recommend its being looked for at the extreme summit of mountains, as this grass would seem to attain its greatest strength and perfection when entirely exposed to the bleakness and cold of the most uncongenial situations.

“Descriptions of one New Genus and some New Species of Parasitic Hymenoptera,” by P. CAMERON, F.E.S.

So little has been done in the way of describing foreign parasitic *Hymenoptera*, that undescribed species are to be found in most of the collections (however small) brought home by naturalists. For the species here described I am indebted (along with many other species) to Professor Trail, of Aberdeen; the Rev. Thos. Blackburn, B.A., of Port Lincoln, South Australia; Mr. George Lewis (so well known for his investigations into the insect fauna of Japan), and to that indefatigable discoverer of rarities, Mr. J. J. Walker, R.N.

#### CHALCIDIDAE.

##### *Chalcis Mikado*, sp. nov.

Niger, scapo antennarum, coxis, trochanteribus femoribusque posticis, rufis; tegulis, apice femorum, basi et apice tibiæ tarsisque posterioribus, albis; tarsis anticis testaceis; alis hyalinis. ♀

Long. fere 8 mm.

Antennæ short, thick, shorter than the thorax, the flagellum not double the length of the scape; covered with a close microscopic pile and with some fuscous hairs. Head coarsely rugosely punctured, a stout keel down either side close to the eyes; antennal groove deep, shining, impunctate, glabrous; a keel down the centre; covered with short glistening white hair. Thorax coarsely rugosely punctured, covered with glistening white hair; mesopleuræ deeply excavated, shining, finely obscurely reticulated. Scutellum ending at the apex in two blunt teeth. Metanotum reti-



culated, with two blunt teeth on either side, an elongated—rounded at either end—area in the centre. Abdomen subsessile, shining, impunctate, the basal half glabrous, the apical sparsely covered with white hairs. Legs covered with short white hair; the white on the anterior femora large, on the posterior four small; the anterior four tibiae are white at the extreme base and apex; the base of the hind tibiae is black, but there is a white spot not far from it, and the apex is broadly white; on the underside of the hind femora are ten teeth; the apical not very large and closely set, the others stout, large, and widely separated; the second from the apex is small. The humerus is pale testaceous, the ulna and radius fuscous-black.

*Chalcis Callipus*, Kirby (Journ. Linn. Soc., XVII, p. 75) comes very near the above described species, but it must, I think, be distinct; for the words, "femora armed below with a series of small teeth," can scarcely apply to the large and stout teeth of *C. Mikado*; *Callipus*, moreover, has the antennæ entirely black, and the antennal groove and the underside of the abdomen are reddish. *C. Mikado* also is fully a line larger. As with most of the species the white on the tibiae and tarsi runs into fawn.

*Hab* Hugita, Japan (*George Lewis*).

*Halticella tinctipennis*, sp. nov.

Nigra, geniculis, tarsis anterioribus, apice tibiis, coxis posterioribus femoribusque posticis, rufis; alis fumatis, basi fere hyalinis. ♀

Long. fere 6 mm.

Antennæ 11-jointed, a little longer than the head and thorax united, covered with a slight microscopical pile; originating from distinct tubercles, the scape more than double the length of the flagellum; a little dilated at the apex; first joint of flagellum double the length of the second, which is the shortest, apical joint conical, double the length of the tenth. Head covered with silvery white hair;



the antennal groove very wide, reaching quite close to the eyes and distinctly margined; the centre finely and closely transversely striated; the sides punctured somewhat strongly; the front ocellus placed in the groove, the hinder pair on the other side of the margin; the vertex and sides of the head punctured; thorax strongly punctured; the upper side covered with a fuscous, the pleuræ and sternum with white pile; the pleuræ not deeply excavated, obliquely, rather strongly striated; scutellum ending in two blunt, stout teeth; metanotum reticulated; two keels converging at base and apex, in the apex in the centre, and there is a more roundly curved one on either side of them; the metapleuræ are densely covered with silvery white hair; abdomen semisessile, the third and following segments at the sides bearing longish silvery white hair. Legs shortly pilose; hind femora stout, a black, deeply fringed border on the apical three-fourths; a tooth at the apex of the four anterior; basal joint of fore tarsi curved; hind tarsi black, reddish on the underside. Wings irregularly smoky, the base almost hyaline, the apex much lighter in tint than the middle; ulna about four times longer than broad, cubitus short.

*H. apicalis*, Walker (Trans. Ent. Soc., 1874, p. 400), is closely allied, but judging from the description, is different, the coxæ being all black, the metanotum with only three keels, the prothorax "about four times as broad as long"—in *tinctipennis* not much more than double—the wings are uniformly coloured; the antennæ shorter than thorax.

*H. tinctipennis* belongs to Kirby's genus or subgenus *Stomatocerus*, so far as I can make out.

*Hab.* Nagasaki, Japan (*George Lewis*).

*Epitranus erythrogaster*, sp. nov.

Niger, scapo antennarum, pedibus, abdomineque, rufis, coxis posticis (apice excepto) petioloque, nigris; alis hyalinis.

Long. 5.5 mm.



Antennæ about as long as the abdomen, the flagellum about one-fourth longer than the scape; 11-jointed, the flagellum becoming thicker towards the apex, the third joint nearly three times the length of the second. Head finely punctured—the punctures very shallow—the face in centre finely transversely striated; two keels run down from the centre to the antennæ, diverging towards the apex; the face is nearly perpendicular and is continuous with the vertex; ocelli in a curve, and placed on the top of the head, the top of the eyes being on a level with them. Thorax rather strongly punctured; the prothorax four times broader than long; parapsidal sutures deep; a transverse furrow in front of the scutellum, which is large, very strongly punctured and unarmed; mesopleuræ excavated obliquely, the excavation reaching to the sternum, shining, obliquely irregularly striated; in front of it the pleuræ are crenulated; metathorax reticulated, flattish; two keels run down the centre united by some transverse ones; and on either side of them are some irregular areæ. There are no teeth on the sides, but there are two irregular ones on each side under the petiole, which issues from the upper side of the metathorax. Petiole about three-fourths of the length of the abdomen, stoutly keeled, the space between the keels deep, shining. The second segment a little longer than the petiole, being as long as the petiole and the other segments united; the back is irregularly black, and the abdomen altogether is rather compressed. The thorax is covered with short hairs; the metapleuræ with rather long white ones; the abdomen is glabrous. Legs shortly pilose; hind coxæ as long as the femora, which bear beneath ten short stout teeth; the hind tibiae bear a stout black keel on the underside, and end in a stout curved tooth; the four anterior tibiae have no spurs. Wings hyaline, suffused with fuscous in the middle; the ulna about one-fourth shorter than the humerus; cubitus very short.



If Kirby's views of the limits of genera are to be carried out consistently, this species will require to have a new genus erected for its reception. (Cf. Journ. Lin. Soc., xvii., p. 53).

*Hab.*, Nagasaki, Japan (*Geo. Lewis*).

*Panthalis*, gen. nov.

Antennæ 9-jointed (including the annellus, which is small and broader than long); the 3rd joint a little longer than the fourth; the others subequal to the last, which is one-half longer than the penultimate; stout, of nearly equal thickness throughout; situated well up on the face. Head much broader than long, concave in front and behind; the front excavated, the excavation not reaching to the foremost ocellus; the face keeled below the antennæ; cheeks margined; eyes large, oblong, bare. Prothorax longish, narrowed in front; mesonotum flattish, parapsidal furrows narrow, but deep; pleuræ deeply and widely excavated obliquely in the middle; scutellum large, flat, of nearly equal width throughout, the apex rounded; at the sides, at the base, deeply excavated; metathorax scarcely one-half the length of the scutellum; keeled down the centre. Abdomen subsessile; the first segment longer than the following three united; the third is produced into a broadly triangular sharp point in the middle above; the fourth similarly produced, but blunter. Ovipositor longer than the abdomen, closely clasped by the segments; the sheaths closely united; from the centre above and laterally is developed a large plate, which becomes gradually larger to the apex, which is rounded. The lateral plates curve slightly downwards. They are shining, obscurely ribbed, and bear short stiff, widely-separated hairs; the edges are fringed with hair. Legs slender; coxæ large; spurs short, slender. Ulna elongated, thick; cubitus curved, thick, three times longer than broad.

The affinities of this genus lie with *Belonea*, *Prionopelma*,



&c., but it is readily distinguished from any of the described genera by the extraordinary structure of the ovipositor. Other noteworthy characters are the 9-jointed antennæ, placed high up on the face, the structure of the third and fourth abdominal segments, &c. The tarsi in the only specimen I have are incomplete.

*Panthalis Blackburni*, sp. nov.

Antennæ black; head, prothorax in front, pleuræ and metanotum (the latter much brighter in tint) green, suffused with coppery tints, the rest of thorax coppery; basal three segments of abdomen reddish-testaceous; the other segments black, suffused with coppery tints; base of ovipositor black; the flanges brilliant coppery; the coxæ, trochanters and femora, metallic green; the upper side of hind femora, the knees broadly and tibiae testaceous, and tarsi red. Wings hyaline; the nervures fuscous. Head and thorax closely punctured; the excavation on pleuræ and the pleuræ behind more shining and but slightly punctured; the scutellum less strongly punctured than the mesonotum and more shining. There is a stout, straight central, and two lateral, converging keels on the metanotum. Abdomen shining, the apical segments obscurely shagreened. Coxæ (especially the hinder, which are hollowed behind) punctured. The face, pleuræ, and apical segments of the abdomen are covered with a sparse, whitish pubescence.

Length 6 mm.; terebra 4 mm.

*Hab.* Port Lincoln, South Australia (*Rev. Thos. Blackburn*, B.A.)

*Belonea erythropoda*, sp. nov.

Head and thorax black, suffused with green and coppery tints; abdomen steely purple, darker towards the apex and beneath; legs ferruginous-red; the tips of tarsi, a large mark on the upper side of the femora, the knees more or less, and the base of the tibiae, blackish; wings hyaline, suffused with fuscous towards the base, and a dark fuscous



triangular cloud is at the cubitus; antennæ black, the centre of the flagellum red, whitish above. Head opaque, except on the front; closely punctured, above the antennæ transversely striolated; antennal grooves deep, the space between them sharply triangular; eyes faintly pubescent, converging slightly above; thorax rugosely punctured, opaque, except the pleural depression; parapsidal furrows indistinct; scutellum not clearly defined; metanotum short, crenulated; the sides densely covered with long, white hair. Abdomen shining, impunctate, the apical segments fringed with white hair. Legs stout, the tibiae and tarsi densely pilose; hind coxæ rugosely punctured; hind femora thickened, finely punctured; hind tibiae curved and thickened at the apex, ending above in two short, stout spines; and in the centre are three widely separated short spines; spurs short, stout. Head and thorax covered with a depressed pile.

The male, *mutatis mutandis*, agrees with the female, the antennæ as usual being thicker.

Length 8 mm.; terebra 19 mm.

*Hab.* Port Lincoln, South Australia (*Rev. T. Blackburn*).

The very much longer ovipositor, among other differences, distinguishes *B. erythropoda* from the South Australian *B. australica*, West., the ovipositor in that species being scarcely longer than the body.

#### CHRYSIDIDÆ.

##### *Hedychrum japonicum*, sp. nov.

Brilliant green, the abdomen rosy red, the antennæ, legs and ventral surface of abdomen, blackish, wings fuscous, lighter at the base. Antennæ with the scape metallic green, longitudinally punctured and striated; the scape covered with a very short, sparse microscopic pile, almost glabrous. Head coarsely and uniformly punctured, except the hollow over the antennæ, which is rather strongly transversely striated, and the part immediately between and on either side, the latter being finely punctured, and the former



aciculated; the clypeus shining, impunctate in the centre. Pro- and metanotum punctured like the head, the scutellum somewhat stronger and the metanotum still more strongly except on the projecting sides, where the punctuation is closer and finer than on the mesothorax; the hollow on the side of prothorax large, shining, striolated, the hollow on the hinder part of the mesopleuræ is also striolated, and shallower than that on the propleuræ; sternum rather weakly punctured. Abdomen finely and closely punctured, if anything weaker laterally; the apex entire, fringed with white hair. The anterior femora and tibiae are dull metallic green, finely punctured, the tarsi are fuscous; the hind femora are dull black; the tibiae are green, strongly punctured and densely pilose; the hind tarsi black, fuscous at the apices of the joints. Upper median cellule bluntly acute at the apex, reaching to the commencement of the radius.

All the coxæ are metallic green, the hinder closely punctured, the anterior more shining and more sparsely punctured; the spurs are testaceous, the claws blackish.

Length, 8 mm.

Very nearly related to *H. lucidum*; differing from it in the head, thorax, and antennæ being almost glabrous; in the more slender antennæ; in the prothorax being longer compared to the part of mesothorax in front of the scutellum, in the projecting hinder edge of the metanotum being stouter, in the abdomen being longer compared to the thorax, in the fifth tarsal joint being as long as the preceding joints united; in the second joint being about one half longer than the third, and in the thorax being entirely green.

*Hab.* Fukui, Japan, (*Geo. Lewis*).

*Hedychrum Lewisi*, sp. nov.

Bluish-green, variegated with purple, antennæ and tarsi blackish; wings fuscous, the posterior only at the apex. Antennæ covered sparsely with a microscopic down, the




scape green, bluish at base and apex, punctured. Head coarsely punctured, the frontal hollow shining, striated, the space between the antennæ impunctate, on either side of them finely punctured; mandibles blackish. Pro- and metanotum coarsely rugosely punctured, scutellum and metanotum bearing large, roundish, or angled punctures, pleural hollows striated, but not strongly; the toothed hinder edge of metanotum coarsely punctured, striolated at the base; the tooth triangular; the central part of pro- and mesonotum is bluish-purple. Abdomen shining, covered with shallow, clearly separated punctures; the ventral surface very shining, finely punctured in the middle. The coxæ are shining and rather strongly punctured (compared to the femora), the femora are very finely punctured, and fringed with longish hair; the tibiae much more strongly punctured; the metatarsus is bent considerably; the spurs not one third of its length, the last joint is about the length of the preceding two united. Upper medial cellule rounded at the apex (not acute), reaching beyond the commencement of the radius.

Length, 6 mm.

*Hab.* Hitoyoshi, Japan (*Geo. Lewis.*)

*Chrysis japonicus*, sp. nov.

Apex of abdomen entire. Blue with a purplish tinge, variegated with green, flagellum of antennæ black, wings fuscous hyaline, the nervures black; head and thorax covered with longish fuscous hair; antennæ as long as the thorax, the scape bare, black, more or less marked with green and irregularly punctured. Head above coarsely rugosely punctured; along the inner side of the eyes much less strongly and more irregularly; the central part of hollow striolated; below the antennæ the punctures are moderately large and distinctly separated; between them almost impunctate; the keel over the depression -shaped; clypeus incised; mandibles black. Thorax covered with



large, round, clearly separated punctures; they are smallest on the lateral lobes of the mesonotum, and are, if anything, smaller on the scutellum than in the centre of mesonotum; on the metanotum they are more irregular in shape (but not larger than on the scutellum) and run into reticulations; on the pleuræ the punctuation is closer and finer; the depressions are shining and striated in the centre; a little below the middle of the mesopleuræ is a large broad longitudinal furrow. Abdomen closely punctured, the punctures interlacing on the basal segment; on the apical segment they are much weaker. The apical segment is waved in the centre and on either side, but there are no teeth; the foveæ are not very deep. The coxæ, trochanters, femora, and more or less of the tibiae are green; the former three parts bear longish fuscous hairs; the tibiae are more sparsely haired; the tarsi are almost glabrous; the coxæ are punctured; the femora are finely punctured, and bear also some large punctures among the smaller, and the hinder four are hollowed on the underside behind. The metatarsus is as long as the following three joints united; the second joint is as long as the fifth.

The ground colour of the body is blue, the face, the orbits of the eyes more or less, two lines on the pronotum, the mesonotum laterally, the edges of the metanotum, the greater part of the pleuræ, and the edges of the abdominal segments are greenish or greenish-blue.

Length 9-10 mm.

*Hab.* Hitoyoshi, Japan (*Geo. Lewis*).

*Chrysis pulchellus*, sp. nov.

Apex of abdomen with four teeth. Green, variegated with blue, antennæ black, the scape green. Head coarsely punctured above the frontal hollow, which is much more closely and finely punctured, in the centre transversely; between and below the antennæ they are larger, but more sparse; mandibles black; the keel over the hollow is



slightly incised in the middle; a stouter keel runs into it from the outer ocelli; below the central ocellus is a deep hollow. Pronotum covered with large round punctures; the mesonotum less strongly punctured; the scutellum somewhat stronger than the pronotum, and with the punctures more widely apart; the metanotum more strongly than the pronotum, except laterally; and along the edge of the central region are some very large punctures; the two foveæ on the apex are very large and deep. The pleuræ are strongly and coarsely punctured except on the hollows; the transverse furrow on the mesopleuræ is shining, almost impunctate. The abdomen is smooth, covered with moderately large widely-set-apart shallow punctures; the teeth are short; the foveæ deep and large (especially the central) and fourteen in number; the legs are green and punctured, the tarsi black; the hind tibiae (especially) and tarsi are densely covered with white stiff pubescence; the claws and spurs are testaceous. Wings violaceous, strongly iridescent, the nervures black; the upper median cellule acute at the apex.

Length 7 mm.

*Hab.* Ceylon (*Geo. Lewis*).

From Hiojo, Japan, Mr. George Lewis has brought back a *Chrysis* which I cannot separate from *ignita*, Lin.

#### ICHNEUMONIDÆ.

*Ichneumon patricius*, Haliday.

The description of this species (Trans. Lin. Soc. XVII. p. 317) is too laconic to enable me to say with certainty if a specimen taken by Mr. J. J. Walker, R.N., at Punta Arenas, Straits of Magellan, is identical with it. If so Haliday's description may be usefully supplemented. In Mr. Walker's example the front is deeply excavated, smooth, and shining; the rest of the head punctured, the face transverse, covered with a sparse fulvous pubescence; the apex of the clypeus is nearly transverse, shining, sparsely punctured; the palpi testaceous; the pro- and mesothorax strongly punctured,



more strongly laterally; scutellum shining, bearing some widely separated punctures; longer than broad, narrowed towards the apex, the sides scarcely keeled; post scutellum rugose; metathorax rugosely punctured, the apex slightly hollowed in the centre, semi-oblique; there are six areae, the supra median horse-shoe shaped, large; petiole shining, impunctate, curved; post petiole longitudinally striated; gastrocoeli obsolete; hind coxæ rugosely punctured; areolet longer than broad, five-angled; the lateral nervures parallel, complete, the recurrent nervure is received in the middle; there is a small projecting branch on the cubital nervure. In colouration it agrees with Haliday's description.

*Patroclus (Ichneumon) venezuelensis*, sp. nov.

Rufo-testaceous, the face, orbits, and base of four front legs inclining to yellowish; the flagellum of antennæ (except a broad yellow ring towards the centre), the base of the first to four abdominal segments broadly, the apex of hind tibiae broadly and the hind tarsi, black; wings smoky-fuscous, paler towards the apex, the stigma fuscous, testaceous at the base. Face punctured, the centre projecting into a  $\wedge$ -form from the antennæ to the clypeus, mandibles punctured; front broadly, but not deeply, excavated; vertex punctured. Thorax punctured all over, but much weaker on the pleuræ; the metanotum more strongly transversely punctured, on the apex running into reticulations; the metapleuræ strongly longitudinally punctured. Tubercles on metathorax viewed laterally triangular; there are no areas; and only two complete keels, one outside the spiracles, the other uniting the tubercles. Petiole shining, impunctate, the sides raised; post petiole strongly punctured depressed in the centre (between the continuation of the raised sides of the petiole) and laterally. Abdomen closely and strongly punctured on the basal four segments; the apical impunctate, shining, somewhat acutely pointed; sheath of ovipositor black at apex; gastrocoeli transverse,



wider than long, deep in the centre, the outer edges striolated. The head and thorax covered with a fuscous or pale pubescence; on the metathorax it is double the length of that on the mesonotum. Coxæ punctured; the femora sparsely, the tibiae and tarsi densely pilose. Areolet scarcely 5-angled, the lateral nervures almost meeting at the top; the nervures at the base are dull testaceous; at the apex fuscous.

Length, 14 mm.

*Hab.* Venezuela, (*Dr. Moritz*) Mus. Vienna.

*Patroclus* is an *Ichneumon* with pectinated claws.

*Colpognathus? magellansis*, sp. nov.

Black: the abdomen from the apex of the petiole (except a black mark on either side of the second and third segments above, that on the third being the longer), and legs fulvous-red; the orbits broadly and more or less of face, the tegulae, the edge of the pronotum near them and two lines on the pronotum, yellow, the scutellum (except a black band across in front of the middle) and post-scutellum brick-red; the basal six joints of the antennæ on the lower side reddish-testaceous; wings yellowish-smoky hyaline, the stigma testaceous, the nervures fuscous. Antennæ thirty-jointed, the flagellum a little attenuated at the base of the flagellum, densely shortly pilose; the scape at the apex on the upper side deeply incised. Head rather strongly punctured, covered with a pale sparse pubescence, almost transverse in front, deeply excavated above the antennæ, the excavation shining, obliquely striated and finely punctured, the centre raised; clypeus shining, almost impunctate, transverse at the apex, not projecting, a minute fovea on either side at the base; mandibles broadly curved; bidentate, the inner tooth the larger. Thorax strongly punctured above the scutellum, shining, and with the punctures more widely separated, the pleuræ not so strongly punctured on the upper side, and on the lower part, running into a strong



course striation; the central part of the mesopleuræ shining, impunctate; sternum shining, punctured, deeply furrowed in the centre. Metathorax large, the apex obliquely vertical; areolas obsolete; a keel runs down the side on the inner side of the spiracle; one goes round the top of the vertical part of the metanotum from a large obtuse tubercle or blunt tooth situated a little above the middle, and from the incomplete supramedial area (which is square, but wants the apical keel) a keel runs in a curve to the lateral longitudinal keel, joining it below the middle. Petiole broad at the apex, the narrow apical part slightly hollowed at the base, and with a stout keel on either side, this keel running into the base of the post petiole, which is keeled along the edge; shining, closely longitudinally striated, except the extreme apex of the post petiole. The base of the second segment is finely longitudinally striated; without any gastrocoeli; the rest of the abdomen shining, impunctate. The apical segments of the abdomen are compressed laterally, and bear a fringe of fulvous hair; the sheaths of the ovipositor are pilose. Legs (especially the femora) stout; covered with a fulvous pile, especially thick on the tibiae and tarsi, hind coxæ rugosely punctured; the hollow on the upper side transversely striated; the femora and tibiae are punctured. Areolet pentagonal, the under nervure obsolete; the recurrent nervure received a little beyond the middle, and not received in an acute angle.

The face is obscured with black on the upper side; the four anterior femora are lined with black above, and there is a black mark on the upper side of the posterior tibiae at the base.

Length, 11 mm.; ovipositor, 1.5 mm.

Gray Harbour, Straits of Magellan (*J. J. Walker*, R.N.)

This species belongs to the "*Ichneumon*es *Pneustici*" of Wesmael. In the table which that author gives in his *Tentamen Dispos. Method. Ichn. Belgii*, p. 165, it comes



nearest to *Colpognathus*; but it is doubtful if it really belongs to that genus.

*Podogaster striatus*, sp. nov.

Head and thorax yellow, the occiput, vertex, a broad line on the mesonotum proceeding from the pronotum to about the middle, where it is joined by a transverse band, which occupies the remainder of the mesonotum to the scutellum; a broad line on metanotum projecting at each angle at the apex, a large spot immediately below the tegulæ, and a smaller and rounder one on either side of sternum, black. Antennæ black, the scape brownish beneath, abdomen black, fulvous at the sides and ventral surface from the second segment. Legs yellow, the four front tibiae and femora of a more reddish hue at the apex; hind coxæ black, except at the extreme apex; the hind tibiae and tarsi fuscous black, paler at the joints. Wings hyaline, fuscous at the apex; tegulæ brownish. Head and prothorax impunctate; mesonotum to the tegulæ very faintly punctured, from tegulæ to scutellum rugose; scutellum faintly blistered at the base, a transverse ridge at the apical third. Metanotum reticulated, the reticulations large, fainter at the base; sides of sternum faintly punctured; the edge of prothorax on its lower half near the mesothorax slightly obliquely striated. The scutellum is depressed in the middle; the mandibles are piceous. Abdomen much compressed laterally, sabre-shaped; petiole almost cylindrical, thickened at apex, and longer than the second segment. Legs covered with a close and moderately long pile.

Length, 12 mm.

Differs from the type (*P. coarctatus*, Brullé), in wanting the ferruginous colour of the thorax, the yellow front tarsi, in the different arrangement of black on the thorax, &c.

*Hab.* Amazons (*Prof. J. W. H. Trail*).

*Lissonota maculiceps*, sp. nov.

Red: the front in the centre, vertex, occiput, the abdomen,



a large spot on the hind coxæ, the trochanters broadly at the base, the base (narrowly), and apex (broadly), of the hind femora and the apex of the hind tibiae broadly, black; antennæ black, fuscous beneath, the scape reddish on the under side; the basal four segments broadly reddish at the base, the apical narrowly; the ventral surface pale; wings hyaline, a smoky fascia at the apex. Antennæ as long as the body, covered with a fuscous microscopic pile. Head smooth, shining, impunctate, a large black mark in the centre of the face which is convex in the centre, as is also the clypeus which is scarcely transverse at the apex; tips of mandibles black; palpi pale testaceous. Thorax shining, the pleuræ punctured; metanotum transversely striated. Abdomen impunctate, shining, legs shining, impunctate, the tibiae and tarsi covered with a close pale pile; the front legs are of a paler red than the others. Areolet absent.

Length, 10 mm., terebra, 7 mm.

*Hab.* Amazons (*Prof. J. W. H. Trail.*)

*Anomalon fulvo-hirtum*, sp. nov.

Black: the head and thorax covered with a dense longish fulvous, inclining to golden, pubescence; the mandibles, scape of the antennæ, tegulæ, the pronotum in front of them, the anterior coxæ, the trochanters and base of femora, the tibiae except at base and apex (the anterior almost entirely) yellow; the femora fulvous, the anterior running into yellow, the posterior darker than the middle; the base and apex of the tibiae and the hind tarsi, black; anterior tarsi and spurs yellowish; wings hyaline, nervures and stigma black. Finely rugosely punctured, opaque; the petiole and base of the second segment, finely longitudinally aciculate, the rest of abdomen finely shagreened. Petiole long, slender, a deep longish shining impunctate furrow above, extending from a little beyond the middle to the post petiole; there is a small roundish, fulvous depression on either side of the second segment near the base. Abdomen compressed,



densely covered with a long fulvous pubescence; the base of the segments marked with black above. Hind coxæ coarsely punctured. The pubescence on the scutellum is long and dense.

Length, 12 mm.

*Hab.* Amazons (*Prof. J. W. H. Trail*).

#### EVANIIDÆ.

##### *Gasterupton japonicum*, sp. nov.

Black: a broad ring at the base of the femora, the apex of the anterior tibiae; the basal three fourths of the four basal joints of posterior tarsi, yellowish-white; the anterior tarsi obscure testaceous, the base inclining to yellowish-white; the second, third, and fourth abdominal segments reddish-testaceous at the apex; the apex of the sheaths of the ovipositor broadly white. Wings hyaline, suffused with fuscous, the stigma and nervures black. The third joint of the antennæ is about one fourth longer than the second; the fourth is about as long as the first and second joints united. Head sub-opaque, almost alutaceous; microscopically pilose; edge of the occiput sharply raised; hinder ocelli as wide apart (if not wider) as the length of the third antennal joint. Mandibles piceous at the base; palpi and maxillæ testaceous. Thorax opaque, the pro- and mesothorax aciculated, the mesonotum marked with scattered punctures; parapsidal furrows wide, deep, marked with transverse keels; a wide shallow irregularly reticulated oblique furrow on the side of prothorax; the lower part of the mesopleuræ irregularly reticulated; on the other side of the scutellum are four large foveæ; metathorax reticulated, the metanotum roughly, the sides more irregularly. Abdomen nearly three times the length of the thorax, aciculated, the petiole nearly as long as the thorax, ovipositor longer than the body. Posterior coxæ coarsely aciculated; metatarsus nearly as long as the four remaining joints united.

Length, 20 mm., terebra, 19 mm.

*Hab.* Kobe, Japan (*Geo. Lewis*).



*Aulacus flavipennis*, sp. nov.

Luteus, antennis, pedibus posticis abdomineque, nigris, alis flavis, apice fumatis, stigmate nigro. Mas.

Long: 17 mm.

Antennæ scarcely so long as the thorax and abdomen united; closely pilose, the scape with a few long hairs; the third joint considerably shorter than the fourth; the apical joints piceous on the under side. Head shining, impunctate, closely covered with golden yellow hair, tips of the mandibles and sometimes the labrum in the middle, black; palpi yellow. Thorax coarsely rugose, running into course reticulations on the pleuræ, scutellum and metathorax; the mesothorax in front transverse, coarsely transversely striated; perpendicularly excavated; covered thickly with golden yellow pubescence; prothorax impunctate, smooth. Abdomen shining, impunctate, covered with a depressed pile, except on the basal two segments, and not so conspicuously on the base of the other segments; the basal half of the first segment pale yellow. Legs at the base pilose, the tibiae and tarsi with a closer and shorter pile; the coxæ transversely striated, the hind coxæ are luteous at the base; the base of hind femora and knees are testaceous.

There are two forms of this species (at least I can find no other valid points of distinction between them beyond the difference in the colouration of the wings). One (and this is also smaller in size) with a small cloud below the stigma, and a narrow irregular cloud along the edge; the other with the wings violaceous from a little before the base of the stigma, and with a lighter cloud in the second cubital cellule and in the radial below the apex of the stigma. The second recurrent nervure is received not far from the second transverse cubital. The latter is largely bullated.

*Aulacus signatus*, Shuckard (also from Ceylon) resembles this species, but has the head and thorax black.

Dekaya, Ceylon (*Mr. George Lewis*).



## BRACONIDÆ.

*Chelonus filicornis*, sp. nov.

Black, densely sericeous; the anterior knees and tibiae in front sordid testaceous; wings smoky, the apex lighter in tint; the stigma black, the nervures fuscous. Antennæ double the length of the thorax, the scape thick, nearly as long as the third joint, from where the joints become gradually thinner, until at the apex they are very attenuate; about twenty-jointed, but the basal joints are very difficult to distinguish. Face elongated, the eyes separated from the oral region by fully half their length; trophi elongated, black; face transversely rugosely punctured; the clypeus more shining, finely rugose; front and vertex coarsely transversely rugosely punctured; the frontal depression smooth, shining; eyes but sparsely pilose. Thorax strongly punctured; the metathorax coarsely reticulated; its apex oblique; the sides ending in a stout blunt tubercle; scutellum coarsely rugosely punctured; the sides raised, margined. Abdomen scarcely so long as the head and thorax united; the apex bluntly rounded; the dorsal surface longitudinally rugosely striolated, running into reticulations, and becoming finer towards the apex, which is also (as usual) more densely pilose. Legs (especially the coxæ, tibiae and tarsi) closely pilose; the coxæ stoutly punctured; laterally and in front there is an obscure brownish ring towards the base of the hind tibiae; the spurs are clear white. The radial nervure is sharply elbowed upwards at the second transverse cubital nervure, which is very oblique and bullated largely; the second cubital cellule, double the width of the apex at the base; the cubital nervure beyond the second cubital cellule is faint.

Length 7.5 mm.

This comparatively large species is known from all the American species known to me by the very attenuated antennæ, and by the greatly elongated face.

*Hab.* New Mexico.



Mr. P. CAMERON drew attention to the importance of the examination of the male organs of Bees and Wasps, as in many cases they furnish great aid to their classification. He exhibited a series of drawings of these objects executed by Mr. Chaffers, and under the microscopes a large number of specimens.

There were also shown by means of the microscopes, by the PRESIDENT, some very interesting Macrospores of Lycopods, from the Scotch coal-beds ;

And by Dr. HODGKINSON some sections of silicified wood.

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Ordinary Meeting, March 14, 1887.

MARK STIRRUP, F.G.S., in the Chair.

Mr. STIRRUP exhibited slides of *Sporangites Huronensis* (Dawson), from the Devonian shales of Ohio.

Mr. H. C. CHADWICK exhibited a series of twenty-five original drawings illustrating the minute anatomy of *Antedon rosaceus*. In a few explanatory remarks he briefly described the fibrillar envelope which encloses the chambered organ, and from which cord-like processes extend through all the arms and cirrhi. Reference was made to the experiments of Dr. Carpenter and Prof. Milnes Marshall, which point to the conclusion that these structures constitute a nervous system. Mounted preparations of various parts of *Antedon rosaceus* were exhibited under the microscopes.