

No. 3.—*Parasitic Hymenoptera from the British Solomon Islands*
collected by Dr. W. M. Mann.

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CONTRIBUTIONS FROM THE ENTOMOLOGICAL LABORATORY OF THE
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UNTIL a few years ago the Hymenoptera of the Solomon Islands remained practically unknown. In 1909, Mr. W. W. Froggatt secured a small collection on the islands and these have been studied by several workers. The parasitic forms were examined by Cameron (Proc. Linn. soc. N. S. W., 1911, 36, p. 349-365), who found seventeen species, all of which he described as new. At least one of these (*Echthromorpha pallidilineata*) had been previously recorded under another name from the Pelew Islands. In the collection obtained by Dr. Mann there are 32 species which I have been able to study satisfactorily. Six of these are identical with ones described by Cameron from the Solomons; two are forms occurring in New Guinea; one was described years ago by Westwood from the Solomons, and two are rather widespread Indo-Malayan species.

Many of the genera are world-wide; several range through India and the Malay region. One, *Lissopimpla*, is Australian, although it extends to Ceylon, and *L. erythropus* is therefore an Australian type, even if it be not specifically identical with *L. scutata* Krieg. from Queensland as has been suggested by Morley.

Among the bees of the Solomons, Cockerell (Proc. Linn. soc. N. S. W., 1911, 36, p. 160) has pointed out general Indo-Malayan affinities with "a genuine Australian element" and this is equally true of the parasitic Hymenoptera, so far as the material and published records go. It may be of interest to note that *Meroglossa tetrazantha* Ckll., a bee mentioned by Cockerell as belonging to a typically Australian genus was also taken by Mann, who secured a single specimen on the island of Yandina, showing that the species is probably a common one in the Solomons.

I have attempted to gather together a list of the parasitic Hymenoptera so far reported from the Solomon Islands and their neighbors as far as the Bismarck Archipelago on the northwest and New Caledonia on the southeast. It is evident that the grouping of these

islands with the omission of New Guinea is to a great extent one of convenience only. Many more Papuan species will undoubtedly be found in the Solomons and the meagre list from all the small islands will unquestionably be greatly augmented by intensive collecting. However, the mere fact that Mann obtained over one third of the species previously collected by Froggatt would seem to indicate that the fauna may not be so very extensive.

STEPHANIDAE

STEPHANUS FROGGATTII Cameron.

Megischus froggattii Cameron, Proc. Linn. soc. N. S. Wales, 1911, **36**, p. 357.

There are six specimens including four females and two males from Auki, Malaita; Tulagi; Fulakora; and Malaili. The larger females from Auki are 26-31 mm. in length and have the accessory femoral teeth better developed than the smaller ones (21-23 mm.). The males measure 20-21 mm.

PARASTEPHANELLUS ORBITALIS, sp. nov.

Type.—M. C. Z., 9,051, and *Paratype*. Solomons: Fulakora. W. M. Mann.

♂. Length 7-8 mm. Black, head pale yellowish from mandibles to just above antennae, the inner orbits narrowly pale to the level of the lower tubercle; posterior orbits, wider above, white; antennae piceous, with the base of the flagellum fuscous; palpi piceous; propleurae rufous below; front legs brownish yellow in front; knees and tips of tibiae of all legs whitish, their tarsi honey-yellow. Wings slightly infuscated. Head rugose, transversely so on front below and on vertex medially; three lower tubercles of vertex about equally developed; intra-ocular ones much weaker; cheeks smooth, malar space as long as first flagellar joint, not furrowed; hind margin of head carinate, but the carina not strongly developed nor recurved. Third and fourth joints of flagellum of antennae the longest, subequal; second twice as long as first, these two together as long as the third. Pronotum in front transversely wrinkled, the wrinkles extending obliquely on the pleurae; on each side with a coarsely punctate area before the smooth posterior margin. Mesonotum with a median

punctate line, the parapsidal furrows forming a semicircle; otherwise sparsely foveate-punctate. Axillae rugose, more finely so laterally, separated basally by a small fovea and from the scutellum by straight oblique, foveate furrows; scutellum smooth along its centre; with coarse, sparse punctures laterally. Propodeum with a few very large irregularly placed shallow punctures, with a smooth longitudinal impression on each side extending to the base of the hind coxa and below this with a coarsely reticulate ridge; its sides below the ridge irregularly wrinkled, nearly smooth. Mesopleurae pubescent in front, smooth and shining behind; obliquely raised at the middle and depressed behind towards the propodeum. Abdominal petiole two thirds as long as the thorax, transversely striate above, irregularly rugose on the sides and below; with some stiff white hairs laterally, the spiracles at the middle. Remainder of abdomen polished. Claspers short, no longer than broad with the apex regularly rounded and beset with a short dense fringe of hairs; smooth basally, punctate and hairy on apical half. Hind coxae transversely striate, with an elongate smooth area externally near the base; femora with a prominent tooth at basal third, middle and apical third; two blunt denticles follow after the basal tooth, several acute ones after the middle tooth and a decreasing series of five after the apical tooth. Stigma rather broad, half the width of the radial cell which is complete except at extreme apex; cubital vein distinct almost to wing tip; transverse median vein inserted one third of its length before the basal vein, so that the petiole of the discoidal cell is very short; second discoidal cell open below, but with the basal and apical sides complete, the vein forming the apical side swollen below the tip.

This is a typical member of the genus and apparently distinct from its congeners, all of which occur in the Indo-Malayan region. In all the genera of this undoubtedly old family the structural characters, particularly of body proportions and sculpture, appear to be very firmly fixed and to show scarcely any variation. I append a key, based mainly on color, which will serve to distinguish the present species from the others.

1. Abdomen and most of body yellowish brown small species 5-8 mm.
P. pygmaeus Enderl.
 Abdomen, beyond base of second segment, black.....2.
2. Abdomen entirely black.....3.
 Abdomen, black, the petiole reddish.....6.
3. Head black, orbits white or buff.....*P. orbitalis*, sp. nov.
 Head red or red and black, sometimes varied with yellowish...4.

4. Head entirely reddish.....*P. martini* Stadlm.
Head distinctly maculate or varied in color.....5.
5. Wings hyaline, scutellum with foveae at base...*P. malayanus* Cam.
Wings smoky, no foveae at base of scutellum.
P. maculifrons Cam.
6. Legs reddish, head rufopiceous.....*P. damellicus* Westw.
Hind femora and tibiae black; head pale yellowish, blackened
above.....*P. brevistigma* Enderl.

DIASTEPHANUS SALOMONIS Westwood.

Thesaur. entom. Oxon., 1874, p. 128 (*Stephanus*).

A female from Wai-ai most surely belongs to this species which was briefly described by Westwood from an imperfect example. I have appended a description including the details omitted in the original description.

♀. Length 17 mm. Black with the apical half of the hind femur and constricted part of the hind tibia ferruginous; head with a broad white band extending from the base of the mandible behind the eye nearly to the top of the eye; front with the inner orbits and a median line extending half way to the median ocellus pale yellow; mandibles ferruginous at middle. Face transversely striate below the tubercles; irregularly reticulate between the tubercles; between the ocelli with two transverse carinae; behind them with wavy transverse aciculations and a median groove. Second and third joints of flagellum equal, each nearly twice as long as the first which is considerably longer than the pedicel. Cheeks smooth and shining. Prothorax very long, equalling the length of the fore leg from the base of the coxa to the knee, its constricted portion finely transversely wrinkled; its posterior margin smooth, preceded by a band of transversely elongated punctures; mesonotum in front irregularly rugose reticulate, smooth behind except for the crenate parapsidal furrows. Propodeum above with coarse thimble-like punctation. Propleurae finely shagreened; mesopleurae smooth above and below, between and in front with a band of large incompletely impressed punctures. Metapleura reticulate above, below with some incomplete vertical wrinkles. Abdominal petiole as long as the head and thorax, transversely striate above and below except at extreme base; hind coxae similarly striated. Hind femur with serrate projections before the middle where it bears a

large tooth, behind this with three denticles, another large tooth, then a decreasing series of eight denticles. Ovipositor as long as the body, its sheaths entirely black. Wing-venation typical for the genus, the upper and outer edges of the discoidal cell indicated by slight brown streaks.

Considering the size 17 mm., the locality¹ and the agreement so far as Westwood's description goes, I think this is undoubtedly his species. It is not, however, the same as Schletterer's *Stephanus pallescens* from the Philippines which its author suggested might be Westwood's species. Westwood gives $10\frac{1}{2}$ lines as the alar expanse which is about right for a species 17 mm. in length, but not for one 11 mm. in length, the size given for *S. pallescens* although species of this group sometimes vary considerably in size. The present form differs conspicuously from *S. pallescens* in the form of the antennal flagellum and pedicel.

EVANIIDAE.

TRIGONOFŒNUS SALOMONIS, sp. nov.

Type.—M. C. Z. 9,052. Solomons: Malaita, Auki. W. M. Mann.

♀. Length 16 mm., ovipositor 20 mm. Black, with deeply infuscated wings; four anterior femora, tibiae, metatarsi, and second joint of trochanters, ferruginous; first joint of these trochanters, second joint of hind ones and hind tibiae fuscous, base of hind tibia yellowish; hind tarsi orange-yellow at base shading to almost white at tip. Face minutely, confluent punctate; front minutely, somewhat transversely aciculate; ocelli large, the lateral ones about their own diameter from the eye, malar space well developed, as long as the width of the mandible at base, clypeus with the lateral angles slightly prominent, medially broadly emarginate; cheeks and temples very finely and closely punctate; vertex like the front; occipital margin rather sharp and slightly recurved. Third joint of antennae no longer than the second; fourth over three times as long as second and nearly five times as long as thick; following gradually decreasing in length. Prothorax short, not so long as the distance from humerus to tegula. Thorax short, the mesonotum as broad as long; parapsidal furrows oblique, nearly straight, meeting at posterior fourth of mesonotum and from thence prolonged to the scutellum as a median

¹ Westwood gives "Solomon's Island (New Hebrides)."

groove; median lobe transversely rugose, more coarsely so on the sides; lateral lobes and scutellum finely rugose. Propodeum deeply reticulate, the spaces rather regular, nearly circular; entire thorax almost without pubescence. Pleuræ coarsely rugose-reticulate, finer on the mesopleura above near the tegulae and on the base of the sides of propodeum. Abdomen subshining, uniformly blackish; sheaths of ovipositor tipped with white. Legs with the hind coxae coarsely transversely rugose above and externally, finely punctate below; hind tibiae less swollen than usual, but little thicker than the femora; their tarsi stout, the first joint distinctly longer than the following together, both the hind tarsi and their tibiae at tip conspicuously clothed with golden pubescence. Radial cell broad, the radius sharply bent upwards at its apical third; small discoidal cell almost as long as its petiole.

Of the species referred to this genus by Kieffer, this comes closest to *T. abuensis* Cam. from India, from which it differs in its clear wings and differently colored legs. It is also quite different from any species of *Gasteruption* known from this region, aside from the generic differences which do not appear to be very clear-cut, at least when applied to our American species.

BRACONIDAE.

SPATHIUS MANNI, sp. nov.

Type.—M. C. Z. 9,053. Solomons: Wai-ai. W. M. Mann.

♀. Length 7.5 mm., ovipositor 3 mm. Black; head below the level of the antennae dark reddish brown; antennae yellowish at base, brown beyond; palpi piceous; tarsi brownish yellow; posttegulae white, seventh and eighth segments of abdomen yellow; wings fuscous, with a hyaline cross-band near the base and a hyaline streak extending across from the base of the stigma; apex hyaline; veins black, stigma white at base. Head seen from above, as wide as thick, full behind the eyes, then roundly narrowed to the prominent posterior carina; eyes rather large, as wide as the cheeks, the malar space two thirds the length of the third antennal joint; eyes slightly emarginate opposite the antennae; ocelli in a nearly equilateral triangle, posterior ones nearer to one another than to the eye-margin. Mouth opening gently concave above, the clypeus separated, with deep lateral foveae. Face transversely rugose; front and vertex evenly transversely aciculate; back of head above middle of eyes horizontally aciculate, the

aculations curving upwards to meet those of the vertex; cheeks smooth. Antennae slightly longer than the body, flagellar joints regularly decreasing in length; first one fourth longer than the second; maxillary palpi nearly twice the length of the head. Prothorax with the posterior margin strongly carinate. Thorax long and narrow; mesonotum slightly longer than the propodeum and one half longer than wide, its surface shagreened; parapsidal furrows deep; coalescing at the middle to form a transversely areolate depression. Scutellum with six small elongate pits at the base, its surface shagreened. Propodeum transversely rugose-reticulate; with a median carina that forks just before the middle to form a long petiolar area extending to beyond the middle; spiracle small, circular; below it a complete carina with an incomplete one below that. Pro- and mesopleura irregularly striate and reticulate, the mesopleura with a shagreened area at the middle below. Petiole of abdomen as long as the thorax from posterior angle of propleura to tip of propodeum; slender, scarcely bent, slightly widened at the spiracles and again after posterior fourth, the apex twice as wide as at spiracles which are at basal third; its surface rugose medially, striate-reticulate on the sides, more finely striate toward apex. Second segment microscopically transversely aciculate, more distinctly so at base, as long as wide at apex which is twice as wide as base; third to fifth minutely roughened with a polished band at base; sixth polished; seventh longitudinally striate on basal half. Legs comparatively slender; hind coxae finely shagreened above, their femora four times as long as thick. Front tibiae finely spinulose on their anterior surface; middle ones minutely denticulate; hind ones minutely tuberculate on hind edge. Submedian cell slightly longer than the median, recurrent nervure received at base of second cubital cell; subdiscoidal vein interstitial.

This species is quite distinct in size and color from any others known from the Indo-Malayan region.

SPATHIUS MELLEUS, sp. nov.

Type.—M. C. Z. 9,054. Solomons: Rio. W. M. Mann.

♀. Length 2.7 mm.; ovipositor 1 mm. Honey-yellow, the thorax somewhat darker than the head, abdomen, and legs; antennae blackened beyond middle; wings yellowish hyaline, with a faint cloud just before and another just beyond the middle. Head as broad as thick, scarcely widened behind the eyes, hind margin strongly carinate.

Eyes a little longer than wide, slightly broader than the cheeks. Anterior margin of clypeus strongly concave; face shining, with rather faint irregular sculpture and a median elevation from the clypeus to the base of the antennae; malar space nearly as long as the third antennal joint; front below the ocelli weakly arcuately aciculate; ocelli in a nearly equilateral triangle, posterior pair almost twice as far from one another as from the eye-margin; head above ocelli highly polished, faintly coarsely shagreened; head behind smooth and polished. Antennae with the joints of the flagellum gradually growing shorter, the second scarcely shorter than the first. Pronotum with a strong transverse carina, just behind the raised anterior margin and with a weaker one at the middle. Mesonotum short, no longer than wide, coarsely shagreened; parapsidal furrows complete, bounded interiorly on their posterior half by a raised line, the space between not reticulate. Scutellum with a deep crenate groove at base. Propodeum areolated as in *S. manni*, but with the superomedian and petiolar areas separated and the surface more coarsely sculptured and more shining. Petiole of abdomen stout, considerably curved above, as long as the propodeum to the root of the hind wing, evenly widened from base to apex where it is less than twice as wide as at spiracles; coarsely striate above and on the sides. Second segment with a row of short longitudinal striae at base, followed by an area of very faintly impressed large punctures; apex polished. Following segments smooth, polished. Propleura irregularly reticulate; mesopleura shagreened, with a small reticulate space in front above. Legs stout; hind coxae shagreened, their femora three times as long as thick; none of the tibiae with denticles or tubercles. Recurrent nervure received near the base of the second cubital cell: submedian cell barely longer than the median; subdiscoidal vein interstitial.

This species is somewhat similar in size and color to the Papuan *S. minutus* Szep., but lighter, with the metathorax not black; the mesothorax shows no transverse sculpture and the head is entirely smooth.

ACANTHORMIUS Ashmead.

Proc. U. S. N. M., 1906, 30, p. 200.

There is a small species in the material before me which is either referable to this genus or represents a closely allied one. As will be seen from the following description the general form and peculiar structure of the abdomen are very similar to *A. japonicus* Ashm., but

the armature of the third abdominal segment is not like that of the type-species. It will easily run down to the genus in Ashmead's Genera of Ichneumon flies¹ and his emendation of the same² given in connection with the description of the genus. In habitus the species is very much like a *Chelonus*, but is structurally very different.

ACANTHORMIUS DUBITATUS, sp. nov.

Type.—M. C. Z. 9,055. Solomons: Three Sisters, Malapaina. W. M. Mann.

♀. Length 2.3 mm. Uniformly ferruginous, the legs and three basal joints of antennæ pale yellow. Face evenly convex, smooth and shining; malar space one third as long as the eye; clypeal emargination deep, leaving a large semicircular opening above the mandibles. Front and posterior part of head polished, the latter very strongly margined. Antennæ 21-jointed; scape short, oval; pedicel more than half as large as the scape; flagellar joints long, gradually decreasing in length toward apex, basal ones cylindrical, apical ones becoming more or less lanceolate. Mesonotum highly polished with deep crenulate parapsidal furrows that converge and meet before the scutellum; also with a median furrow impressed only behind; scutellum with two large, quadrate, nearly confluent foveae at the base. Propodeum areolated, the superomedian area an equilateral triangle connected with the anterior margin by a median carina, petiolar area pentangular, long, narrowed below. Abdomen consisting of three segments, the second longest, about as wide as long; third a little shorter; first one third shorter; upper surface coarsely longitudinally striated or wrinkled; third segment deeply emarginate at apex and also at the middle of each side, with a small tooth just preceding the lateral emargination; venter pale; ovipositor shorter than the first segment. Propleura with several coarse striae below, mesopleura convex, polished, with a few coarse striae converging from the upper anterior margin toward the centre of the disc; below with a deep elongate impression and just inside the posterior edge with a crenate line; metapleura coarsely rugose. Wings nearly hyaline, with pale brown veins; submedian cell slightly longer than the median; stigma elongate; second section of the radius one third longer than the first;

¹ Proc. U. S. N. M., 1900, 23, p. 148.

² Ibid., 1906, 30, p. 200.

radial cell nearly attaining the wing-tip; recurrent nervure interstitial with the first transverse cubitus; submedian cell of hind wing fully half as long as the median.

PLATYBRACON SZÉPLIGETI.

Dr. Mann obtained three species of this remarkable genus on Fulkora. Two species have already been described from the neighboring islands; the type of *P. depressus* Szépligeti from New Guinea and since recorded by him from Aru; the second one *P. insularis* by Cameron from the Solomon Islands. Cameron's species appears to be represented in the collection by 16 specimens. I cannot be positive as the original description is rather incomplete although it fits these specimens so far as it goes. The other two are, I think, perfectly distinct and undescribed. All, however, are very similar, including the Papuan species. The following key will serve to distinguish them.

1. Fourth abdominal segment with a distinct striate or rugose sculpture; antennae entirely black.....2.
- Fourth abdominal segment smooth and shining; antennae ferruginous apically.....3.
2. Fifth and following abdominal segments rugosely sculptured, the anterior corners of the third and fourth segments rugose.
P. depressus Szép.
- Fifth and following segments smooth, anterior corners of third and fourth segments smooth.....*P. insularis* Cam.
3. Frontal projection below base of antennae small, in profile projecting only half as far forward as the mandibles; raised area of 1st abdominal segment three times as long as broad.
P. debilis, sp. nov.
- Frontal projection large, extending as far forward as the mandibles; raised portion of first segment a little over twice as long as broad.....*P. fortis*, sp. nov.

PLATYBRACON INSULARIS Cameron.

Proc. Linn. soc. N. S. Wales, 1911, 36, p. 353.

Sixteen specimens, all females, vary in length from 8.5 to 12 mm. but are very uniform in sculpture and in the small size of the facial

projection. The raised portion of the first abdominal segment is broad, but little over twice as long as broad and widest near the middle.

PLATYBRACON DEBILIS, sp. nov.

Type: M. C. Z. 9,056 and *Paratype*. Solomons: Fulakora. W. M. Mann.

♀. Length 9-11 mm. Pale fulvous, the tips of the mandibles, basal three fifths of antennae, ocellar area, and sheaths of ovipositor black; apical two fifths of antennae ferruginous; last tarsal joint fuscous. Wings black, with a pale fulvous basal band as wide as the length of the stigma and a hyaline spot beneath the stigma including most of the first cubital and the extreme base of the radial cell; veins black except at the base of the wing and the first section of the radius which is fulvous; stigma yellowish white. Head a little wider than long, broad and rounded off behind, the part behind the eyes nearly as long as the eyes; malar space shorter than the third antennal joint; transverse ridge below base of antennae poorly developed, but little projecting; above it is a median raised line extending between the antennae and continuing to the ocelli as an impressed line. Antennae 56-jointed. Mesonotum, scutellum, and propodeum smooth and shining, the latter without striae apically, but with the usual groove just outside the spiracle. First abdominal segment as long as broad, its raised portion weakly and irregularly striated, gradually widened behind, three times as long as broad, lateral portions very unevenly longitudinally striate. Second segment over twice as long as broad, its oblique furrows straight, weak, scarcely crenulated, extending two thirds across the segment where they widen out and disappear; lateral areas smooth; middle one coarsely striate except along hind margin; anteriorly with a narrow raised area which extends backward to a point at the posterior third of the segment. Third segment sculptured like the second, but more weakly, without the narrow median portion and with the oblique furrows curved, so that they terminate at the middle of the lateral margins of the segment. Fourth and following segments smooth; the fourth with a curved oblique furrow like the one on the third. Ovipositor a little shorter than the body. Legs stout as usual. Wing-venation as in the other species.

Two specimens, type and paratype from Fulakora, British Solomon Islands, W. M. Mann.

PLATYBRACON FORTIS, sp. nov.

Type and Paratype.—M. C. Z. 9,057. Solomons: Fulakora. W. M. Mann.

Later two additional females were received by Dr. Mann from Mr. Chas. Bignell, collected at Fulakora.

♀. Length 11–14 mm. Similar to the preceding but with the projecting ridge below the base of the antennae much more highly developed and projecting as far forward as the mandibles when seen in profile. The raised portion of the first abdominal segment is also broader in proportion to its width, only a little over twice as long as broad.

It is possible that this species may be only a well-marked form of the preceding.

Dr. Mann tells me that all the *Platybracon* which he obtained were flying about felled trees in the forest, so that it is probable that the members of the genus are parasitic on the larvae of wood-boring insects.

IPHIAULAX (ATANYCOLUS) BIGNELLI, sp. nov.

Type.—M. C. Z. 9,058. Solomons: Isabel, Fulakora. Charles Bignell.

♀. Length 16 mm., ovipositor 20 mm. Black; the head yellow except ocellar area; pro- and mesothorax, scutellum and four anterior legs fulvous; wings black, the stigma fulvous on basal half; clear spot below stigma present, but not very prominent. Head one third broader than thick, rounded behind, the temples nearly as broad as the eyes. Face rugose, opaque; malar space one third as long as the eye; no keel between antennae; frontal depression with a narrowly v-shaped median elevation. Prothorax above very finely punctate; mesonotum with distinct furrows anteriorly, smooth and polished; scutellum finely punctate behind; metathorax with a few fine scattered punctures, shining. First abdominal segment one half longer than wide at apex, with a high ridge at each side on the basal third enclosing a deep impression; behind the spiracle this ridge curves down to form a lateral carina which is bounded internally by a crenulated furrow, disc of segment strongly elevated, smooth and shining, without carinae; medially behind with a rounded rugose area. Second segment with a finely, irregularly striated median field anteriorly de-

fined by two curved raised lines which meet before the middle of the segment and continue to the apex as a strong median carina; also with an oblique carina on each side from the anterior angle to the posterior margin enclosing an obliquely rugose area, external to this is another similar rugose area that extends only to the middle of the segment. Third segment irregularly longitudinally rugose on basal third, without very distinctly separated anterior angles; fourth segment smooth except at extreme base, anterior angles not separated; following segments entirely smooth and shining. Pleurae smooth except for some delicate oblique aciculations on the propleura anteriorly and for a few fine scattered punctures on the metapleura. Last ventral segment prominent. Outer edge of stigma nearly twice as long as the inner; recurrent nervure received at apical fifth of first cubital cell; second section of radius three times as long as the first.

This species is similar to the Papuan *I. nova guineensis* Szép., but differs greatly in the sculpture of the abdomen, especially on the first segment.

AUSTROÖPIUS NOVA GUINEËNSIS Szépligeti.

Termes. füzetek, 1900, 23, p. 64.

There is one specimen from Ugi, British Solomon Islands. The species was originally described from New Guinea.

CARDIOCHILES SIMILIS, sp. nov.

Type.—M. C. Z. 9,059. Solomons: Santa Cruz, Graciosa Bay. W. M. Mann.

♂. Length 4.5 mm. Black, conspicuously clothed with white pubescence, especially on the posterior part of the mesonotum and the scutellum. Mandibles, except base and apex ferruginous; anterior legs with the tips of the femora and the tibiae and tarsi fulvous; spurs of four posterior tibiae whitish; palpi piceous; first abdominal segment reddish at the sides; posterior margins of segments 2-4 whitish. Wings deeply infuscated, with a subhyaline band across the middle. Head slightly more than twice as broad as thick, the occiput scarcely excavated; eyes densely hairy, their inner margins weakly convergent below; malar groove almost as long as the width of the mandibles at base; face shining, minutely punctate, without median carina, but with a small median tubercle below the antennae; face,

including clypeus, not higher than broad; vertex smooth and shining; ocelli separated by less than their own diameter. Antennae 35-jointed, slender, the joints at the middle nearly half longer than thick. Mesonotum shining, the parapsidal furrows very sharp and crenulate, but narrow; basal groove of scutellum broad, deep and coarsely crenulate. Propodeum smooth in front, coarsely reticulate behind where it is areolate, but irregularly so, the sculpture concealed by the pubescence. First abdominal segment with two longitudinal grooves separating a median portion that is strongly elevated behind; second segment before the transverse groove elevated, but without a median raised area. Propleurae striate below, irregularly punctate above; mesopleura with an irregularly punctate space near the top and below the middle, with a punctate line inside the posterior margin; metapleura smooth; sides of propodeum reticulate. Legs stout. Cubitus arising at the middle of the basal vein; first section of radius shorter than upper section of basal vein.

This species may be the same as *C. fasciatus* Szép. from New Guinea, but it is impossible to tell from the original description (Termes. füzetek, 1900, 23, p. 60) which omits the structural details of the Papuan species.

BRACON (CREMNOPS) SALOMONIS, sp. nov.

Type and Paratype.—M. C. Z. 9,060. Solomons: Santa Cruz, Graciosa Bay. W. M. Mann. A fourth specimen from Auki has the abdomen entirely yellow.

♂. Length, 7–8 mm. Pale fulvous, marked with black, the mandibles and venter more or less luteus. Head, except for a small ferruginous dot at middle of face, and antennae, black; teeth of mandibles, apical third of hind tibiae and hind tarsi, except extreme base of the joints, black; fifth and also usually the fourth segment of abdomen with a large transverse dark brown or black stain; wings black, the stigma brown basally and the parastigma luteus; discoidal cell with an irregular curved hyaline mark at the base. Head approximately as broad as high; malar space as long as the eye; front shining, finely punctate, almost straight in profile; frontal carinae extending to the lateral ocelli, but not so sharp on their inner half; maxillary palpi one half longer than the labial ones; antennae 40-jointed, scape, simple at apex; third joint distinctly longer than the fourth. Lateral pits of pronotum separated by a narrow median space. Middle lobe

of mesonotum with two narrow impressed lines; parapsidal furrows deep, broad and finely reticulated anteriorly. Propodeum with the superomedian area contracted to a point in front, so that it is narrowly triangular; petiolar area subtriangular, as broad as high; in all there are six longitudinal carinae, one strong complete transverse one at apical third and the supermedian and adjacent lateral areas bear four less strongly elevated transverse carinae. Propleurae smooth, with a series of coarse shallow punctures along the hind edge; mesopleura very finely and sparsely punctate, the groove in front of middle coxa almost obsolete; metapleura finely punctate, the punctures well separated. Abdomen highly polished; first segment twice as long as broad at apex which is twice as broad as the base; second segment with a large, oval, weakly convex space at the base. Tarsal claws bifid on all the legs, those of the front tarsi pectinate at the base; hind tibiae with two spines near the base of the spurs; longer spur nearly half the length of the metatarsus. Wings with normal venation; the second cubital cell about two thirds as long above as below.

This species is quite similar to two known from New Guinea; one of these was described by Szépligeti¹ as *Cremnops bicolor*, but as the name *bicolor* has been used by Brullé² for an African species of *Bracon* (*sensu auctorum*), I therefore propose the name *erimensis*, nom. nov. for Szépligeti's species. The second species, *B. xanthostigma*, may be known as *B. nova guineensis*, nom. nov. as *B. xanthostigma* has been used by Cresson³ for an American species of *Bracon* (*sensu auctorum*). The present species differs from *B. erimensis* by its shining face, incomplete ocellar carinae, and in color, although a variety described later by Szépligeti⁴ is more similar in color. From *B. nova guineensis* it differs by the triangular superomedian area and in color.

Cameron⁵ has described *Agathis fulgidipennis* from the Solomon Islands and this is evidently quite similar to the present *Bracon* in appearance. However, as the two genera are both well known as distinct and separable on the form of the tarsal claws, I cannot believe that they could be the same. The present species is also similar in color to the Papuan *Euagathis variceps* Cameron, and to *Bracon* (*Agathis*) *fumipennis* Smith.

¹ Termes. füzetek, 1900, 23, p. 60.

² Hist. nat. ins. hym., 1846, 4, p. 412.

³ Proc. Ent. soc. Philadelphia, 1865, 4, p. 303.

⁴ Termes. füzetek, 1902, 25, p. 66.

⁵ Proc. Linn. soc. N. S. Wales, 1911, 36, p. 356.

DISOPHRYS FUMIPENNIS Smith.

Journ. proc. Linn. soc. Zool., 1859, **3**, p. 176.

Two females from Tulagi probably represent a color-variation of this species which is known also from Aru and New Guinea. The body is entirely luteous, with the antennae, tips of hind tibiae, and entire hind tarsi black. The wings are much lighter basally and the stigma is yellow on the basal half.

CHELONUS SALOMONIS Cameron.

Proc. Linn. soc. N. S. Wales, 1911, **36**, p. 355.

One specimen from Rere.

PHANEROTOMA LONGIPES Szépligeti.

Termes. füzetek, 1900, **23**, p. 59.

A single specimen from Tulagi.

ICHNEUMONIDAE.

ERYTHROPIMPLA NIGRA, sp. nov.

Type.—M. C. Z. 9,061 ♀. Solomons: Rio. W. M. Mann.

♀. Length 13 mm. Black, marked with pale yellow as follows: lower surface of antennal scape, palpi, four anterior legs, except coxae and base of trochanters of middle pair, tegulae, and antetegulae; wings deep yellow on basal two fifths, blackish beyond, veins yellow at base, black beyond, stigma black. Head very transverse, three times as broad as thick; ocelli large, in a small triangle, the lateral ones less than their diameter from the median one and from the eye-margin. Eyes long, touching the mandibles below, deeply emarginate opposite the antennae, strongly convergent for a distance below; face sparsely, finely punctate; clypeus separated by a straight line, its anterior margin deeply emarginate; front and head behind shining

and scarcely punctate. Antennae with the first flagellar joint nearly as long as the second and third together, the latter subequal, twice as long as thick; following decreasing in length, becoming quadrate near the middle of the flagellum. Mesonotum punctate, confluent medially, but sparsely on the sides; parapsidal furrows impressed anteriorly. Scutellum strongly convex, nearly truncate behind, coarsely sparsely punctate and clothed with brownish hair as is also the propodeum. Propodeum coarsely densely punctate in front and at the sides, but with a median smooth stripe anteriorly and a large, oval, smooth area behind. Propleura smooth, except for a few punctures near the upper edge; mesopleura sparsely punctate, with a densely punctate space near the tegula and a large smooth area above and behind; with a vertical grooved line extending from the sternum almost to the upper margin opposite the middle of the tegula; sides of propodeum scarcely punctate; spiracle large, oval; metapleura smooth and shining. Abdomen coarsely punctate, more deeply and closely so on the second to fifth segments, except along apical margin; first segment with two strong convergent carinae that almost meet to form a triangular area at the base of the segment; second to fifth each with a basal and subapical transverse constriction, the latter curving forward medially; apical segments without distinct constrictions. Venter white. Ovipositor nearly as long as the abdomen, its sheaths very strongly hairy. Legs moderately stout; tarsal claws with a large, subacute lobe at the base. Stigma very narrow, submedian cell slightly shorter than the median; areolet large, obliquely triangular, subpetiolate above, receiving the recurrent nervure just before apex; transverse discoidal vein in hind wing broken at its lower fifth.

This species will run to either *E. calliptera* Sauss. or *E. pseudoptera* Morl. in Morley's key to the species of *Hemipimpla* (including *Erythropimpla*) from both of which it is abundantly distinct.

ECHTHROMORPHA SEMPERI Krieger.

Mitt. Zool. mus. Berlin, 1908, p. 329.

Cameron, Proc. Linn. soc. N. S. Wales, 1911, **36**, p. 362 (*pallidilineata*).

Morley, Revision Ichneumonidae British mus. Nat. hist., 1913, pt. 2, p. 48.

Seven females and ten males from Tulagi; one male from Rere. The females vary in size from 13 to 18 mm., and the males from 8-16 mm. The antennae are blackened on the apical third, especially in the female, but otherwise the specimens agree closely with Cameron's description.

MEGARHYSSA PICEA, sp. nov.

Type and Paratype.—M. C. Z. 9,062. Solomons: Malaita, Auki. W. M. Mann.

♀. Length 19–20 mm.; ovipositor 25–30 mm. Body piceous, varied to only a small extent with lighter color; cheeks and lower posterior orbits fuscous; first three joints of antennae fuscous below, joints 16–19 pale yellow; sides of face below, broader near clypeus, yellow; clypeus, anterior legs, middle and hind femora and tibiae, obscure lateral blotches near apex of first, third, fourth, fifth, and sixth abdominal segments dull reddish brown. One lighter specimen has the orbits yellow for a short distance above the antennae, the posterior orbits yellow, the propodeum and first abdominal segment dull ferruginous, the legs bright ferruginous and yellow spots at the upper edge of propleura, below tegula, at apex of first abdominal segment, and small obscure yellow spots on the sides of segments three to six. Wings brownish, paler at apex and with a blackish fascia, narrowed behind, extending from the costal margin to the discoidal vein, including the basal half of the radial cell and the apical half of the third discoidal cell. Head fully twice as wide as thick, narrowed behind the eyes, in vertical view with the temples one third as wide as the eyes; cheeks but little wider than the temples; face smooth and shining; clypeus with a small median acute tubercle at the middle of its lower margin and another at each lower angle. Flagellar joints gradually decreasing in length, the first distinctly longer than the second. Mesonotum with the usual coarse transverse striations; scutellum transversely rugose-punctate; propodeum shining, not punctate on the sides; its spiracles oval, only twice as long as broad. Propleura entirely smooth; mesopleura smooth above and behind, finely punctate in front; metapleura with small rather closely placed punctures. Abdomen polished, without fine sculpture; petiole scarcely twice as long as broad, widest at basal fourth behind which it is slightly narrowed; second segment twice as long as the first, fully twice as long as wide; third to fifth segments deeply emarginate behind. Legs as usual. Wings with the submedian cell distinctly longer than the median; areolet large, obliquely triangular, petiole about half the height of the areolet; recurrent nervure interstitial with the second transverse cubitus; cubito-discoidal vein in hind wing broken at its upper fifth.

This species is quite distinct in color from the several others known

from the Indo-Malayan region. In Morley's key it will run to *M. instigator* Sm. or to *M. tridentata* Cam. which he considers synonymous. From Tosquinet's very lengthy description (Mem. Soc. ent. Belg. 1903, 10, p. 97) of *M. instigator* it differs in the sculpture of the face, form of clypeus, and more slender abdominal petiole. From *M. tridentata* (Proc. Zool. soc. London, 1901, 1, p. 230) it differs in the sculpture of the face, propodeum, and metapleurae, dark scutellum, etc.

CYANOXORIDES SPLENDENS, sp. nov.

Type.—M. C. Z. 9,063. Solomons: Fulakora. W. M. Mann.

♀. Length 11 mm. Dark metallic blue; antennae black with joints 11–16 white (apical joints broken off) front and middle tibiae fuscous, their tarsi brownish yellow; hind coxae and femora ferruginous, their trochanters black, their tibiae black with a broad, indistinctly defined, pale brown annulus near base, their tarsi pale testaceous. Wings hyaline with a fuscous band, wider behind, including the basal vein and transverse median nervure, and a second band, fading out posteriorly which extends over the basal half of the radial cell; veins black, stigma pale at base. Head nearly twice as wide as thick, sharply narrowed behind the eyes; ocelli in a nearly equilateral triangle, the posterior pair about half farther from the eye-margin than from one another; face broadly protuberant below the antennae, closely punctate; interantennal keel prominent; antennae slender, the basal flagellar joints five or six times as long as thick, the flagellum hairy, especially beyond the first few joints; mandibles without teeth; front and vertex highly polished almost impunctate except at the sides below the ocelli; cheeks and malar space irregularly vertically striate through the coalescence of rows of elongated punctures; malar space half as long as the first flagellar joint. Mesonotum with weakly impressed parapsidal furrows; densely punctate with an area on each side that is sparsely punctate. Scutellum convex, rugosely punctate with a small median smooth depression on its apical half. Propodeum rather evenly convex above; coarsely rugose-punctate; areolated; median areas not separated from each other; basal and apical lateral areas completely defined; pleural space defined by a carina below it; spiracles linear. Propleura coarsely punctate above, smooth below; mesopleura coarsely punctate, confluent so near the middle coxa; metapleura rugose. Abdomen subpetiolate, the first segment slightly longer than the propodeum and scutellum together, its base one fourth

as wide as the apex; its surface very coarsely punctate, rugose medially and with a patch of oblique striae at the inner end of the oblique grooves; spiracles distinctly before the middle. Second segment slightly more than half as long as the first, broadest behind and distinctly shorter than wide; with a curved impression on each side that extends from the middle of the anterior margin to the middle of the lateral one; anterior corners separated by a short, deep oblique groove, surface confluent punctate on the raised portions and obliquely striate on the depressed parts. Third segment shorter than the second and similarly sculptured, but with much less evident striae; following segments smooth and shining. Hind legs very long, with the coxae and femora thickened; front tibiae twisted and constricted at the base; tarsal claws simple. Ovipositor as long as the body. Submedian cell distinctly shorter than the median; transverse cubitus long, one third the length of the recurrent nervure; transverse discoidal vein in hind wing broken below the middle.

To judge from the generic description of *Cyanoxorides*, this species is atypical in having a more nearly petiolate abdomen, with the spiracle of the first segment placed before the middle. It is so typical in all other respects, however, that it is undoubtedly congeneric with Cameron's species.

ENICOSPILUS Stephens.

There are four species of this genus in the collection, three of which are apparently undescribed, together with *E. salomonis* Cameron. They may be distinguished by the following key.

1. Submedian cell of same length as the median; abdomen black beyond second segment; wing-venation very dark. Plate 1, fig. 1.
E. fulacorensis, sp. nov.
- Submedian cell shorter than the median; abdomen entirely reddish; wing-venation brown. 2.
2. Propodeum finely sculptured; cubito-discoidal cell with two widely separated, chitinous spots, one near each end of the first section of the radius. Plate 1, fig. 4. *E. salomonis* Cam.
- Propodeum coarsely reticulate, especially toward apex; chitinous spots not as above. 3.
3. Recurrent nervure as long as the transverse cubitus; metapleura finely, closely punctate. Plate 1, fig. 3. *E. approximatus*, sp. nov.
- Recurrent nervure nearly twice as long as the transverse cubitus; metapleura irregularly sculptured, more or less rugose and striate. Plate 1, fig. 2. *E. malaitensis*, sp. nov.

ENICOSPILUS FULACORENSIS, sp. nov. Plate 1, fig. 1.

Type.—M. C. Z. 9,064. Solomons: Fulakora. W. M. Mann.

♀. Length 22 mm. Light reddish brown; abdomen piceous beyond the second segment; front and middle legs beyond the coxae, hind trochanters, knees, tibiae, and tarsi, and mandibles except tips dull yellow; flagellum of antennae black; sides of face and front, and posterior orbits pale yellow; wings hyaline, with the venation piceous, almost black. Face very finely and sparsely punctate, clypeus smooth and polished; malar space a little shorter than the thickness of the third antennal joint. Mesonotum not distinctly punctate. Scutellum carinate laterally, the carinae straight, twice as far apart at base of scutellum as at apex; apical half coarsely longitudinally striate. Propodeum smooth and shining before the carina, behind this evenly rugose-reticulate, the reticulations rather distinctly oblique. Mesopleura longitudinally finely striate below, indistinctly so above; metapleura coarsely striate below, finely so above. Posterior tibiae with a few dark bristles externally in addition to the yellow pubescence. Median cell as long as the submedian; chitinous spot in cubito-discoidal cell prolonged apically as a curved line almost to the radius; first section of radius thickened on the basal two thirds; base of third discoidal cell half as long as the apex of the second discoidal; discoidal vein in hind wing broken at lower third.

Type from Fulakara, British Solomon Islands, Wm. M. Mann.

This species is very similar in color to *E. nigrinervis* Cameron from New Britain, but differs at once in the length of the submedian cell and longitudinally striate scutellum.

ENICOSPILUS MALAITENSIS, sp. nov. Plate 1, fig. 2.

Type.—M. C. Z. 9,065. Solomons: Malaita. W. M. Mann.

♂. Length 22 mm. Light yellow-brown, the antennae fuscous toward tips; inner orbits above pale yellow. Wings hyaline, veins fuscous. Face finely closely punctate, clypeus more sparsely so, especially below. Malar space slightly longer than the diameter of the first flagellar joint. Mesonotum closely, very finely punctate. Scutellum with straight lateral carinae, its surface finely punctate, without striae, rather broad, twice as wide in front as at apex. Propodeum smooth and impunctate before the carina, coarsely reticulate

behind it. Mesopleura finely punctate above, longitudinally aciculate below; metapleura irregularly rugose-striate, without any distinct punctures. Posterior tibiae with a few short bristles externally in addition to the pubescence. Submedian cell much shorter than the median; cubito-discal cell with a chitinous triangular spot just beyond the middle, prolonged as a thin line nearly to the radial vein; discoidal vein in hind wing broken at lower third.

ENICOSPILUS APPROXIMATUS, sp. nov.

Plate 1, fig. 3.

Type.—M. C. Z. 9,066. Solomons: Malaita, Auki. W. M. Mann. ♀. Length 20 mm. Uniformly pale yellowish brown, without lighter markings and with only the tips of mandibles and tarsal claws black. Wings hyaline, venation piceous. Face and clypeus polished, not distinctly punctate; malar space only about half as long as the diameter of the first flagellar joint. Mesonotum minutely punctate. Lateral carina of scutellum straight; scutellum not striate toward apex which is half as broad as the base. Propodeum punctulate and shining before the carina, behind it reticulate, much more finely so anteriorly near the carina. Mesopleura below finely closely punctate, not distinctly striate; metapleura finely densely punctate above, sparsely so below. Hind tibiae without fine bristles in addition to the pubescence. Median cell longer than the submedian; cubito-discal cell with two chitinous spots close together, the basal one triangular and joined to the apical, arcuate one by an almost imperceptible brown line, discoidal vein in hind wing broken at the lower third.

LEUCOSPIDAE.

LEUCOSPIS MACRODON Schletterer.

There are three specimens of this rather widely distributed species from Fulakora, Auki, and Malaili. Two are quite typical, agreeing in color with the original description and with Papuan specimens, while another is entirely black, except for the antennal scape, an oblique stripe on each side of the front opposite the scape, a spot at the upper angle of the hind coxa, a stripe along the upper edge of the

femur, most of the four anterior legs and the posterior tarsi which are yellow or brownish yellow. The melanic specimen is, however, structurally the same as the fully marked specimens.

CHALCIDIDAE.

CHALCIS Fabr.

There are four species of *Chalcis* in the present collection, including one already described from the Solomons, and another, *C. euplocae*, which is apparently widespread in the Indo-Malayan region. The following key will distinguish the four species.

1. Cheeks, below eye and behind malar carina, with coarse reticulate sculpture; hind femora tricolored, black with rufous spot before apex which is white.....*terribilis*, sp. nov.
Cheeks punctate or nearly smooth; hind femora bicolored, black with the apex yellow or white.....2.
2. Four anterior legs entirely lemon-yellow beyond the middle of the femora; hind tibiae entirely yellow except at extreme base.
euplocae Westw.
Four anterior legs with the femora black except at tip; all tibiae white or yellow varied with black.....3.
3. Hind tibiae black, with a white stripe externally except at base; middle tibiae white with a black stripe internally.
C. salamonis Cam.
Hind tibiae black, yellow externally at extreme base; middle tibiae black, yellow at base and apex.....*C. piraticus*, sp. nov.

CHALCIS TERRIBILIS, sp. nov.

Type.—M. C. Z. 9,067. Solomons: Rere. W. M. Mann.

♀. Length 5 mm. Black, tegulae with a large white spot; front femora white behind near tip and at extreme tip in front, their tibiae brown with a white streak externally at base and spot at base; middle legs with knees and tip of tibiae yellowish white; hind femora white at extreme apex and with a subapical rufous spot externally, their tibiae externally with a white spot near base and at apex; all tarsi pale brownish yellow. Head above umbilicately punctate; front between antennal cavity and eye with a strong carina extending along

lower two thirds of eye; cheeks very coarsely sculptured, irregularly punctate-reticulate; malar carina weak, curving backward before meeting the eye; subgenal and postgenal carinae strong. Antennae very stout, flagellar joints after the second fully twice as wide as long, those near apex nearly three times. Eyes bare; head and body hairs glistening white. Thorax above umbilicately punctate; lateral carinae of prothorax well developed; each as long as the median space between them. Scutellum at apex with a deeply bilobed projection. Abdomen smooth, with very fine punctures on the sides of the third and following segments. Hind femur about twice as long as wide, with a small projection inwardly near base, their inner surface smooth, outer surface very sparsely and finely punctate; about 13 femoral teeth, basal ones, except first, and apical ones smaller than the others. Wings nearly hyaline; postmarginal vein half as long as the marginal and twice as long as the stigmal.

C. terribilis may be known by the configuration of the facial carinae and banner-like color-pattern of the hind femora.

CHALCIS PIRATICUS, sp. nov.

Type and Paratypes.—M. C. Z. 9,068. Solomons: Malaita. W. M. Mann.

♀. Length 3.2–4 mm. Black; the tegulae pale yellow; front and middle knees, tips of tibiae and tarsi honey-yellow; extreme apices of hind femora, ring including basal fourth of tibiae, apex externally of tibiae, and tarsi, yellow. Pubescence of body whitish. Head rugose-punctate above; ocelli in a low triangle, the lateral ones less than their diameter from the eye-margin, eyes bare or nearly so; cheeks smooth; malar carina dividing just below eye, one branch extending along the inner orbit as a light-carina, the other branch extending to the hind margin of the head so as to enclose the cheek in the form of a rhomboid between carinae. Antennae rather slender, the middle joints of the flagellum less than twice as broad as long. Thorax closely umbilicately punctate; lateral carinae of pronotum weakly developed, each about as long as the space between them. Scutellum simple, sharply rounded at apex. Abdomen shining, sides of third to sixth segments faintly shagreened, hairy: apical two segments coarsely shagreened. Posterior femora very broad, distinctly more than half as wide as long; internally near base without distinct tubercle, although there is a slight trace of one; underside with about

13 teeth, basal one large, triangular, next small, next larger than the following which form a decreasing series; outer surface finely, closely punctate; inner surface very finely and sparsely punctate. Post-marginal vein one third as long as the marginal and one half longer than the stigmal.

Known from the others occurring on these islands by the almost entirely black hind femora, with minute yellow marking at tip.

CHALCIS SALOMONIS Cameron.

Proc. Linn. soc. N. S. Wales, 1911, 36, p. 349.

One female from Ugi.

CHALCIS EUPLOEAE Westw.

Trans. Ent. soc. London, 1837, 2, p. vi Proc.

One specimen from Yandina.

SCELIONIDAE.

SCELIO SETIGER, sp. nov.

Type.—M. C. Z. 9,069. Solomons: Ugi. W. M. Mann.

♀. Black, the four anterior tibiae and tarsi fuscous, front wings strongly infuscated, hind ones hyaline. Front and vertex reticulate, with shallow, thimble-like punctures; a small smooth area above the median ocellus and a triangular smooth space above the base of antennae; reticulations of front below on the sides forming several raised lines that converge toward the base of the mandible; malar furrow nearly half as long as the eye; cheeks and back of head irregularly reticulate, more coarsely so on the cheeks which have no striae of any kind. Head seen from above twice as wide as thick, strongly excavated behind, the lateral ocelli very close to the eye-margin. Antennae stout; scape reaching to level of middle of eye; first flagellar joint one half longer than the pedicel, strongly narrowed basally, slightly over twice as long as thick at tip; three following joints widened, twice as wide as long and really forming a part of the club in

form except that they appear to be much more freely movable; basal joints of club fully twice as wide as long. Thorax coarsely rugose-reticulate; mesonotum without parapsidal furrows, although all its reticulations form more or less distinctly longitudinal series. Prothorax smooth, lightly punctured on its contracted part, behind reticulate, with a slight but noticeable tooth at the humeral angle. Scutellum very convex, semicircular, with large punctures forming reticulations, each puncture bearing a short stiff hair or bristle, as do also the punctures of the mesonotum, although here the hairs are not so conspicuous and stout. Metanotum (postscutellum) projecting very slightly as a fluted ridge; propodeum strongly depressed coarsely rugose medially and behind, finely so laterally where it is clothed with dense short whitish hair. Abdomen of the usual form, the first five segments rather regularly longitudinally striate, striae coarser on the first and more irregular on the third segment; apical margin of second to fourth, wider medially on the third and fourth, smooth and shining; sixth segment with deep, large setigerous punctures, third segment the largest, a little wider than long. Propleurae rugose-punctate, more coarsely so behind, mesopleurae with a few very irregularly placed punctures of variable size and shape; sides of propodeum coarsely reticulate anteriorly, finely so behind. Underside of abdomen sculptured almost like the upper side. Costal vein sharply defined, fuscous; stigma small, dark brown as is also the oblique stigmal vein.

This species is readily distinguishable from others occurring in the Indo-Malayan region by its dark color, infuscated wings, sculpture of head and cheeks, etc. In Kieffer's key (Ann. Soc. sci. Bruxelles, 1908, 32, p. 124) which is quite complete, it runs near *S. minor* Voll. from Maderia and *S. fulvipes* Först, from Germany.

CACELLUS CAERULEUS, sp. nov.

Type.—M. C. Z. 9,070. Solomons: Santa Cruz, Graciosa Bay. W. M. Mann.

♀. Length 7 mm. Dark metallic blue, legs and antennae entirely black; wings heavily infuscated, the hind ones subhyaline at base, the fore ones dark fuscous anteriorly near the base. Front very deeply and coarsely confluent punctate, with a short median smooth stripe above the base of the antennae; occiput coarsely rugose, temples and cheeks sculptured like the front; malar space short, with a deep

furrow; cheeks wide, but temples very narrow; eyes bare, convergent on the front above; ocelli large, in a small equilateral triangle, separated from one another by their own diameter, but almost touching the eye. Mandibles broad, tridentate. Antennae with long, cylindrical scape, nearly as long as the eye-height; first flagellar joint over twice the length of the pedicel and over one third as long as the scape; second flagellar joint wider, twice as long as wide; third wider, quadrate, fifth and following which form the rather slender club transverse, those near the middle of the club twice as wide as long. Thorax and scutellum above very coarsely punctate, the punctures forming longitudinal rugae on the sides of the pronotum and a more or less distinct row just outside the well-marked parapsidal furrows; no median furrow on mesonotum, although there are two short indistinct ridges anteriorly between the parapsidal furrows. Scutellum rounded behind; postscutellum unarmed, visible only as a series of deep foveate punctures under the edge of the scutellum. Propodeum medially raised almost to the level of the scutellum as a triangular portion, pointed behind where it is minutely bidentate; on sides below this smooth, followed by a carina below which the surface is concealed by a rather dense coat of short white hair. Propleurae smooth and polished anteriorly, white, hairy on the posterior strip; mesopleura with a smooth oblique depression, below and anteriorly coarsely strigose, behind with a series of foveae, hairy in front; metapleura rugose-reticulate beneath the hair which is less dense than that on the lower part of the propodeum. Abdomen about half longer than the head and thorax together, with six visible segments; first as long as wide, but little narrowed basally, coarsely longitudinally striate; second and third segments of equal length and similar sculpture, the third quadrate, but the second narrower basally; surface longitudinally striate-reticulate, with series of fine punctures between the reticulations, laterally with a sharp carina which extends also along the sides of the first and fourth segments; medially with a raised line which extends over the fourth segment and indistinctly beyond; fourth segment slightly shorter than the third, quadrate, similarly sculptured; fifth as long as wide, considerably narrowed behind, the lineate sculpture less evident, sixth small, triangular, entirely without lineations but retaining the punctures; all sutures smooth, impunctate; venter coarsely, sparsely punctate, much more convex than the dorsum. Legs rather slender, the tarsal claws simple. Marginal vein rather long, about five or six times as long as thick; stigmal oblique, knobbed, nearly one third longer than the marginal; basals,

submedian, and radial veins indicated strongly as dark streaks; cubital and discoidal ones indistinctly so in the same way.

This is a large, beautiful species and should be easily recognized. Although I have not been able to compare it with the type-species of *Cacellus* it agrees perfectly with the original description of the genus and is congeneric with American species which I refer to *Cacellus*.

BETHYLIDAE.

APENESIA MALAITENSIS, sp. nov.

Type.—M. C. Z. 9,071. Solomons: Malaita, Auki. W. M. Mann.

♀. Length 4.8 mm. Head, thorax, antennae, and legs pale yellowish brown; abdomen piceous with the apical margins of the basal segments and the sixth and seventh segments entirely fuscous or honey-yellow. Head to apex of clypeus about one fourth longer than wide, slightly narrowed above, with the upper angles obliquely rounded; occipital margin concave; eyes minute, oval, smaller than the pedicel of the antennae, inserted very close to the mandibles; clypeus sharply elevated medially; mandibles bidentate, apical tooth much larger than the inner one. Front and back of head with faint traces of longitudinal aciculations and with a few large scattered punctures. Antennae 13-jointed, barely reaching the vertex; scape thick, obclavate, over half as long as the remainder of the antennae; pedicel globose, as long as the first flagellar joint, second and third flagellar joints each about as long as the first, and somewhat broader; following much broader, transverse; last joint twice as long as the preceding, broadly rounded at tip. Pronotum one half longer than wide, sculptured like the head, rounded in front, truncate behind; neck visible from above, one third as long as the pronotum, rounded in front; pleurae visible from above, appearing one fourth as wide as the pronotum. Middle lobe of mesonotum subtriangular, nearly as long as wide and rounded behind; lateral lobes about twice as long as the median one, the whole mesonotum one half wider than the pronotum, its surface smooth. Propodeum constricted just beyond basal third, a little wider behind than in front; anterior margin concave; apex evenly rounded; upper surface indistinctly longitudinally aciculate, with a few scattered large punctures. Abdomen smooth, as long as the head and thorax together; sparsely clothed with long hairs on the sides, more conspicuously so toward the apex; second segment the

longest, quadrate; following growing gradually shorter and narrower. Legs very stout, especially the front femora; middle tibiae strongly, irregularly bispinulose along the posterior surface. Tarsal claws simple.

This species resembles the Papuan *A. proxima* Kieffer in color but differs in the punctate head.

LIST OF SPECIES.¹

STEPHANIDAE.

- Stephanus froggattii* Cam. Solomon Is.
 Proc. Linn. soc. New South Wales, 1911, **36**, p. 357.
Antea, p. 98.
- Stephanus violaceipennis* Cam. New Britain.
 Proc. Zool. soc. London, 1901, **1**, p. 225.
- Parastephanellus maculifrons* Cam. Bismarck Archipelago.
 Journ. Roy. Asiatic soc. Straits branch, 1902, no. 37, p. 32.
- Parastephanellus orbitalis* Brues. Solomon Is.
Antea, p. 98.
- Diastephanus salomonis* Westw. Solomon Is., New Hebrides.
 Thesaur. entom. Oxon., 1874, p. 128.
Antea, p. 100.

EVANIIDAE.

- Gasteruption viridescens* Kieff. New Britain.
 Berliner entom. zeits., 1906, **51**, p. 273.
- Trigonofoenus salomonis* Brues. Solomon Is.
Antea, p. 101.
- Evania erythrocnemis* Schlett. New Britain.
 Ann. K.-k. naturh. hofmus. Wien, 1889, **4**, p. 158.
- Evania mediana* Schlett. New Britain.
 Ann. K.-k. naturh. hofmus. Wien, 1889, **4**, p. 157.
- Evania muelleri* Schlett. New Britain.
 Ann. K.-k. naturh. hofmus. Wien., 1889, **4**, p. 170.

BRACONIDAE.

- Spathius manni* Brues. Solomon Is.
Antea, p. 102.
- Spathius melleus* Brues. Solomon Is.
Antea, p. 103.
- Acanthormius dubitatus* Brues. Solomon Is.
Antea, p. 105.
- Pegarthrum fuscipenne* Cam. Solomon Is.
 Proc. Linn. soc. New South Wales, 1911, **36**, p. 355.
- Platybracon debilis* Brues. Solomon Is.
Antea, p. 107.

¹ Distribution outside the included area is not cited, see p. 97-98.

<i>Platybracon fortis</i> Brues.	Solomon Is.
Antea, p. 108.	
<i>Platybracon insularis</i> Cam.	Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36 , p. 353.	
Antea, p. 106.	
<i>Iphiaulax bignelli</i> Brues.	Solomon Is.
Antea, p. 108.	
<i>Nedinoschiza cratocephala</i> Cam.	Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36 , p. 354.	
<i>Cratobracon ruficeps</i> Cam.	
Proc. Zool. soc. London, 1901, 1 , p. 227.	
<i>Bracon</i> (auct.) <i>diore</i> Cam.	New Britain.
Proc. Zool. soc. London, 1901, 1 , p. 226.	
<i>Bracon</i> (auct.) <i>leucostigmus</i> Cam.	Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36 , p. 352.	
<i>Austroöpius nova guineënsis</i> Szép.	Solomon Is.
Termes. füzetek, 1900, 23 , p. 64.	
Antea, p. 109.	
<i>Cardiochiles similis</i> Brues	Solomon Is.
Antea, p. 109.	
<i>Bracon salomonis</i> Brues.	Solomon Is.
Antea, p. 110.	
<i>Disophrys fumipennis</i> Smith.	Solomon Is.
Journ. proc. Linn. soc. London. Zool., 1859, 3 , p. 176.	
Antea, p. 112.	
<i>Agathis fulgidipennis</i> Cam.	Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36 , p. 356.	
<i>Chelonus salomonis</i> Cam.	Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36 , p. 355.	
Antea, p. 112.	
<i>Phanerotoma longipes</i> Szép.	Solomon Is.
Termes. füzetek, 1900, 22 , p. 59. (<i>Phanerotomella</i>).	
Antea, p. 112.	

ICHNEUMONIDAE.

<i>Eristicus froggattii</i> Cam.	Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36 , p. 359.	
<i>Eristicus salomonis</i> Cam.	Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36 , p. 358.	
<i>Eurycryptus laticeps</i> Cam.	New Britain.
Proc. Zool. soc. London, 1901, 1 , p. 232.	
<i>Mesostenus insularis</i> Cam.	Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36 , p. 360.	
<i>Xanthocryptus luteus</i> Cam.	Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36 , p. 364.	

- Xanthoeryptus robustus* Cam. New Britain.
Proc. Zool. soc. London, 1901, 1, p. 233. Solomon Is.
- Cyanoxorides splendens* Brues. Solomon Is.
Antea, p. 115.
- Echthromorpha bitecta* Morley. New Caledonia.
Revis. Ichneumonidae British mus. Nat. hist., 1913, pt. 2, p. 39.
- Echthromorpha diversor* Morley. Solomon Is. or New Hebrides.
Revis. Ichneumonidae British mus. Nat. hist., 1913, pt. 2, p. 47.
- Echthromorpha equisita* Morley. New Caledonia.
Revis. Ichneumonidae British mus. Nat. hist., 1913, pt. 2, p. 40.
- Echthromorpha incrmis* Morley. New Caledonia.
Revis. Ichneumonidae British mus. Nat. hist., 1913, pt. 2, p. 46.
- Echthromorpha insidiator* Smith. New Britain.
Proc. Linn. soc. London. Zool., 1863, 7, p. 9.
- Echthromorpha semperi* Krieg. Solomon Is., Peleu Is.
Mitt. Zool. mus. Berlin, 1908, p. 329.
Antea, p. 113.
- Erythropimpla nigra* Brues. Solomon Is.
Antea, p. 112.
- Erythropimpla pallidiceps* Cam. Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36, p. 362.
- Exeristes consimilis* Morley. New Hebrides.
Revis. Ichneumonidae British mus. Nat. hist., 1914, pt. 3, p. 27.
- Lissopimpla erythropus* Cam. Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36, p. 363. (rufipes).
- Lissopimpla pacifica* Morley. New Caledonia.
Revis. Ichneumonidae British mus. Nat. hist., 1913, pt. 2, p. 35.
- Megarhyssa fulva* Cam. (nec Voll.) New Britain.
Proc. Zool. soc. London, 1901, 1, p. 229. (Rhyssa)
(= fasciata Sm.).
- Megarhyssa picea* Brues. Solomon Is.
Antea, p. 114.
- Megarhyssa tridentata* Cam. New Britain.
Proc. Zool. soc. London, 1901, 1, p. 230. (Rhyssa)
(= instigator Sm.).
- Theronia flavistigma* Morley. Solomon Is.
Revis. Ichneumonidae British mus. Nat. hist., 1914, pt. 3, p. 47.
- Xanthopimpla insularis* Cam. New Britain.
Proc. Zool. soc. London, 1901, 1, p. 231.
- Eremotylus longiventris* Cam. New Britain.
Proc. Zool. soc. London, 1901, 1, p. 228.
- Enicospilus approximatus* Brues. Solomon Is.
Antea, p. 118.
- Enicospilus fulacorensis* Brues. Solomon Is.
Antea, p. 117.

- Enicospilus lunulatus* Szép. Bismark Archipelago, Nusa Is.
Ann. Mus. nat. Hungarici, 1906, 4, p. 143.
- Enicospilus malaitensis* Brues. Solomon Is.
Antea, p. 117.
- Enicospilus nigrinervis* Cam. New Britain.
Proc. Zool. soc. London, 1901, 1, p. 229.
- Enicospilus salomonis* Cam. Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36, p. 361.
Antea, p. 116.
- Enicospilus trinotatus* Morley.
Revis. Ichneumonidae British mus. Nat. hist., 1912, pt. 1, p. 53.
Australia and possibly Solomon Is. or New Hebrides.
- Leptophion longiventris* Cam. New Britain.
Proc. Zool. soc. London, 1901, 1, p. 228.
- "*Ophion*" *austrocaledonicus* Montr. New Caledonia.
Ann. Soc. Linn. Lyon, 1864, 11, p. 248.
- Paniscus autipodum* Vachal. New Caledonia.
Revue. ent., 1907, 26, p. 120.

LEUCOSPIDAE.

- Leucospis antiqua* Walker. New Caledonia.
Journ. entom., 1860, 1, p. 19.
- Leucospis gambeyi* Maindron. New Caledonia.
Ann. Soc. ent. France, 1878, 8, p. 164.
- Leucospis macrodon* Schlett. Solomon Is., New Britain.
Berliner entom. zeitschr., 1890, 35, p. 168.
Antea, p. 118.

CHALCIDIDAE.

- Chalcis cailliaudi* Montr. New Caledonia.
Ann. Soc. Linn. Lyon., 1864, 11, p. 249.
- Chalcis euploeae* Westw. Solomon Is.
Trans. Entom. soc. London, 1837, 2, p. vi, Proc.
Antea, p. 121.
- Chalcis piraticus* Brues. Solomon Is.
Antea, p. 120.
- Chalcis salomonis* Cam. Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36, p. 349.
Antea, p. 121.
- Chalcis terribilis* Brues. Solomon Is.
Antea, p. 119.

CLEONYMIDAE.

- Aressida carinicolis* Cam. Solomon Is.
Proc. Linn. soc. New South Wales, 1911, 36, p. 351.

SCELIONIDAE.

Cacellus caeruleus Brues.

Solomon Is.

Antea, p. 122.

Scelio setiger Brues.

Solomon Is.

Antea, p. 121.

BETHYLIDAE.

Apenesia malaitensis Brues.

Solomon Is.

Antea, p. 124.

PLATE 1.