

VI. *Descriptions of New Species of Cryptinæ from the Khasia Hills, Assam.* By PETER CAMERON, communicated by GEORGE ALEXANDER JAMES ROTHNEY, F.E.S.

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THE species described here are in the collection of Mr. G. A. J. Rothney.

ETHA LACTEIVENTRIS, sp. nov.

Plumbeous black: the face, clypeus, mandibles, palpi, the inner orbits, the outer broadly on the lower-side, whitish-yellow: the base of the propleuræ broadly, the mark incised below, a line on the pronotum, tegulæ, tubercles, scutellums, the apex of the metanotum—the mark squarely narrowed in the middle behind—an oblique, pyriform mark on the apex of the metapleuræ above, united to a much larger mark, which is prolonged downwards at the base to the longitudinal furrow; an irregular, somewhat triangular, mark under the hind-wings and down the middle is a large, oblique mark, sharply pointed at the base, and the apices of the abdominal segments, yellow. Legs fulvous, the middle femora and apex of middle tarsi darker, their coxæ and trochanters white, the hinder coxæ white, black above, except at the base, the femora and tibiæ dark rufous, the femora above and the apex of the tibiæ blackish, the tarsi white, black at the base. Wings fulvo-hyaline, the stigma obscure testaceous, paler at the base. Joints 7–12 of the antennæ clear white, the scape and base of the flagellum brownish beneath. ♀.

Length 11; terebra 4 mm.

Face closely punctured, the clypeus smooth, as are the front and vertex; the front distinctly depressed and with a wide furrow in the middle. Thorax smooth; the sternal furrow wide, smooth; the other furrows are crenulated. First abdominal segment smooth, the lateral tubercles large; the other segments are faintly aciculated.

ETHA KHASIANA, sp. nov.

Black; the face, clypeus, the inner orbits narrowly to the middle, the outer entirely from shortly above the middle, the mandibles, palpi, a broad line on the lower part of the propleuræ, a narrower one, not reaching to the apex, shortly above the middle; lower down, extending from the middle to the apex, a much larger mark, which,

at the apex, is prolonged downwards, the projection being curved and narrowed at the base and straight at the apex; the apex of the 1st abdominal white. The black part of the front coarsely irregularly striated. Face and clypeus minutely punctured. Thorax opaque, thickly covered with short pale pubescence which gives it a greyish appearance; mesonotum opaque, closely punctured, the centre at the base finely, but not very distinctly, transversely striated. Scutellum closely punctured; the apex of the post-scutellum strongly and closely punctured. Median segment behind the keel finely rugose; immediately behind it, it is obliquely irregularly fulvous. Wings hyaline, the stigma fuscous. The 7th to 10th antennal joints white, the basal two joints of the flagellum brownish beneath. ♀.

Length 10; terebra 4 mm.

Face in the centre closely and distinctly, at the sides sparsely and obscurely punctured; the clypeus obscurely punctured at the base; the front and vertex have a plumbeous hue and are very smooth and shining; the front has a distinct furrow in the centre. The meso- and the base of the meta-notum have a plumbeous hue and are very smooth and shining, this being also the case with the pleuræ. Mesosternal furrow wide, long and deep; that on the apex of the mesopleuræ is slightly, on the metapleuræ coarsely, crenulated. Petiole very smooth and shining, and having an elongate fovea near the base of the post-petiole; the other segments are less shining.

GOTRA FULVIPES, sp. nov.

Black; the face, oral region, mandibles, palpi, the outer orbits below broadly and the upper all round, white: the edge of the pronotum, a small round mark on the apex of the middle lobe of the mesonotum, the scutellar keels, the scutellums, a wide line round the apex of the metanotum, narrowed and rounded above, the base of the prosternum, the tubercles, the lower part of the mesopleuræ, the mesosternum except in the centre, the yellow on the sternum and pleuræ being divided at the base by a black wedge, which is sharply pointed at the apex, the apex of the mesopleuræ, the mark widely dilated above, a large mark, longer than wide, on the top corner at the base, a large oblique quadrangular mark near the apex, the apices of the abdominal segments above and the apical segments at the sides and beneath, yellow. The four front coxæ and trochanters yellow, the rest of the legs fulvous, the hinder coxæ white, a broad band down the outer-side in the centre and round the apex above, the hinder femora and tibiæ, rufous, the extreme base of the femora, their apex broadly, the base of the tibiæ narrowly and their apex broadly, black; the hinder tarsi pallid yellow, the claws black. Wings hyaline, the stigma and nervures black; the areolet very

small, narrowed at the base. The 7th to 12th joints of the antennæ clear white at the sides and below ; the scape with a narrow white line below. ♀.

Length 12 ; terebra 2 mm.

Face and clypeus shining, strongly punctured and sparsely covered with white hair ; the front with a wide and deep furrow down the centre and strongly transversely striated ; the vertex on the lower part irregularly reticulated and striated, behind punctured. The apical half of the mandibles deep black. Mesonotum coarsely and closely punctured ; the scutellums smooth ; the metanotum has, in the middle, a smooth area, wider than long, widened from the base to the apex and bordered by stout keels laterally ; the sides next to this smooth, the rest behind the keel irregularly, obliquely striated and punctured, the rest of the segment strongly irregularly reticulated all over, the reticulations more distinct at the apex. Petiole smooth and shining ; the post-petiole laterally with some large, widely separated punctures ; the 2nd segment closely and rather strongly punctured ; the gastrocoeli smooth and shining.

CRYPTUS RUFOPETIOLATUS, sp. nov.

Black ; the clypeus, except the oblique apex, a small oval mark in the middle of the face, the inner orbits entirely, the outer more broadly, except above, the mandibles, except at the apex, the palpi, the basal half of the scutellum, the post-scutellum, the metanotal spines and keel and the apex of the petiole, yellow : the scape of the antennæ beneath and the abdominal petiole, except at the apex, rufous. Legs rufous, the hinder tarsi black ; the apical half of the 2nd tarsal joint and the whole of the 3rd and 4th, white. Scutellum closely punctured ; the post-scutellum bifoveate at the base. The median segment behind the keel closely and finely rugose ; the spines thin, broad, bluntly rounded at the top ; the two are united by a narrow keel, which is roundly curved backwards ; the space between the two keels is irregularly, mostly obliquely, striated, except the triangular space in the middle above ; the oblique apex closely rugose and irregularly striated in the middle. Propleuræ closely striated ; the meso- closely rugose and thickly pilose. The 6th to 12th joints of the antennæ white. Wings hyaline, the stigma black. ♀.

Length 17 ; terebra 5 mm.

Face closely punctured and thickly covered with white hair. Clypeus distinctly projecting ; its basal and apical halves obliquely depressed. The upper inner orbits raised ; the front and vertex depressed ; the former smooth, obscurely aciculated ; the vertex

stoutly obliquely striolated. Thorax opaque, the mesonotum covered with white pubescence. Abdominal petiole smooth; the base of the post-petiole depressed in the middle; the segments banded with yellow at the apex.

CRYPTUS HIMALAYENSIS, sp. nov.

Black; the face, clypeus, labrum, mandibles broadly at the base, palpi, the orbits narrowly above, widely below, yellow; a broad line on the base of the prothorax, a slightly narrower one on the pronotum, the tegulæ, and the tubercles, lemon-yellow; the apex of the petiole rufous in the middle; the 2nd segment to near the apex, black suffused with rufous; the apex and the other segments ferruginous. The four front coxæ and trochanters whitish-yellow; the hinder black; the femora fulvous, the tibiæ and tarsi testaceous, the middle tibiæ slightly darker, the tarsi paler; the hinder femora and tibiæ rufous, the under-side of the apical joint of the trochanters, the apex of the hinder tibiæ and the base of the tarsi, blackish; the rest of the tarsi white. Wings hyaline, the nervures and stigma black. ♀.

Length 11; terebra 4 mm.

The scape and the four or five middle joints of the flagellum striated; the apex is, at the sides, strongly transversely striated, the centre coarsely punctured. Propleuræ, except at the base, closely longitudinally striated, finely and closely above, much more strongly below; the meso- opaque, granular, the middle and apex obscurely striated. The metapleuræ with a distinct oblique furrow below the spiracles; behind this they are finely longitudinally, in front more strongly, obliquely striated.

CRYPTUS BIBULUS, sp. nov.

Black; the scape of the antennæ beneath, the face, clypeus, mandibles, palpi, the inner orbits narrowly, the outer, except at the top, broadly whitish-yellow, the 3rd and following abdominal segments obscure rufous. The four front coxæ and trochanters white, the femora, tibiæ and tarsi fulvous; the hinder coxæ, trochanters, the femora, except at the base, broadly above, the apical three-fourths of the tibiæ and the base of the metatarsus, black; the fulvous colour on the hinder femora and tibiæ is darker than on the front legs. Wings hyaline, the stigma and nervures black. ♂.

Length 9 mm.

Face minutely punctured, the clypeus with some scattered punctures; the vertex roughly aciculated, the front smoother and not much depressed. Mesonotum strongly, closely and uniformly punctured; its middle lobe raised distinctly at the base; the scutellum

with large, clearly separated punctures; the post-scutellum more strongly punctured. Median segment closely and finely punctured behind the transverse keel; the rest coarsely rugosely punctured and sparsely covered with long soft white hair; there is only one transverse keel and in the middle, on either side, is an indistinct tubercle. Propleuræ at the apex above closely, the middle widely longitudinally striated; the meso- and meta- closely and uniformly punctured, and thickly covered with a white pile.

UMLIMA FLEXILIS, sp. nov.

Black, the clypeus, the base of the mandibles, palpi, the scutellar keels, the sides of the 2nd abdominal segment on the apical half—narrowly at the base, much more broadly at the apex—lemon-yellow. The four front legs pallid fulvous, the apex of the fore tarsi and the middle tarsi above, the coxæ, except at the apex, black; the hinder legs of a darker and deeper rufous colour, the coxæ, trochanters, the apex of the femora narrowly, the base of the tibiæ somewhat more broadly, the apical third of the tibiæ, the base of the metatarsus broadly and the apical half of the 5th joint, black, the rest white. Antennæ banded with white beyond the middle, the flagellum thickly covered with longish pubescence. Face closely, finely rugosely punctured, the clypeus roundly convex, its apex rounded; both are thickly covered with long white hair. Labrum projecting, transverse, its sides oblique. The inner orbits distinctly margined; the front and vertex smooth and shining. Mesonotum thickly covered with short pale pubescence, closely, and in the middle, strongly punctured; the middle lobe is largely raised at the base, where the furrow is transversely striated. The median segment behind the transverse keel closely, finely and uniformly punctured; the middle between the two keels transversely striated; the base shagreened, not distinctly striated; the apical slope is much more strongly transversely striated; the pronotum laterally is stoutly striated. Pleuræ punctured, the middle and apex of the pro- above strongly striated; the middle of the meso- longitudinally striated. Pleural furrow wide and deep and extending to the apex where it is wider and deeper. Mesosternum closely punctured; its furrow wide and deep. Abdominal petiole smooth and shining, depressed at the apex, tuberculate behind the stigma; the other segments are more opaque and thickly covered with pale pubescence; the gastro-coeli very narrow, longish and shallow. ♂

Length 10 mm. ♂.

FRIONA VARIPES, sp. nov.

Black, the face, clypeus, mandibles, except the teeth, palpi, the inner orbits above and the outer below the middle of the eyes, a

yellow central line on the metanotum, an apical mark slightly thicker than it, curved at the base and not reaching to the edges, the apices of the abdominal segments narrowly and the ventral surface, yellow. The four front legs pallid fulvous, their coxæ pallid yellow; the hinder coxæ black, broadly white at the base above, the trochanters black, the femora dark rufous, tibiæ yellow with a fulvous tint, the extreme base and the apex more broadly black, the tarsi pallid yellow, their base narrowly and the apex of the last joint with the claws, black; the metatarsus is shorter than the 2nd and 3rd joints united. Wings iridescent, hyaline, the stigma and nervures black. ♂.

Length 14 mm.

Antennæ longer than the body, thickly covered with short black hair; beyond the middle is a broad white band. Face strongly punctured, the clypeus smooth, roundly convex, its apex black, oblique. Front bearing stout, irregular, slightly oblique keels and with a stout one in the middle. Thorax sparsely covered with long fuscous hair; smooth, except for a depressed, irregularly stoutly reticulated space at the apex of the middle lobe. Scutellums smooth and sparsely haired. The base of the metanotum smooth, the rest of it with stout, transverse, clearly separated striæ. Propleuræ stoutly striated except at the base; the meso- similarly striated except in the middle behind; the meta- stoutly striated, the striæ at the base intermixed with deep punctures; the striæ are mostly curved. The central furrow on the mesosternum deep, crenulated. Abdomen narrow, smooth and shining.

This is the largest of the known Indian species. It may be known from *F. frontella* by the darker-coloured legs, by the weaker more widely separated, striæ on the front and vertex, by the hair on the thorax being denser and longer and by the metatarsus being shorter compared with the 2nd joint. *F. curvicarinata* may be known from it by the curved keels on the front, by the smaller areolet and by the yellow mark on the metanotum being widely dilated at the apex.

FRIONA FRONTELLA, sp. nov.

Black; the face, clypeus, mandibles, palpi, the inner orbits and the outer above and below, the edge of the pronotum, tegulæ, scutellums, a narrow line down the middle of the metanotum from the transverse keel to the base of the oblique apex, which is surrounded by a broader band of similar colour and the apices of all the abdominal segments, the yellow on the penultimate extending broadly

to the base in the middle, yellow. The eight middle joints of the antennæ clear white, except on the top where they are marked with black. Four front legs pale fulvous, the coxæ and trochanters white, the hinder of a deeper fulvous colour, their coxæ broadly black on the sides and at the apex above, their base above white; the apex of the femora and the base of the tibiæ, the apex of the tibiæ and the base of the tarsi, black; the rest of the tarsi, except the last joint, white, and there is a testaceous band near the base. Wings hyaline. ♀.

Length 12; terebra 5 mm.

Face rather strongly punctured, the clypeus almost smooth; in the centre of the face is a narrow black line, continued to the base of the clypeus as a brownish one; there is a black line on the base of the clypeus. Front and vertex strongly striated; the central keel straight, the others more oblique. Mesonotum shining, thickly covered with long fuscous hair; the middle lobe clearly separated. The metanotum at the base smooth; it has a semicircular depression in the centre; the rest of the segment is strongly transversely striated; the apex has a slightly oblique slope; its centre is smooth, the sides obliquely striated. Propleuræ in the centre with large, stout, curved striæ, the top and bottom strongly aciculated; the meso- except in the middle behind, strongly longitudinally striated; the meta- strongly obliquely striated, the striæ becoming stronger from the base to the apex. Abdomen smooth and shining; the 2nd and 3rd segments strongly aciculated.

FRIONA CURVICARINATA, sp. nov.

Black; the face, clypeus, labrum, palpi, mandibles, a mark on the vertex opposite the ocelli and the apices of all the abdominal segments, yellow. The four front legs are yellowish, with a pale fulvous tinge; the middle tarsi blackish, the hinder coxæ pale yellow, broadly black at the apex, narrowly above on the outer-side, the trochanters black, the femora dull fulvous, broadly black above, the tibiæ black, the base to shortly beyond the middle, dull fulvous, the tarsi white, the base of the metatarsus narrowly and the extreme apex, black. Wings hyaline. Antennæ filiform, longer than the body, the scape below and a broad band shortly beyond the middle of the flagellum, white. ♂.

Length 13 mm.

Face rugosely punctured, transversely striated in the centre, thickly covered with short white hair, front and vertex smooth; in front of the ocelli are three rows of irregular, curved keels, all bent backwards in the middle; on the sides of the front are two or three

short longitudinal keels. Mesonotum smooth, thickly covered with long fuscous hair, distinctly trilobate; scutellum sparsely covered with longish fuscous hair; opposite the post-scutellum is a large broad yellow mark. Median segment elongate, the base behind the transverse keel smooth, the rest transversely striated, but not strongly or closely, the yellow marks commence near the keel, the broad part shortly behind the middle and extending right across the apex. The middle of the propleuræ finely longitudinally striated; the meso- above similarly striated, the striæ extending to shortly beyond the middle; the apex on the lower-side is more closely and finely striated; the meta- more strongly, closely obliquely striated and thickly covered with long white hair. Abdomen smooth, long and narrow.

Comes near to *F. frontella*; may be known from by the keels or striæ on the front being curved or transverse, not longitudinal, by the pleuræ not being so strongly or closely striated, and by the apex of the yellow line on the metanotum being much more largely dilated.

HEMITELES GENICULATUS, sp. nov.

Black; the metathorax rufous, yellow towards the apex, the inner orbits, an irregular mark on the upper part of the face, touching the yellow on the orbits, the palpi, middle of the mandibles, a line on the pronotum narrowed in the middle, a slightly broader one on the lower-side of the propleuræ, the tubercles, a large mark, narrowed and rounded at the apex on the lower-side of the mesopleuræ, yellow. The four front legs testaceous, the coxæ and trochanters pale yellow, the hinder legs rufous, their coxæ broadly black on the outer and inner-side; the basal joint of the trochanters pale yellow, the apical black; the apex of the femora and of the tibiæ and the base of the metatarsus black; the rest of the tarsi, white. Wings clear hyaline, the stigma pale, the nervures dark testaceous. Abdomen black, a band before the apex of the 1st, slightly more than the apical half of the 2nd, a mark on the side of the 3rd, the apex of the 6th and the whole of the apical segment, pale yellow. Scape of antennæ rufous. ♀.

Length 8 mm.

Face strongly, the clypeus less strongly punctured, except for a smooth band behind the apex; the front shagreened, the vertex closely, but not very strongly, punctured. Mandibles testaceous at the base, the apex black. Mesonotum closely rugose, the furrows transversely striated at the base. Scutellum punctured sparsely, the sides at the base stoutly keeled, the keels reaching to the middle;

the post-scutellum bifoveate at the base. Median segment closely rugose ; the areola broader than long, rounded at the base and apex ; the spines are small, triangular. The pro- closely, the mesopleuræ more strongly punctured ; the meta- distinctly punctured, striated towards the apex, the base smooth.

HEMITELES PULCHERRIMUS, sp. nov.

Ferruginous, the head black, the face, clypeus and mandibles, yellowish-testaceous ; the palpi pallid yellow. Legs coloured like the thorax, the front and hinder tarsi more yellowish and paler in tint. Wings clear hyaline, the stigma pale fulvous, the nervures darker. Antennæ black, the scape and the base of the flagellum rufous, beyond the middle is a white band of 9-10 joints. ♀.

Length 8 ; terebra 3 mm.

Sides of face infuscated, punctured, the clypeus sparsely covered with long fuscous hair. Scutellum minutely punctured ; the post-scutellum raised in the centre, the raised part bordered by stout keels. The basal middle area of the metanotum is obliquely narrowed towards the apex, which is about one half the width of the base ; the areola is slightly longer than broad, its base rounded, the apex transverse, the sides straight ; nearly all the areæ are clearly defined ; the spiracular is divided into two by a stout keel immediately behind the spiracles. Pro- and mesopleuræ shining, impunctate. The sides of the 2nd and 3rd abdominal segments are black ; the petiole is closely and strongly aciculated, its apex laterally strongly and closely longitudinally striated, as is also the base of the 2nd segment, the striation being strongest in the middle ; the apical dorsal segment is oblique and yellow at the apex ; the cerci large, pilose.

HEMITELES ORNATITARSIS, sp. nov.

Black, the metathorax red ; the inner orbits from the front ocellus to the base of the clypeus, broader above, narrowed, almost interrupted, opposite the antennæ, the edge of the pronotum, tegulæ, tubercles, a large mark obliquely truncated behind on the lower part of the mesopleuræ, and the scutellums, yellow ; the petiole rufous, yellowish at the apex, the apex of the 2nd segment from shortly behind the middle yellowish-white ; the 3rd white on the sides at the apical half ; the apical two segments white, as are also the 2nd and third ventral segments. The four front coxæ and trochanters white, the femora rufous, the tibiæ and tarsi paler ; the hinder coxæ, apical joint of the trochanters, the basal two-thirds of the femora and tibiæ and the basal and apical joints of the tarsi, black ; the calcari and the 2nd and 4th joints of the tarsi white. Wings

very iridescent, the stigma pallid yellow, the basal nervures black, the apical pallid fuscous. ♀.

Length 7; terebra 1 mm.

Antennæ perceptibly thickened towards the apex; the scape rufous below. Face closely punctured, more strongly in the middle; the clypeus at the apex with shallow, scattered punctures; the front and vertex closely and not so strongly punctured. Mandibles yellowish-testaceous, the teeth black; the palpi pallid yellow. Mesonotum closely punctured; the scutellum almost smooth. Median segment coarsely punctured, the middle transversely striated at the sides; the basal central area slightly wider than long, obliquely narrowed towards the apex, the areola semicircular, nearly as wide as long, aciculated laterally; the teeth blunt, stout; the posterior median area of nearly equal width throughout, its base rounded. The apex of the pro- and the mesopleuræ closely and strongly punctured, the meta- for the most part closely, obliquely and strongly striated. Petiole smooth, the apex aciculated; the gastrocoeli transverse, shallow, pale testaceous, the segment behind them obliquely striated.

The ♂ wants the white and red marks on the mesopleuræ; the hinder femora are black at the apices, the tibiæ are for the greater part black; the hind coxæ broadly black at the apex; the white mark on the antennæ is smaller and their apical joints are dilated beneath.

MESOSTENUS RESPONDENS, sp. nov.

Black; the 6th to 15th joints of the antennæ beneath, the face, clypeus, except at the sides, labrum, base of mandibles, palpi and the outer orbits—broadly on the lower-side—white; a broad line on the pronotum, a mark on the apex of the middle lobe of the mesonotum, the scutellums, a broad line round the apex of the mesonotum—narrowed above, the lateral part appearing triangular through being gradually narrowed below,—the tubercles, a small mark on the apex shortly above the middle, a large mark on the lower-side, triangularly narrowed at the apex. A crescent-shaped mark immediately under the hind-wings, an oblique, conical mark on the metapleuræ and the apices of the abdominal segments—the basal two broadly, the penultimate still more broadly, the central narrowly,—yellow. Legs rufo-fulvous, the four front coxæ and trochanters pale yellow, the hinder pale fulvous above and with a somewhat triangular black mark in the centre, the apex of the hinder tibiæ, the extreme base of the tarsi and their apical joint

black ; their middle joints have a yellowish tinge. Wings rather short, hyaline. ♀.

Length 13–14 mm. ; terebra 2 mm.

Face and clypeus covered with short silvery hair, the vertex rugose, irregularly striated in the middle below the ocelli. Mesonotum finely and closely transversely striated, the striæ stronger towards the apex. Scutellums impunctate. Median segment closely reticulated, the reticulations becoming stronger and more widely separated towards the apex ; the spines rounded at the apex. Propleuræ shining, shagreened, striated at the apex ; the meso- closely punctured, reticulated at the base ; a smooth depression at the centre ; the meta- above closely reticulated, the lower border crenulated, the centre obliquely striated ; the base in the middle finely punctured. Abdominal petiole shining, obscurely shagreened, the sides with a double keel reaching to the stigmas ; the middle segments shagreened.

MESOSTENUS BRAHMINUS, sp. nov.

Black ; the orbits all round, but much narrower near the top on the outer-side and above the clypeus on the inner, the face, clypeus at the base, labrum, base of mandibles, palpi, a broad line on the middle of the pronotum, an oval mark on the apex of the middle lobe of the mesonotum, the scutellum, the apex of the post-scutellum, the apex of the metanotum all round, narrowest above, the lower edge of the propleuræ, the tubercles, a small, somewhat oval mark on the apex of the mesopleuræ above the middle, a large mark on the lower-side—narrowed towards the apex and triangular at the base—a short line on the mesopleuræ, bordering the keel, a large mark behind the spiracles and a smaller one, narrowed toward the apex, on the centre of the metapleuræ, and the apices of the abdominal segments, yellow. Legs rufo-fulvous, the four front coxæ and trochanters white, the hinder coxæ broadly black at the base beneath, at the sides and at the middle above ; the base of the hinder tibiæ, their apices more broadly, the base of the metatarsus and the apical joint black ; the rest white. Wings hyaline. ♀.

Length 12 mm. ; terebra 3 mm.

The 7th to 15th joints of the antennæ white, black above. Face and clypeus closely punctured and covered with short silvery hair. Front smooth ; the vertex with a stout smooth keel in the centre, the sides strongly marked with curved keels ; the ocellar region finely striated, the striæ curved. Mesonotum closely punctured, the furrows crenulated, especially towards the apex, the sides there finely transversely striated. Scutellum smooth, almost impunctate. The base of the median segment irregularly longitudinally striated ; in

the centre is an area bounded by two stout keels, wide at the base, gradually, but not much, narrowed towards the apex; the basal transverse keel stout; the middle and apex of the segment strongly reticulated, especially at the apex. The apex of the propleuræ covered closely with curved keels, the apical half in the middle with some stout, clearly separated oblique keels; the meso- stoutly obliquely striated, the lower part with the striæ closer; the meta- at the base finely obliquely striated, the apex more stoutly and with the striæ running into reticulations. Abdominal petiole smooth, almost impunctate; the other segment opaque, closely punctured.

MESOSTENUS MISIPPUS, sp. nov.

Black; the 7th to 14th joints and the scape of the antennæ beneath; the orbits broadly all round, an irregular mark on the face above the middle, the clypeus, except its oblique apex, labrum, palpi, and mandibles, except at the apex, white; a narrow line on the pronotum, a diamond-shaped mark on the mesonotum at the apex, a small line opposite the tegulæ, the scutellums, a line following the outline of the upper-side of the apex of the metanotum to shortly below the spines, the lower edge of the propleuræ, the tegulæ, a small and a larger mark immediately below the hinder wings, a large line on the lower-side of the mesopleuræ, irregularly curved upwards at the apex, a large oblique mark slightly narrowed above, on the centre of the metapleuræ, and all the abdominal segments at their apices, yellow. Legs rufo-fulvous, the four front coxæ and trochanters yellow; the hinder coxæ black at the base above and more widely at the apex below; the basal joint of the trochanters black above, the hinder tarsi white, the base fulvous, the apical joint black. Wings hyaline. ♀.

Length 12; terebra 2 mm.

Face closely punctured and closely covered with short white pubescence; the vertex and front strongly and closely obliquely striated; the sides of the front depressed, the depression somewhat triangular, finely and closely striated on the outer-side. Mesonotum closely punctured, thickly covered with short white pubescence, the base of the middle lobe obscurely transversely striated; scutellums smooth. Median segment behind the keel finely rugose, in front of it, in the centre, irregularly reticulated, the rest closely rugosely punctured; the spines broad, rounded at the top. Propleuræ strongly and closely striated except on the top and bottom; the meso- finely rugose, below the tubercles finely striated; the meta- finely rugose, and obscurely obliquely striated. Abdominal petiole aciculated.

Agrees closely with *M. respondens*; it is more slender,

the face is broadly black in the middle, the front is furrowed, not keeled; there are no keels on the middle of the metanotum at the base, and the hinder tibiæ and tarsi are not marked with black.

MESOSTENUS CLARINERVIS, sp. nov.

Black; the face, clypeus, mandibles at the base, the inner and outer orbits, the white on the inner slightly dilated at the base, and apex of the mandibles, white. A broad line on the basal half of the pronotum, the base of the tegulæ, a mark, slightly broader than long, on the apex of the middle lobe of the mesonotum, the scutellar keels, the apical half of the scutellum, the yellow continued down the base as a triangle, the post-scutellum and its keels, a somewhat conical mark on the base of the metanotum, its apex transverse, the teeth, a line on the lower-side of the propleuræ, the tubercles, an oblique, somewhat oval, mark on the base of the mesopleuræ, a smaller, more irregular mark on the lower-side at the apex, a crescent-shaped, large mark on the sides of the mesosternum, a mark, somewhat conical on the lower-side, on the base of the metapleuræ at the top, a larger oblique one in the middle, and a line on the apices of all the abdominal segments, the basal three being the larger, yellow. Legs ferruginous, the four anterior coxæ white, the tips of the tarsi black. Wings hyaline, the costa and stigma fuscous, the nervures at the apex testaceous. Antennæ black, the five middle joints white, lined with black above; the apex brownish. ♀.

Length 13; terebra 5 mm.

Face rough, the clypeus obscurely punctured at the base; on the sides of the clypeus is an oblique, broad black mark, extending from the base of the mandibles to shortly above the base of the clypeus; the apical half of mandibles black. Front and vertex depressed; the former shagreened, the latter with a distinct keel down the centre, its sides obliquely striated; the striæ stout and irregular. Mesonotum almost opaque, closely and strongly punctured; the scutellum almost impunctate. Median segment coarsely reticulated, most strongly on the apex, where, in the middle, the reticulations are transverse and much wider than long; the base is deeply depressed; from the middle at the base runs an oblique furrow, bordered on the basal side by a sharp, stout keel, the keel bordering the apex of this furrow being smaller and less clearly defined; the triangular space bounded by this furrow is less strongly and more closely punctured than the rest of the segment; the teeth are large, stout. The upper part of the propleuræ at the base above with some stout, semi-oblique striations; the apex with slightly thinner oblique striæ, the lower part with stout, longitudinal keels, most of them

having a slight curve. Base of mesopleuræ coarsely longitudinally striated; the upper part, except at the apex, obliquely and longitudinally striated. Upper part of metapleuræ closely reticulated, the lower stoutly obliquely striated. Abdomen smooth and shining, the 2nd and 3rd segments closely punctured.

The posterior coxæ may have a yellow mark on the base and apex. Characteristic are the three yellow marks in a triangle, on the metanotum.

MESOSTENUS RETICULATUS, sp. nov.

Black; the face, oral region, the inner orbits to the end of the vertex, mandibles, except the teeth, palpi, two lines on the prothorax next to the head, a line on the centre of the pronotum, tegulæ, scutellum, the apex of post-scutellum, two large elongated marks on the apex of the metanotum, including the spines, and the apices of the abdominal segments, yellow. The 5th to 12th antennal joints yellowish-white. Legs fulvous, the hinder coxæ below, apex of hinder femora and tibiæ, black. Wings hyaline, the stigma testaceous, nervures fuscous. ♀.

Length 15–16 mm.

Front and vertex stoutly striated in the middle, the striæ stout, irregular, semi-oblique, in places forming irregular reticulations; smooth and shining. Face and base of clypeus coarsely punctured; the apex of the clypeus smooth, semi-circularly depressed. Middle lobe of the mesonotum closely punctured in the centre, the sides, especially towards the apex, coarsely striated, the centre with a broad shallow, but distinct, longitudinal depression; the outer lobes on the base and inner-side stoutly irregularly striated—scutellums smooth, sparsely haired. Median segment strongly reticulated, except at the base, where, in the centre, there is a small smooth space behind the transverse keel; the reticulations on the base laterally are much weaker than on the rest of the segment. The teeth are large, stout. Propleuræ, except at the base, strongly irregularly striated; the base of the meso- above coarsely rugosely punctured and with some irregular striæ; the base of the meta- rugose, coarsely reticulated, the apex coarsely obliquely striated. The pleural furrow at the base is narrow, deep and crenulated.

MESOSTENUS CALIGATUS, sp. nov.

Length 9; terebra 2 mm. ♀.

Very similar to *M. saluator*, but smaller; there are no white marks on the pleuræ, the median segment is not so strongly reticulated, but its base is distinctly punctured, almost as strongly as its

apex, and the former is gradually, and slightly rounded from the ocelli to the base of the antennæ. Black, the inner orbits from the base of the clypeus to near the end of the vertex, the outer more broadly below—the yellow becoming dilated round the base of the mandibles, the palpi, the top and bottom of the prothorax, tegulæ, scutellums, the apex of the median segment, including the spines, broadly at the sides, tubercles, a large crescent-shaped mark behind the metathoracic spiracles, a large mark on the apex of the middle lobe of the mesonotum; the apex of the 1st abdominal segment, of the 2nd broadly, the apical segments entirely and the basal two segments beneath, yellow. Legs rufo-fulvous, the four front coxæ and trochanters white; the apex of the hinder tibiæ infuscated.

Face strongly and closely punctured, the upper part laterally obscurely striated; the clypeus more weakly and closely punctured; the front and vertex coarsely shagreened, the front slightly depressed and keeled down the centre. Mandibles ferruginous before the teeth. Mesonotum shagreened, shining, covered with a short black pile. The keel on the metanotum is broadly and roundly curved backwards in the middle; the space behind it coarsely reticulated, the sides at the base smooth and shining; the keels on its centre straight and slightly converging towards the apex; the reticulations on the yellow sides are golden. Propleuræ stoutly obliquely striated, except at the base; near the base is a stout perpendicular keel. Mesopleuræ punctured and irregularly striated; the metapleuræ strongly, almost uniformly and slightly obliquely, striated. Wings hyaline, the stigma fuscous, paler below, the nervures darker. First abdominal segment smooth and shining, becoming gradually dilated from the middle to the apex, the middle segments aciculated.

MESOSTENUS SALUTATOR, sp. nov.

Black, a broad line on the pronotum, tegulæ, a squarish mark on the apex of the middle lobe of the mesonotum, the scutellar keels, the scutellums, two broad marks on the sides of the apex of the median segment, the base of propleuræ, tubercles, an elongated curved line on the mesopleuræ, extending from below the tubercles to the base of the middle coxæ, a long crescent-shaped mark—narrowed on the inner end, more truncated below—behind the spiracles, a line following the oblique keel on the metapleuræ—broad at the base, becoming narrowed towards the apex—and the apices of the 2nd to 5th and the abdominal segments entirely, yellow. Four front legs fulvous, their coxæ and trochanters pale yellow, the apex of hinder tibiæ, the base and apex of the hinder tarsi black; the rest of the tarsi white. Wings hyaline, the stigma and nervures black. ♀.

Length 11; terebra 2 mm.

Joints 6 and 7 of the antennæ white, black above ; the scape brownish below. Face closely punctured, bare ; the sides of the raised central part, its apex and the sides of the clypeus black, the black lines united together, the rest yellow. Mandibles black, the basal half yellow, edged with black. Palpi yellow ; the apical joint of maxillary fulvous. Front smooth and shining ; the vertex irregularly closely, strongly and somewhat obliquely striated and slightly depressed before the ocelli. Mesonotum closely and strongly aciculated. Base of the metanotum closely, irregularly striated, most strongly on the outer-side ; in the centre are two keels ; the only transverse keel is curved backwards in the centre ; the rest of the segment is closely, irregularly reticulated ; at the apex, in the middle, is a smooth space with three longitudinal keels. Propleuræ for the most part strongly longitudinally striated ; at the top is a stout oblique keel. Mesopleuræ finely rugosely punctured at the base and top, the punctures running into striæ. The base of the metapleuræ on the lower part depressed, stoutly crenulated, the lower and apex strongly obliquely striated, the striæ running into reticulations at the base. Petiole smooth and shining ; the sides to the thickened apex with two sharp keels ; the 2nd to penultimate segments closely, but not strongly, punctured.

MESOSTENUS VERSATILIS, sp. nov.

Length 15 ; terebra 4 mm.

Agrees closely in coloration and form with *M. reticulatus* and in having the median segment reticulated ; but may be known by the shorter hinder coxæ, which are also devoid of black, by the blackish hinder trochanters and by the longer and thinner spines on the metathorax.

Antennæ stout, broadly annulated with yellow in the middle. Black : the face, clypeus, base of mandibles, palpi, the inner eye orbits, an elongated line on the base of the pronotum, gradually narrowed towards the apex, tegulæ, tubercles, scutellar keels, scutellum, a crescent-shaped mark behind the posterior wings, the sides of the obliquely sloped apex of the median segment, its spines, about the apical fourth of the basal three abdominal segments, the middle more narrowly and the apical entirely, yellow. Legs rufous, the extreme apex of the hinder coxæ, more or less of the hinder trochanters, the apex of the hinder femora, the base of the hinder tibiæ more narrowly and their apex more broadly, black. Wings hyaline, the nervures testaceous, the stigma black. ♀.

Sides of the front stoutly obliquely striated, the middle depressed. Mesonotum thickly covered with short hair ; the sides of the middle lobe at the base and the outer-sides of the furrows striated. Scutellum

smooth, sparsely covered with short fuscous hair. Median segment shagreened behind the transverse keel; the base depressed and having some stout longitudinal keels, the centre smooth and bounded by curved keels; the rest of the segment irregularly reticulated, more widely at the base, than in the middle or apex. There are three stout keels on the base of the propleuræ, the top, especially at the apex, marked with irregularly curved keels, the middle with stout, distinctly separated ones; the lower part closely and strongly aciculated. Mesopleuræ coarsely aciculated, the apex above smoother and more shining, the lower part stoutly striated. Metapleuræ closely, irregularly reticulated.

MESOSTENUS MACULICEPS, sp. nov.

Black: the scape of the antennæ beneath, the apex of the 6th and the 7th to 10th joints white beneath; the palpi, apex of labrum, clypeus, a large wedge-shaped mark on the face below the antennæ, a line on the pronotum, narrowed in the middle, the apex of the middle lobe of the mesonotum, scutellums, the scutellar keels, two large marks on the obliquely sloped apex of the median segment, its spines, the base of the propleuræ, tubercles, the apex of the 1st abdominal segment, of the 2nd and 3rd and the apical two entirely, yellow. Legs rufous, the four front coxæ and trochanters yellow, the tarsi spinose, the hinder white, black at base and apex. Wings hyaline, the stigma and nervures black. ♀.

Length 10 mm.

Face closely punctured and covered with short, white pubescence, the clypeus smooth, the front and vertex closely punctured. Mesonotum opaque, alutaceous, the furrows distinct, the scutellum smooth. Median segment finely rugose; behind the basal keel striated; the apex in the middle irregularly transversely striated. Except at the base the propleuræ are stoutly, obliquely striated; the meso- opaque, shagreened, obscurely striated; the apex of the meta- obliquely striated. The mesopleural furrow distinct, curved, striated. Mesosternum shining, aciculated, the central furrow widened at the apex.

PHYGADEUON LATIANNULATUM, sp. nov.

Black; the scape beneath and joints 10-16 of the antennæ clear white; the clypeus, mandibles, except at the apex, and palpi yellowish-white, the base of the pronotum and tegulæ, yellow, the apical fourth of the 1st, the apical half of the 2nd, and a mark in the centre of the 3rd abdominal segment, rufous. Legs: the four anterior pale rufous, the coxæ and trochanters pale yellow, reddish above, the femora rufous, their extreme apex black, the tibiæ fuscous-

black, dark rufous at the base, the hinder tarsi white, black at base and apex. Wings hyaline, the stigma fuscous. ♂.

Length 7 mm.

Face closely punctured, thickly covered with white hair, the front and vertex shining, distinctly, but not closely, punctured and thickly covered with short, fuscous hair. Mesonotum punctured in the centre and thickly covered with short fuscous hair. Scutellum almost impunctate. Median segment obscurely punctured, thickly covered with long white hair; its basal areae are indistinct; the basal three clearly defined, the central rounded above. Pro- and mesopleurae shining, obscurely punctured, the lower part of the former obscurely striated in the middle. Mesosternum smooth, thickly covered with white pubescence.

Comes near to *P. labiale* but is larger, the antennae are longer and more slender; otherwise may easily be separated by *P. labiale* having the clypeus and the four front coxae black, by the metatarsus being entirely black and by the narrower white band on the antennae.

PHYGADEUON STRIATIFRONS, sp. nov.

Black; the labrum and middle of mandibles dull testaceous, the palpi, tegulae, tubercles, the basal third and a mark in the centre of the 1st abdominal segment, almost the apical half of the 2nd and the apical two segments, clear white. Legs pale testaceous; the coxae and trochanters white, the hinder coxae black, more or less testaceous on the under-side, the femora and tibiae dark brownish, the femora black above, the hinder tarsi white, the basal two-thirds of the 1st and the last joint blackish; the joints spinose at the apex; the penultimate with a bunch of long stiff hairs. Wings hyaline, the stigma pale testaceous. The scape and the 8th to 13th joints of the antennae beneath, white, ♀.

Length 9; terebra 2 mm.

Face opaque, roundly bulging out in the middle; the vertex and upper part of the front furrowed down the middle and stoutly transversely striated, the sides strongly aciculated, the lower part of the front smooth; the clypeus sparsely punctured above. Mesonotum finely punctured; the furrows only indicated at the base. Median segment longish, its apex oblique; the basal area longer than broad, gradually narrowed to less than half the width of the base at the apex; the areola elongate, obliquely narrowed at the base and apex; all the areae distinct; the outer of nearly equal width throughout; the spines are stout, triangular. Propleurae finely and closely punctured, the middle striated; the meso- and metapleurae closely punctured, as is also the mesosternum. Wings hyaline, the

stigma pale, the nervures black at the base, fuscous towards the apex; the transverse median nervure interstitial; the areolet is longer than wide. Petiole longer than the 2nd abdominal segment, smooth and shining.

PHYGADEUON LABIALE, sp. nov.

Black; the labrum, base of mandibles and palpi white, the four front trochanters white; the femora and tibiæ fulvous, the tarsi paler; the coxæ, basal joint of hinder trochanters, apex of hinder tibiæ all round and of femora above and the basal and apical joints of the tarsi, black; the middle of tarsi and the spurs white; the apex of the 1st abdominal segment, the 2nd except the sides above, and two marks on the apex and the 3rd, except on the sides and apex, reddish; the apical segments are bordered with white. The scape of antennæ in the middle beneath and joints 12-14 white. Wings hyaline, the stigma and nervures fuscous. ♂.

Length 6-7 mm.

Face opaque, closely punctured and thickly covered with short white hair; the front and vertex strongly punctured, the punctures larger and more widely separated than they are on the face. Thorax thickly covered with white hair, which is longer on the pleuræ and median segment; the mesonotum shining, uniformly punctured, the punctures large and distinctly separated; the scutellum more shining and with the punctures smaller, sparser and covered with long and white hair; post-scutellum smooth and shining; the depression at the side wide, deep and marked with three stout keels. The base of the metanotum has a deep depression; at the base are two curved keels, which do not reach to the extreme base; the space enclosed by them is shining and finely punctured; the space before them is irregularly punctured; the apex has an oblique slope and is coarsely shagreened, the top of the oblique slope is bordered by a stout keel which bulges backwards into a triangle; there are three distinct areæ on the apex; the areola is rounded at the base, its sides straight, oblique and slightly converging towards the apex; the posterior median area is rounded at the base, the sides converge slightly towards the apex; it is coarsely, irregularly transversely rugose; the lateral areæ are strongly obliquely striated. Propleuræ and mesopleuræ strongly punctured, the former striated behind; the latter smooth in the middle. Metapleuræ closely punctured, more strongly above than below; its median keel is not very distinct and is interrupted in the middle.

PHYGADEUON PALLIDINERVIS, sp. nov.

Black; the apex of the 1st, and the 2nd and 3rd abdominal seg-

ments ferruginous, the apical two segments white, the legs rufous, the apex of the hinder tibiæ and the tarsi black ; the wings hyaline, the stigma pale yellow. ♀.

Length 5 ; terebra 1 mm.

Antennæ stout, black, the 8th and 13th joints clear white, except above, the 2nd and the apices of the 3rd and 4th joints testaceous. Front and vertex closely and strongly punctured and covered with white pubescence. Mandibular teeth rufo-testaceous ; the palpi white. Thorax thickly covered with white hair ; mesonotum strongly punctured ; the scutellum very shining and obscurely punctured. Metanotum at the base in the centre smooth, bearing two, not very distinct, keels which curve round to the right and left ; the middle region is rough, obscurely punctured ; the apex above is bordered by a stout keel which curves backwards in the middle and is, at the top, obliquely striated ; the rest is roughly punctured ; the apex has an oblique slope and is thickly covered with long white hair. Pleuræ for the most part strongly and closely punctured.

The base of the post-petiole is strongly longitudinally striated, the striæ strongest on the sides ; the 2nd and 3rd ventral segments are testaceous. The punctures on the propleuræ run into striations at the apex.



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