

Hymenopterological Notices. By P. Cameron.

(Received February 11th, 1891.)

I. *On some Hymenoptera parasitic in Indian injurious insects.*

For the examination of the insects here noticed and described, I am indebted to Mr. E. C. Cotes, of the Indian Museum, whose good work in connection with Indian Economic Entomology is well known and appreciated. All the new species described are small, if not minute; and one of them, *Aphelinus theæ*, is a very remarkable little insect.

PLATYGASTER ORYZÆ, *sp. nov.* (Pl. I. f. 7 & 7a).

Brownish, shining, impunctate; the legs pallid yellow; the antennæ yellow; wings hyaline; mesonotum with a large, somewhat roundish, fovea in the middle near the scutellum, which is convex and rounded at the apex [this fovea is present in two examples, and may be accidental]; abdomen subpetiolate, as long as the head and thorax united, the base of abdomen apparently not striolate ♀.

Length barely 1 mm.

Foerster divides the sub-family *Platygasterina* into 21 "genera," Thomson into 11. I cannot make the present species fit into any of the divisions, and therefore place it in *Platygaster, sensu lat.* The "generic" characters are as follows: Antennæ with the 4-jointed club in ♀ subabrupt, the club joints longer than the others; the last joint conical, nearly twice the length of the penultimate, the other club

joints somewhat moniliform. Abdomen subpetiolate. Parapsidal furrows obsolete. Scutellum convex, rounded at the apex, glabrous. Ocelli almost forming a triangle, wings without nervures, deeply fringed. Tarsi 5-jointed. Vertex immarginate.

Bred from *Cecidomyia oryzae*, Wood-Mason, a midge which proved destructive to paddy in Moughyr in October, 1880. See *Notes on Indian Economic Entomology*, No. 2, p. 103, pl. vi. f. 6.

The species of *Platygaster* greatly affect species of *Cecidomyia*, most of which are gall markers.

APHELINUS THEE, *sp. nov.* (Pl. I. f. 5 & 5a).

Yellow; the legs pallid, with apex of the hinder tibiae and tarsal joints infuscated. Head dilated behind the eyes. The second antennal joint small; the third large, thicker than the second or fourth; the fourth and fifth not half the size of the third, and equal in length; the club abrupt, longer than the preceding four joints united; the last joint conical, apparently thinner than the penultimate. Hinder tarsal spur as long as the metatarsus. Wings with a long hair fringe.

Length not  $\frac{1}{2}$  millim.

The only specimen I have seen is mounted in balsam and has got flattened, so that its exact shape cannot be seen satisfactorily. Apparently there are two broad triangular processes projecting from the thorax to near the middle of the abdomen; but their precise relationship or structure cannot be correctly made out. They seem to proceed from the base of the mesonotum. The sutures of the thorax cannot be observed. I am not aware of any similar structure being known in the family. It is so peculiar that I have no doubt that it will be proved, on further examination, from fresh specimens, of generic value—that the species forms the

type of a new genus. Otherwise the species compares fairly well with *Aphelinus*.

Bred from the tea scale insect *Aspidiotus theæ* from Janygo, where it was bred by Mr. F. W. H. Mills. The group of *Aphelininæ* are parasitic in those destructive pests, the *Coccidæ*.

PTEROMALUS ORYZÆ, *sp. nov.* (Pl. I. f. 2 & 2a).

Coppery-green, the scape and legs yellow, the femora with a more testaceous tinge; the mandibles rufo-testaceous. Head and thorax closely, and somewhat strongly, punctured; the antennal groove transversely striated; the mesopleuræ more strongly punctured than the mesonotum; the metapleuræ shining, impunctate; median segment finely punctured, except at the apex, and with a stout keel down the centre. Abdomen shining, as long as the thorax; the apical segment conical. Wings hyaline, with a very faint fulvous tinge; the nervures yellowish. In some examples the femora are infuscated; the coxæ punctured, green; the flagellum of the antennæ may be blackish to testaceous.

Length nearly 3 mm.

This species belongs to the sub-tribe *Pteromalides* of Thomson (Hymenoptera Scandinavia, IV.); but to what particular genus, as defined either by the learned Swede or to the more numerous genera of Foerster, it passes my wit to determine; and in this my valued correspondent, Prof. G. L. Mayr, of Vienna, agrees with me. I have, therefore, referred it to the old genus *Pteromalus*. The ringlet is 2-jointed; the succeeding joint is as long as it united; the club is 3-jointed (but the joints can only be with difficulty seen); the antennæ have thus 13 joints. The parapsidal furrows are obsolete.

A parasite on the destructive rice weevil *Calandra*

*oryzae*. Cf. *A preliminary account of the wheat and rice weevil in India*, by E. C. Cotes, p. 5.

COTESIA, *gen. nov.*

Antennæ 17-jointed, the third joint longer than the fourth. First abscissa of radius is longer than the thickness of the stigma, originating somewhat beyond the middle; the other abscissæ obsolete. First abscissa of the cubitus originating from the transverse praebrachial, and becoming obsolete beyond the curved transverse first cubital nervure; the other and anal nervures obsolete. The recurrent nervure received before the middle of the cellule. Axillary nervure not divided. Radius and cubitus in hind wings obsolete. Parapsidal furrows obsolete. Abdomen curved; ventre convex; ovipositor curved.

Apparently comes nearest to *Pygostolus*; but differs in having the antennæ 17-jointed; in having no radius, and only one cubital cellule.

COTESIA FLAVIPES, *sp. nov.* (Pl. I. f. 3 & 3a).

Black, shining; the antennæ for the greater part testaceous beneath; the legs yellow, the ventral surface and sides yellowish-testaceous; the ovipositor short, black. Thorax covered with a whitish pubescence; wings hyaline, the nervures fuscous; stigma large. Head well developed behind; the base of abdomen piceous-black; the abdomen shorter than the thorax, the segments edged with yellow. Median segment aciculate. The antennæ longer than the body.

Length  $2\frac{3}{4}$  mm.

A parasite of the moth, whose larva proved injurious to *Gorghum vulgare* at Poona. See *Indian Museum Notes*, No. 1.

Mr. Cotes sends two species of *Pimpla*.

1. PIMPLA PUNCTATOR, Linn, *Syst. Nat.*, t. i., p. 935-38 ;  
Vollenhoven, *Stett. Ent. Zeit.*, 1879, p. 143 = *P.*  
*pedator*, Fab., *Syst. Piez.*, p. 114-6.

Vollenhoven, *l.c.*, records the rearing of this ichneumen from *Papilio Pammon* ; and says further, "Wahrscheinlich kommt *Punctator* parasitisch in verschiedenen Insecten vor." The specimens sent by Mr Cotes were bred from the caterpillars of *Cricula trifenestrata* in Hazanbugh. The parasite has a very wide distribution, being found widely distributed in the Oriental region and in Celebes.

2. PIMPLA ZEBRA, Vollenhoven, *Stett. Ent. Zeit.*, 1879,  
p. 147. This has also been bred from *Cricula tri-*  
*fenestrata*. Vollenhoven describes it from Java.

## II. *Two New Species of EUCHARINÆ.*

The group of *Eucharinæ* is one of the most remarkable in the family *Chalcididæ*. Not only are they much larger than usual, but they are remarkable for the extraordinary development of the thorax, the scutellum especially showing many curious developments. Until recently the history of these interesting insects was quite unknown. We now, however, are acquainted with the habits of two species from widely remote regions ; and, as the various groups of *Chalcididæ* confine themselves, with remarkable uniformity, in their attacks to the same class of insects, I think that we are justified in concluding that their prey is the ant tribe. The discoverer of this interesting fact is Prof. Forel, of Zurich, who, receiving some cocoons of the huge Australian "Bull-dog" Ant *Myrmecia forficata*, Fab., from Bull Creek, South Australia, had the curiosity to open some of them and found a ♂ and ♀ of the species I have called *Eucharis myrmiciæ* in two of them, and in a perfect condition, except that their wings had not yet developed.

So far as I am aware only one other Hymenopterous

insect is parasitic on ants, this being the European Braconid *Elasmosoma berlinense*.

*EUCHARIS MYRMICLÆ, sp. nov.* (Pl. I. f. 10 a—c).

*Cuprea; scapo antennarum, pedibus abdomineque rufo-ferrugineis; flagello antennarum nigro; apice scutelli inciso.*

Long. fere 10 millim.

*Hab.* Bull Creek, South Australia.

Occiput margined above, slightly concave; ocelli in a straight line; front broadly excavated; clypeus transverse at the apex. Head coarsely transversely striolated; the front with the striæ much more widely apart and more regular; clypeus impunctate, smooth and shining; convex, and broadly furrowed along the sides. Mandibles long, curved, and without teeth and testaceous. Antennæ not much longer than the thorax, not much thickened towards the apex; the third joint distinctly longer than the fourth, the others becoming gradually shorter and very slightly thicker; in ♂ as long as the body, tapering towards the apex; densely micropilose. Thorax coarsely rugosely punctured, the space outside the parapsidal furrows more finely than the central portion. Parapsidal furrows diverging in front; a broad furrow runs from them to the tegulæ; there is a depression in the centre at the base of the scutellum which is coarsely rugosely reticulated; the apex projecting into a lamina with a curved incision in the centre; in the ♀ it does not form a lamina and is more deeply curved; and in the ♂ there is, in the centre, a stout keel which is not so conspicuous in the ♀. Pro- and mesopleuræ in front coarsely rugosely reticulated, the rest of the mesopleuræ finely rugosely punctured; metapleuræ rugosely reticulated. Petiole oblique; in ♀ shorter, in ♂ longer than hind femora; dark coppery-green with varying tints; the legs and abdomen, except at the base, rufo-testaceous; petiole coppery; antennæ black; wings apparently hyaline.

CHALCURA BEDELI, *sp. nov.* Cam. (Pl. I. f. 8, 9, *a—b*).

Dark blue; the antennæ black, dark testaceous at the apex beneath, the legs testaceous, the coxæ, the base of anterior femora, the middle more broadly at the base and the posterior to near the apex, black; abdomen piceous, the base and apex of the second, and the others broadly blackish; wings hyaline, a light fulvous cloud in the middle, and which becomes cleft before the base of the humerus; the upper branch running along the ulna; the lower along the lower edge of the wing; the nervures testaceous. Antennæ about as long as the thorax, serrate; the joints of the flagellum (except the last) sharply produced in front; the basal joints with the apices very sharp; the first joint of the flagellum nearly twice the length of the second. Head shining, the front broadly depressed; the vertex and clypeus transversely; the front obliquely striolated. Thorax shining, irregularly striolate; except a large space on the lateral lobe of the mesonotum in front of the tegulæ. Parapsidal furrows distinct; and there is an indistinct furrow between them. The middle of mesopleuræ excavated transversely; the metapleuræ obliquely. There is a transverse narrow furrow in front of the scutellum; its base is hollowed, the hollow with stout longitudinal keels; the scutellum finely longitudinally striolated; the apex produced obliquely; the apex scarcely truncated; the median segment aciculate. Petiole a little more than twice longer than broad.

The ♂ has the antennæ flabellate; the branches curved; the penultimate joint has the branch much shorter than the others; the last joint does not carry a branch, and is sharply produced at top and bottom. The thorax is more strongly striolate than in the ♀; the depression at the base of the scutellum is obsolete, and the apex of the scutellum is more deeply incised; the median segment is irregularly reticulated,

and bears two keels down the centre. The petiole is more than twice the length of the female's, being not much shorter than the rest of the abdomen; irregularly aciculate at the base. The wings are entirely hyaline, and want the forked cloud found in the ♀.

This species belongs to Kirby's genus *Chalcura* (*Jour. Linn. Soc. Zool.* XX. 30), of which only one species is known, namely, *Eucharis deprivata*, Walker from Ceylon. It differs from the other groups of *Eucharis* with simple apex of scutellum in having the antennæ flabellate in the ♂, except from *Rhipipallus*, which has the antennæ in the ♂ biramose.

Found by the well-known French coleopterist M. L. Bedel, at Edough in Algeria, living in the nests of *Myrmecoystus viaticus*. For the examination of the specimens I am indebted to Prof. E. Emery of Turin, so noted for his studies on ants.

### III. Two New Species of *TELENOMUS* reared from Hemipterous Eggs from the Amazon Valley.

#### *TELENOMUS MELANOGASTER*, *sp. nov.*

Yellowish-testaceous, the vertex and abdomen black, the scape of the antennæ wanting the testaceous hue found on thorax; two fuscous streaks on the mesonotum; wings hyaline with a fuscous tinge; the fringe long; the hinder femora a little infuscated in the middle. Front punctured; mesonotum finely punctured. Ocelli situated quite close to the eyes. Scape elongate, nearly as long as the three following joints united; joints 2—5 elongate, the third and fourth longer than the second and fifth; the sixth and following joints moniliform, not half the length of the fifth; the base of abdomen striolate, sordid testaceous. Parapsidal furrows absent; scutellum subconvex, aciculate. ♂.

Length 1 ½ millim.



This, and the following species, belong to Thomson's *Telenomini* and, apparently from its punctured front, to *Telenomus*; the difference between *Telenomus* and *Phanurus* lying in the latter having the front smooth and the ovipositor exserted. I can hardly look upon *Phanurus* as distinct from *Telenomus*.

Bred from the eggs of a bug from the Amazon Valley.

TELENOMUS (PHANURUS) AMAZONICA, *sp. nov.*  
(Pl. I. f. 4—4, *a*).

Black, the six basal joints of the antennæ pallid yellow. Head and abdomen shining, impunctate; mesonotum opaque, alutaceous, almost punctured; base of second segment striolate; scutellum shining. Antennæ with a four-jointed abrupt club, its last joint thinner and smaller than the penultimate; the second and third joints sub-equal. Ocelli situated close to the eyes. Second abdominal segment larger than all the others united. Ovipositor exserted. ♀. Length  $1\frac{1}{2}$  millim.

Amazon Valley.—Bred from the eggs of a bug.

It is remarkable that most of the species of *Telenomus* whose habits have been investigated are parasites in the eggs of bugs.

IV. *A New Genus of European Tenthredinidæ.*

HENNEDYIA *gen. nov.* (*Tenthredinidæ.*)

Antennæ filiform, 22-jointed. Fore wings with two radial and four cubital cellules; the second and third of the latter receiving each a recurrent nervure; lanceolate cellule with an oblique cross nervure; hind wings with two cubital cellules. Spurs not reaching to the middle of metatarsus; patellæ obsolete; claws simple.

This genus belongs to the Tribe *Tenthredina* and sub-tribe *Selandriades* of Thomson and of my *Monograph of*

the British Phytophagous Hymenoptera. From any of the described genera of that group it is to be at once recognised by the great number of joints in the antennæ, being six more than in *Phyllotoma* the genus known up till now with the most numerously jointed antennæ, namely, sixteen. *Phyllotoma*, however, has (like all its allies, the leaf-mining Sawflies) only three cubital cellules, while further there are no cubital cellules in the hind wings. In the form of the antennæ undoubtedly it agrees best with *Phyllotoma*; and, in fact, there is no other genus, except *Phyllotoma* with which, as regards the antennæ, it can be compared. In the neuration of the wings and in bodily structure it almost agrees with *Athalia*; but *Athalia* has the antennæ at the outside not more than 10—11 jointed, while further they are sub-clavate in both sexes. On the whole I should consider *Hennedyia* more nearly related to *Athalia* than to *Phyllotoma*; but its relationship can only be finally settled by the discovery of the ♀.

The genus I dedicate to the memory of my first mentor in natural history, Mr. Roger Hennedy, the author of the *Clydesdale Flora*.

HENNEDYIA ANNULITARSIS, *sp. nov.* (Pl. I. f. 1—1, a.)

*Nigra, nitida, pronoto, tigulis abdomine pedibusque rufo-testaceis; apice tibiæ articulisque tarsorum nigris; alis fuscis, nervis nigris. ♂.*

Long. fere 5 mm.

Antennæ longer than the body, filiform, tapering towards the apex, almost bare; the basal two joints globose, of almost equal length; the third joint nearly one-fourth longer than the fourth; the other joints becoming gradually shorter to the apex; the third joint slightly curved. Cheeks emarginate, the occiput almost convex; frontal area not clearly defined; a fovea below the ocelli and there is a smaller one immediately above the antennæ. Clypeus convex, a broad and mode-

rately deep furrow at its base; the apex almost transverse. Eyes slightly converging beneath; not reaching to the base of the mandibles. Thorax shining, impunctate; the central and lateral furrows on the mesonotum wide, deep; a narrow, shallow, indistinct furrow on the scutellum. Cenchri clear white; the hollow separating them wide, deep; blotch large, pale. Radial nervure received a little beyond the middle of the third cubital cellule; transverse basal nervure received quite close to the base of the cellule; the first transverse cubital somewhat beyond the basal third; the second at the basal third; the cubital nervures being angled where the recurrent nervures are received. There is a horny point at the apex of the second cubital cellule. The accessory nervure in hind wings received beyond the middle. Legs bearing a white microscopic down: the coxæ, trochanters, apex of tibiæ, more than the apical third of the metatarsus; the apical three-fourths of the second joint, and the whole of the other joints on the hind tarsi (the anterior and middle tarsi with the black less extended) and the base of the fore femora, black.

It will be noticed that the tarsi are annulated with black as in most of the species of *Athalia*.

Taken at Gibraltar by Mr. J. J. Walker, R.N.

#### V. *A New Indian Species of RHINOPSIS.*

##### RHINOPSIS CONSTANCEÆ, *sp. nov.* (Pl. I. f. 6).

Black, the mandibles, clypeus, pronotum, the mesothorax, except a line on the sternum, the apex of the mesonotum and its sides before the tegulæ, the median segment, and the antennæ ferruginous; the narrowed basal half of the petiole white; the coxæ beneath, more or less of the trochanters; a broad line on the base of the femora and the tarsi reddish; the base of the tibiæ and the apex of the femora, obscure reddish. Wings hyaline, a broad smoky

band originating at the middle of the stigma; nervures obscure testaceous, paler at the base; the stigma fuscous, pale at the base. Head finely rugosely punctured, semi-opaque. Eyes slightly diverging beneath. Ocelli hardly forming a triangle, the anterior being too far in front, separated by a greater distance from the posterior than these are from each other. The posterior separated from each other by half the distance they are from the eyes. Clypeus convex, keeled in the middle, the apex triangular. Apex of mandibles piceous. Prothorax finely and closely punctured, somewhat convex above, the sides concave, furrowed in the centre; the lower part of the concavity projecting more than the upper, the edge of the latter being furrowed and margined; prosternum furrowed, widely in front, narrowing behind. Mesothorax finely punctured; parapsidal furrows wide, parallel; there is a large shining keeled depression below the tubercles, the pleuræ behind this being convex; mesopleuræ widely furrowed, keeled in the centre. Median segment with a straight central and two lateral curved converging keels in the centre; and, on the edge, are two other keels; the interstices transversely striolate; the apex semiperpendicular, transversely striolate and keeled above.

*Rhinopsis ruficornis*, Cam. is nearly related to *R. Constanceæ*, but differs in having the hinder ocelli separated from the eyes by more than twice the distance they are from each other; in the mesonotum being without black at the base. in the scutellum being ferruginous; in the pronotum being deeply furrowed in the middle, in the apex of the median segment being tuberculate laterally before the curve; in the lateral central keels being less distinct and more widely apart; in the narrow part of the petiole being longer, the apex nodose; while in *Constanceæ* it becomes gradually developed from the middle; the legs are stouter and have the femora not so attenuate at the apex; the wings are shorter

and have the second recurrent nervure interstitial, while in the present species it is received in the basal third of the cellule, the wings further being deeply smoky before the middle.

*Hab.* Poona (*Wroughton*).

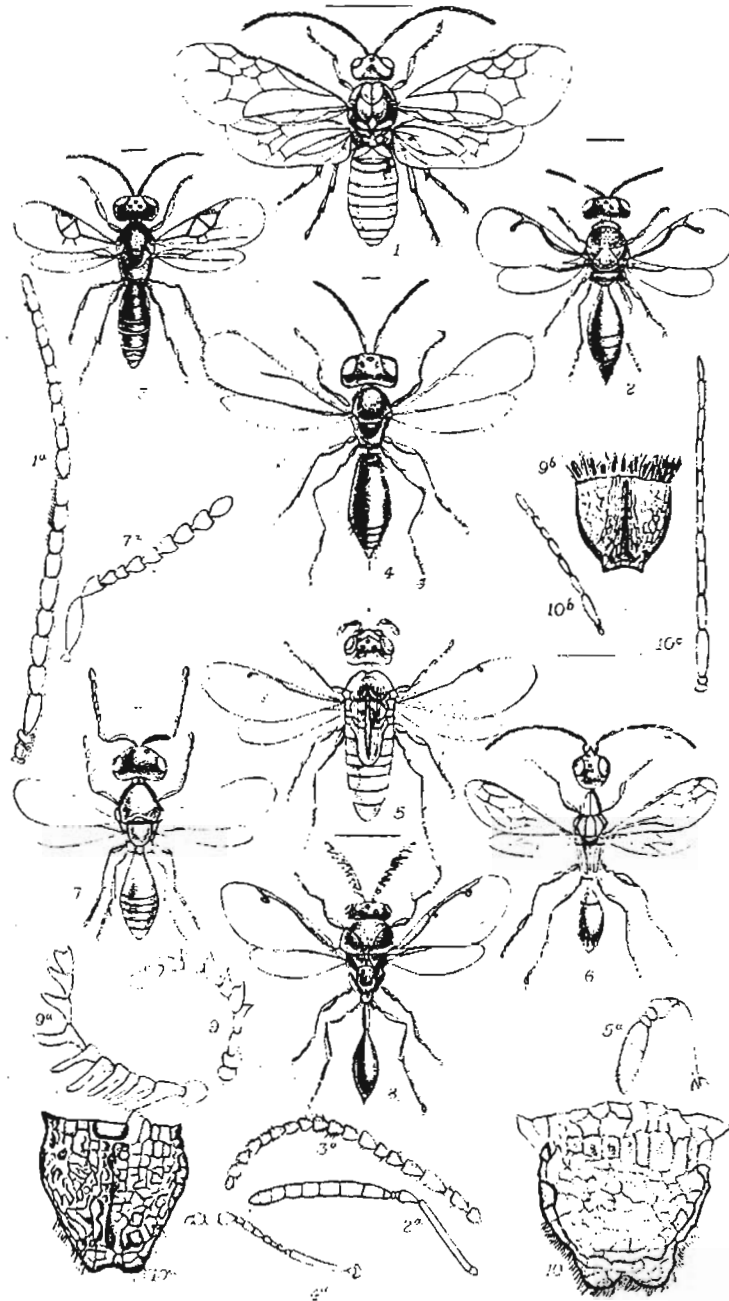
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#### Explanation of Plate.

FIG.

1. *Hennedyia annulitarsis*, 1<sup>a</sup> antenna.
2. *Pteromalus oryza*, 2<sup>a</sup> antenna.
3. *Cotesia flavipes*, 3<sup>a</sup> antenna.
4. *Telenomus amazonicus*, 4<sup>a</sup> antenna.
5. *Aphelinus theæ*, 5<sup>a</sup> antenna.
6. *Rhinopsis Constanceæ*.
7. *Platygaster oryza*, 7<sup>a</sup> antenna
8. *Chalcura Bedeli* ♂.
9. „ „ antenna ♀, 9<sup>b</sup> antenna ♂, 9<sup>b</sup> scutellum.
10. *Eucharis myrmiciæ*, scutellum ♀, 10<sup>a</sup> scutellum, 10<sup>b</sup> antenna ♀, 10<sup>a</sup> antenna ♂.

HYMENOPTERA.—PLATE I.



Constance Hoskins-Abrams: *Internat. Nat.*