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## Part II. On Some New and Other Species of Non-Parasitic Hymenoptera in the Collections of the Zoological Branch of the Forest Research Insitute, Dehra Dun

Peter Cameron

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VOL. IV.

PART II.

THE  
**INDIAN FOREST**  
**RECORDS**

On some new and other Species of Hymenoptera in the  
collections of the Zoological Branch of the Forest  
Research Institute, Dehra Dun

BY

P. CAMERON



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## PART II.

On some new and other species of non-parasitic Hymenoptera in the  
Collections of the Zoological Branch of the Forest  
Research Institute, Dehra Dun.

By P. CAMERON.

## Introduction.

IN this paper I have enumerated and described the specimens contained in a collection of non-parasitic Hymenoptera sent to me by Dr. A. D. Imms, Forest Zoologist.

It includes a description of a new species of Saw-fly and an enumeration of the Aculeate Hymenoptera in the collection with description of the species which seem to be undescribed. The Saw-fly belongs to a genus, some species of which have proved very destructive to pine trees. I have also added descriptions of three new species from Simla and one Masuri (Mussoorree?) from my own collection. These are indicated by an asterisk.

## Tenthredinidæ.

*Lophyrus indicus*, sp. nov.

Black, densely covered with short pale pubescence, the abdomen less densely so than the thorax; the labrum, palpi, apex of femora, that of the interior broadly, the tibiae and tarsi pallid testaceous; wings hyaline, the stigma and nervures black, the former streaked with black at the base, the black with a transverse, longish triangular white spot at the base. Head and thorax closely, rather strongly punctured, the pleuræ more strongly rugosely so than the mesonotum; the face, clypeus, labrum and a line, dilated at the base, down the centre of the basal half of the scutellum; there is also a broad triangular smooth space at the base of the scutellum; the furrow bordering the base of the scutellum smooth and shining. Cenchri narrow, curved, rounded behind.

♂ Length 4 mm.

Dehra Dun. September, (*Forest Zoologist's Collector*).

Antennal rami fringed with white hair. Apex of clypeus transverse, the sides rounded. Mandibles piceous, black at base and apex. There is a roundly curved shallow furrow behind the ocelli, making the centre of the vertex semicircular. There is a shallow furrow down the middle the central lobe of mesonotum. Metanotum more coarsely punctured than the scutellum, the basal segment of abdomen more finely and closely so. Transverse median nervure received shortly beyond the middle, the posterior third of 1st transverse cubital nervure faint, the basal abscissa of radius broadly roundly curved; the 2nd recurrent nervure is received shortly beyond the apex of the basal third of the cellule

## ACULEATA.

## Mutillidæ.

*Mutilla sex-maculata*, Swed.

Bingham, *Fauna of Brit. India*, *Hym.* i, 25. ♀.

Dehra Dun. July.

For remarks of this species and its ♂, cf. Cameron, *Ann. Mag. Nat. Hist.* IV (7), 60.

## Pompilidæ.

*Salix flavus*, F.

Bingham, *l.c.*,  
Gorakpur.

*Salix (Prionemis) dehraensis*, sp. nov.

Black, the basal 2 abdominal segments all round and a curved band on the base of the 3rd above, ferruginous, wings hyaline, a fuscous cloud filling the radial cellule, the 2nd cubital, except for a triangular hyaline cloud at the base below, the 3rd entirely, these clouds extending into the discoidal cellule as a somewhat semicircular, fainter one on its apical half; 2nd abscissa of radius more than double the length of the 3rd, 1st recurrent nervure received near the base of the basal third, the 2nd nearer the middle. Claws unidentate, the base roundly dilated. Eyes slightly converging above, the hinder ocelli separated from each other

by a slightly less distance than they are from the eyes. Apex of clypeus broadly rounded. Third antennal joint about one quarter longer than the 4th. Metanotum transversely striated, more weakly at the base than elsewhere. Apex of pronotum bluntly, roundly angled in the middle. Long spur of hind tibiæ slightly more than one-third of the length of metatarsus and as long as the 2nd joint. ♂.

Length 8 mm.

Dehra Dun, July.

Metanotum gradually roundly sloped from the base to the apex, the metapleuræ opaque, pronotum large, rounded in front probably in fresh examples the head and thorax are densely covered with white pubescence, in the specimen examined it is dense on the mesopleuræ and coxæ.

Comes, in Bingham's work, nearest to *S. electus* Cam.

*Pseudagenia tinctoria*, Sm.

= *Mutabilis* Sm.—Bingham, *Fauna of Brit. India*, i, 116.

Dehra Dun. October.

## Sphegidæ.

*Sceliphron tibiale*, Cam.

*Ann. Mag. Nat. Hist.*, 1899, IV (7) 54.

Two damaged specimens taken at Rundali, Dehra Dun, in June are probably referable to this species of which *S. lineatipes* Cam. is perhaps a variety. The tibiæ in the Dehra Dun examples are only lined with black in front, not entirely black as in the type. *S. tibiale* is a variable species as regards the markings, a less rare form has 2 yellow marks in the centre of the metanotum. Its nearest ally known to me is the New Guinea species *S. Bruinjnii*, Maid. *S. lorentzi* Cam. being also related to it. *S. Bruinjnii* may be known from it by the post-petiole, and all the following abdominal segments being ferruginous, with the base of the 3rd to 6th lined with black, the apex of its clypeus, too, is broadly rounded, not bilobate.

*Liris nitidus*, sp. nov.

Black, smooth, shining, the metanotum opaque, the basal part with a narrow furrow having a keel down its centre, it is slightly shorter than

the rest of the thorax, its apex is rounded broadly above, the sides of the apical slope irregularly transversely striated, more strongly above than below. The head, base of mandibles and pronotum densely covered with golden pubescence, probably in fresh examples the whole thorax is so. Pygidium closely striated, the sides and apex covered with golden pile; no doubt in fresh examples the whole surface has a golden pile. There are indications of a golden or silvery pile on the apices of the abdominal segments. Wings black, tinged with violaceous, the stigma and nervures black, basal abscissa of radius as long as the following 2 united, the 2nd one-fourth of the length of the 3rd; the 2nd recurrent nervure received shortly beyond the apex of the basal third of the cellule. The space between the recurrent nervures is as wide as the 2nd abscissa of the radius. Pubescence on metathorax white. ♀.

Length 18 mm.

Dehra Dun, December (J. W. Judd).

Comes near to *L. nigripennis*, Cam., which may be known from it by the almost hyaline cubital cellules, by the apex of metanotum being abruptly truncate and by the head and thorax being, "dull, opaque, very minutely punctured," not smooth shining and impunctate, as in *L. nitidus*.

*Ampulex compressa*, Fab.

Bingham, *Fauna of Brit. India*, i.

Garhi, Dehra Dun, July (Forest Zoologist's Collector).

*Trypoxylon ornatipes*, sp. nov.

Black, the 2nd abdominal segment, the 3rd, and the basal fourth of the 4th above and the basal third of the sides rufo-testaceous; the anterior tarsi, basal 2 joints of the middle, the base of the 4 hinder tibiae narrowly, the spurs and the apex of the trochanters more obscurely, whitish yellow, the fore tibiae for the greater part pale testaceous, especially in front. Wings hyaline, the stigma and nervures black. Mandibles rufo-testaceous. A shallow furrow down the centre of the upper half of the front which is roundly bilobate, below it, on the lower half, is a distinct keel. Metanotal area with the central depression longish oval, narrower at the apex than at the base, irregularly transversely striated, the lateral bounding furrows with the striae stronger and more

regular. Pubescence on the lower part of eye incision outer orbits, face and clypeus dense and silvery, on the pleurae it is longer and sparser, more like hair than pubescence. Abdominal petiole nearly as long as the following 3 segments united, the apex not forming a distinct node, gradually, weakly widened towards the apex. Tegulae piceous. Front and vertex closely, minutely punctured, the mesonotum shining, almost impunctate. ♂

Length 9 mm.

Dehra Dun. July, at light.

The furrow on apical slope of the metanotum is wide, with obliquely sloped sides, slightly roundly narrowed towards the apex and with a keel in the centre. The apex of the wings is faintly clouded.

Comes near, of the Indian species, to *T. bicolor*, Sm.

DIPLOTERA.

Vespinae.

*Polistes stigma*, F.

Dehra Dun, 25th March. The example is of the race *stigma*, but darker coloured than usual for that form.

*Icaria annulipes*, sp. nov.

Rufous, or rufo-testaceous; the sides of the clypeus broadly, the apex more narrowly, the rufous central part widened towards the apex, a broad line on the inner orbits from the incision to the antennae, the antennal keel for the greater part, a narrow line across the base and a less distinct one on the sides, a line on the base of scutellum, broader one on the base and sides of post-scutellum, 2 large lines on the metanotum, a line on the base and apex of mesopleurae, one on the sternum extending on to the pleurae, a mark on base of metapleurae, gradually widened below, 2 oval marks on the apex of post petiole, a transverse oval one, near the centre of the 2nd segment, on the outer part, a broad line, of equal width, on the base of the 2nd, filling the outer two-thirds, a shorter one on the sides of the 3rd, a squarish mark on the sides of the 6th; 2 oval marks on the centre of the 2nd ventral; lines on the base of the 3rd or 5th, dilated laterally, and an oval mark on the sides of the

6th, pallid yellow. Legs coloured like the body, the hind tarsi darker in tint, the apex of femora and a line or spot near the apex of the tibiae pallid yellow. Wings hyaline, the apex of the costal and the greater part of the radial cellule smoky, the stigma and nervures black.

The ♂ has the yellow markings more widely extended, the face, clypeus and mandibles are entirely yellow, the 2nd ventral segment has one large mark, roundly incised at the base, and the femora and tibiae are yellow below.

Length ♀ 15, ♂ 13 mm.

Dehra Dun, March—July (*Forest Zoologist's Collector*).

Abdominal petiole longish, in ♀ as long as the 2nd segment, the apical half nodose, pyriform, twice longer than wide. There is a shallow furrow down the middle of the scutellum. Metanotal furrow wide and shallow, a weak keel down the middle. The eyes below in the ♀ are separated by the length of the antennal scape and pedicle united, in the ♂ by the length of the 3rd joint of the flagellum, the eyes strongly converging below; the clypeus in the ♂ is almost twice longer than wide, widened gradually towards the apex, which is broadly rounded. The 7th to 9th joints of the flagellum are broadly, but not much dilated below, the last is about one-fourth longer than the penultimate, is longish ovate, and simple, not curved, hollowed below and dilated as in *I. variegata*.

Comes near to *I. fuscipennis*. Cam. from the Khasias, which is dark chocolate in colour, and has the yellow markings much larger all over the body and legs and, more particularly, on the legs and pleuræ. The clypeus in the ♀ of *fuscipennis* is slightly longer as compared with the width and, more particularly, is bluntly rounded at the apex, not ending in a sharp point as in *annulipes*.

#### Odynerinæ.

##### *Ancistrocerus sikhimensis*, Bing.

*Fauna of Brit. India, Hymen.*, i, 363.

Jaunsar.

##### *Odynerus ornatus*, Smith.

Bingham, *l.c.*, 364.

Dehra Dun, September (Butterwick).

Bingham, *l.c.*, refers this species to *Odynerus (sensu str.)* but Smith himself [*Ann. Mag. Nat. Hist.*, (2) IX, (1852), p. 49] calls it an *Ancis-*

*trocerus*. Bingham does not appear to have been actually acquainted with the species, for he, *l.c.*, only copies Smith's description. I have a ♂ from Bombay, which agrees with Smith's description of *ornatus*, except that it is not an *Ancistrocerus*. I give here a description of both sexes of the Dehra species.

♀ Ferruginous, a broad oblique line over each antenna, about one-half longer than wide and united below by a narrower black line, a large spot covering the ocelli, more developed below than above them, narrowed gradually from the bottom to the top, the bottom transverse, except for a shallow incision in the middle, the occiput except above, more than the lower half of the occiput, a large mark on the basal half of the mesonotum, dilated laterally at the base, the apex gradually slightly narrowed to a rounded point, a squarish mark on either side of the apex, the edges of the scutellum and post-scutellum, the base of the propleuræ, the base of the mesopleuræ, the mark becoming widened below, squarish mark on the upper apical half, the base of the 2nd, 3rd and 4th abdominal segments, their apices more narrowly, a mark narrowed towards the apex, on the 2nd ventral segment and a line bordering the apex of post-scutellum and going down the centre of metanotum, black. Legs coloured like the body, the base of 4 front femora and the hinder to near the apex, black. Wings yellowish hyaline, clear in tint behind, the radial cellule clouded. The puncturation on the head and thorax is strong and close, the post-scutellum more rugosely punctured than the scutellum, its apex above raised, crenulated, forming a segment of a circle. Sides of metanotum broadly rounded. First abdominal segment large, cup-shaped, the 2nd longer than it is wide at the apex.

The ♂ is similarly coloured except that the clypeus, mandibles, except at the edges, a triangular mark on the front, continued as a short line between the antennæ and a line on the lower part of the eye incision are bright lemon-yellow. The clypeum in the ♀ is longer than wide, closely distinctly punctured, its apex depressed, the sides forming shining reddish teeth; in the ♂ the clypeus is wider compared with the width less closely punctured and there is a rounded incision on the apex; the legs bear less black. No doubt the black markings vary in size and shape.

##### *Rhynchium argentatum*, F.

Bingham, *F. of B. India, Hymen.*, i, 358, 633.

Mussoorie.



## Anthophila.

*Ceratina Binghami*, Cock.

*Viridissima*, Bing., *Fauna of Brit. India, Hymen*, i, 501.

Lachiwala, near Dehra Dun. May.

*Megachile stirotoma*, sp. nov.

Black, the pubescence, including the pollen brush, and bands on the base of the dorsal abdominal segments, white, the upper part of the ventral surface with black hairs. Wings hyaline, iridescent, the apex from end of the cubital cellules slightly smoky, the nervures black. ♀.

Length 14 mm.

Dehra Dun.

Head large, slightly wider than the thorax, closely punctured, a smooth narrow furrow running from the occiput to the ocelli, clypeus above forming a wide triangle depressed and punctured in the centre and bordered by flat shining broad keels; below this is a shallow transverse depression, followed by a larger deeper one, bordered below by 2 smooth wide transverse keels, of which the lower is the wider and is dilated slightly in the middle. Mandibles longish, covered with longish, interlacing punctures; the lower apical part furrowed, there are 2 broad, rounded teeth, the inner thinner and widely separated from the apical. Punctuation on mesonotum close, and running more or less into transverse striæ; there is a narrow, smooth irregular shining line down the middle apex of scutellum and post-scutellum fringed with longish black hair. Metanotal area opaque, smooth, clearly separated, a shallow furrow down the middle; the rest of the metanotum is not so strongly punctured as the scutellum. Apex of basal abdominal segment closely, regularly punctured, the 2nd and 5th with the apical half more or less irregularly punctured, the punctures becoming gradually weaker and sparser, the last much more closely, finely and regularly punctured and covered with short, stiff black hair; the apical ventral segments thickly covered with longer black hair. The base of the 2nd and 3rd segments distinctly, the 4th slightly depressed. The base of metatarsus is not much more than half the width of the apex of hind tibiæ. Front

between the antennæ broad, flat on the same level as the vertex, not projecting.

Belongs to Bingham's Section F (*Fauna of Brit. India*, I, 472) and runs to *M. cephalotes*. Bingham has omitted in his description the colouration of the wings; Smith, *Cat.* I, 179, calls them "subfuscous, hyaline towards their base."

*Cælioxys sulcispina*, sp. nov.

Black, the face, lower part of front broadly at the eyes, the lower three-fourths of the outer orbits, a small tuft in the middle of the mesonotum at the base, the part at the base of tegulæ, a small patch behind them, 2 transverse tufts on the base of scutellum, the mesopleuræ and mesosternum, the upper and lower part of metapleuræ densely, the central sparsely, patches, narrowed inwardly, on the sides of the abdominal segments and continuous lines on the ventral of snow white pubescence; wings to the 2nd cubital cellule in front, to the 2nd recurrent nervure, hyaline, the rest fuscous, tinged with violaceous, the 1st cubital cellule and the greater part of the space between the recurrent nervures lighter in tint than the apical part, the nervures black. Apex of scutellum broadly rounded, the centre with a small rounded incision, the sides project into stout teeth, broad at the base, narrowed towards the apex, which is rounded, the sides are margined with a stout keel, the outer keel straight and commencing at the mesonotum, the inner shorter and rounded. Metanotal area semicircular, opaque, its base with a stout keel down the basal half in the centre, the base with a short striated border. Apical abdominal segment with 8 teeth, 2 short basal, 4 upper apical, of which the central 2 are stouter and broader than the outer and having a small flat shining keel in the centre and 2 longer sharper pointed ones below. Head, pro- and mesonotum with scutellum strongly punctured; the 1st abdominal segment and the 4th and following more finely and closely so, the 2nd smooth, the base with a row of scattered punctures followed by a curved line of punctures in a shallow furrow, on the apex is a regular row of furrows, with some scattered ones before it in a curve, the 3rd is irregularly punctured, almost smooth near the base and apex, its apex and that of the 4th with a regular row of small punctures in a shallow furrow. Ventral surface with the punctuation closer, finer and more regular than they are above. Legs

densely covered with snow-white pubescence, that on the under side of the tarsi tinged with rufous. ♂.

Length 9-10 mm.

Sabbawalla, near Dehra Dun. June.

Looked at laterally the scutellar teeth are broad and have the apex bluntly rounded. The tegulae are piceous on the outer margin. The puncturation on the basal abdominal segment is finer, but not any closer than it is on the apical 2; on the 4th it is sparser than it is on the 5th. Mandibles coarsely punctured at the base, the lower part furrowed, the upper basal half with a longish oval furrow.

*Coelioxys fulvitaris*, sp. nov.\*

Black, the sides of the clypeus above, the face, lower three-fourths of outer orbits, pronotum, pleurae, metanotum, the base and sides of the 1st abdominal segment, narrow lines, triangularly dilated laterally, on the 2nd to 5th, and wider lines, widely interrupted in the middle, on the ventral basal 5th, of white pubescence; the hair on the face and clypeus tinged with fulvous; the pubescence on the legs white, on the underside of the tarsi bright rufo-fulvous. Wings fuscous-violaceous, the base to the transverse basal nervure paler in tint, but still tinged with violaceous, the nervures and stigma black. Face broadly rounded in the centre, smooth, clypeus with a distinct keel down the centre. Apex of scutellum broadly rounded, roughly margined, the teeth broad, about one-half longer than wide, slightly narrowed towards the apex, which is bluntly rounded. The ventral apical segment projects distinctly over the dorsal; which has the basal half closely punctured, more strongly on the apex than on the base, and with a smooth line down the centre, the apical half has a distinct keel down the centre, its base is depressed on either side of the keel; the apex laterally is margined; the surface is rugosely punctured, more coarsely and less closely on the base than on the apex; the ventral surface is closely, somewhat strongly striated, the striae intertwining. ♀.

Length 14 mm.

Masuri (Mussoorie?).

The puncturation on the clypeus is coarse, irregular, closer above than below, where the punctures run into reticulations; on the face and front they are smaller, deep, round and clearly separated. Vertex strongly,

irregularly punctured. Mesonotum closely, rugosely punctured, more strongly at the apex than at the base; the scutellum as strongly punctured as the apex of the mesonotum, but closer and with the punctures running into reticulations. Metanotum closely, finely rugose, opaque. Abdomen closely, distinctly punctured, more sparsely towards the apex than at the apex, the puncturation less close in the centre of the apical half of the segments.

Comes near to *C. sex-maculata*, Cam.

*Coelioxys tenuilineata*, sp. nov.\*

Black, shining, the face, clypeus, front, outer orbits, the base and apex of mesopleurae densely, the centre sparsely, narrow bands, not much dilated laterally, on the apices of the basal 5 abdominal segments, broader ones on the ventral and the legs covered with snow-white pubescence. Wings almost hyaline to the base of the stigma, fuscous violaceous beyond; the nervures black. Scutellum strongly, sparsely punctured, the punctures closer on the sides, in the centre sparser on the apex than on the base, the lateral spines about twice longer than wide, of almost equal width throughout, rounded at the apex, convex above; the apex laterally bluntly rounded. Apical half of last abdominal segment gradually narrowed to a point, closely punctured, a smooth keel down the centre, the apex of ventral long, acutely pointed, aciculated, the base finely punctured; it projects largely beyond the dorsal segment. Apex of clypeus bluntly rounded. Abdominal segments finely, closely punctured at the base and apex of the basal 5 segments; the basal half of the 6th smooth. ♀.

Length 10-11 mm.

Simla.

In certain lights the back of the abdomen is tinted with violaceous. Looked at from the mesonotum the apex of the scutellum is seen to be slightly reflexed and has an incision in the centre. The head and thorax have the usual puncturation.

*Coelioxys fuscipes*, sp. nov.\*

Black, the legs brownish fuscous, darker behind than in front; the face, clypeus, front, outer orbits, a spot before and behind the tegulae,

2 small transverse spots on the scutellum, the greater part of the pleuræ and sterna, narrow bands on the apices of the dorsal and wider ones, mostly interrupted in the middle, on the ventral abdominal segments, of snow white pubescence, the legs clothed with similar pubescence. Scutellum more strongly and less closely punctured than the mesonotum, the punctures sparser on the centre of the apical half; the apical margin broadly rounded, slightly raised and with a rounded incision in the centre; the teeth short, not quite twice longer than wide, a small and a large fovea on the top. Wings hyaline to the 1st recurrent and 1st transverse cubital nervures, the 2nd recurrent almost interstitial. Basal 4 abdominal segments closely punctured, the punctures becoming weaker towards the apex; there is a smooth transverse line on the sides of the segments near the apex; the 5th segment weakly, closely punctured, the basal half of the 5th very weakly, the apical more distinctly, closely punctured; there is a fine smooth keel down the centre of the basal half; basal third of apical ventral segment smooth, the middle closely punctured, the apical third smooth; it projects, but not much, over the dorsal segment and becomes gradually narrowed towards the apex. ♀.

Length 12 mm.

Simla.

Apex of clypeus bluntly rounded; the clypeus large, longer than the face, roundly convex. The centre of the apex of the scutellum is almost bilobate, being separated from the sides and having a central incision; the apex of the last abdominal segment is not acute, but rather bluntly rounded. There is an indication of a keel on the front. There are no transverse furrows on the abdominal dorsal segments.

*Coelioxys ruficaudis*, sp. nov.\*

Black, the apical abdominal segment from near the base red; the legs brownish red; mandibles rufous, the teeth black; flagellum rufo-fuscous below; wings hyaline, the stigma and nervures black. Apex of scutellum rough, broadly rounded, the lateral teeth large, bluntly rounded at the apex, the sides broadly roundly curved, the centre with a large deep hollow, widened and deepened at the base of the inner curve. Pubescence dense and silvery, almost covering entirely the outer orbits, pleuræ, sternum and legs; 2 small spots, longer than wide, on the base of mesonotum, one at the sides, near the base and apex of the tegulæ,

2 small, narrower, transverse ones on the base of scutellum, and bands, widened outwardly, on the apices of the abdominal segments above and narrower ones below of silvery pubescence. Ventral plate of apical abdominal segment broadly triangular, slightly longer than it is wide at the base. Front without a median furrow. Scutellum short, rounded behind. A wide transverse furrow on the apex of the 2nd abdominal segment. ♀.

Length 6 mm.

Simla.

Clypeus finely, the front and vertex coarsely rugosely punctured, the former not much raised, its apex transverse, narrowly rufous. Thorax coarsely rugosely punctured. Apical half of last dorsal segment of abdomen depressed laterally, projecting beyond the central basal part, which becomes, at the apex, gradually roundly narrowed to a fine point; this apical part is more coarsely punctured than the rest. The sides of the last ventral segment are broadly raised on the apical half, the centre appearing as a consequence depressed.