

opening; outer mandibular barbel $1\frac{1}{2}$ length of inner, which measures $\frac{1}{2}$ length of head. Gill-rakers short and wide apart, 10 on first arch. Clavicles concealed under the skin. Dorsal about 65, its distance from the occipital process $\frac{2}{5}$ length of head, its distance from caudal fin equal to diameter of the eye. Anal 60, nearly touching caudal. Pectoral not quite $\frac{1}{2}$ length of head, the spine not serrated, about $\frac{2}{3}$ the length of the fin. Ventrals much nearer end of snout than caudal. Caudal $\frac{1}{2}$ length of head. Uniform dark brown.

Total length 1500 millim.

Fwambo, British Central Africa.

A single specimen, presented to the British Museum by Mr. A. Carson in 1894.

XXXVI.—*On some new Genera and Species of Parasitic Hymenoptera from the Khasia Hills, Assam.* By P. CAMERON.

[Continued from p. 273.]

Aglaojoppa rufofemorata, sp. n.

This species has the general coloration, including the red femora, of *A. Rothneyi*, but may readily be separated from it as follows:—

Scutellum not distinctly dilated at the base; the top of the posterior median area not separated from the areola by a distinct curved keel, areola almost smooth; the marks on the abdomen widely separated	<i>rufofemorata</i> .
Scutellum distinctly dilated at the base, the top of the posterior median area distinctly separated from the areola by a rounded keel, the areola irregularly rugose; the marks on the second and third abdominal segments not widely separated.....	<i>Rothneyi</i> , Cam.

Black; the face, clypeus, inner orbits, the lower two thirds of the outer entirely, the base of the mandibles, palpi, the top of the prothorax broadly, a line on the lower edge, two long lines on the mesonotum, the scutellar keels, scutellums, the sides and apex of the postpetiole, and large, irregular, widely separated marks on the second to the fifth abdominal segments, a large irregular mark on the lower side of the mesopleuræ, narrowed at the apex and with a triangular incision on the lower side at the base, and with its

lower basal part extending on to the mesosternum, a line under the hind wings, a large oblique mark on the metapleuræ, and the outer areæ of the metanotum, pale yellow. Antennæ black, the scape beneath and a broad band on the middle of the flagellum white; the apex of the flagellum brownish. The four front legs are pallid yellow, their femora and tibiæ lined behind with black; the hinder coxæ black, yellow above, their trochanters yellow; the femora red to near the apex; the tibiæ pale yellow to shortly beyond the middle, the rest black; the tibiæ pale yellow. Wings hyaline, the nervures and stigma black. ♀.

Length 19 mm.

Hab. Khasia. Coll. Rothney.

Head sparsely punctured, the part below the outer ocelli rugose. Thorax closely punctured, the median segment more closely and strongly than the rest; the areola irregularly wrinkled in the centre, the sides furrowed, the upper half of the posterior median area strongly irregularly reticulated and with a fovea in the centre on the top; the lower part is more closely and not so strongly reticulated. Centre of postpetiole closely longitudinally striated; the second, third, and fourth segments are closely punctured, the base closely, longitudinally, and finely striated. The gastrocœli shallow.

Aglaojoppa violaceipennis, sp. n.

Black; the inner orbits narrowly in the middle, broadly above and below, the lower half of the outer entirely, the face, clypeus, labrum, a triangular mark on the base of the mandibles, palpi, the edge of the pronotum, two short broad marks on the middle of the mesonotum, the scutellums, two large marks on the apex of the median segment on the sides, a mark on the lower side of the propleuræ, the tubercles, the lower half of the mesopleuræ, a mark under the hind wings, a large mark in the middle of the metapleuræ, and an irregular mark on the sides of the basal two segments of the abdomen, orange-yellow. Legs lemon-yellow; the hinder coxæ (except at the base above and at the apex below), the fore femora behind (except at the apex below), the middle behind (except in the centre above), the hinder trochanters, the base and apex of the hinder femora, and the apices of their tibiæ, black. Wings uniformly fuscous violaceous, the hinder paler than the anterior. ♀.

Length 18 mm.

Hab. Khasia. Coll. Rothney.

Face and clypeus rough, sparsely pilose; a mark above

the clypeus, the foveæ, and the edge below, black. Upper inner orbits acutely margined. Mesonotum distinctly but not closely punctured. Scutellum almost impunctate, its apex black, more broadly in the centre than laterally. Areola distinctly wider than long, short, broadly rounded at the base, the apex raised, almost transverse, the inner part depressed, irregularly rugose; the posterior median area closely transversely rugose, more coarsely and irregularly at the sides; the spiracular stoutly obliquely striated. Petiole broadly depressed, the sides acutely raised; the depression transversely striated; postpetiole stoutly, sharply, longitudinally striated in the middle; the second to the fifth segments closely punctured, the second stoutly longitudinally striated. Gastrocœli deep, smooth, except for a few striæ at the base.

Aglaojoppa quadrimaculata, sp. n.

Black; the face, clypeus, the inner orbits (forming two triangular united marks), a large mark (triangularly narrowed above, round below) on the lower half of the outer orbits, a triangular yellow mark on the base of the mandibles, the palpi, a broad line on the pronotum, two short broad lines in the middle of the mesonotum, the scutellums, the apex of the posterior lateral areæ of the median segment, a mark (narrowed behind) on the hinder part of the propleuræ, the lower half of the mesopleuræ, a mark below the hind wings, a small irregular one behind the spiracles, an oval irregular one in the middle of the metapleuræ, and two marks on the apex of the basal two abdominal segments, orange-yellow. ♀.

Length 17 mm.

Hab. Khasia. Coll. Rothney.

Face closely and strongly punctured, the clypeus more sparsely punctured; the ocellar region rugose. Scape of antennæ bright yellow below; the flagellum fuscous, with a broad white band near the middle. Mesonotum sparsely punctured, the punctures smaller on the sides. Areola broader than long, narrowed and rounded behind, the apex with a slight rounded incision; it is smooth; the posterior median area is closely transversely striated; on the sides of the lower half is a stout longitudinal keel, united to the sides above and forming an enclosed area, inside of which are a few stout curved keels; the other areæ are obliquely irregularly striated. Propleuræ sparsely punctured, striated behind, the mesopleuræ more closely and strongly punctured, except in the centre behind; the metapleuræ are still more closely and strongly punctured. Legs lemon-yellow; the hinder

coxæ (except for an oblique mark on the outer side above), the hinder trochanters, the base narrowly, the apex more broadly of the hinder femora, and the apex of the hinder tibiæ, black. Wings fuscous violaceous, the stigma and nervures fuscous. Petiole hollowed in the centre and keeled laterally; the postpetiole raised in the middle and stoutly, irregularly, longitudinally striated, its sides punctured; the second to fifth segments closely punctured. Gastrocœli large, deep, the basal half stoutly striated.

Agrees closely in coloration with *A. violaceipennis*; may be known from it by the areola not being hollowed, by the paler more fuscous wings, and by the fuscous stigma and nervures.

Aglaojoppa 5-maculata, sp. n.

Black; a triangular yellow mark at the base of the mandibles, the edge of the pronotum broadly, two lines on the mesonotum with a curved projection on the outer side near the base, the scutellums, two large marks on the median segment (half on the metanotum, half on the pleuræ), two lines on the lower part of the propleuræ, the lower half of the mesopleuræ, a mark under the hind wings, the postpetiole, and two large marks on the apex of the second and third segments, lemon-yellow. Legs lemon-yellow, the four anterior femora behind, the posterior entirely, the hinder coxæ (except at the base above), and the apex of the hinder tibiæ, black. Wings almost hyaline, the apex with a fuscous-violaceous tinge; the stigma and nervures black. Flagellum white in the middle, the scape yellow below. ♀.

Length 18 mm.

Hab. Khasia. Coll. Rothney.

Head lemon-yellow, the middle of the front broadly, the ocellar region, and the occiput, black. Face and clypeus sparsely punctured and covered with short white hair; there is a small black mark in the centre of the clypeus at the apex. Mesonotum closely punctured in the centre. Scutellum with scattered punctures. Base of the median segment aciculated, the outer side with scattered punctures; the apex, and more particularly the posterior median area, strongly punctured. Pleuræ closely punctured, the metapleuræ more strongly than the rest. The middle of the postpetiole longitudinally striated; the middle of the second segment entirely and the basal half of the third longitudinally striated.

Aglaojoppa latemaculata, sp. n.

Black, the mandibles broadly at the base, the upper edge

of the pronotum broadly, the mark dilated at the apex, the lower half of the prosternum behind, two longish lines on the centre of the mesonotum, the scutellums, two large oblique marks on the apex of the median segment, extending on to the pleuræ, the lower half of the mesopleuræ, the mesosternum, except for a triangular black mark in the middle at the base, the apices of the basal two abdominal segments broadly, two large lateral marks occupying the apical two thirds of the second and two similar, but smaller, ones on the apex of the third segment, yellow. Legs yellow, a line on the four front femora behind, the hinder coxæ, the femora, the apex of their tibiæ, the base narrowly and the apices of the four front tibiæ, black. Wings hyaline, the apical half fuscous violaceous, the stigma and nervures black. ♂.

Length 13 mm.

Hab. Khasia. Coll. Rothney.

Head lemon-yellow, the front and vertex in the middle, the greater part of the occiput and the outer orbits broadly above, black. Face and clypeus almost bare, sparsely punctured. Mesosternum sparsely punctured. The keels bounding the areola are thin and indistinct; the latter is smooth and shining and has an oblique slope at the base. Posterior median area rounded above, closely punctured, the punctures round and shallow; the spiracular and other areæ closely punctured.

Xanthojoppa geniculata, sp. n.

Yellow, the ocellar region, a line in front of it, a broader line behind, the greater part of the occiput, the apex of the mandibles, the base of the mesonotum in the centre, its apex and sides broadly, the middle of the median segment, the apex of the petiole broadly in the middle, and the other segments in the middle, the mark on the base of the second more dilated, black. Legs rufo-fulvous, the anterior with a more yellowish, paler tint; the apices of the tarsi darker, the hinder coxæ yellowish at the base, on the outer side at the apex marked with black and the apex of the femora black. Wings hyaline, with a fulvous tinge, the stigma fulvous, the nervures blacker. ♀.

Length 15-16 mm.

Hab. Khasia. Coll. Rothney.

Antennæ rufous, darker towards the apex. Face and clypeus shining, impunctate, and bearing a few white hairs; the labrum fringed with long golden hairs. Palpi rufous,

pilose. Mesonotum impunctate, the base covered with short pubescence. The furrow at the base of the metanotum deep, black. The sides of the metanotum at the base oblique, the middle much more strongly transversely striated; the posterior median area in the middle irregularly longitudinally reticulated; the teeth are large, somewhat triangular. The top of the prothorax is more deeply and roundly depressed than usual. Propleuræ obscurely punctured at the base and apex; the base of the depression obliquely striated, the striæ being stronger above, where it is black all round. Mesopleuræ yellowish, the base and apex on the lower side black; below the tubercles is a striated belt. Abdomen smooth; the apex of the petiole on the lower side raised and finely transversely striated.

Resembles *X. nigrolineata* in form and coloration, but differs in the flatter scutellum, in the more depressed middle of the pronotum, and in the second abdominal segment not being striated.

Erythrojoppa nigromaculata, sp. n.

Long. 18 mm. ♀.

Hab. Khasia. Coll. Rothney.

This species agrees very closely in coloration with *E. ferruginea*, Cam., but differs in having the scutellum not pyramidal.

The fifteen or sixteen basal joints of the antennæ are ferruginous, more yellowish in tint towards the middle; the dilated apical joints are black. Head ferruginous, the clypeus and orbits with a yellowish tint; the face and the top of the clypeus punctured but not closely; the central raised part of the face is more strongly punctured than the sides. The front above is broadly but not deeply furrowed in the centre, and is there transversely striated. The apex of the clypeus slightly projects in the centre; the projecting labrum is smooth and has the apex fringed with long rufous hair. Mandibular teeth black. On the ferruginous thorax the following parts are black: the middle of the pronotum and of the propleuræ, the sides of the mesonotum in front, its apex, the scutellar depressions, the base of the median segment, the greater part of the posterior median area in the centre (the black part narrowed above), the apex of the segment all round, the base of the mesopleuræ, except at the top, a line under the tubercles, the apex at the middle coxæ, the base of the metapleuræ, its apex and more narrowly its lower edge. The scutellum is roundly convex and

is slightly raised above the level of the mesonotum; the lateral keels extend near to the apex, which has an oblique slope and is closely longitudinally striated. The raised areola and the base of the median segment in the middle are smooth and shining; the rest of the segment closely rugosely punctured and striated; the metapleuræ and the spiracular area are closely, strongly, obliquely striated. Legs coloured like the body; the apical two joints of the hinder tarsi black; the pubescence is short, and on the base (the coxæ particularly) is pale fulvous. Wings yellowish hyaline, the apex fusco-violaceous; the nervures and stigma black. Abdomen ferruginous; the apical half of the third more or less and the other segments entirely black; the postpetiole is depressed in the middle at the base; the centre is strongly longitudinally striated; the gastrocœli, except at the base, are smooth and shining; the second segment to near the apex is closely longitudinally striated.

Xanthojoppa femorata, sp. n.

Yellow; the ocellar region, the vertex behind it, the occiput, an oblique mark on the upper part of the orbits behind, not touching the eyes, the central furrow on the front, the mandibular teeth, the sides of the mesonotum broadly, a line in the centre, reaching from the base to shortly beyond the apex, the scutellar depression, the space at its sides broadly, the depressed space at the base of the median segment, the central area, its apex broadly, the middle of the propleuræ, the sides, upper part and apex more broadly of the mesopleuræ, the base and apical part of the metapleuræ, a short mark on the apex of the petiole, longer than broad, broad at the apex, gradually narrowed and rounded at the base, a larger mark, triangular at the base, the other segments broadly in the middle, black. Wings fuscous violaceous, paler at the apex, the stigma and nervures black. The middle tarsi have the apical four joints black; the outer half of the hinder coxæ, except at the base, the hinder femora, tibiæ, and tarsi deep black. ♀.

Length 12-13 mm.

Hab. Khasia. *Coll.* Rothney.

The basal fourteen or fifteen joints of the antennæ fulvous, the apical black, almost bare; the scape shining, bare. Mesonotum closely, but not strongly, punctured. Scutellum shining. Areola coarsely, irregularly, longitudinally reticulated; the posterior median area is more coarsely reticulated, the sides at the top are transversely, obliquely striated, the

apex is more coarsely transversely striated and with a stouter, transverse keel which projects at the edges into a stout triangular tooth. The upper part of the propleuræ smooth, the lower with curved striations on the basal half. Mesopleuræ punctured, except in the middle behind; in front of this it is striated. Metapleuræ stoutly, obliquely striated. Gastrocœli shallow, smooth, transverse, black. The abdominal segments are covered with short black hair, except the first.

Acanthojoppa xanthopsis, sp. n.

Length 13 mm. ♀.

Hab. Khasia. Coll. Rothney.

This species has a small, broader than long, areola as in *A. nigromaculata*, but it differs in the median segment not being marked with black and in the top of the scutellum being broader and more distinctly roundly incised.

Luteous, the face, clypeus, labrum, and mandibles, except their teeth, pale yellow; the antennæ from the 15th or 16th joints black. Face and clypeus covered with short white hair. The mesonotum is darker coloured and thickly covered with short black hair. Apex of clypeus roundly, but not deeply, incised; the hair on the basal slope is long, black, and thick. The basal slope of the median segment is smooth and with the keels short, not reaching to the base; the areola small, the base rounded, the apex transverse; the apical slope has the centre irregularly shagreened; the sides stoutly, transversely striated. Pro- and mesopleuræ smooth, the base of the metapleuræ irregularly and sparsely, the apical half obliquely, punctured. Wings hyaline, the apex slightly infuscated, the stigma testaceous. The abdomen appears darker coloured on the back from being thickly covered with short black hair. Gastrocœli shallow, deeper at the apex, which is wider than long and is aciculated.

Acanthojoppa tinctipennis, sp. n.

Luteous; the face, clypeus, inner orbits narrowly, the outer broadly below, yellow, the apex of the antennæ broadly black; the wings fuscous hyaline, the apical half darker, more violaceous in tint, smooth and shining, the mesonotum granular and closely covered with short black hair; the scutellum coarsely and closely punctured and thickly covered with fuscous hair; the sides strongly keeled, the apex above slightly depressed. Basal areæ of median segment closely and strongly punctured; the areola slightly longer than broad, its sides at the base rounded, the centre a little depressed; the apex slightly bent inwardly; the

apical slope thickly covered with long fuscous hair; the posterior median area closely, the lateral areae more coarsely transversely striated. Pro- and mesopleuræ closely punctured, the former striated behind, the metapleuræ more closely and strongly punctured. Four front coxæ paler than the rest of the legs. Petiole smooth and shining; the sides at the apex punctured. Gastrocœli shallow, wide at the apex, the base with two or three keels. ♂.

Length 12 mm.

Hab. Khasia. Coll. Rothney.

A species closely related to *A. curtispina*, Cam., from which it differs in the wings being darker coloured throughout, in the areola being distinctly bounded by a keel behind and not coarsely transversely striated, and the recurrent nervure is received shortly behind the middle of the areolet.

Acanthojoppa varicornis, sp. n.

Luteous; the face, clypeus, and mandibles pale yellow; the apex of the antennæ black, brownish below; the wings hyaline, the base with a fulvous tinge, the stigma pale testaceous, the nervures darker coloured. ♀.

Length 10 mm.

Hab. Khasia. Coll. Rothney.

Head smooth and shining, the face and clypeus sparsely covered with a short pile. The upper part of the thorax is darker coloured than the sides and is closely and uniformly punctured and covered with a microscopic down. Scutellum thickly covered with long black hair; the lateral keels stout, the apex roundly incised above. The basal three areae of the median segment smooth, the rest closely and somewhat coarsely transversely striated; the areola is about as broad as long, its sides and apex straight, the base rounded; the teeth are about three times longer than broad. Mesopleuræ, except above, closely and indistinctly, the metapleuræ much more strongly, striated. The second abdominal segment is closely longitudinally striated between the gastrocœli.

[To be continued.]

BIBLIOGRAPHICAL NOTICES.

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12s. 6d. net.

UNDOUBTEDLY this manual, when complete, will fill a distinct gap in ornithological literature, for although the subject has been, at least partially, covered by Mr. Dresser's larger work on the 'Birds



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