

THE
TRANSACTIONS
OF THE
ENTOMOLOGICAL SOCIETY
OF
LONDON
FOR THE YEAR
1903.

LONDON:

PRINTED FOR THE SOCIETY BY RICHARD CLAY AND SONS, LIMITED,
LONDON AND BUNGAY.

SOLD AT THE SOCIETY'S ROOMS, 11, CHANDOS STREET
CAVENDISH SQUARE, W.,

AND BY LONGMANS, GREEN, AND CO.,
PATERNOSTER ROW, E.C.; AND NEW YORK.

1903-1904.

XIII. *Descriptions of Twelve New Genera and Species of Ichneumonidæ (Heresiarchini and Amblypygi) and three species of Ampulex from the Khasia Hills, India.* By PETER CAMERON, communicated by GEORGE ALEXANDER JAMES ROTHNEY, F.E.S.

[Read May 6th, 1903.]

Caspipina, gen. nov.

Mandibles curved, sickle-shaped, unidentate. Apex of clypeus transverse; not separated from the face; the foveæ distinct. Occiput sharply margined. Scutellum flat; its sides on the basal half keeled. Median segment completely areolated; the areola, if anything, broader than long and open at the base. Areolet 5-angled; narrowed at the top, the transverse basal nervure interstitial. Legs stout; the tarsi spinose. Antennæ compressed and somewhat dilated beyond the middle. The apex of the median segment has an oblique, straight, not rounded slope. The inner orbits are sharply margined. The recurrent nervure is roundly curved outwardly and bears the stump of a nervure in the middle.

Caspipina ferruginea, sp. nov.

Ferruginous; the edge of the pronotum, the lower edge of the propleuræ, the tubercles, the mesopleuræ broadly in the middle at the base and the centre of the metapleuræ, yellow; the edges of the mesonotum, the space at the sides of the scutellums, the apex of the median segment—the black projecting upwards along the keels—a band shortly below the middle of the propleuræ, the base, top, and apex of the mesopleuræ, and the base and lower-side of the metapleuræ, black. Legs ferruginous, the fore coxæ yellowish; the tarsi thickly covered with short, stiff hair; the incision on the base of the fore tarsi wide and deep. The basal sixteen joints of the antennæ ferruginous, the rest black. Wings fusco-hyaline, the nervures and stigma black. ♀.

Length, 13 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Head shining, the face and clypeus closely, but not strongly, punctured and sparsely covered with short pale pubescence; the
TRANS. ENT. SOC. LOND. 1903.—PART II. (JUNE)

front and vertex closely punctured, the inner and outer orbits obscure yellow. Mandibles with a yellowish tinge at the base, the apex black. Mesonotum closely and finely punctured, as are also the scutellums. Median segment closely, rugosely punctured, the punctures running into striae on the apex and on the spiracular area. Propleuræ shagreened, the meso- and metapleuræ closely punctured. Prosternum stoutly keeled in the middle; its apex and the base of the meso- black. The base of the 1st abdominal segment and of the 2nd, black; the 4th and the following segments more or less black; the post-petiole is raised in the middle and separated from the sides; its middle slightly depressed, closely punctured and finely longitudinally striated, except at the apex; the gastrocelli are stoutly striated.

ENCHISIADES, gen. nov.

Mandibles curved, ending in one tooth; the apex gradually narrowed, rounded. Face flat. Labrum projecting. Clypeus not separated from the face, its apex transverse. Scutellum roundly convex, not much raised, its sides distinctly keeled. Post-scutellum bifoveate at the base; its sides not keeled. Median segment with a gradually rounded slope, completely areolated, its areola longer than broad, rounded behind, its apex bulging backwards, and with the keel thin. Areolet 5-angled, narrowed above, the nervures almost touching there. Post-petiole broadly dilated, distinctly separated from the petiole. Legs stout; the tarsi long, spinose. Antennæ long, slender, slightly but distinctly, dilated towards the apex.

The hinder coxæ are larger than usual; the head is only slightly developed behind the eyes; the occiput is broadly rounded inwardly; its lower edge narrowly, but distinctly, keeled.

ENCHISIADES RUFIPES, sp. nov.

Black; the face, clypeus, labrum, mandibles, orbits, the edge of the pronotum narrowly, the line not extending to the apex, the lower edge of the propleuræ slightly more broadly, the scutellar keels, the sides of the scutellum, post-scutellum, the lateral region of the apical slope of the metanotum, the tubercles, a line on the inner-side of the mesopleuræ, commencing above the middle at the base, where it is narrowed along the basal half and more broadly on the lower half, where it is obliquely turned upwards; two marks under the hind-wings and a small mark above the middle of the hinder coxæ, lemon-yellow. Legs rufous; the four front coxæ and trochanters and the four apical joints of the hinder tarsi yellowish-white, the hinder coxæ black; the apex and an oblique line on the

middle above, lemon-yellow ; the apex of the hinder femora, the base of the hinder tibiæ, their apical third and the metatarsus, black ; the tarsi thickly spinose. Abdomen black ; an oblique mark on either side of the post-scutellum, a large mark, broader than long, on the sides of the 2nd, 3rd, and 4th segments with their apices narrowly in the middle, lemon-yellow. Wings hyaline, the nervures and stigma black. ♀.

Length, 11-12 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Antennæ black, the 10th to 17th joints beneath white ; the scape minutely punctured and covered with black down. Face and clypeus closely and uniformly punctured, the vertex closely and minutely punctured, in the centre below closely transversely striated ; the front smooth and shining. In the centre of the face is a large bell-shaped black mark, its lower edges uniting with the clypeal foveæ. Mandibles yellow, black at the apex ; the palpi pallid yellow. Mesonotum opaque, granular, more distinctly punctured along the sides and covered with a pale down. Scutellum with the basal half indistinctly, the apical closely and distinctly punctured ; it is thickly covered with pale hair ; the basal keels are stout and extend to shortly beyond the middle. Basal half of post-scutellum punctured ; the two foveæ large and deep ; the depression at its sides has five stout longitudinal keels. Metonotum closely and distinctly punctured ; beyond the basal arcæ more or less transversely striated. Pleuræ closely punctured ; the pro- at the base closely and finely striated.

Darachosia, sp. nov.

Mandibles with a long, curved apical tooth and a short blunt one in the middle. Antennæ as long as the body, dilated and compressed before the apex. Labrum projecting. Scutellum flat, its sides keeled. Median segment completely areolated, its spiracles linear ; the arcola twice longer than broad, rounded behind, its apex indented by the posterior median area. Legs long, the tarsi longer than usual ; the anterior and hinder twice the length of their tibiæ. Areolet 5-angled, narrowed above. Abdomen with eight dorsal segments ; the apex moderately blunt ; the last segment short, about one-half the length of the penultimate ; the ventral keel is distinct on the 3rd and 4th, indistinct on the 5th segment ; the petiole is long and slender ; the sheaths of the ovipositor project largely.

The occiput is transverse ; the eyes large, sharply margined on the inner-side ; the pronotum at the base is broadly raised ; the petiole is long and slender ; it is not abruptly dilated at the apex.

A distinct genus easily known by the form of the mandibles, by the long antennæ dilated before the apex, and by the very long spined tarsi.

This genus, as also do *Evirchoma*, *Sycaonia*, and *Legnatia*, as regards the mandibles, forms a transition between the *Amblypygi* and the *Heresiarchini*, there being a short sub-apical tooth, which is indistinct and more widely separated than it is with the former group, while in the latter the mandibles become gradually narrowed.

Darachosia fulvipes, sp. nov.

Black; the face, except for two short black lines in the middle, the clypeus, the eye orbits—the inner on the upper-side narrowly, the outer more broadly—the malar space, a line on the pronotum, two lines on the mesonotum, in the middle, one opposite the tegulæ, the scutellum, except in the middle—the black central mark narrowed and rounded, its apex transverse—the post-scutellum, the sides of the apical slope of the median segment, the yellow extending laterally on to the spiracular area and at the apex on to the pleuræ; the base of the pronotum, a line below the middle of the propleuræ, the mesopleuræ from shortly below the middle, the tubercles and the apex of the mesopleuræ narrowly, pale yellow. Legs fulvous, the four front coxæ and trochanters pallid yellow; the femora lined with black above, the front tarsi infuscated; the hinder coxæ black; the apex and the middle broadly above on the apical half, pale yellow; the trochanters, more than the apical third of the femora, and the apex of the tibiae, black; the hinder tarsi pale yellowish. Abdomen black; the apices of all the segments lined with yellow, the apical three segments more narrowly than the others. Wings hyaline, their base with a slight fulvous tinge; the stigma testaceous, the apical nervures of a darker testaceous colour, the basal black; the areolet much narrowed above, the nervures almost touching there. ♀.

Length, 15 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Antennæ as long as the body, the scape below and joints 11–17 white; the thickened joints brownish beneath; the scape closely punctured and thickly covered with short white hair. Face closely punctured; it and the clypeus are covered with white pubescence. The lower part of the front is smooth and shining, the upper transversely striated, punctured laterally. Mesonotum closely and uniformly punctured; the scutellum is closely and more strongly punctured; its keels yellow. Median segment, except at the base in

the middle, closely punctured; the areola closely punctured on the apical half; the basal smooth and shining and furrowed laterally. Pleuræ closely punctured; the pro-striated behind; the meta-more closely and strongly than the meso-. Mesosternum closely punctured; its basal slope stoutly transversely striated in the middle and bearing two transverse yellow marks; on the apex, near the middle coxæ, are two small oblique marks. The petiole closely and somewhat strongly punctured; its sides, on the apical half, striated; the 2nd, 3rd and 4th segments closely and uniformly punctured; the gastrocœli smooth, striated round the edges; the space between them closely, longitudinally striated.

Evirchoma, gen. nov.

Mandibles curved, with one longish apical and a short subapical tooth, not separated behind. Apex of clypeus broad, transverse, above separated from the face by a wide suture, which is deep on the sides, shallow and wider on the top. Labrum projecting. Occiput margined. Scutellum margined laterally at the base, large, convex, gradually rounded at the base and apex. Median segment completely areolated; the areola longer than broad, rounded at the base, of almost equal width throughout; the spiracles linear, curved. Areolet 5-angled, much narrowed at the top, the nervures almost touching these; the transverse basal nervure not interstitial. Abdomen with seven dorsal segments, the last large, not retracted, as long as the preceding, bluntly pointed; the ventral keel is on the 2nd, 3rd and 4th segments; the ovipositor projects, and is as long as the apical two segments united. Tarsi spinose.

Evirchoma pallidimaculata, sp. nov.

Scape of antennæ rufous, closely, but not strongly, punctured; the flagellum stout, the 8th to 20th joints white, tinged with rufous, the rest black, more or less brownish. Face and clypeus strongly and closely punctured, the apex and sides of the latter smooth; the face yellow, broadly rufous in the middle; the clypeus broadly rufous in the middle, the sides paler, and there is a darker band between. Orbits yellow, broadly below; the vertex dark rufous, closely punctured; the front blackish, smooth. Apex of labrum fringed with long, fulvous hair. Mandibles rufous, the teeth black. Palpi yellow. Thorax dark rufous, the lower part of the pro-, the lower half of the mesopleuræ, the scutellums and the sides of the median segment at the apex, yellow, suffused with rufous. Mesonotum dark rufous, very closely punctured. Scutellum strongly longitudinally punctured, almost striated in the middle; the base black, the rest yellowish, running into rufous. Post-scutellum yellow, finely

longitudinally striated. Median segment with the central three areæ smooth ; the basal central wider than long, narrowed towards the apex ; the basal lateral bear shallow, widely separated punctures ; the posterior median strongly transversely striated ; the spiracular at and behind the spiracles, almost impunctate, the rest obliquely striated, the striæ becoming stronger and more widely separated towards the apex, especially behind the teeth, which are large, keeled on the under-side, and united with the lateral keels. Propleuræ finely punctured above. Mesopleuræ yellow, black above, under the tubercles and halfway down the middle, the lower part of the base behind the keel black ; the lower part is strongly longitudinally striated, the upper striæ being much shorter than the lower. Metapleuræ below the keel black, except at the base above, and the apex obliquely on the lower-side ; the yellow part is narrow at the top, becoming wider at the bottom. Legs dark rufous ; the femora darker ; the four front coxæ and trochanters yellowish-white ; the hinder broadly dark rufous at the base in front ; behind yellow, except for a large mark on the base below ; the basal joint of the hinder trochanters dark rufous ; the hinder tarsi thickly spined. Petiole black, its apex yellow ; the 2nd and 3rd segments black, impunctate ; their apices broadly rufous ; the other segments for the greater part dark rufous, their apices yellowish. The ovipositor sheaths pilose, largely projecting, rufous in the middle.

Sycaonia, gen. nov.

Mandibles with one short upper tooth, distinctly projecting beyond the lower, which hardly projects and is bluntly rounded. Face distinctly and broadly projecting in the middle, the projecting part bordered laterally by a shallow furrow, which is wider and more distinct below. Clypeus not separated from the face. Occiput margined. Antennæ stout, thickened beyond the middle. Scutellum flat, only slightly roundly convex ; its sides not margined. Post-scutellum with a depression on either side at the base and bordered on the outer-side by a sharp keel. Median segment regularly areolated ; its sides with a blunt tooth ; its spiracles curved, linear ; areola separated by its own length from the base of the segment ; it is longer than broad, slightly narrowed towards the apex. Areolet 5-angled, narrowed above. Legs stout, the tarsi spinose. Abdomen with seven segments ; the last large all round ; if anything longer than the penultimate ; its apex somewhat bluntly pointed.

Sycaonia rufo-facies, sp. nov.

Black ; the orbits all round narrowly, the apex of the petiole and a mark, about three times broader than long and rounded on the

inner-side, on the sides of the 2nd abdominal segment at the apex, yellow. Legs rufous, the four front coxæ and trochanters, the tibiæ to beyond the middle—about the basal two-thirds—pale yellow; the hinder coxæ on the sides and beneath, the hinder trochanters, apex of femora, their base more narrowly and the apex of the tibiæ black; the tarsi are covered thickly with stiff spines. The wings have a slight, but distinct, fuscous tinge; the stigma and nervures are fuscous; the 2nd transverse cubital nervure is faint. ♀.

Length, 11 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Antennæ with the 10th to 19th joints white except above; the scape rufous beneath. Face and clypeus strongly and closely punctured and thickly covered with white pubescence. Front above and clypeus closely and distinctly punctured. Mesonotum closely punctured and thickly covered with short black hair. Scutellum slightly roundly convex, sparsely punctured and thickly covered with longish pale hair. The base of the post-scutellum is obliquely depressed; its apex has an oblique straight slope. Areola smooth and shining; the posterior median area closely transversely striated; the other areæ closely and distinctly punctured; the spiracular transversely striated beyond the stigma; the striæ on the apical lateral areæ are coarser, more irregular and more widely separated. Pro- and mesopleuræ closely and minutely punctured, the apex and middle of the former closely and the lower half of the latter, more widely and strongly striated. The metapleuræ, if anything, are more strongly punctured and with the apical half obliquely striated. Petiole smooth above, except on the sides of the post-petiole, which are punctured; the gastrocœli shallow, closely striated near the apex, which is testaceous; the sides are closely striated; the apices of the other segments are narrowly testaceous, this being the case also with the 2nd, 3rd and 4th ventral segments.

Legnatia, gen. nov.

Mandibles with one long, curved upper and a short blunt sub-apical tooth. Abdomen with eight dorsal segments; the cerci large; the apical segment blunt, small; the ventral keel on the 2nd and 3rd segments only; the ovipositor largely projecting. Antennæ longish, dilated and compressed beyond the middle. Labrum hidden. Scutellum flat; its sides keeled. Median segment completely areolated; it is longish and has a gradually rounded slope; its areola widely separated from the base of the segment, which is not depressed; it is twice longer than wide: the spiracles linear, curved. Areolet

5-angled, narrowed above. Legs longish; the tarsi long, the hinder almost twice the length of the tibiæ; the apices of the joints spined.

The post-petiole becomes gradually wider from the base to the apex and is not clearly separated; the gastrocœli large and deep; the head is not largely developed behind the eyes, and becomes obliquely wider below before the middle; the eyes are large and are sharply margined on the inner-side.

A genus easily known by the long antennæ dilated beyond the middle, by the curved mandibles with long apical tooth, by the long spined tarsi and by the abdomen having eight segments.

Legnatia fulvipes, sp. nov.

Black; the face, clypeus, the inner orbits, the outer—narrowly above, entirely below—the lower part of the prothorax, the edge of the pronotum, two lines on the basal two-thirds of the mesonotum, the scutellum, except a narrow line down the middle, a squarish mark on either side of the base of the metanotum, its lateral area entirely, the lower half of the mesopleuræ, a mark under the hinder-wings, the metapleuræ from shortly behind the middle, where they are obliquely rounded, a small mark at the spiracles, the sides and apex of the post-petiole, the apices of the 2nd and 3rd segments broadly laterally, more narrowly in the centre, a line on the apex of the 4th, interrupted in the middle, a small round spot on either side of the middle of the 5th, the 6th on the apical half of the middle, the whole of the 7th, and the 2nd, 3rd and 4th ventral segments for the greater part, pale yellow. Legs fulvous; the four front coxæ and trochanters and the hinder coxæ, pale yellow; the apex of the latter on the outer-side, the apex of the hinder femora, of the hinder tibiæ and the base of the metatarsus, black. Wings hyaline, the stigma pale, the nervures black. ♀.

Length, 11 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Antennæ black, as long as the body, the scape beneath and the 9th to 16th joints white beneath. Face and clypeus closely punctured all over and sparsely covered with pale pubescence; the vertex more sparsely punctured, more closely and distinctly at the ocelli than below; the black band on the vertex and front is contracted on the top of the latter. Mesonotum closely punctured; the scutellum much more sparsely punctured; the post-scutellum smooth. Median segment closely, rugosely punctured; the areola is shagreened and is furrowed round the sides and base; the posterior median area is

strongly, if somewhat irregularly, transversely striated, as are also the posterior intermedian. The lower half of the propleuræ longitudinally striated, the upper smooth. Meso- and metapleuræ closely punctured.

Eutanyacra, gen. nov.

♂. Apex of abdomen bluntly pointed, with eight segments, the 8th produced in the middle into a long narrow process, which is three times as long as the basal portion of the segment; the ventral fold is only distinct on the 2nd and 3rd segments. Face flat, not separated from the clypeus. Clypeal foveæ large, deep. Mandibles with one long upper and a blunt lower tooth which is not clearly separated behind. Apex of clypeus transverse, its sides rounded. Labrum hidden. Occiput sharply margined. Scutellum roundly convex. Median segment areolated; the areola about as broad as long, and with its apex rounded. Spiracles elongated. Legs stout, of moderate length; the tarsi spinose. Antennæ serrate, shorter than the body, distinctly tapering towards the body.

The ædigus is much larger than usual; it appears to form one solid piece, united below at the apex and with a broad and deep furrow on the basal two-thirds; at the base of this is a large tubercle, on either side under the base of the projection on the apical segment; the apex, looked at from the sides, is bluntly rounded on the lower-side, which projects more than on the upper. The 8th dorsal segment is small and bears longish cerci. Gastrocelli large, deep.

Belongs, by the bluntly-pointed apex of the abdomen and by the ventral fold being on the 2nd and 3rd segments only, to the *Amblypygi*. In Ashmead's arrangement the genus comes near *Pseudamblyteles*. The ♀ I do not know, but the peculiar structure of the 8th ventral segment, the very large ædigus and the large cerci make the ♂ representatives of the genus easy of recognition.

Eutanyacra pallidicoxis, sp. nov.

Black; the face, clypeus, inner orbits, a small spot on the base of the mandibles, the upper edge of the pronotum, the scutellums, tubercles, tegulæ, the apex of the post-petiole narrowly, its sides more broadly, a large mark on the sides of the 2nd and 3rd segments on the apical half and narrowed on the inner side, the apex of the 6th segment to near the middle and the greater part of the 7th segment, pale yellow. Legs pale yellow, the hinder coxæ, the hinder femora, except at the base and the apical two-thirds of the last joint of the tarsi, black. Wings hyaline, with a slight fulvous

tinge; the cubitus before the areolet and the 2nd transverse cubital nervure are largely bullated. ♀.

Length, 13 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Antennæ not much longer than the abdomen, distinctly tapering towards the apex, the flagellum densely pilose, the apical joints serrate; black, brownish beneath; the scape beneath, the 2nd and the 7th to 14th joints white. Face and clypeus strongly and closely punctured, and thickly covered with short white pubescence; in the centre of the face is a line which is irregularly dilated in the middle; the front and vertex are strongly punctured; the outer orbits are less strongly and more closely punctured. Palpi pale testaceous. Mesonotum closely punctured and thickly covered with short silvery pubescence; the scutellum is not so closely punctured as the mesonotum, and is thickly covered with white pubescence; its apex is distinctly narrowed. Median segment closely rugosely punctured; the sides at the apex obliquely reticulated, more closely behind than below. Pleuræ closely and distinctly punctured, as is also the breast, which is deeply furrowed down the middle. Post-petiole closely longitudinally striated; the 2nd to 4th segments closely punctured; the gastrocæli stoutly striated.

Ancyra, gen. nov.

Areolet large, not much narrowed above, 5-angled. Clypeus not separated from the face, its apex transverse. Labrum projecting. Mandibles bidentate, the upper tooth not much longer than the lower. Scutellum roundly convex, its base and apex with an oblique slope. Median segment regularly areolated; the areola about twice longer than broad, transverse at the apex, the sides slightly angularly produced in the middle. Metathoracic spiracles linear. Legs longish, not very stout; the tarsi spinose. Abdomen longish, with seven segments, the last large; the ventral fold on the 2nd and 3rd segments only. Antennæ short, not much longer than the abdomen, the joints serrate beyond the middle; the apex distinctly narrowed. Eyes large, parallel, their lower part reaching below the clypeal foveæ.

The stump of a nervure on the outer-side of the recurrent nervure is longer than usual; there is none on the disco-cubital; the transverse basal nervure is interstitial. May be known by the large, wide areolet, by the long, slender legs, by the large eyes which reach close to the base of the mandibles, by the pyramidal scutellum and by the long abdomen.

Ancyra flavomaculata, sp. nov.

Pallid yellow; the hollowed lower part of the front, the ocellar region, the vertex behind, an oblique mark behind and united to the eyes near the top, the occiput, the mesonotum, except two yellow lines down the middle, the parts at the sides of the scutellums, the base, apex and central area of the metanotum, a line in the centre of the propleuræ on the basal two-thirds, the base, upper part and apex of the mesonotum, and two marks on the sides of the mesonotum—broad at the apex, gradually narrowed behind—and the greater part of the abdomen, black. Legs pallid yellow like the thorax; the four front coxæ above and more or less below, the four front trochanters more or less above, the base of the four anterior femora, the hinder coxæ below at the base, the base of the hinder femora to near the middle; the four anterior and the base and apex of the hinder tarsi, the four front tibiæ at the base behind and the hinder at the base all round, black. Wings smoky-violetaceous; the stigma and nervures black. Abdomen black; the apical half of the petiole, the apical half of the 2nd and 3rd segments, except in the middle, and a small mark on the side of the 4th segment, pallid yellow. ♂

Length, 19–20 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Antennæ not much longer than the abdomen; the scape pallid yellow, black above; the basal six joints entirely pallid yellow, the 7th to 13th yellow, marked with black above; the others black; serrate, distinctly tapering towards the apex. Face and clypeus shining, punctured all over, but not very closely or strongly and almost glabrous; the vertex is more closely punctured. Mandibles yellow, their teeth black. Mesonotum closely punctured. Median segment rather strongly punctured; the areola roughly aciculated; on the sides are a few, oblique short keels, and on the apex in the middle a central one; except at the base the posterior median area is closely, transversely striated; on the smooth base are two longitudinal keels. Pleuræ closely punctured. Petiole closely punctured at the base, the rest smooth. Gastrocæli deep and bearing three stout keels. The black line on the 2nd abdominal segment is broad at the base, narrowed at the apex; that on the 3rd is much broader and also gradually narrowed towards the apex; the apex of the segment is black.

Losgna, gen. nov.

Antennæ compressed and dilated beyond the middle. Mandibles bidentate, the upper tooth much larger than the lower. Scutellum

large, quite flat, its sides sharply keeled. Apex of clypeus broadly transverse. Labrum projecting. Head largely projecting behind the eyes, at the top obliquely narrowed. Eyes distinctly margined on the inner-side. Median segment completely areolated; the areola large, longer than broad, its base roundly dilated; the sides of the segment bluntly toothed; the keel below leaf-like. Legs normal; the tarsi long, spinose. Abdomen with seven segments, the last bluntly pointed, and as long as the penultimate; the ventral keel on the 2nd and 3rd segments only; the ovipositor largely projects.

The head behind is deeply and roundly incised; above it is depressed; the occiput is not distinctly margined. In addition to the longish spines on the tarsi, their joints bear shorter spines, and are also thickly covered with stiff hairs. The ocelli are placed on the edge of the occiput.

Belongs to the *Amblypygi*. May be known from *Amblyteles* by the very flat, keeled scutellum, by the dilated antennæ, by the spined tarsi, and by the abdomen having seven segments.

Losgna forticeps, sp. nov.

Black; the outer orbits broadly below, the inner narrowly above; the face, clypeus, labrum, palpi and mandibles pallid yellow; a line on the hinder half of the pronotum, its base, the sides and apex of the scutellum, the scutellar keels, the sides and apex of the apical slope of the median segment, the lower half of the mesopleuræ and a mark behind the metathoracic spiracles, white. The four anterior legs pale fulvous, the coxæ and trochanters yellow; the hinder coxæ, trochanters and femora pale fulvous, marked with black above, the tibiæ and tarsi black. Abdomen black, the base of the petiole broadly, an oblique mark on the sides at the apex, the sides of the 2nd and 3rd segments on the apical half, an oblique mark on the sides of the 4th and 5th—all extending backwards at the base; the apex of the 6th all round and the 7th entirely, pallid yellow, as is also the whole ventral surface. Wings hyaline, the nervures and stigma black. ♀.

Length, 15 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Antennæ black, the scape and joints 11-20 white beneath. Face broadly dilated in the middle, punctured; the clypeus with scattered punctures. Front smooth and shining, broadly excavated laterally, the ocelli in front surrounded by a semicircular furrow. Mesonotum strongly and closely punctured and with two shallow, wide, longitudinal furrows in the centre. The flat scutellum bears large, deep,

clearly separated punctures in the middle. Areola stoutly, closely, mostly transversely, irregularly reticulated; the posterior median area closely transversely rugose. The hinder part of the propleuræ stoutly, closely obliquely striated. Mesopleuræ closely, but not strongly and the meta- closely, strongly, and uniformly punctured.

Pramha, gen. nov.

Metethoracic spiracles small, oval. Antennæ thickened and compressed beyond the middle; annulated with white; the basal joints of the flagellum elongated. Clypeus separated from the face; its apex broadly rounded. Mandibles with a large apical and a small subapical tooth. Labrum hidden. Areolet 5-angled; the transverse basal nervure interstitial. Abdomen with seven distinct segments; its apex blunt; the ventral fold extends to the apex of the 4th segment, the ovipositor large, projecting. Legs moderately stout, the penultimate tarsal joint spinose.

Belongs to the *Amblypygi*. The scutellum is flat and not keeled, the post-scutellum bifoveate; the face flat, clypeal foveæ large and deep; the occiput margined; the temples not much developed; the petiole as in *Ichneumon*; the gastrocœli large, shallow; the transverse basal nervure interstitial; the last ventral segment is large; the cubital nervure at the base is not angled, but broadly rounded. The areola is wider than long, transverse in the middle with the sides rounded at the base; the apex rounded inwardly.

Pramha mandibularis, sp. nov.

Black, a line on the pronotum, broadest behind, the tegulæ, tubercles, scutellums, a band on the base of the propleuræ, yellow; the sides of the petiole broadly, the apex more narrowly, rufous; the 2nd, 3rd and 4th abdominal segments rufous and yellow at the base and apex, the others yellow at the apex. The four front legs fulvous, the coxæ and trochanters yellow, the hinder pair rufous; the coxæ fulvous-yellow behind, the tibiæ of a much darker rufous colour, the tarsi fulvous. Wings hyaline, the nervures fuscous, paler towards the apex; the lower part of the stigma pale testaceous. ♀.

Length, 8 mm.

Hab. KHASIA HILLS. Coll. Rothney.

The scape and the 10th to 16th joints of the antennæ white, the 2nd and the apices of the 3rd and 4th joints brownish. Face strongly punctured, the clypeus less strongly and closely punctured and covered with short white pubescence. The base of the mandibles

broadly and the palpi white. Front and vertex closely, strongly and uniformly punctured and sparsely covered with short pale hair. Mesonotum closely and finely punctured and thickly covered with short fuscous hair. Scutellum with a black mark, rounded above on the apex; the basal depression wide, deep and stoutly keeled laterally. Median segment closely punctured all over and, except at base, thickly covered with long fuscous hair; the basal area is wider than long and has oblique sides; the posterior median area slightly hollowed and not clearly limited, the keels not being very distinct; it is closely transversely striated. The upper part of the propleuræ weakly punctured, the apex below stoutly transversely striated. Mesopleuræ closely and strongly punctured; in the middle above is an oblique shining furrow. Mesosternal furrow wide, deep and with some stout keels in the middle. Metapleuræ closely punctured; the lower half of the basal depression with three stout keels. Apex of petiole aciculated and marked with large, closely separated, punctures; the basal third of the 2nd segment is closely and strongly striated; the gastrocœli are represented by three shallow depressions, the space between them being finely striated.

Benyllus, gen. nov.

Median segment completely areolated, its apex spined; the posterior median area largely projecting into the areola; its spiracles linear, curved. Scutellum convex, rounded, its sides sharply margined. Mandibles unequally toothed, the upper much longer than the lower. Clypeus not separated from the face. Occiput not margined. Wing areolet 5-angled, narrowed above; the transverse basal nervure interstitial. Legs stout, the tarsi long, spinose. Abdomen with seven segments; the apex of the petiole curved; the gastrocœli almost obsolete; the ovipositor largely projecting; the 7th segment is nearly as long as the 6th; the ventral keel stout, extending to the apex of the 5th segment—to the base of the ovipositor. Antennæ stout.

A genus of *Amblypygi* characterized by the stout, unequally-toothed mandibles, the stoutly-keeled scutellums, the spined median segment, and by the posterior median segment area largely projecting into the areola.

Benyllus rufus, sp. nov.

Rufus, nigro maculato, facie, clypeo orbitisque oculorum flavis, mesonoto nigro, alis hyalinis, stigmatibus fusco. ♀.

Length, 10 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Head black ; the face, clypeus, the inner orbits and the outer more broadly, except above, lemon-yellow ; the palpi of a paler yellow ; the face and clypeus, except at the sides, punctured and covered with pale pubescence ; the front smooth and shining, depressed, except at the top, where there is, in the middle, a raised punctured band ; the vertex is closely and distinctly punctured ; a furrow runs down from the lower ocellus. Mandibles yellowish, black at the apex. Thorax rufous ; the mesonotum and the sides of the median segment at the base, black. Mesonotum and scutellum closely punctured ; the post-scutellum irregularly punctured and striated. The basal area of the median segment are closely punctured ; the areola obliquely, stoutly striated on the sides ; the posterior median punctured all over, the punctures clearly separated, but not deep ; the outer area irregularly punctured on the upper half, on the lower transversely striated ; the spines are large. Propleuræ smooth and yellowish in tint ; the meso-metapleuræ and mesosternum closely and distinctly punctured ; the mesosternal furrow striated. Abdomen of a slightly darker rufous colour than the thorax ; a mark on the petiole—half on the petiole and half on the base of the post-petiole—and the basal two-thirds of the 2nd and 3rd segments, black ; the post-petiole and 2nd segment closely and distinctly, the 3rd less distinctly punctured ; the sheath of the ovipositor blackish. Legs coloured like the body ; the four front coxæ and trochanters pale yellow.

Buathra, gen. nov.

♂. Antennæ long, stout, distinctly tapering towards the apex ; the 1st joint of the flagellum distinctly longer than the 2nd. Eyes prominent, parallel. Front and vertex deeply excavated. Clypeus small, its apex rounded. Mandibles stout, with two stout, blunt, subequal teeth. Parapsidal furrows, deep, distinct. Scutellum not much raised, not keeled. Median segment rugosely punctured, without areæ, but with two transverse keels, bent backwards in the middle ; at the sides these are united by a keel which ends in a tooth, which is blunt, but distinct. Areolet almost square, hardly narrowed in front ; the disco-cubital nervure has a stump of a nervure ; the transverse basal nervure is interstitial. Petiole slender, the spiracles at the base of the post-petiole, which is not much dilated. Gastrocœli indistinct. Metathoracic spiracles large, oblique, linear. Clypeus roundly projecting.

I have only a ♂ of this genus, and am not sure about its exact systematic position. In the distinct parapsidal furrows and in the squarish areolet it agrees with the *Cryptina*, as it does also in the paucity of areæ on the

median segment; in the position of the spiracles on the petiole, and in having the stump of a nervure on the disco-cubital nervure, it agrees with the *Ichneumonina*.

Buathra rufiventris, sp. nov.

Black; the abdomen from the apex of the petiole and the legs ferruginous; the antennal scape in the middle below; the inner orbits narrowly above, broadly below—the band becoming broader beyond the middle and narrowed obliquely towards the apex—a mark, rounded at the apex, in the centre below the antennæ, the clypeus, mandibles, except the teeth, the palpi, the outer orbits narrowly, except above, the tegulæ and tubercles, yellow. The four front coxæ and trochanters are yellow in front and at the sides; the middle trochanters are black behind; the hind coxæ and base of trochanters black; the apical four joints of the hinder tarsi spinose. Wings hyaline, the nervures and stigma black. ♂.

Length, 15 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Head densely covered with glistening, silvery-white pubescence. Face strongly punctured. Median segment with a gradually rounded slope to the middle, the apex oblique. Thorax covered with glistening white hair, closely and strongly punctured, the pleuræ more strongly than the mesonotum; the metapleuræ at the apex coarsely obliquely striated. The punctures on the scutellum large and clearly separated; the basal depression large and with some stout striæ. Post-scutellum longitudinally striated in the centre. Petiole strongly aciculated except at the apex, as are also the sides and ventral surface.

AMPULEX KHASIANA, sp. nov.

Length, 16 mm. ♀.

Hab. KHASIA HILLS. Coll. Rothney.

Agrees closely with *A. longicollis*, Cam., but is smaller, the prothorax is not quite so long nor so distinctly narrowed at the base; the apex of the median segment is not reticulated at the end of the transverse striations; the fovea at the apex is neither so deep nor so clearly defined, the narrowed basal part is longer and more distinctly separated, and the bordering nervure on the radial nervure is not so curved at the apex.

Antennæ black, moderately stout, the 3rd joint about twice the length of the 4th. Head dark purple, coarsely punctured above the

antennæ, sparsely covered with pale hair. Clypeus smooth, blue above, the middle sharply carinate, the apex with an oblique short tooth on either side; the labrum smooth, glabrous. Front keeled in the centre, the keel bordered by some oblique one. Temples largely developed, roundly narrowed. Prothorax smooth, longer than broad, narrowed at the base, which is raised and distinctly separated; the middle of the pronotum forms almost a triangle. Mesonotum with large, deep, scattered punctures; the furrows are narrow, complete. Scutellum at the apex bordered with large, deep, irregular punctures; there being also a few in the centre; the sides of the post-scutellum with two large punctures. The three central keels on the median segment are distinct and extend to the base of the apical third, where the central keel roundly bifurcates; the central space is stoutly transversely striated; the inner lateral area is finely and closely, the outer more stoutly and widely striated; at the apex are three transverse keels, the apical being more widely separated from the posterior than the latter are from each other; from the hinder keel another projects backwards into the bifurcated apex of the central keel; the projecting apex in the centre is smooth, broader than long, and has the apical third depressed; the lateral teeth are large and somewhat triangular. The apex of the segment has an almost perpendicular slope, is transversely striated, rather irregularly at the base, more closely and regularly in the middle and apex, where it is thickly covered with long white hair. Mesopleuræ stoutly, deeply, irregularly punctured; the tubercles large, smooth and roundly convex; the metapleuræ with two stout longitudinal keels; the space between these is smooth at the base, the rest with stout perpendicular keels; the base in the centre is smooth, its lower part and the apex stoutly, irregularly reticulated. Mesosternum irregularly punctured; the process is long, narrowed at the base, slightly narrower and rounded at the apex; the inner side is slightly raised, the centre hollowed. Legs black, the four hinder coxæ green, the basal half of the hinder femora red; their apex and the hinder tibiæ purple; the tarsi thickly spinose; the tooth on the claws is placed shortly beyond the centre. Wings deep smoky-violaceous; the stigma and nervures black; the apex of the radius is rounded; the appendicular cellule is almost open at the apex, elongate; the basal abscissæ of the radius of equal length; the 1st recurrent nervure is received in the middle, the 2nd near the apex of the basal third of the cellule. Abdomen shining, very smooth, purple; the narrowed basal part of the petiole is as long as the widened apical half; the 2nd segment is slightly longer than all the succeeding segments united. The sides and lower part of the petiole are stoutly striated; the striæ on the sides are oblique.

The pro- and mesonotum are largely tinted with green; the metanotum is deep purple, blue at the base and apex and, to a less extent, on the sides.

AMPULEX ASSAMENSIS, sp. nov.

Length, 13 mm. ♂

Hab. KHASIA HILLS. Coll. Rothney.

Antennæ black, the apical joints perceptibly curved, the scape thickly covered with pale pubescence; the 3rd joint slightly, but distinctly, longer than the 4th. Head coarsely rugosely punctured, the front transversely striated in the middle, the temples obliquely narrowed; the antennal tubercles stout, longish, narrowed above, slightly curved; the temples narrowed. Clypeus green, thickly covered with long white hair; its apex ends in a triangular tooth, there being no lateral ones. Labrum brownish, thickly covered with long white hair. Mandibles black, the apex rufous, the base punctured. Eyes only very slightly converging above, where they are separated by slightly more than the length of the 2nd and 3rd antennal joints united. The thorax coarsely punctured, the prothorax and sides of the mesonotum blue, the middle of the metanotum indigo-blue; sparsely covered with long black hair. The middle lobe of the median segment is stoutly striated; the striæ distinctly curved, those at the base irregularly curved; the central keel is distinct; the outer areas are more closely and regularly striated; the projecting apex is deeply hollowed, the hollow being wider than long and bounded behind by three foveæ, there being another fovea behind the outer of these. The apex of the segment is largely, irregularly reticulated, the upper reticulations being the larger, the lower of the two teeth is small and triangular. Pro- and mesopleuræ distinctly punctured, except on the middle of the former and apex of the latter; the metapleuræ strongly reticulated. The mesosternal process large, its sides oblique on the inner, rounded on the outer-side. The four hinder femora are bright red; the anterior femora and tarsi of a duller red; the femora are blue behind; all the tarsi black; the hinder claws are stoutly bifid, the hinder claw the stouter and shorter. The first two abscissæ of the radius are equal in length; the 1st transverse cubital nervure is only indicated slightly below. The narrowed basal part of the petiole is short, the middle triangular and with a curved furrow on the sides at the base; it is sparsely punctured laterally; the apex is more strongly punctured; the 2nd segment is more closely punctured all over; the apical segments are coarsely and deeply punctured below; the

punctures on the 2nd segment are more scattered, especially at the base ; the other segments are coarsely and closely punctured.

AMPULEX CARINIFRONS, sp. nov.

Length, 15 mm.

Hab. KHASIA HILLS. Coll. Rothney.

Agrees in coloration and closely, in some other respects, with *A. compressa*, but may be known from it by the parapsidal furrows being less clearly defined, by the raised apex of the pronotum being smoother above and deeply furrowed throughout, by the raised apex of the median segment being roundly depressed in the middle, and by the 2nd abdominal segment being much more strongly punctured.

Antennæ black, the scape punctured, metallic green, the 3rd joint not quite the length of the 4th. Head deeply punctured, the face thickly covered with long white hair ; the front and vertex with brassy tints ; the front in the middle with an enclosed area, its keels enclosing the front ocellus, the basal half of the area being broader than the apical ; the keels bounding the latter are curved inwardly ; the vertex has a furrow in the centre. Pronotum stoutly transversely striated ; the furrows behind the middle are more widely separated ; the apex is distinctly raised, smooth and furrowed down the middle. Mesonotum with large, deep punctures which are more widely separated in the middle at the apex ; the sides near the apex are deeply hollowed, the inner-side of the hollow being stoutly striated, the outer smooth. Scutellum more closely punctured than the mesonotum ; the post-scutellum aciculated ; its sides, except at the apex, with large punctures. Median segment transversely striated, the striæ on the middle more widely separated ; the middle keel is straight, and reaches close to the apex ; the lateral are curved and reach shortly beyond the middle ; the inner outer keel originates from the outermost near its base. Tubercles stout, rounded at the top ; the keel bounding the apex is depressed in the middle. The apex of the segment is irregularly reticulated all over and thickly covered with long white hair. The upper part of the propleuræ is strongly punctured, the lower smooth, faintly aciculated ; the mesopleuræ coarsely punctured except at the apex, where it is aciculated ; the upper half striated below, reticulated above. Mesosternum coarsely punctured, the central furrow not widened at the apex as in *A. compressa*. Wings fusco-violaceous, darker along the nervures, of which there are three ; the cubital nervure is more rounded upwards on the 2nd cubital cellule than in *A. compressa*,

and the 2nd recurrent nervure is received nearer the middle. The base of the abdomen is distinctly narrowed and furrowed down the middle. The base of the petiole is distinctly narrowed and furrowed down the centre; the apex and the 2nd segment are distinctly punctured all over, but not closely, the apical segments are more closely and strongly punctured. The four hinder coxæ are brassy; the four posterior femora bright red, black at the apex; the anterior femora green, dull rufous in front, the tibiæ are black in front, blue or green behind; the tarsi black; hinder claws with a tooth at the base. The eyes at the top are separated by the length of the 4th antennal joint.

As the above concludes the descriptions of the new species of *Ampulex* known to me from the Khasia Hills, it may be useful to give a list of the Khasia species described by me. In the Ann. and Mag. Nat. Hist. July 1899, p. 57, *Ampulex (Rhinopsis) nigricans*; l.c. 1890, *pilosa*, p. 37; *pulchriceps*, p. 38; l.c. 1902, *Rothneyi*, p. 54; *trichiosoma*, p. 55; *ruficornis*, p. 56; l.c. 1903, *montana*, p. 319; *himalayensis*, p. 320; *interstitialis*, p. 321; *longicollis*, The Entomologist, p. 263, 1902; *trigona*, p. 264; *brevicornis*, p. 312. Described here, *khasiana*, *assamensis*, and *carinifrons*. The known species from Khasia are *latifrons*, Kohl, and *compressa*, Fab., in all seventeen species.

Bingham (Fauna of British India, *Hym.*) describes eight Indian species only, but one of these (*Cognata*, Kohl) appears to have been included in error. Cf. Cameron, Ann. and Mag. Nat. Hist. 1900, p. 39.

JUNE 2, 1903.