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EN

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'S-GRAVENHAGE  
MARTINUS NIJHOFF

Sm 1906

# HYMENOPTERA

OF THE

Dutch Expedition to New Guinea in 1904 and 1905.

PART I: THYNNIDÆ, SCOLIDÆ, POMPILIDÆ, SPHEGIDÆ  
AND VESPIDÆ.

BY

P. CAMERON.

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## Thynnidæ.

*Thynnus albopilosellus* sp. nov.

Three-coloured; the head, pleuræ, breast, metanotum and ventral surface of abdomen densely covered with long whitish pubescence; the following parts are rufous: the vertex, upper part of front (the mark narrowed below), the upper part of occiput, a broad line on the base of upper part of pronotum, the mesonotum and scutellum, except narrowly on the sides and the basal 4 segments of the abdomen — the basal broadly, the red on the others becoming gradually narrower; the following parts are whitish yellow: the clypeus, the lower part of the front in the middle, the inner orbits broadly from shortly below the ocelli, labrum, mandibles, except the teeth, the outer orbits, the basal slope of the pronotum, a narrow line on its apex, post-scutellum, metanotum, the basal slope of the abdomen, a quadrangular mark on the upper part of the 1<sup>st</sup> segment, broader than long and of equal width, a more irregular one on the sides of the 2<sup>nd</sup>, dilated laterally

at the base, the outer dilated part reaching close to the base of the segment; a similar mark on the 3<sup>rd</sup>, but with the 2 basal parts broader and rounder, a transverse mark, reaching near the centre of the segment, narrowed in the middle, dilated laterally, the inner dilated part larger and broader than the outer; a short line on the sides of the 5<sup>th</sup> segment and 2 irregular marks of moderate size in its centre; black are: a broad irregular line on the occiput, the apex of the propleuræ, meso- and metapleuræ, breasts, the lower part of the 1<sup>st</sup> abdominal segment, a longish mark of equal width on its sides at the apex, similar marks on the apices of the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, marks of about the same length, but roundly narrowed at the base, on the 3 following segments, except for the 2 marks in the centre of the 5<sup>th</sup>, and the ventral surface. The antennæ, apical two-thirds of the fore femora and all the tibiae and tarsi, except the apical joints of the anterior tarsi, are rufo-testaceous, the rest of the legs black, except the calcaria which are white. Wings hyaline, the base and the anterior parts largely dark fuscous, the costa and stigma black, the nervures, except at the base, testaceous. ♂.

Length 14 m.m.

Merauke.

Smooth and shining; the middle segments of the abdomen sparsely punctured, the 7<sup>th</sup> strongly, closely longitudinally striated, its apex slightly incised in the middle, the sides broadly rounded; there is a strong, sharply-pointed tooth on the sides of the 6<sup>th</sup> ventral segment, the apex of which is broadly roundly incised; the hypopygium ends in a long spine, which becomes gradually narrowed to a sharp point; there is a smooth, flat keel down its centre; at the base of the tooth the segment is transverse; on the sides, at the apex, are 2 short, but distinct teeth. There are 2 white spots on the 2<sup>nd</sup> ventral segment; the 3<sup>rd</sup> and 4<sup>th</sup> are indistinctly spotted. The 3<sup>rd</sup> joint of the antennæ is shorter than the 4<sup>th</sup>.

Clypeus large, its apex broadly projecting, the sides ending in distinct teeth; the centre rounded, almost transverse. Ocelli in a curve; the hinder separated from each other by a distinctly greater distance than they are from the eyes. The 3<sup>rd</sup> abscissæ of the radius and cubitus are longer, but not much, than the 2<sup>nd</sup>; the 1<sup>st</sup> recurrent nervure is received shortly beyond the middle; the 2<sup>nd</sup> near the apex of the basal fifth of the cellule.

This is a *Thynnus* as limited by Ashmead in his classification of the family, »Canadian Entomologist«, 1903, p. 98.

### Scoliidæ.

#### *Discolia nitida* Smith.

Described from Aru (Journ. Linn. Soc. III, 152; c.f. also Saussure, Cat. Gen. Sp. Scol., 108). The specimens in the collection do not agree in all respects with Smith's description; they are smaller; but fit it fairly well on the whole. The body and legs are densely covered with long black pubescence. The space outside the hinder ocelli is strongly, but not closely punctured, the punctures irregularly arranged; there is a distinct furrow on the lower half of the front, bordered irregularly by deep punctures; the apex of the clypeus is depressed, opaque and closely rugosely punctured. There are scattered punctures along the base and sides of the mesonotum; the basal half of the scutellum and the post-scutellum are more weakly and closely punctured, this being also the case, but more weakly, with the metanotum; the pleuræ are more strongly and closely punctured. Basal segment of the abdomen weakly and sparsely, the middle slightly more strongly, the apical coarsely, rugosely punctured and with the hair dense and long; it is equally long as the basal segment, but not so dense; the middle segments are almost bare and are very shining. The underside of the flagellum is dark rufo-fuscous.

Calcaria and tarsal spines black. The upper part of the mesopleuræ at the base distinctly projects.

The ♂ has the thorax more opaque and more closely and strongly (including the mesonotum) punctured all over; it is also densely covered all over with black pubescence. The mesopleuræ, before the tegulæ, project more distinctly, the upper part being distinctly separated from the lower, projecting over it. Clypeus opaque, sparsely punctured and haired; its apex is broadly rounded.

*Dielis formosa* Guérin, var. *maculiceps* Cam.

What is probably a variety of this Australian species is in the collection from Merauke. It has the 2<sup>nd</sup> and 3<sup>rd</sup> abdominal segments entirely and the greater part of the 4<sup>th</sup> and 5<sup>th</sup> pale orange-yellow, the 2<sup>nd</sup> segment with 2 and the 3<sup>rd</sup> with a larger oblique, somewhat pyriform black mark on the sides. There is a curved transverse mark on the vertex close to the eyes of a pale orange colour, and there is a similarly coloured line behind the eyes. The apex of the clypeus is pale orange-yellow. Legs black, the hair long and pale, the spines and calcaria pale rufous; the inner spur of the hind tibiæ is much longer than the outer and ends in a dilated point. The hair on the occiput, pro- and mesonotum and scutellum is bright red; on the rest of the head and thorax it is pale fulvous, almost white. The abdominal segments are smooth; the last is thickly covered with long black hair.

*Dielis 7-cincta* Fab. ?

There is a single ♂ of what is probably the above species. The clypeus, except for a triangular black mark in the centre, the narrowed end above; the lower half of the outer orbits, the mark narrow above, becoming gradually wider below and extending below the eyes, the fore legs and the 4 hind tibiæ

below are yellowish-testaceous or pale yellow, the middle tibiæ and tarsi rufous. The sides of the basal three abdominal segments are pale testaceous to the middle at the apex, the lines widest on the outer side; the apices of the others are very narrowly lined with white; there is a broad band, pale testaceous in colour, on the apex of the 2<sup>nd</sup> ventral segment and a similar one on the sides of the 3<sup>rd</sup>. The pubescence on the head and thorax is dense and pale fulvous to dark fulvous on the mesonotum; the pleuræ and apex of metanotum are covered with a dense pale golden pile. The abdomen is covered densely with black hair; it has distinct violaceous and blue tints. Wings light fuscous-violaceous, the posterior paler; the nervures and stigma are black. Length 21 m.m.

I suspect that the species described above is *septemcincta* Fab.; Saussure (Cat. Gen. Sp. Scol., p. 223) thinks it very probable that the latter is the ♂ of *formosa*. What Saussure, *l. c.* p. 208, has described doubtfully as the ♂ of *formosa* has the wings »sordide ferrugineo-hyalinis, cupreo-micantibus«; the wings in *septemcincta* ♂ he calls »hyalinae«. But see also Saussure, *l. c.* p. 301. It is impossible to decide the matter without more information and specimens. I consider, myself, that the ♂ I have described above may be the veritable ♂ of *formosa*. Both *formosa* and *septemcincta* are Australian species; but it may be pointed out that *formosa* has been recorded from New Guinea by Mantero and Albert Schulz. Cf. Berl. Ent. Zeits. XLIX, 212 and Ann. del Museo Civico di Storia Nat. di Genova, 1900, p. 13.

### Pompilidæ.

#### *Salix ferrugineus* Sm.

*Mygimnia ferruginea* Smith, Journ. Linn. Soc. IV, Supp. 121;  
*Salix ferrugineus* Cameron, Résul. d. l'Exp. Sc. Néerl. à la  
N. Guinée, p. 54.

Etna Bay.

*Salix fervidus* Smith.

*Prionemis fervidus* Smith, Journ. Linn. Soc. III, 156; *l. c.* IV, Supp. 120.

Etna Bay.

This species was described from Aru. Smith calls the wings »fuscus basi subhyalinis«; in the Etna Bay example they are brilliantly blue-violaceous, with the base narrowly yellowish hyaline. Apart from the difference in colouration *S. fervidus* (*S. ferrugineus* has the abdomen coloured like the head and thorax and the base of the wings is not yellowish hyaline) may be known from the commoner *ferrugineus* by the longer and more slender antennæ, by the more prominent metanotal tubercles; by the 3<sup>rd</sup> transverse cubital nervure being roundly curved, not angled and obliquely sloped as in *ferrugineus*, and by the arrangement of the ocelli; in *fervidus* they are separated from the eyes by twice the distance they are from each other; in *ferrugineus* by the same distance, the vertex between the eyes being narrower in the latter species.

**Sphegidæ.**

*Sphex umbrosus* Christ.

Merauke.

Cf. Cameron, *l. c.* p. 56.

The specimens agree with the form which F. Smith described from Australia as *Sphex ephippium*. I have the latter from Brisbane, Australia, identical with the Merauke examples.

*Sceliphron letium* Smith.

Cf. Cameron, *l. c.* p. 56.

Merauke. May.

*Sceliphron Bruinjnii*, Maind.

Cf. Cameron, *l. c.*, p. 46.

Merauke; Etna Bay.

The markings on the head, thorax and four front legs are pale, whitish yellow; the apex of the clypeus is broadly bilobate.

*Sceliphron papuanum* sp. nov.

Black; the antennal scape, clypeus except narrowly round the apex and a larger trilobate mark above, the lateral lobes large, rounded and narrowed towards the apex, the central much shorter, narrower and more sharply pointed; a line on the pronotum, basal two-thirds of scutellum, an irregular mark on the base of the metanotum at the sides, 2 smaller, longer than wide, marks in the middle, the apical fourth (the mark rounded behind), base of tegulæ, a small triangular mark below them, and, touching the latter, a longer curved horn-shaped mark; the dilated part of the abdominal petiole and broad lines on the apices of the 3<sup>rd</sup> and following segments, bright yellow, slightly tinged with orange; the abdominal petiole, apical half of the 4 anterior femora, the apical three-fourths of the posterior and the tibiæ and tarsi, reddish; wings hyaline, tinged with fulvous, the nervures and stigma rufo-testaceous. ♀.

Length 18 m.m.

Merauke.

Head and thorax densely covered with long white pubescence. Apex of clypeus broadly bilobate. The pubescence on the face and on lower inner orbits is pale golden; the rest of the upper part of the head is thickly covered with long pale hair. Front punctured, but not strongly or closely; its lower half with a deep furrow in the centre. Antennal tubercles with a yellow mark. Mesonotum finely, closely transversely striated. Base of scutellum finely punctured; its apex

finely, closely longitudinally striated. Median segment finely closely rugosely punctured, the apical slope irregularly transversely striated. There is an irregular yellow mark on the apex of the hind coxæ above.

Closely allied to *S. Bruinjui* and to the Assamese *S. tibiale* Cam.; may be known from both by the red abdominal petiole.

*Psenulus ? interstitialis* sp. nov.

Rufo-testaceous, the thorax and 4 anterior legs much paler in colour; the head black, the mandibles, except at the apex, and the palpi whitish; wings hyaline, the costa and stigma testaceous, the nervures darker coloured, the 1<sup>st</sup> recurrent nervure interstitial with the 1<sup>st</sup> transverse cubital nervure, the 2<sup>nd</sup> received shortly beyond the 2<sup>nd</sup> transverse cubital. ♀.

Length 9 m.m.

Etna Bay.

Smooth and shining, the head more opaque, alutaceous above, the face, oral region and lower part of outer orbits densely covered with silvery pubescence, the rest of the head more sparsely with pale hair; apex of clypeus broadly rounded, margined. Antennæ stout; the 3<sup>rd</sup> joint 3 times longer than the scape and about one fourth longer than the 4<sup>th</sup>; the flagellum is darker coloured above; they are placed distinctly above the middle of the eyes. There is a fine furrow in the centre of the front. In the centre of the base of the metanotum there is a distinct transverse depression, widened in the middle; with 2 stout diverging, testaceous keels in the middle and with 5 shorter black ones on either side, and leading below into the central longitudinal furrow, which is wider and shallower at the apex. Abdominal petiole long, curved, as long as the mesonotum, its apex dilated, becoming gradually wider from the base to the apex.

This is not a typical *Psen* or *Psenulus*; it differs from both in the interstitial 1<sup>st</sup> recurrent nervure and in the 2<sup>nd</sup> cubital

cellule not being narrowed in front so much or so distinctly as in the two genera just mentioned. Except in these points the neuration agrees with that of *Psenulus atratus* Pz., in which the 2<sup>nd</sup> recurrent nervure is received in the 3<sup>rd</sup> cubital cellule.

*Notogonia modesta* Smith.

*Larrada modesta*, Smith, Proc. Linn. Soc. III. 159, l. c. VIII, 84. Mérauke.

## Diptera.

### *Eumenidæ.*

*Rhynchium haemorrhoidale* F., race *medium* Maind.

Digoel.

Cf. Cameron, l. c., 63.

A large example with a total length of 23 m.m., with broad red bands on the apices of the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> segments and with the others entirely red. There is a broad, curved red mark close to the apex of the clypeus and a yellowish broad mark, transverse above, broadly rounded below, on the front over the antennæ. The vertex above is entirely black. The teeth on the sides of the metanotum are stout, longish, irregular, stronger above than below. The form in the collection is hardly typical *medium*, the abdominal bands being too red, being more as in typical *haemorrhoidale* as figured by Maindron (Ann. Soc. Ent. Fr., 1882, pl. 4 fig. 10) than in his figure of *medium* in which the bands are yellowish (Pl. V, f. 1, l. c.). There seems to be several well-marked races of *haemorrhoidale* in the Malay Archipelago; but they all merge more or less into each other. Cf. Albert Schulz, Berl. Ent. Zeit. XLIX, pp. 218—225; and Maindron, Ann. Soc. Ent. Fr. 1879 pp. 277—280.

*Odynerus meraukensis* sp. nov.

Black, the antennæ, clypeus, mandibles except the teeth, the eye orbits, a large mark in the centre of the front uniting to the orange of the clypeus and bifurcating broadly, obliquely above, where the branches reach almost to the front ocellus; the hinder eye orbits except on the outer part below, the line becoming narrowed to a sharp point below, the prothorax, except for a band in the middle of the basal slope; tegulæ, scutellums, sides of metanotum broadly, the mark dilated on the pleuræ above, the 1<sup>st</sup> abdominal segment, except the basal slope, the mark projecting in the middle above, the apex of the 2<sup>nd</sup> segment, the whole of the others and the legs, except the coxæ, bright orange. Wings reddish-hyaline to the stigma, fuscous violaceous beyond it, the stigma and basal nervures bright reddish orange. ♀.

Length to end of 2<sup>nd</sup> abdominal segment 12 m.m.

Merauke.

Closely, distinctly punctured all over, more strongly on the top of the head and of the thorax; on the mesopleuræ the punctuation runs into reticulations, strongly above, more weakly below. Clypeus covered with longish punctures; it is longer than wide, its lower half flattened in the centre, the sides obliquely sloped; the apex with a shallow, rounded incision. There is a distinct tubercle between the antennæ. Apex of pronotum transverse, margined. Post-scutellum rugosely punctured at the base, the apex smooth, obliquely sloped; the apical margin of the posterior part raised. Metanotum with a steep slope; its sides rounded above where they are dilated; the metapleuræ below project into a leaf-like expansion. First abdominal segment large, cup-shaped, if any thing, wider than the base of the 2<sup>nd</sup>, which is broader than long. The 2<sup>nd</sup> cubital cellule is much narrowed in front.

This species resembles in form and colouration some Austr-

lian species *e. g.* *O. subalaris* Sauss., Vespides, III, Pl. XIV, fig. 5.

*Odynerus (Leionotus) fulvopruinosus* sp. nov.

Black, the head and thorax densely covered with a fulvous pile; a curved mark, narrowed above, bordering the black centre of the clypeus, the mandibles, except at the apex, where they are rufous, 2 small oblique marks, united below, over the antennæ, a small mark on the centre of the sides of the scutellum, the sides of the post-scutellum broadly, a large triangular mark (the apex below) and the narrowed base, sides and apex of the 1<sup>st</sup> abdominal segment (the line on the apex not continuous, being interrupted in the middle by a black one), pale yellow. Antennal scape yellow below, the flagellum rufous, irregularly marked with black above. Legs black to the apex of the femora, the rest rufo-testaceous. Wings hyaline, the radial cellule clouded in front, the stigma rufo-fuscous, the costa and nervures darker. ♀.

Length to end of 1<sup>st</sup> abdominal segment 8 m.m. (the other segments are amissing in the only specimen in the collection).

Etna Bay.

Vertex sparsely, the upper part of the front more strongly punctured, the punctuation in the middle going down to the base of the antennae and, laterally, to the lower edge of the eye incision. Clypeus strongly, but not closely, punctured, as wide as long, below ending in a sharp point. Temples broad, rounded. Occiput roundly incised. Base of thorax above sharply margined, not transverse, being slightly roundly dilated in the middle, the lateral angles slightly projecting, but not forming teeth. The thorax is somewhat strongly, but not closely punctured; there are no furrows on the mesonotum. There is a short furrow on the apical slope of the scutellum. The post-scutellum has an oblique, straight slope, its apex is broadly rounded. Metanotum short, distinctly widely depressed in the middle, the depression deepest in the middle, the sides

are broadly rounded and covered with longish white pubescence. First abdominal segment clearly petiolated at the base, becoming gradually widened towards the apex, smooth and shining. The hind tibiae are curved, twisted inwardly at the base. The undernoted species is in the collection of the *Natura Artis Magistra*, Amsterdam without a locality label. It is probably Malay or Australian where red is common with the *Odynerinae*.

*Odynerus (Symmorphus) Meijereanus* sp. nov.

Black, the underside of scape, the clypeus to shortly below the middle and farther down along the sides, a small triangular mark on the base of the mandibles, a transverse one over the antennæ, two lines, almost united and dilated backwards in the middle, the dilated part being gradually narrowed, on the pronotum, the 1<sup>st</sup> abdominal segment from the transverse keel to the apex, except for a large irregular black mark in the middle at the base, a broad band, roundly dilated backwards, on the sides of the middle, the dilated parts reaching almost to the middle of the segment, a narrow, distinct line on the apex of the 3<sup>rd</sup> and a narrower, less distinct one, not reaching to the outer edges, reddish orange. Wings uniformly fuscous violaceous, the nervures and stigma black. ♀.

Length to end of 2<sup>nd</sup> abdominal segment 12 m.m.

Stout, robust, more like a *Rhynchium* than an *Odynerus*. Upper part of head closely and strongly punctured. Clypeus large, rounded above, the apex broad, almost transverse. Thorax strongly, rugosely punctured, except on the basal slope, which is smooth and shining and on the apical slope, which is obscurely, sparsely punctured and deeply furrowed down the middle. The apex of the metanotum has a steep slope; its sides are margined as is also the top; the sides roundly, slightly projecting in the middle. The basal slope of the abdomen is shining, irregularly punctured, ridged round the edges;

the longitudinal furrow is shallow, but distinct; it is widened at the base; the sides are straight, *i. e.* the segment is quadrate, not of the usual cup-shaped form. The apices of the basal 2 segments of the abdomen are slightly, narrowly depressed. There are 2 short longitudinal furrows on the apex of the mesonotum; there is a short wide depression on the apex of the scutellum in the middle; between the base of the mesonotal furrows, and, shortly beyond them, the mesonotum is almost smooth.

From the form and colouration of this species. I have no doubt that it is from the Austral-Malay or Australian Regions].

*Eumenus dorycus*, Maind.

What is probably the above species (described Ann. Soc. Ent. Fr. 1882, p. 273 and figured, *l. c.*, Pl. 3, fig. 3, from Dorey and Andaic, New Guinea) has been taken by the Expedition at Etna Bay. As the specimen taken differs somewhat from the description I give a description of it. ♀. Total length 17 m.m. Black; the face and clypeus, a square spot between the antennæ, a mark in the eye incision, a narrow line on the outer eye orbits, the apex of the pronotum, the line narrow in the middle, widened at the sides, post-scutellum, a large mark on the sides of the metanotum, extending on to the pleuræ, the mark obliquely rounded on the innerside, a broad line on the base of the mesopleuræ, extending from the top to the bottom, the upper half straight, the lower obliquely sloped towards the apex; a narrow line on the apex of the first abdominal segment, a large irregularly shaped mark on the sides of the 2<sup>nd</sup>; a distinct line on its apex; narrower, more obscure lines on the apices of the other segments and almost the apical half of the 2<sup>nd</sup> ventral, pale yellow. All the tibiæ and tarsi, the anterior femora, apex of the middle and of the hinder, pale yellow. Wings obscure

hyaline, the apical margin and the apex broadly fuscous violaceous; the nervures and stigma black. ♀.

Front, vertex and thorax closely and strongly punctured, the punctuation on the median segment is stronger, the punctures being larger and more distinctly separated; the pubescence is close, short and pale; the sides of the segment are rounded. The post-scutellum has a straight oblique slope. Tegulae black, brownish along the apex. Apex of clypeus transverse. Abdominal petiole long, curved, as long as the following segments united; it has the basal third slightly narrowed, the apex slightly dilated, not flattened above and bearing a short, distinct longitudinal furrow in the middle. The 2<sup>nd</sup> segment is nearly twice longer than it is wide at the apex; its base is narrowed into a distinct neck.

*Eumenes insolens* Smith from Gilolo (Proc. Linn. Soc. VIII, 88) is probably related to the species described above; it is smaller and wants the 2 conspicuous marks on the sides of the 2<sup>nd</sup> abdominal segment. In colouration *dorycus* agrees with *E. pomiformis*, but that species has the abdominal petiole shorter, and, more particularly, it is widely dilated on the apical half and flattened above, not narrow, curved and cylindrical. Many of Smith's Malay species of *Eumenes* appear to have been founded on the slight varieties of the world-wide ranging *E. pomiformis*, e. g. *inconspicuus*, *singularis*, *blandus*, *politus*, *architectus*, *agilis*, *vindex*, *floralis*; and *piriformis* Sauss. and *affinissimus* Sauss. are other forms, as well as the American *fraternus* Say.

### Vespidæ.

*Icaria pruinosa* sp. nov.

Dark ferruginous, densely covered with a white pile, which gives it a whitish appearance; black are: a broad transverse mark, roundly curved below, immediately above the apical

yellow border, a broad line on the sides of the apical half of the metanotum, bordering the outside, top and the upper innerside of the yellow marks, the mesosternum, a narrow line on the apex of the mesopleuræ, dilated near the top, a narrow line on the base of the metapleuræ, following obliquely the suture above, a broad band in the middle of the 2<sup>nd</sup> abdominal segment, the basal two-thirds of the 3<sup>rd</sup> and the basal half of the 4<sup>th</sup>; yellow are: a line round the apex of the clypeus, a large mark on the base of the clypeus, a narrow line round the top and sides of the prothorax, a broad transverse mark on the scutellum, almost separated in the middle, 2 large marks on the post-scutellum, 2 longish oval marks, rounded on the outer, transverse on the innerside, a narrow line on the apex of the first and the apical fourth of the 2<sup>nd</sup> abdominal segments, pale yellow. The legs are of a brighter ferruginous colour than the body. Wings fuscous, darker and violaceous along the fore margin and apex, yellowish at the base; the apex of costa and stigma ferruginous. ♀.

Total length 15 m.m.

Digoel.

Head and thorax opaque, somewhat alutaceous, not punctured except indistinctly on the upper part of the mesopleuræ. There is a narrow longitudinal furrow on the lower part of the front. Base of thorax above transverse, sharply keeled. Metanotum behind the post-scutellum slightly raised, margined, slightly converging below; on the centre of the apical third is a furrow, narrow at the base, widened below. Abdominal petiole two-thirds of the length of the 2<sup>nd</sup> segment, the basal third narrow, the rest dilated; pyriform, the 2<sup>nd</sup> segment longish, about one fourth longer than it is wide at the apex, the base with a distinct narrowed neck; the apical yellow band is of equal width throughout.

Very similar in size, form and colouration to the common *I. ferruginea*; the latter may be known by the head and thorax

being strongly and closely punctured, by the base of the thorax being rounded, not transverse, by the apical furrow on the metanotum being longer, deeper and wider; and the metanotum is transversely striated; the same characters separate it from the New Guinea *I. jucunda* Cam. (Manchr. Memoirs, 1898, Part IV, p. 46) and, in addition, the latter species has the scutellum and post-scutellum furrowed longitudinally.

*Icaria spilocephala* sp. nov.

Black, the sides of the clypeus broadly, its apex somewhat more narrowly, a narrow line round the base of the prothorax, the scutellum, sides of post-scutellum, 2 longish broad marks on the sides of the metanotum and almost the apical third of the 2<sup>nd</sup> abdominal segment, pale yellow, as are also a line, twice longer than wide, above the antennæ, the lower part of the eye incision broadly and the upper part narrowly; the following parts are ferruginous: antennæ, a line above the yellow one over the antennæ, the occiput and the outer orbits broadly, slightly more than the upper half of the sides of prothorax, a large, broad oblique stripe on the upper two-thirds of the middle of mesopleuræ, the sides of metanotum outside the yellow marks, the 1<sup>st</sup> abdominal segment, basal third of the 2<sup>nd</sup>, and the apices of the others broadly. Legs black, the apices of the femora, the tibiæ and tarsi rufotestaceous. Wings obscure hyaline, the radial and cubital cellules fuscous-violaceous; the costa and stigma fulvous; the nervures black. ♀.

Length 9 mm.

Etna Bay.

Front and vertex covered with round clearly separated punctures which are weaker and closer together on the outer edges. The clypeus is more sparsely punctured; its lower edge is fringed with fulvous pubescence. Pro- and mesothorax closely covered with round clearly separated punctures; the scutellum

is more weakly punctured; the post-scutellum smooth, obliquely sloped; its apex is transverse. Metanotum almost smooth, obliquely sloped; its black central part is depressed. Abdominal petiole of moderate length, as long as the metanotum, its basal third narrowed.

Allied to *I. maculifrons* Cam., from Borneo, having pretty much the same colouration; in that species the yellow is brighter, more lemon-coloured, the post-scutellum is entirely yellow, the 2 marks on the metanotum are smaller and are gradually narrowed above, the abdominal petiole (and particularly the narrowed basal part) is longer; and the band an apex of 2<sup>nd</sup> segment is narrower compared with the black central part. In *maculifrons*, too, the black mark on the clypeus is triangular, becoming gradually narrowed from the top to the bottom, while in *spilocephala* it is not much narrowed below. *I. latibalteata* Cam. (also from Borneo) may be known (as it may be also from *I. maculifrons*) by the shorter 2<sup>nd</sup> abdominal segment, it being not much longer than it is wide at the apex.

*Polistes malayanus*, Cam.

*l. c.* p. 60.

Merauke.

I think it very probable that this may be only a form of *P. tepidus* F., which probably runs into local races over the Austro-Malay and Australian Regions. Cf. Schulz, Berl. Ent. Zeit., XLIX, 227. Probably *P. picteti* Saus. from Australia is another form. To settle the specific limits of *P. tepidus* F. a good series of specimens of both sexes from Malaya and Australasia is necessary.

*Ischnogaster malayaensis* sp. nov.

Black; the face, clypeus, mandibles, the front, lower eye

orbits, at the incision, the outer orbits below, an irregular mark on eitherside of the apex of the pronotum, 2 spots, wider than long, and narrowed on the innerside, on the post-scutellum, a broad mark, extending from the top to the bottom and rounded above, a mark, separated from it by the longitudinal furrow, below it, this mark being dilated beyond the base of the upper mark and gradually narrowed in a curve below, a transverse mark on the apex of the metanotum, the extreme base of the 2<sup>nd</sup> abdominal segment, a curved mark, longer than wide, on the centre of its sides, a transverse, semicircular one on the sides of the 3<sup>rd</sup> at the base, and broad marks on the sides of the ventral segments, and the apical entirely, yellow; the prothorax, except the 2 yellow apical spots, the mesopleuræ, except the yellow spots, mesosternum, the metapleuræ from shortly behind the middle and the metanotum, except the base, broadly in the middle, rufous, on the sides of scutellum a yellow oval mark suffused with rufous. Legs rufo-testaceous, the coxæ paler, the 4 hinder tarsi black; the hinder femora and tibiæ infuscated. Wings hyaline, slightly infuscated at the apex, highly iridescent, the nervures and stigma black. ♀.

Length (total) 16 m.m.

Etna Bay.

Apex of clypeus sharp-pointed, its base furrowed laterally. Front and vertex closely punctured, wrinkled below; the face obscurely, the clypeus more distinctly punctured; between the antennæ is a fine, but distinct keel. The black mesonotum is closely punctured, more or less wrinkled; on the sides of the apical half are 2 fine furrows; the scutellum is less strongly and the post-scutellum still less strongly punctured. Metanotum distinctly transversely wrinkled striated; there is a deep furrow down its centre. The dilated part of the abdominal petiole is narrowed at the base and apex; *i. e.* broadest in the middle; its apex is transverse.

The apical part of the flagellum of antennæ is rufous, as is also the apex of the clypeus and of the mandibles. Clypeus long, more than twice longer than wide; the part below the eyes is as long as the part above. The furrow on the metanotum is deeper and more distinctly defined than usual, than in, *e. g.* *I. nigrifrons*; the 2<sup>nd</sup> abdominal segment in the latter species is longer and is more distinctly narrowed at the base, the narrowed part, too, being longer. The clypeus is longer than usual, especially below the eyes.

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