

## AUSTRALIAN HYMENOPTERA CHALCIDOIDEA—IV.\*

The Family Eulophidae with Descriptions of New Genera and Species.

By A. A. GIRAULT.

### INTRODUCTION.

Of all the families of what is undoubtedly the largest group numerically of the great order Hymenoptera, this, the Eulophidae, seems to be the representative one in the Australian fauna, the number of genera and species exceeding those of any other family of the great complex. This paper records but few of the species but perhaps most of the genera existing to-day on the Australian continent. The groups or tribes established by Ashmead (1904) have been adhered to because they seem to be natural but a large number of new genera have been established more especially in the Tetrastichinae. These genera I believe to be natural groups but for the present they are established especially because it seems necessary to do so in order to avoid that greatest of difficulties with these minute insects, namely, identification of specific forms. It has been true in the past that identification was thought to be insured by a general description of the species, omitting the generic characters since these were understood as being present. But this practice has failed signally in establishing identity of species, for the reasons that some species are carelessly or otherwise referred wrongfully to genera, others differ somewhat from the generic description and these differences are not pointed out while still others differ in smaller characters, those not included within the description of the old genera and not being brought to the attention of the student are, at the time, overlooked. The need and use of revisions show how common and ordinary are the great number of omissions made in descriptions of species and how helpless the student becomes when attempting identification upon these incomplete diagnoses. All of these serious difficulties will be obviated by this what is called (wrongfully, I think and hope) splitting. The student is forced to be careful, the generic diagnosis is as concise as nature allows, specific characters are readily grasped and any variations from the genotype easily and quickly noted. These are the conveniences afforded by the establishment of these genera. Identification is the basis of nomenclature.

On the other hand, nomenclature is the tool or convenience of classification which is concerned with heredity. The tribes of the Eulophidae seem natural but it is difficult to define natural genera; yet going upon the principle that genera are to species as species are to varieties and so on (that is genera are groups comprised of clusters of species, groups within a group) we may say that a genus is natural and valid or good when all of its species or groups of species are mutually inclusive and do not vary enough from each other to intergrade with the species of other mutually inclusive groups (or other valid genera). Thus, *Tetrastichus* Haliday and *Aprostocetus* Westwood are held to be valid genera differing in but one particular, the number of the ring-joints of the antennae. But if there should be found a species of either group in which the number of ring-joints was inconstant, intergrading is established and the two genera must be considered as one, since their inherited structure is the same. This is the principle upon which I have based these genera. In other language they are based upon the constancy (or supposed constancy) of a character or of characters which in turn are

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an index of blood relationship. I believe that I have thus insured identification of species. As to the genera time and increased knowledge will decide their fate at the which I am not and need not, for the present, be greatly concerned. I am not proud of them, since they are not mine but rather nature's.

In work of this kind to escape error is impossible but the enormous number of errors so far made are due largely to one fact, namely, to what may be called piece-work in taxonomy. A systematist scatters his energy and attention over a large field with the idea, though why so I know not, that in so doing he is showing greater ability, sagacity and broadness; he describes a few species here one time, a few there another with the result that, not having an intimate knowledge of genera, these species often become misplaced, the descriptions are illy made and unbalanced and in the end there comes as a consequence that feeling of helplessness in regard to specific identities. In dealing with large complexes and in the relationships of orders and higher groups extensive and broad study is necessary but in describing species intensive study is as equally necessary and if variety is needed or desired a group should be taken by itself, studied intensively, advanced as much as possible and when completed left; any other group may then be studied in the same manner as the first. In this way, specific identities will be insured. Some years ago it was the common practice for many systematists simultaneously to describe species in several orders of insects but if these men failed to insure identity, how can a modern systematist hope to do so? Of those men, none are more notable for failure in this respect than Francis Walker. Was he broadening his knowledge by incorrectly describing species or was he pampering his vanity? He was certainly mistaken and unquestionably wasted a large amount of energy and caused an enormous amount of delay; his efforts resulted in impediments. If the idea in describing species is to make them known, intensive study seems necessary; if, however, the motive is otherwise, no study at all is needed, since in the end the purposes are served by merely publishing the new name and designating a type. The descriptions are made for others and the future.

The principles underlying taxonomy are the same for all groups. He who knows them for one group knows them for all but is necessarily unacquainted with the kind and scope of variation peculiar to every group of animals and because of the enormous number is incompetent to judge of species within them without that insight and knowledge gained from comparative and intensive study. A sincere desire to advance our knowledge of specific forms requires intensive study. A desire merely to describe as many forms as possible, whatever the motive, requires none at all.

Systematists seem to fail in another respect, a fruitful cause of trouble to the future: too often they are not self-critical. If errors are inevitable, which they seem at present, many could be corrected by their agents. This does not seem the usual practice. An individual may see at least some of his own mistakes much more clearly than others, more especially if he is constantly on the alert for them and constantly revising and criticising his own work. An error uncorrected by its author may cause endless trouble in the future. Frankness and more explanation in regard to changes made, a feeling of greater responsibility to the future, greater sincerity, less egotism and vanity and much more thought for clear, intelligible and accurate work, these in themselves, will produce tremendous advances in our knowledge of specific forms. Systematic work is fundamental; the descriptive part of it by no means comprises its scope.

#### ACKNOWLEDGMENT.

In the preparation of this paper I have been greatly aided by my wife who has, in the absence of unobtainable clerical assistance, copied out nearly the entire manuscript.

## SUBFAMILY ENTEDONINÆ.\*

## TRIBE ENTEDONINI.

## GENUS ENTEDON Dalman.

## 1. ENTEDON DIOCLES Walker. Female.

*Entedon (Omphale, Haliday) Diocles, Walker, 1839, p. 40.**Habitat:* Sydney, New South Wales.

## 2. ENTEDON HESTIA Walker. Female.

*Eulophus Hestia Walker, 1839, p. 46.**Entedon Hestia Walker, 1846, p. 66—de Dalla Torre, 1898, p. 38.**Habitat:* Hobart, Tasmania.

## 3. ENTEDON PRONAPIS Walker. Male.

*Entedon Pronapis Walker, 1839, p. 40.**Habitat:* Sydney, New South Wales.

## 4. ENTEDON PODAGRIONIDIS (Girault).

*Mestocharis podagrionidis Girault.*

Like *Mestocharoideus cyaneus* but smaller and the antennæ with only one ring-joint, the funicle joints shorter, the distal one usually wider than long and shorter than either the pedicel or the first club joint. Otherwise the same but the mandibles are tridentate, a third tooth being represented inwardly, though much shorter than the two outer acute ones. Type re-examined.

*Habitat:* Nelson (Cairns), Queensland. Associated with the eggs of mantids.*Type:* No. Hy 1633, in the Queensland Museum.

## MESTOCHAROIDEUS new genus.

*Female:*—Like *Mestocharis* Foerster but the antennæ with two ring-joints, the mandibles bidentate. True lateral carinæ absent. Median carina paired.

*Type:* *Mestocharis cyanea* Girault.

## 1. (MESTOCHARIS) MESTOCHAROIDEUS CYANEUS (Girault). Female. Genotype.

Deep metallic blue, the tarsi white; antennæ concolorous. Reticulated. Funicle 1 longest.

*Habitat:* Nelson (Cairns), Queensland. Forest.*Type:* No. Hy 1634, Queensland Museum.

## GENUS MESTOCHARIS Foerster.

## 1. MESTOCHARIS LIVIDUS new species.

*Female:*—Length, 1.25 mm.

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\* For a table of subfamilies, see pp. 294-295.

Like *Entedon podagrionidis* (Girault) but the distal funicle joint is somewhat longer than wide; the lateral carinae of the propodeum are not at the lateral margin but not very far laterad from the pair of median carinae, the lateral margin of propodeum also carinate as well as fore and hind margins. Intermediate tibial spurs only slightly smaller than those of the hind legs. Median carinae diverging, distad at apex with a very short carina between them. Antennae 8-jointed, one ring-joint, the club 2-jointed. Hind coxae polished, the tibiae metallic green. Space between median carinae rather broad, smooth. Thorax (excepting propodeum) roughly scaly. Mandibles with two equal teeth. Hind tibial spurs long and stout. Second segment of abdomen occupying about half the surface.

*Male*.—The same but a third smaller, the abdomen much shorter, at apex broadly truncate. Antennae apparently with two ring-joints.

Described from three males, seven females labelled "No. 14. From *Epilachne 28-punctata*. Darwin, Northern Territory, 19 May, 1913 (G. F. Hill)." Later, six females labelled "No. 6. Bachelor, N.T., Jan. 23, 1913 (G. F. Hill)."

*Habitat*: Port Darwin and Bachelor, Northern Territory.

*Type*: No. Hy 1635, Queensland Museum, one female on a tag, two males, six females on a slide (plus 3 female heads).

## 2. MESTOCHARIS SILVENSIS new species.

*Female*.—Length, 1.16 mm.

The same as the preceding species but the teeth of the mandibles longer and strong, the inner margin of the second tooth serrate below tip; also the pedicel is distinctly longer than the globular distal funicle joint but not much longer. In *lividus* the first funicle joint is distinctly longer than the pedicel, the latter subequal to the distal funicle joint. Parapsidal furrows caudad broadened from narrow sutures to shallow depressions. Hind and intermediate tibial spurs small and normal. Otherwise as in *lividus*.

*Male*.—Not known.

Described from one female captured August 31, 1913, by sweeping in a jungle pocket.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1636, Queensland Museum, the above specimen on a tag, the head on a slide.

## 3. MESTOCHARIS VETERNOSUS new species.

*Female*.—Length, 0.70 mm.

Differs from *lividus* in having the tibial spurs somewhat enlarged only and in having the caudal margin of the second segment of abdomen deeply cut into at the meson or incised, the third segment longer than usual, much longer than the next two which are transverse linear. Postmarginal vein longer than stigmal. Funicle joints subglobular, the first a little longer. Mandibles bidentate.

From a female captured by sweeping in a strip of jungle bordering a streamlet, November 4, 1912.

*Habitat*: Proserpine, Queensland.

*Type*: No. Hy 1637, Queensland Museum, the above specimen on a tag.



## GENUS HORISMENUS Walker.

1. **HORISMENUS ANTIOPA** new species.

*Female*:—Length, 1.30 mm.

Metallic aeneous green, the wings hyaline, the legs straw yellow except the coxæ; club 2-jointed, funicle 3-jointed. Thorax coarsely reticulated, the propodeum nearly smooth, with a pair of diverging median carinæ, the lateral carinæ absent. Parapsidal furrows represented by a conspicuous longitudinal fovea on each side caudad. Mandibles bidentate. Second segment of abdomen occupying two thirds of the surface. Postmarginal vein absent. Median sulcus of scutellum short, only along proximal fourth. Caudal and lateral margins of propodeum strongly carinate. Axillae subglabrous; scutellum less coarse than scutum and parapsides. Pedicel shorter than funicle 1. Terminal spur of club curved. Type re-examined.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1638, Queensland Museum, the above specimen on a tag, the head on a slide.

## CHRYSOATOMOIDES new genus.

*Female*:—Like *Chrysoatomus* Ashmead but the antennæ filiform, the funicle joints long and slender; propodeum with a median carina.

*Male*:—Not known.

*Type*: The following species.

1. **CHRYSOATOMOIDES LATIPENNIS** (Girault).

*Chrysoatomus latipennis* Girault.

Dark metallic blue, the legs yellow except the coxæ; scape yellowish, the flagellum dark; wings lightly stained; funicle joints subequal, tapering distad. Polygonally reticulated.

*Habitat*: Babinda, Queensland. Jungle.

*Type*: No. Hy 1639, Queensland Museum.

## GENUS NEODEROSTENUS Girault.

Differs from *Derostenus* Westwood in having the propodeum wholly without carinæ; funicle 3-jointed, club 2-jointed.

1. **NEODEROSTENUS AUSTRALIENSIS** Girault. Female. Genotype.

Metallic green, the legs wholly white, also the scape; petiole yellowish brown; fore wings with a distinct sooty spot under the end of the marginal vein. Head and thorax scaly. Club joints about equal.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1640, Queensland Museum.

## GENUS APLEUROTROPIS Girault.

Differing from *Pleurotropis* in bearing two ring-joints and lateral carinæ on the propodeum together with a median sulcus; scutum with a median groove along distal third. At least three funicle joints. Postmarginal and stigmal veins short.

**1. APLEUROTROPIS VIRIDIS** Girault. Female. Genotype.

Brilliant metallic green, the wing hyaline, the legs white except the coxæ; scape white with a dusky dot at tip above, the rest of the antennæ dark metallic; first funicle joint longest, about thrice the length of pedicel.

*Habitat*: Townsville, Queensland.

*Type*: No. Hy 1641, Queensland Museum.

**PLEUROTROPOMYIA** new genus.

*Female*:—Head slightly wider than long (cephalic aspect), the antennæ inserted somewhat below the middle of the face, 10-jointed with three ring-joints, the club 2-jointed. Post-marginal vein elongate, over twice the length of the stigmal, the marginal very long, over twice the length of the submarginal. Scutum with a median groove at distal third. Scutellum simple, the propodeum with a pair of median carinæ, the lateral carinæ long and complete, forked cephalad, the lateral fork short, curving caudo-laterad partly around (but mesad of) the minute spiracle. Parapsidal furrows complete, distinct, shortly curved off. Mandibles 4-dentate, the two inner teeth much shorter and minute. Petiole of abdomen somewhat longer than wide, the second segment largest, occupying somewhat over a fourth of the surface. A complete sulcus just laterad of propodeal spiracle. Eyes hairy.

*Male*:—Not known.

*Type*: The following species.

**1. PLEUROTROPOMYIA GROTIUSI** new species.

*Female*:—Length, 1.50 mm.

Brilliant metallic green, the wings hyaline, the legs white except coxæ. Scape white, rest of antennæ black; distal half of abdomen bluish purple; pedicel shorter than any of the funicle joints of which the first is longest, a little longer than the club (excluding the terminal spur), the third funicle joint longer than the first club joint which is subequal to the pedicel and longer than the body of the second club joint. Thorax with coarse scaly reticulation (not raised), propodeum glabrous.

Described from one female captured August 31, 1913, by sweeping in jungle. Respectfully dedicated to Hugo Grotius.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1642, Queensland Museum, the above specimen on a tag, the head on a slide.

A second female May 6, 1913, by sweeping jungle growth along a forest streamlet.

**2. PLEUROTROPOMYIA SPENCERI** new species.

*Female*:—Length, 0.80 mm.

Like *grotiusi* but much smaller, the funicle joints all shorter, the first only one and a-half times longer than wide (the same in the type species but wider) and not distinctly longer than the third, the club slightly longer than it (excluding terminal spine). Median carinæ in both species diverged at base. (Spiracular sulcus not seen.)

Described from one female captured by sweeping in forest, April 20, 1913. Dedicated to Herbert Spencer.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1643, Queensland Museum, the above specimen on a tag, the head and a fore wing on a slide.

### 3. PLEUROTROPOMYIA SEDITIOSUS new species.

*Female*:—Length, 1.40 mm.

Like *grotiusi* nearly but not quite as robust and the sulcus on the scutum is a half shorter, not more than a sixth the length of the scutum; moreover, the reticulation just cephalad of it forms larger areas than in *grotiusi* (i.e., is coarser). In *grotiusi* the triangular inner (meso-caudal) piece of each parapside is smooth and shining, bearing only a single fovea cephalad of the centre; in this species the same but the piece is narrower and the fovea at the apex; also their mesal ends are farther away from the median sulcus at its apex (touching or nearly in *grotiusi*). Otherwise the same or nearly.

*Male*:—Not known.

Described from one female captured by sweeping in forest, August 2, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1644, Queensland Museum, the above specimen on a tag, the head on a slide.

A second female was captured in forest at Nelson, September 6, 1913.

### APLEUROTROPOPSEUS new genus.

*Female*:—Like *Pleurotropopseus* Girault but the lateral carinæ straight and paired, the antennæ without ring-joints, 7-jointed (the club 2-jointed), the median sulcus of scutum somewhat longer and the postmarginal vein very long, two and a-half or more times longer than the stigmal. Marginal vein much over twice the length of the submarginal. Second abdominal segment about a third of the surface.

*Male*:—Not known.

*Type*: The following species.

#### 1. APLEUROTROPOPSEUS ALBIPES new species.

*Female*:—Length, 1.50 mm.

Metallic blue-green, the wings hyaline, the scape white except at tip, the rest of the antennæ black, the coxæ concolorous, the rest of the legs white. Thorax reticulated. First funicle joint longest, the third oval, longer than the short pedicel.

Described from a female taken by sweeping *Leptospermum*, April 16, 1913 (H. Hacker) and another taken April 20, 1913, by sweeping eucalypts.

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1645, Queensland Museum, the above specimens each on a slide.

### AMESTOCHARIS new genus.

*Female*:—Antennæ 9-jointed with two ring-joints, the club 3-jointed. Parapsidal furrows represented by a groove on each side at caudal half; scutellum simple; propodeum with a pair of median carinæ which diverge from base, each one connected at apex along caudal margin with the lateral carina which forks at apex; surface polished. Petiole longer than

wide, the second segment occupying from half to three fourths of the surface. Mandibles bidentate. Postmarginal vein slightly longer than the stigmal, both short. Cephalic margin of propodeum carinate.

*Male*:—Not known.

*Type*: The following species.

**1. AMESTOCHARIS GOONDIENSIS** new species.

*Female*:—Length, 1.25 mm.

Metallic aeneous green tinged with bluish, the wings clear, the coxæ concolorous, the legs white; thorax reticulated, the lines raised and coarse. Scape and ring-joints yellowish white, rest of antennæ concolorous with body; pedicel shorter than any of the following joints, the first funicle joint longest, over one and a half times the length of the pedicel, the next joints each shortening slightly in succession; third club joint ending in a stout, somewhat curved seta (in reality two setæ, the curved one the longer); both funicle joints narrowing distad.

Described from a single female captured by sweeping in jungle, July 23, 1912.

*Habitat*: Goondi and Nelson, Queensland.

*Type*: No. *Hy* 1646, Queensland Museum, the above specimen on a tag, the head on a slide.

A second female was captured by sweeping in jungle at Nelson, N.Q., June, 1913 and a third in July. There is a fovea at base of scutellum at the meson.

**2. AMESTOCHARIS CONCOLORIPES** new species.

*Female*:—Length, 1.30 mm.

Metallic green, the abdomen darker, the wings hyaline, the legs concolorous with thorax, the three proximal tarsal joints white; base of abdomen green; pronotum bluish, glabrous; thorax coarsely reticulate scaly, the distal third of scutellum glabrous, also the propodeum; spiracle minute, round; petiole shagreened, the abdomen finely scaly except most of the long second segment. Antennæ wholly concolorous, the first funicle joint much the longest of the flagellum, of whose joints all are longer than wide; first and second club joints about equal. Mandibles tridentate.

*Male*:—Not known.

Described from three females captured by sweeping in forest and jungle, August 30, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. *Hy* 1647, Queensland Museum, one of the above specimens on a tag, the head on a slide with the head of *fulvipes*.

**3. AMESTOCHARIS FULVIPES** new species.

*Female*:—Length, 1.00 mm.

Like *goondiensis* but the legs brown, the parapsidal furrows barely indicated caudad by an obtuse depression; second abdominal segment only about half of the abdomen, the latter

pointed conical, not long; second funicle joint slightly shorter than the first which is barely longer than the pedicel, usually subequal to it; club joints more or less subequal to the funicle joints.

Described from one female captured by sweeping miscellaneous vegetation, August 30, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1648, Queensland Museum, the above specimen on a tag, the head on a slide with the head of *concoloripes*.

#### 4. AMESTOCHARIS NYMPHA new species.

*Female*:—Length, 1.20 mm.

Very much like *concoloripes* Girault but nearly black with a purplish tinge and the proximal two thirds or more of scutellum is longitudinally reticulated the polygonal scaliness of the scutum becoming changed into long figures bounded by parallel, raised lines and leaving just before tip a rounded smooth area which is not glabrous. Only the propodeum metallic shining green. Also the three teeth of the mandibles are longer and the second funicle joint barely longer than the third and not tapering at apex so much.

*Male*:—Not known.

Described from one female captured from a window, May, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1649, Queensland Museum, the above specimen on a tag, the head on a slide.

#### PELOROTELOPSELLA new genus.

*Female*:—Like *Pseudacrias* Girault but the propodeal meson bears a median carina bounded on each side by a deep sulcus, the lateral carinae present,\* the propodeum tricarinate. Scutellum wholly sculptured, the parapsidal furrows complete. Second tooth of mandible serrate. Thorax umbilicately punctate, the propodeum polished on each side of meson, the pronotum reticulated, smoother along the median line. Propodeal spiracle minute, round. Antennae the same but the definite number of ring-joints is 2, the antennae 9-jointed.

*Male*:—Unknown.

*Type*: The following species.

#### 1. PELOROTELOPSELLA GENU new species.

*Female*:—Length, 1.75 mm.

Black-blue, opaque, the abdomen and propodeum dark metallic blue-green, the wings hyaline, the legs dark metallic blue, except the contrasting silvery white knees, distal thirds of tibiae and tarsi. Antennae dark metallic blue but the scape white except at distal end, first funicle joint longest, somewhat longer than the pedicel, the distal joint spherical, the distal club joint shorter than the proximal one, its nipple distinct but not long.

Described from one female captured by sweeping jungle growth along a forest streamlet, August 1, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1650, Queensland Museum, the above specimen on a tag, the head on a slide.

\* This is a mistake; sulci take the place of lateral carinae. Hind tibial spur stout.

## PLEUROTROPPOPSIS new genus.

*Female*.—Body stout, agreeing with *Pleurotropis* and the antennæ 10-jointed but with three distinct ring-joints, the club only 2-jointed, the second joint terminating in a prominent setiform process. Eyes very hairy. Propodeum polished, strongly tricarinate. Stigmal vein very short, the postmarginal rather long, about twice the length of the stigmal. Parapsidal furrows represented by a long wedge-shaped sulcus running halfway up from caudal margin then narrowing from apex of the wedge and curving off, ending in the dorso-lateral aspect a little before cephalic margin in a fovea. Another larger and deep fovea at cephalic margin of scutum just meso-cephalad of the fovea and of the furrow. Petiole short; second abdominal segment occupying only a fourth of the surface. Scutellum simple. Mandibles with only two distinct teeth. Submarginal vein hardly broken, shorter than the marginal.

*Male*.—Not known.

*Type*: The following species.

1. *PLEUROTROPPOPSIS MACULATIPENNIS* new species.

*Female*.—Length, 2.10 mm.

Metallic blue-green, the legs concolorous except tips of tibiæ and tarsi which are white; venation sooty, the fore wing with a large dusky rounded blotch under the apex of the marginal and the stigmal veins. Pronotum subfoveate, the mesonotum scaly reticulated and sort of transversely lineolated. First ring-joint and proximal part of scape whitish, rest of antenna concolorous; funicle joints long, one side convex, the first longest, the third shortest, subequal to the rather long pedicel, both club joints shorter than the latter (excluding the terminal seta).

Described from one female captured by sweeping in a jungle pocket, July 24, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1651, Queensland Museum, the above specimen on a tag, the head on a slide with type head of *Achrysocharella aurea* Girault.

## PLEUROTROPOPSEUS new genus.

*Female*.—Like *Apleurotropis* Girault but the propodeum with a median carina instead of a sulcus, the lateral carinæ V-shaped, the arms of the V oblique, pointing more or less cephalo-laterad. Also the median groove of scutum is confined to distal fourth. Parapsidal furrows mere sutures, complete but curved off rather shortly laterad. Mandibles tridentate. Stigmal vein very short but longer than the postmarginal. Wings hyaline.

*Male*.—Unknown.

*Type*: The following species.

1. *PLEUROTROPOPSEUS PURPUREA* new species.

*Female*.—Length, 1.75 mm.

Dark metallic purple, polished, the abdomen at base blue, tarsi yellowish. Antennæ concolorous, the first two funicle joints subequal, as long as the club, the third funicle joint a third shorter, longer than the pedicel. Thorax reticulated.

Described from one female captured by sweeping in the jungle, July 26, 1913.

*Habitat*: Meerawa (Cairns district), Queensland.

*Type*: No. Hy 1652, Queensland Museum, the above specimen on a tag, the head on a slide with the type head of *Opheliminus longfellowi* Girault.

GENUS PSEUDACRIAS Girault.

*Female*:—Characterised by bearing a bi- or tricarinate propodeal meson, the propodeum usually with five distinct carinae, including the two lateral carinae; propodeum polished, its caudal margin also strongly carinate. Scutellum more or less polished. Second abdominal segment much the longest, occupying from a third to over a half of the surface, the petiole short and stout, slightly wider than long. Parapsidal furrows usually complete, very narrow or like sutures and terminating in a shallow depression caudad. Stigmal and postmarginal veins short, the former a little the longer. Mandibles bidentate, the inner tooth usually with several minute sinuses just proximad of apex, mesad. Thorax reticulated, the lines raised, the pronotum polished but longitudinally wrinkled along cephalic margin, transverse. Funicle 3-jointed, the club 2-jointed, the second joint terminating in a prominent seta; three ring-joints. Hind tibial spur stout, half the length of the hind tarsi. Genus recovered from the *Pediobiini* (type re-examined).

*Male*:—Not known.

*Type*: *Pseudacrias micans* Girault.

1. PSEUDACRIAS MICANS Girault. Female. Genotype.

Shining bluish black, the propodeum with a straight median carina on each side of the meson, the middle of the three absent; tarsi white, except distal joint; wings hyaline; first funicle joint slightly the longest, the second club joint short, the first longer, longer than wide, subequal to the first funicle joint. Pronotum and distal half of scutellum shining but the latter with faint polygonal reticulation, the basal half of scutellum longitudinally striate. Parapsidal furrows represented by a fovea caudad and slightly indicated cephalad.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1653, Queensland Museum.

2. PSEUDACRIAS CHALYBS new species.

*Female*:—Length, 1.80 mm.

Metallic cyaneus, the wings hyaline; proximal tarsal joints pallid; proximal club joint much longer than the distal yet not long, the funicle joints not long, the pedicel much smaller than them. Parapsidal furrows complete, the meson of propodeum tricarinate.

Described from a single female captured by sweeping grass along a forest streamlet, August 13, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1654, Queensland Museum, the above specimen on a tag, the head on a slide.

3. PSEUDACRIAS AENEUS new species.

*Female*:—Length, 1.65 mm.

Dark aeneous green, the abdomen darker; the same otherwise as the second species excepting that the second abdominal segment is longer yet not occupying quite half of the

surface (as in the type species), the thorax is reticulated, the lines not raised and forming diamonds, the smooth path down meson of scutellum is rather obscure and the pronotum is finely reticulated. Antennæ with three ring-joints, the distal two short; pedicel longer, not much shorter than the first funicle joint. Inner or second tooth of mandible simple.

*Male*:—Not known.

Described from one female captured by sweeping foliage in a jungle pocket, June 5, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1655, Queensland Museum, the above specimen on a tag, the head on a slide.

#### 4. PSEUDACRIAS QUADRICARINATUS new species.

*Female*:—Length, 1.60 mm.

Differing from the preceding two species in lacking the median of the three carinæ at the meson but a space is left for it; it is slightly indicated in fact, the median carinæ diverging. Brilliant metallic green, the abdomen dark; like *aeneus* but the thorax with scaly network but not raised as in *aeneus* and there is a large distinct glabrous area at base of scutellum; proximal three fourths of second segment of abdomen and propodeum polished (the latter not so distad and laterad), the rest of abdomen densely scaly. Lateral carinæ forked distad. Petiole finely longitudinally lined; basal three fourths of abdominal segment 2 green. Pronotum glabrous. Antennæ concolorous; first funicle joint longest, 3 globular; club 1 much longer than 2. Mandibles 2-dentate, the second tooth as in *aeneus*. Second ring-joint very short.

*Male*:—Not known.

Described from one female captured by miscellaneous sweeping, August 13, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1656, Queensland Museum, the above specimen on a tag, the head on a slide.

#### GENUS METACRIAS Girault.

Differs from *Entedon* Dalman in having the median carina of the propodeum bounded on each side by a deep sulcus whose lateral margins are acute, the propodeal spiracle round and moderately small and the hind tibial spur elongate. The parapsidal furrows are about complete from cephalic margin but difficult to see, being shallow. The genus was first placed with the *Pediobiini*. (Type re-examined.)

#### 1. METACRIAS AUSTRALIENSIS Girault. Female. Genotype.

Dark metallic bluish, the wings hyaline; legs concolorous, the knees, tips of tibiae and tarsi white. Antennæ concolorous, the first funicle joint nearly as long as the club, the distal one subequal to the pedicel. Head and thorax coarsely reticulately punctate.

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1199, Queensland Museum.



**2. METACRIAS SECUNDUS** new species.

*Female*:—Length, 2.00 mm.

Very similar to *australiensis* but the postmarginal vein absent, the thorax more aeneous and more deeply punctate, umbilicately punctate, the scape is metallic only at the middle portions, the ends white and the grooves on each side of the median carina of propodeum are shallower. Mandibles strongly bidentate. Both species have a more or less complete foveate curved sulcus in the stead of a lateral carina. Compared with types of *australiensis*. Ring-joint large. The scutellum in *australiensis* is raised reticulate not punctate, the areas deeper on the scutum.

*Male*:—Not known.

From one female captured in September, 1913 (A. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1657, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

In this species the parapsidal furrows are complete, not very distinct but more so than in the genotype.

## DIAGNOSTIC ARRANGEMENT OF THE ENTEDONINE EULOPHIDÆ.

## FEMALES. AUSTRALIA.

The abdomen is usually distinctly petiolate, the parapsidal furrows variable, complete or incomplete, but always plainly indicated cephalad or caudad; stigmal vein usually sessile or very short, the marginal long. Forms always metallic blue, green or purple or else black, seldom with yellow on the body, the latter short and stout, the mandibles usually bi- or tridentate, the funicle never more than 4-jointed; with a scaly sculpture. Propodeum long and usually with carinæ. Second abdominal segment frequently elongate, the abdomen upturned.

## I. Antennæ without ring-joints; scutellum simple.

Antennæ 7-jointed, the club 2-jointed; scutum with a median sulcus at distal half; postmarginal vein over twice the length of the stigmal, the marginal over twice the length of the submarginal; propodeum tricarinate.

**Apleurotropopseus** Girault (Type: *A. albipes* Girault).

## II. Antennæ with one or more ring-joints; scutellum with or without a groove.

1. Scutellum with a median longitudinal grooved line only. Antennæ 8-jointed, the club 2-jointed, one ring-joint, the funicle 3-jointed.

**Horismenus** Walker (Type: *H. cleodora* Walker).

2. Scutellum simple, without longitudinal grooves.

(1) Antennæ with one ring-joint, the funicle 3-jointed.

Propodeum without true lateral carinæ but with a median carina.

Antennæ 8-jointed, the club 2-jointed, the terminal joint as usual with a stout spine; head very wide, the occiput concave, the propodeal spiracles large, oval, in depressions; scutellum sculptured; median carina of propodeum connected at apex with the carinated caudal margin.

**Entedon** Dalman (Type: *E. cyanellus* Dalman).

The same; propodeal spiracle round, small, the median carina bounded by a deep sulcus on each side. Hind tibial spur elongate. Lateral carinæ represented by sulci.

**Metacrias** Girault (Type: *M. australiensis* Girault).

Propodeum wholly without carinae, finely scaly. Antennae 8-jointed, the club 2-jointed and with the usual terminal spine; postmarginal vein as long as the stigmal.

**Neoderostenus** Girault (Type: *N. australiensis* Girault).

Propodeum plainly tricarinate, with true lateral carinae. Antennae 8-jointed, the club 2-jointed.

**Mestocharis** Foerster (Type: *M. cyclops* Foerster).

- (2) Antennae with one ring-joint, the funicle 2-jointed. Club 3-jointed, the antennae 8-jointed, the funicle joints long; propodeum with a median carina only.

**Chrysoatomoides** Girault (Type: *Chrysoatomus latipennis* Girault).

- (3) Antennae with two ring-joints, the funicle 3-jointed, the ovipositor not exerted. Antennal club 2-jointed.

Propodeum without true lateral carinae. Median carina of propodeum paired; postmarginal vein absent; second abdominal segment occupying a third of the surface; hind tibial spur large, the mandibles bidentate.

**Mestocharoides** Girault (Type: *Mestocharis cyanea* Girault).

Propodeum with true lateral carinae.

Propodeum with a median groove or sulcus with carinated margins.

Scutum with a median groove at distal third; postmarginal and stigmal veins short; second abdominal segment short, shorter than segment 7.

**Apleurotropis** Girault (Type: *A. viridis* Girault).

Propodeum with a median carina.

Scutum simple; median carina of propodeum bounded by sulci along each side; mandibles bidentate; second abdominal segment occupying over a third of the surface; postmarginal and stigmal veins short.

**Pelorotelopsella** Girault (Type: *P. genu* Girault).

Scutum with a median groove at about distal fourth; median carina of propodeum simple, the lateral carinae, however, V-shaped, the arms pointing cephalo-laterad; mandibles tridentate; second abdominal segment only about a sixth of the surface of the abdomen; postmarginal and stigmal veins short.

**Pleurotropopseus** Girault (Type: *P. purpurea* Girault).

- (4) Antennae with two ring-joints, the funicle 2-jointed, the club 3-jointed.

Median carinae of propodeum paired, diverging at apex, there each one connected along caudal margin with the lateral carina which forks at apex; second abdominal segment occupying from a half to three fourths of the surface of the abdomen; mandibles bidentate; postmarginal vein slightly longer than the stigmal, both short.

**Amestocharis** Girault (Type: *A. goondiensis* Girault).\*

\* Scutum with a complete median sulcus; axillae advanced cephalad of scutum; propodeum very short; the abdomen broadly ovate; parapsidal furrows short, distinct; venation and antennae as in *Amestocharis*. **HORISMENOIDES** new genus (type: *H. sulfureiventris* new species). The genotype is metallic purple, the legs and abdomen sulphur yellow, the wings hyaline, the body highly polished; funicle 2 purple. Nelson, N.Q.

(5) *Antennæ* with three ring-joints, the funicle 3-, the club 2-jointed.

Scutum without a median groove.\*

Meson of propodeum bi- or tricarinate, the propodeum usually 5-carinate, its caudal margin carinate and true lateral carinæ present; second abdominal segment occupying a third of the surface; stigmal and postmarginal veins short, the former a little the longer. Hind tibial spur long and stout.

**Pseudacrias** (Girault Type: *P. micans* Girault).

Meson of propodeum with one carina, the propodeum strongly tricarinate; second abdominal segment occupying a fourth of the surface; postmarginal vein about twice the length of the stigmal; eyes very hairy. Ring-joints large, distinct.

**Pleurotropopsis** Girault (Type: *P. maculipennis* Girault).

Scutum with a median groove at distal third or more.

Meson of propodeum bicarinate, the lateral carinæ also present, long and complete; marginal and postmarginal veins elongate.

**Pleurotropomyia** Girault (Type: *P. grotiusi* Girault).*Note:* Compare *Cluthaira* Cameron in the Elachertini.

## TRIBE PEDIOBIINI.

## GENUS EPACRIAS Girault.

Differing from *Paracrias* Ashmead in that the antennæ bear two ring-joints, the club 3-jointed, the funicle 2-jointed. Propodeum tricarinate.

**1. EPACRIAS NIGRIVIRIDIS** Girault. Female. Genotype.

Blackish metallic green, rather coarsely rugulose. Legs and antennæ concolorous, the proximal three tarsal joints whitish. Wings hyaline, the postmarginal vein much shorter than the very short stigmal. First funicle joint longest. Petiole stout, distinctly longer than wide.

*Habitat:* Quingilli, Queensland. Forest.*Type:* No. Hy 1658, Queensland Museum.

## GENUS ERIGLYPTOIDEUS Girault.

Like *Metacrias* Girault but the funicle joints long and slender and the postmarginal and stigmal veins long and subequal. Antennæ 9-jointed with one ring-joint, the club 2-jointed, the funicle 4-jointed. Propodeum without carinæ. Petiole short and stout.

**1. ERIGLYPTOIDEUS VARICORNIS** Girault. Female. Genotype.

Dark metallic green, the scutellum and propodeum aeneous, the face blue, sunken. Legs concolorous, the trochanters, tibiae and tarsi yellowish; scape pallid at each end, the distal club joint yellowish white.

*Habitat:* Murray Bridge, South Australia.*Type:* No. I. 1236, South Australian Museum.

## PEDIOBOMYIA new genus.

*Female:*—Antennæ 7-jointed with one ring-joint, the club solid and ending in a spur. Scutellum simple, scutum without a trace of parapsidal furrows; postmarginal and stigmal

\* ENTEDONELLA n.g. (type: *E. magnifica* Gir. & Dodd n.sp.). Propodeum with a median carina only, the carina bounded by sulci; postmarginal vein very short. The genotype is metallic purple, the scape and legs golden yellow, the body umbilicately punctate. Victoria.

veins very short; second segment of abdomen occupying half of the surface, the eighth a third of its length and next longest, conical, the petiole stout, distinct, broad and wider than long. Propodeum with a pair of median carinæ which gradually diverge distad, the lateral carinæ also present, long and complete, the spiracle minute, round. Petiole with a sulcus on each side of meson. Propodeum with a short neck.

*Male*:—Not known.

*Type*: The following species.

**1. PEDIOBOMYIA DARWINI** new species.

*Female*:—Length, 1.65 mm.

Black with a purplish tinge the wings hyaline; legs reddish brown, the coxæ concolorous with body, also the cephalic femur; scape yellowish brown, rest of antenna concolorous, the first funicle joint subelongate, as long as the club, bevelled off at tip, the other two a little shorter than the pedicel. Thorax with raised polygonal reticulation except the smooth propodeum. Abdomen densely scaly.

From one female captured by sweeping in a jungle pocket, August 31, 1913. Dedicated to Charles Darwin.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1659, Queensland Museum, the above specimen on a tag, the head on a slide.

**PEDIOBOPSIS** new genus.

*Female*:—Like *Eriglyptus* Crawford but the ring-joint is present, the club 3-jointed, the funicle 2-jointed, the form like the Omphalini, the propodeum short, noncarinate. Parapsidal furrows entirely wanting, no trace of them. Abdomen sessile, stout, broad, a little longer than the thorax, the segments not very unequal, rather short. Scutellum simple. Stigmal vein moderate, not short nor sessile, longer than the short postmarginal. Reticulately punctate. Antennæ inserted a little below the middle of the face.

*Male*:—Not known.

*Type*: The following species.

**1. PEDIOBOPSIS SPENCERI** new species.

*Female*:—Length, 1.30 mm.

Dark purplish, opaque, the abdomen shining aeneous purplish, the wings hyaline; legs and scape reddish brown but the coxæ concolorous; rest of antenna subfuscous, both funicle joints subequal, distinctly longer than wide, slightly shorter than the pedicel; club joints longer than wide, the middle one longest, the third conical and terminating in a stout short spine. Scutellum large, with a finer sculpture than the scutum. Tarsi pale.

Described from one female captured by sweeping in jungle, July 26, 1913. Dedicated to Herbert Spencer.

*Habitat*: Meerawa (Cairns), Queensland.

*Type*: No. Hy 1660, Queensland Museum, the above specimen on a tag, an antenna on a slide.

## URACRIAS new genus.

*Female*.—Antennæ 10-jointed with three ring-joints, the club 2-jointed; scutum and scutellum simple; postmarginal vein absent, the stigmal vein very short; propodeum at the meson with a median carina which forks at base and which is bounded on each side by a sulcus whose lateral margin is acute, forming carinæ, the propodeum thus tricarinate at the meson. True lateral carinæ absent but in the vicinity of the spiracle, the propodeum with a long sulcus originating at apical meson, running along the caudal margin of the segment, then across the propodeum to cephalic margin like a lateral carina then curving off laterad. A short, oblique carina at cephalic margin of propodeum a little laterad of the lateral carina at the meson. Propodeum glabrous, the thorax otherwise with coarse polygonal reticulation, the lines raised. Second abdominal segment longest, occupying about a fourth of the surface. Petiole moderate in length. Mandibles strongly bidentate.

*Male*.—Not known.

*Type*: The following species.

## 1. URACRIAS EXCELSUS new species.

*Female*.—Length, 1.20 mm.

Dark blue, the propodeum and abdomen dark metallic green, the wings hyaline, the legs dark blue except the knees, tips of tibiæ and the three proximal tarsal joints. Scape whitish along proximal half, the antennæ otherwise dark blue. Pedicel longer than any of the funicle joints of which 1 is a little the longest, distinctly longer than wide, 3 not much shorter but wider. Club conical, with a terminal nipple, the first joint largest.

Described from one female captured by sweeping in the forest, August 14, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1661, Queensland Museum, the above specimen on a tag, the head and a fore leg on a slide.

## TABLE TO THE PEDIOMIINE GENERA OF EULOPHIDÆ.

## AUSTRALIA. FEMALES.

The mesoscutum is entire, the parapsidal furrows wholly absent or represented by mere traces of depressions caudad, not by elongate sulci nor distinct depressions caudad nor by grooves from either end. The abdomen is sessile or petiolate. The form is like that of the *Entedonini*. Rarely or never marked other than with metallic color.

Scutellum simple.

## I. Antennal club solid.

Antennæ 7-jointed with one ring-joint; postmarginal and stigmal veins very short; second segment of abdomen occupying half of the surface, the petiole wider than long; scutellum simple, the propodeum with a pair of diverging median carinæ and two lateral carinæ.

*Pediobomyia* Girault (Type: *P. darwini* Girault).

## II. Antennal club 2-jointed.

Antennæ 9-jointed with one ring-joint, the funicle 4-jointed; postmarginal and stigmal veins long and slender; propodeum without carinæ; petiole short and stout.

*Eriglyptoideus* Girault (Type: *E. varicornis* Girault).

Antennæ 10-jointed with three ring-joints, the funicle 3-jointed; postmarginal vein absent, the stigmal very short; propodeum with the median carina bounded by sulci whose lateral margins are carinated; a lateral sulcus on propodeum, true lateral carinæ absent.

**Uracrias** Girault (Type: *U. excelsus* Girault).

### III. Antennal club 3-jointed.

Antennæ 8-jointed with one ring-joint; stigmal vein not sessile, longer than the short postmarginal; segments of abdomen rather short, not much unequal, the abdomen sessile; propodeum short, noncarinate.

**Pediobopsis** Girault (Type: *P. spenceri* Girault).

Antennæ 9-jointed with two ring-joints; postmarginal and stigmal veins very short; petiole of abdomen longer than wide; propodeum tricarinate (median and lateral carinæ).

**Epacrias** Girault (Type: *E. nigriviridis* Girault).

## TRIBE OMPHALINI.

### GENUS EUDERUS Haliday.

#### 1. EUDERUS MESTOR Walker.

*Eulophus mestor* Walker, 1839, p. 42.

*Eulophus capio* Walker, 1839, p. 44.

*Euderus mestor* Walker, 1846, p. 67.

*Euderus mestor* Walker, De Dalla Torre, 1898, p. 6.

*Habitat*: King George's Sound.

### GENUS CLOSTROCERUS Westwood.

#### 1. CLOSTROCERUS SAINTPIERREI Girault. Female.

Brilliant metallic blue-green; legs and antennæ black except the dusky pale tibiæ and tarsi. Fore wings bifasciate, the first fascia leaving the apex of the marginal vein, the second around the apex of the wing and rather narrow; first fascia somewhat V-shaped, the apex of the V distad and central. In the middle of the blade a blotch which projects into the angle formed by the two areas of the first fascia.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1662, Queensland Museum.

#### 2. CLOSTROCERUS MIRUS new species.

*Female*:—Length, 1.50 mm.

Agreeing with *saintpierrei* Girault but the tibiæ and tarsi more yellowish, the first band of the fore wing bow-shaped or slightly convex while there is a round spot in the blade a little cephalad of the middle and beneath the middle (or nearly) of the marginal vein; this is isolated. Moreover, the second or apical band disappears at caudal third or more. Antennæ 7-jointed, without a ring-joint. Whole body densely scaly. Abdomen concolorous with the thorax.

*Male*:—Not known.

Described from one female captured by sweeping grass and foliage in a forest (300 feet), January 23, 1913.

*Habitat*: Townsville, Queensland.

*Type*: No. Hy 1663, Queensland Museum, the above specimen on a slide.

### 3. CLOSTEROCERUS ZANGWILLI new species.

*Female*:—The usual length.

Metallic green, the abdomen metallic blue; legs and antennæ concolorous or black excepting tarsi and posterior tibiae which are yellowish white. Characterized by the usual bifasciate fore wings which form an H, the fascia being joined along the midlongitudinal line; the band around the margin is nearly complete, the first stripe accented under the stigmal vein conspicuously, the stripe broad and nearly straight; no blotch in middle of the wing under venation. Antennæ compressed fusiform and usual, 8-jointed, the minute ring-joint being present. Propodeum without a median carina. The wing pattern is more sooty than usual. Mandibles tridentate.

*Male*:—Not known.

Described from one female captured by sweeping grass along a damp stream, July 7, 1913 (A. P. Dodd). Dedicated to Israel Zangwill for his tragedy The War God.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1664, Queensland Museum, the above specimen on a slide (with the type of *C. mirus* Girault).

In *C. mirus*, the minute ring-joint is also present and so with all of the species but as it fits into a cavity at the base of the first funicle joint it usually is not visible.

### DIAGNOSIS OF THE AUSTRALIAN SPECIES OF *CLOSTEROCERUS* WESTWOOD.

#### I. Fore wings with two isolated fasciæ and a blotch.

First band of fore wing >-shaped, a central blotch projecting distad into the space between the two arms of the band.

Brilliant metallic blue-green; legs concolorous except the dusky pale tibiae and tarsi. *saintpierrei* Girault.

First band of fore wing bow-shaped or only slightly convexed, the blotch proximad of it isolated.

Brilliant metallic blue-green, the tibiae and tarsi yellow. *mirus* Girault.

#### II. Fore wings with two fasciæ which are joined along the middle of the blade, forming an H; no blotch.

Metallic green, the abdomen blue; tarsi and hind tibiae yellowish white; proximal fascia of fore wing accented under the stigmal vein, broad, nearly straight.

*zangwilli* Girault.

## GENUS ZAOMMOMYIA Ashmead.\*

## 1. ZAOMMOMYIA OCULATA Girault. Female.

Dark metallic blue-green, the propodeum and part of axillæ reddish yellow, also the abdomen except basal fourth; venter of body yellowish brown, also the legs, which are, however, paler distad of the femora. An obscure stained area under the distal half of marginal vein on the fore wing. Antennæ 8-jointed, the club 3-jointed, the third joint terminating in a long spinelike projection. Second funicle joint longer than the first.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1664, Queensland Museum.

A second female was captured in a jungle pocket July 10, 1913.

## 2. ZAOMMOMYIELLA SAINTPIERREI new species.

*Female*:—Length, 1.35 mm.

Orange yellow, the head deep metallic blue, the base of abdomen rather narrowly, except at meson, metallic purplish, the abdomen more yellowish, less reddish than the thorax. Wings hyaline. Scape yellow, rest of antenna black, the pedicel elongate, about twice the length of the first funicle joint, much longer than the second which is longer than the first yet only about a half longer than wide. Mandibles tridentate. Club acuminate, the terminal seta of the third joint long. Scutum punctate.

*Male*:—Not known.

Described from one female captured by sweeping in a jungle pocket, July 30, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1665, Queensland Museum, the above specimen on a tag, the head on a slide with the type appendages of *Cirrospilomella fasciatus*.

## 3. ZAOMMOMYIELLA ABNORMIS new species.

*Female*:—Length, 1.35 mm. Abdomen slender, conical, longer than the thorax.

Brilliant metallic blue, the slender abdomen coppery, blue at base, the propodeum, all of legs and a short abdominal petiole reddish brown, the tibiæ and tarsi white. Antennæ black. Fore wings with a large brownish blotch appended from the stigmal vein, filling the blade nearly to each margin and much of it under the distal third of marginal vein. Propodeum with some irregular depressions, washed with blue mesad. Thorax polygonally scaly. Parapsidal furrows complete. Mandibles tridentate. Oral area narrowly yellow. Antennæ inserted not far from the clypeus; distal club joint with a long, stout seta, nearly as long as itself, the first joint longest; funicle 1 globular, distinctly shorter than 2 which is distinctly longer than wide, subequal to club joint 1. Postmarginal vein longer than the stigmal.

*Male*:—Not known.

Described from one female captured by sweeping edge of jungle (A. P. Dodd), September 16, 1913.

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1666, Queensland Museum, the above specimen on a tag.

\* ZAOMMOMYIELLA new genus (type: *Zaommomyia oculata* Girault). The funicle is but 2-jointed, in *Zaommomyia* it is 3-jointed.



## SECODES new genus.

1. **SECODES CAPENSIS** Girault. Female. Genotype.

Dark metallic green, the wings hyaline; knees and tibiae whitish; thorax scaly; ovipositor exerted for half the length of the abdomen, the latter brownish, the ovipositor valves black; cephalic and caudal margins of propodeum carinated and meeting at the short meson. Club with a small nipple, the pedicel scaly, longer than the funicle joints; antennae black. Mandibles tridentate.

A second specimen has been seen.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1667, Queensland Museum.

2. **SECODES SUMNERI** Girault. Female.

The same as the preceding but the ovipositor not exerted, the propodeum with a short median carina, the legs and antennae concolorous (excepting two proximal tarsal joints); abdomen long, conic ovate and concolorous.

*Habitat*: Lawson, New South Wales. Forest.

*Type*: No. I. 1235, South Australian Museum, Adelaide.

## GENUS OMPHALOMORPHA Girault.

This genus differs from *Hubbardiella* Ashmead in having the parapsidal furrows complete, the postmarginal vein well developed, longer than the stigmal, the funicle joints wider than long, the antennae 11-jointed with two ring-joints, the club 3-jointed.

1. **OMPHALOMORPHA VIRIDIS** Girault. Female.

Dark metallic green; sides of cephalic tibiae, knees and tarsi pale yellow; wings hyaline, nearly naked; antennae black, pedicel longer than any of the funicle joints, the first of the latter shortest.

*Habitat*: Nelson (Cairns), Queensland. Forest?

*Type*: No. Hy 1668, Queensland Museum.

2. **OMPHALOMORPHA REPERCUSSA** new species.

*Female*:—Length, 1.25 mm.

Dark blue, the tarsi white except distal joint; wings subhyaline; first funicle joint longest, distinctly longer than wide, joint 4 shortest, a little wider than long; club ovate, with a distinct terminal spine; pedicel a little shorter than funicle 1; mandibles tridentate; postmarginal vein a little longer than the stigmal. Hind tibial spur single, not small. Propodeum with a short median carina and no others, the spiracle small, oval. Thorax (except the more finely sculptured propodeum) densely, finely, reticulately, punctate. Antennae blue.

*Male*:—Not known.

Described from two females captured by sweeping in forest, November 6, 1912.

*Habitat*: Ayr, Queensland.

*Type*: No. Hy 1669, Queensland Museum, one of the above specimens on a tag, the head and a hind leg on a slide.

## GENUS RHICNOPELTELLA Girault.

Antennæ capitate, 11-jointed, three ring-, funicle- and club-joints, the club much wider than the funicle, the joints of the latter transverse. Postmarginal vein shorter than the stigmal,\* the marginal not half the length of the submarginal. Parapsidal furrows complete, the scutellum simple. Abdomen rounded oval, depressed, not as long as the thorax but wider. Male about the same.

**1. RHICNOPELTELLA IMMACULATIPENNIS** Girault. Female. Genotype.

Dark metallic aeneous green; club, tarsi, knees, most of cephalic tibiae, tips of other tibiae, brown. Distal club joint shortest of the club, shorter than the distal funicle joint which is somewhat over half the length of the pedicel.

*Habitat*: Brisbane, Queensland. Forest.

*Type*: No. Hy 1202, Queensland Museum.

**2. RHICNOPELTELLA SPLENDORIFERELLA** Girault. Female, male.

Brilliant metallic green; distal half or more of hind tibiae white; fore wing with a stained rounded area under the apex of stigmal vein and beneath most of the marginal. The male is more brassy, the vertex metallic rosaceous.

*Habitat*: Brisbane, Queensland. Forest.

*Types*: No. Hy 1203, Queensland Museum.

**3. RHICNOPELTELLA VIRIDIS** Girault. Female, male.

Brilliant metallic green tinged with bluish, the legs except coxae, deep lemon yellow; wings hyaline; a peltate yellowish spot in centre of abdomen at base. Male about the same.

*Habitat*: Brisbane, Queensland. Forest.

*Type*: No. Hy 1670, Queensland Museum.

**4. RHICNOPELTELLA CONSOBRINUS** Girault. Female.

Like *immaculatipennis* but smaller and the thorax bright metallic green; distal funicle joint only about a fourth the length of the pedicel.

*Habitat*: Nelson, Queensland. Forest.

*Type*: No. Hy 1671, Queensland Museum.

**5. RHICNOPELTELLA RETICULATA** Girault. Female, male.

Like *immaculatipennis* but the two distal funicle joints of the antennæ are large and subquadrate, each as long as the pedicel, the last funicle joint more than twice the size of the last club joint. Outer half of cephalic tibia yellowish. Male the same but the antennæ with four ring-joints, the two funicle joints transverse.

*Habitat*: Murray Bridge, South Australia.

*Type*: No. I. 1237, South Australian Museum, Adelaide.

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\* Sometimes as long as or a little longer than the stigmal.

**6. RHICNOPELTELLA FILIA** Girault. Female.

Closest to *splendoriferella* but dark blue-green, the wings hyaline, the antennæ concolorous. Distal funicle joint not more than half the length of the pedicel.

*Habitat*: New South Wales (Mt. Kosciusko).

*Type*: No. I. 1341, South Australian Museum, Adelaide.

**7. RHICNOPELTELLA PURPUREA** new species.

*Female*:—Length, 1.10 mm.

Metallic purple but otherwise like the other species; knees, cephalic tibiae and all tarsi pale yellowish; antennæ wholly black except the club, the three ring- and funicle joints which are greyish; distal two funicle joints alike, the first joint of the funicle much like the ring-joints; distal funicle joint distinctly shorter than the distal club joint. Pedicel as long as the funicle, the scape black. Distal funicle joint not more than a fifth the length of the large pedicel. Mandibles bidentate.

*Male*:—Not known.

Described from one female captured by sweeping in the forest along the banks of Cape River, December 27, 1912.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1672, Queensland Museum, the above specimen on a tag, the head on a slide.

**8. RHICNOPELTELLA FLAVIPES** new species.

*Female*:—Length, 1.70 mm.

Characterised by being dark aeneous green, the abdomen dark, the legs (except coxæ) lemon yellow; scape all concolorous; tegula lemon yellow; three ring-joints but the first funicle joint ring-like but wider than the ring-joints, the pedicel rather distinctly longer than the distal funicle joint which is plainly wider than long. Mandibles bidentate.

*Male*:—Not known.

Described from one female captured by sweeping in forest, August 30, 1913.

*Habitat*: Nelson, Queensland.

*Type*: No. Hy 1673, Queensland Museum, the above specimen on a tag, the head on a slide with the type of *Elachertetrastichus aeneipes* Girault.

DIAGNOSIS OF THE AUSTRALIAN SPECIES OF *RHICNOPELTELLA* GIRAULT.

## 1. Brilliant metallic green.

Legs all deep yellow except the concolorous coxæ; wings hyaline; a peltate yellowish spot in centre of abdomen at base. *viridis* Girault.

Legs concolorous except distal half or more of hind tibia and the tarsi which are whitish; fore wings with a slightly infuscated area under the apex of stigmal and much of the marginal vein. *splendoriferella* Girault.

2. Dark metallic aeneous green, the legs mostly concolorous, the thorax sometimes bright green.  
 Legs concolorous or mostly so.  
 Distal joint of funicle plainly shorter than the pedicel.  
 Distal funicle joint somewhat over half the length of the pedicel; large.  
*immaculatipennis* Girault.  
 Distal funicle joint only about a fourth the length of the pedicel; thorax bright green; small.  
*consobrinus* Girault.  
 Distal joint of funicle as long as the pedicel and more than twice the size of the third club joint. Outer half of cephalic tibiae yellowish.  
*reticulata* Girault.  
 Legs lemon yellow except coxae.  
*flavipes* Girault.
3. Dark metallic purple or blue.  
 Dark blue-green, the wings hyaline, the antennae concolorous; cephalic tibiae, the knees and the tarsi pallid dusky; distal funicle joint not more than half the length of the pedicel.  
*filia* Girault.  
 Metallic purple; knees, cephalic tibiae and all tarsi pale yellow; club greyish; distal funicle joint distinctly shorter than the distal club joint and not more than a fifth the length of the large pedicel.  
*purpurea* Girault.

GENUS ACHRYSOCHARIS Girault.

Differs from *Closterocerus* Westwood in having filiform antennae; funicle 2-jointed, club 3-jointed; wings usually hyaline. Brilliant metallic green and yellow.

1. ACHRYSOCHARIS MAGNIFICA Girault. Female. Genotype.

See table.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1674, Queensland Museum.

2. ACHRYSOCHARIS PULCHRA Girault. Female.

See table.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1675, Queensland Museum.

3. ACHRYSOCHARIS GRANDIS Girault. Female.

See table.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1676, Queensland Museum.

4. ACHRYSOCHARIS MACULATIPENNIS Girault. Female.

See table.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1677, Queensland Museum.

5. ACHRYSOCHARIS BIFASCIATUS Girault. Female.

See table.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1678, Queensland Museum.

**6. ACHRYSOCHARIS LEIBNITZI** Girault. Female.

See table.

*Habitat*: Mount Tambourine, Queensland. Jungle.

*Type*: No. I. 1342, South Australian Museum, Adelaide.

**7. ACHRYSOCHARIS TRIFASCIATUS** new species.

*Female*:—Length, 1.30 mm.

Like *bifasciatus* Girault but differing in that of the thorax only the whole of scutum is faintly washed with metallic green and there are three distinct black stripes across the abdomen at about the middle portion and two rather large dusky spots at sides of base (dorsad); also median line of scutellum from base is slightly metallic and each axilla at cephalic end and the mesal margin of each parapside; propodeum with a number of dark areas; the blotch on the fore wing is more distinct but from the distal part of the marginal vein in both species and a cross-stripe. The abdominal stripes are farther apart and characteristic. The same otherwise.

*Male*:—Not known.

Described from one female captured by sweeping grass along a forest streamlet, August 7, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1679, Queensland Museum, the above specimen on a slide.

**8. ACHRYSOCHARIS CLARISCUTELLUM** new species.

*Female*:—Length, 1.15 mm.

Like *maculatipennis* but the scutellum very highly polished yet still finely scaly (through a lens appearing smooth and brilliantly polished; mesad it is nearly without fine sculpture); and the antennæ are black, the first funicle joint not small and globular but plainly longer than wide while the three club joints are all shortened; pedicel longest of the flagellum, the distal funicle joint next longest. Proximal half of scape white. Like *leibnitzii* except that the scutellum is polished and the mandibles with only two distinct, acute, equal teeth, the third subobsolete, very much shorter than the others and barely indicated; also the club joints are shortened.

*Male*:—Not known.

Described from one female captured by sweeping forest growths along the summit of the second coast range of mountains (1,500 feet), May 21, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1680, Queensland Museum, the above specimen on a slide.

**9. ACHRYSOCHARIS BREVICORNIS** new species.

*Female*:—Length, 1.15 mm.

Like *maculatipennis* except that the wings are hyaline, the hind femur distinctly concolorous, the hind knees, all of other legs except coxæ, white; antennæ black except proximal half or less of scape, the pedicel no longer than the funicle joints which are short, the first subquadrate, the second globular and a little shorter. Scutellum with the usual sculpture. Mandibles as in *clariscutellum*.

*Male*:—Not known.

Described from one female captured by sweeping in forest, August 21, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1681, Queensland Museum, the above specimen on a slide.

#### 10. *ACHRYSOCHARIS FOERSTERI* new species.

*Female*:—Length, 1.00 mm.

Similar to *brevicornis* Girault but smaller, the antennæ more slender, the second funicle joint distinctly longer than the first, distinctly longer than wide, a little longer than each of the three club joints, the first funicle joint barely longer than wide, subequal to the pedicel (in *brevicornis* the club joints are a little wider than long, the third a little longer than wide, conical); also differing from *brevicornis* in that the hind wings are much slenderer and acutely pointed, the longest posterior marginal cilia as long as the greatest width of the blade (less than third in *brevicornis*). Mandibles tridentate. Wings hyaline. Hind tibiae more or less dusky below knees.

*Male*:—Not known.

Described from two females captured April 26, 1913 among undergrowth and June 29, 1913 by sweeping herbage respectively (H. Hacker). Dedicated to Arnold Foerster.

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1682, Queensland Museum, one of the above specimens on a slide to itself.

#### 11. *ACHRYSOCHARIS NIGRIPES* new species.

*Male*:—Length, 1.20 mm.

Like *brevicornis* but the legs all concolorous except knees, tips of tibiae and tarsi; also the posterior marginal cilia of hind wings are longer, the hind wings somewhat narrower but obtuse at apex, both funicle joints plainly longer than wide, the first longer, the first two club joints more or less quadrate. Mandibles and scape not seen. Wings hyaline.

*Female*:—Not known.

Described from a male reared in connection with a coccid, June 6, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1683, Queensland Museum, the above specimen on a slide.

#### DIAGNOSIS OF THE SPECIES OF *ACHRYSOCHARIS* GIRAULT.

##### AUSTRALIA.

##### I. Body (excluding appendages) wholly metallic green.

Fore wings hyaline, the legs usually white except hind legs.

First funicle joint subquadrate the second globular and a little shorter.

*brevicornis* Girault.

Second funicle joint distinctly longer than wide, longer than the first.

*foersteri* Girault.

The same as *brevicornis* but all legs concolorous except knees, tips of tibiae and tarsi; both funicle joints plainly longer than wide.

*nigripes* Girault.

Fore wings with a substigmatal blotch.

Legs white, excepting coxæ; fore wings with a half complete fascia from the stigmal knob; antennæ black. *leibnitzii* Girault.

Legs white excepting coxæ but the hind femur more or less dusky; fore wings with a subelliptical stained area about the stigmal knob; antennæ dusky yellowish. *maculatipennis* Girault.

The same but scutellum with a highly polished appearance; antennæ black; club joints shortened. *clariscutellum* Girault.

II. Body (excluding appendages) mostly yellow, marked with deep metallic green.

Thorax wholly metallic green.

Abdomen pale cadmium yellow, at extreme tip more or less metallic greenish and also across base; a round greenish spot at each side of abdomen, somewhat distad of the middle; wings hyaline; lower face yellow. *grandis* Girault.

Thorax not wholly metallic green but with much yellow.

Fore wings hyaline.

Pale cadmium yellow; head except lower face, pronotum, mesonotum except latero-caudal halves of each parapside, base and tip of abdomen, propodeum except laterad, a spot on each side of abdomen about the middle, cephalic half of axilla and a narrow line down proximal two thirds of scutellum, metallic green. *magnifica* Girault.

The same but the metallic green line down the scutellum much broader and ovate in shape. *pulchra* Girault.

Fore wings with an obscure but broad clouded stripe across from the stigmal vein.

Golden yellow; pronotum, cephalic half of scutum and apex of each parapside, metallic green; two stripes across abdomen about middle, propodeum, spot in centre of scutellum, one across apex of axilla and another on axilla caudad of middle, dusky or dusky black. *bifasciatus* Girault.

The same; whole of scutum faintly metallic green; three stripes across abdomen about middle. *trifasciatus* Girault.

#### GENUS GYROLASELLA Girault.\*

Differs from *Closterocerus* Westwood in bearing two ring-joints and two grooved lines on the scutellum, the pedicel not compressed, the flagellum stout but not greatly flattened.

##### 1. GYROLASELLA FASCIATUS Girault. Female. Genotype.

Honey yellow; the abdomen with about eight cross-stripes of metallic green and black, the seventh consisting only of two spots, one on each side of the meson; scutum metallic green except lateral margins and most of scutellum within the grooves, the parapsides mesad and apex of axillæ; also distal apex of propodeum; ocelli in green spots. Wings hyaline, the legs dusky yellowish.

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1684, Queensland Museum.

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\* This genus belongs to the Elachertini, allied with *Atoposoma* Masi.

**2. GYROLASELLA CONSOBRINUS** Girault. Female.

The same but pale greenish yellow, the abdominal stripes denser and confluent at meson, laterad turning cephalad like a foot.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1685, Queensland Museum.

**3. GYROLASELLA SPECIOSISSIMA** Girault. Female.

Like *consobrinus* but the postscutellum has a line of green down all of the meson, the fore wings bear a fuscous spot from the stigmal knob; the footlike cephalic projections laterad of the abdominal stripes are thicker, line 7 is complete and there is a dumbbell-shaped area at the meson distad of stripe 6.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1686, Queensland Museum.

**4. GYROLASELLA SPECIOSA** Girault. Female.

Lemon yellow; inner margin of parapside, median line of scutellum to distal fifth, the same of scutum nearly centrally, the cephalic end with a line across it, a stripe across cephalic propodeum, cephalic margin of scutum narrowly, two short transverse lines in centre of abdomen and opposite to them on each side, three spots in a line longitudinally, metallic green. Wings hyaline.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1687, Queensland Museum.

**5. GYROLASELLA LINEATA** Girault. Female.

See table.

*Habitat*: Mount Tambourine, Queensland.

*Type*: No. I. 1238, South Australian Museum, Adelaide.

DIAGNOSIS OF THE SPECIES OF *GYROLASELLA* GIRAULT.\*

AUSTRALIA.

Fore wings hyaline.

Abdomen with more than three cross-stripes.

Scutum with much more than the median line metallic green.

Honey yellow; abdomen with about eight cross-stripes, the seventh consisting of two spots on each side of the meson, the stripes isolated from each other and straight. Scutellum metallic green between the grooves.

*fasciatus* Girault.

Pale greenish yellow and the same but the cross-stripes of abdomen confluent at meson, laterad turning cephalad like a foot.

*consobrinus* Girault.

Scutum with only part of median line green.

Honey yellow, the abdomen with many cross-stripes which are narrowly confluent at meson; median line of scutum caudad, the same of scutellum to distal fifth and a short transverse dash on each side of meson just cephalad of median green line of scutum, green.

*lineata* Girault.

\* For other species, see pp. 262-264.



Abdomen with not more than three cross-stripes; scutum with median line metallic green at middle, the rest yellow.

Lemon yellow; inner margin of parapside, median line of scutellum to distal fifth, the same of scutum nearly centrally, the cephalic end with a line across it and two short transverse lines in centre of abdomen and opposite them, on each side, three spots in a line longitudinally, metallic green. *speciosa* Girault.

Fore wings with a substigmatal spot.

Like *consobrinus* but the postscutellum is green down all of the median line and the footlike lateral projections of the abdominal stripes are thicker, stripe 7 is complete and there is a dumbbell-shaped area at the meson distad of stripe 6.

*speciosissima* Girault.

#### GENUS ACHRYSOCHAROIDES Girault.

Similar to *Gyrolasella* Girault but the postmarginal vein longer than the stigmal, the scutellum with a rather conspicuous fovea on each side of the median line, the funicle 3-jointed, the club 2-jointed.

#### 1. ACHRYSOCHAROIDES SARCOPHAGUS Girault. Female. Genotype.

*Chrysocharis sarcophagus* Girault.

Bright metallic green, tinged with coppery and purple, the wings hyaline; legs white except coxæ; antennæ black, the scape dusky; funicle joints cylindrical ovate, longer than the pedicel, the first somewhat the longest.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1688, Queensland Museum.

#### BRACHYCHRYSOCHARELLA new genus.

*Female*:—Head rounded, the mandibles bidentate, the antennæ inserted somewhat below the middle of the face, short and strongly clavate somewhat as in *Rhynopeltella* but the pedicel very much longer than the funicle and there are only nine joints, two ring-joints, two funicle joints, and a 3-jointed club, the latter much swollen and ovate. Club not terminating in a seta. Otherwise as in *Rhynopeltella* except that the marginal fringes of the fore wing are a little longer than usual. Hind tibiæ with one spur.

*Male*:—Not known.

*Type*: The following species.

#### 1. BRACHYCHRYSOCHARELLA DUBIA new species.\*

*Female*:—Length, 1 mm.

Dark metallic aeneous green, the wings hyaline; coxæ and the hind femur concolorous, each of the legs pallid; antennæ pallid dusky. Thorax finely scaly.

Described from two females captured from the foliage of *Eucalyptus* in forest, November 9, 1911.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1689, Queensland Museum, the above specimens on a slide.

The stout abdomen hides the ovipositor so that I am not sure they are females; there are two funicle joints.

\* For other species, see p. 170.

GENUS ACHRYSOCHARELLOIDEA Girault.

Differing from *Gyrolasella* Girault in that the club of the antennæ is 4-jointed, the last joint minute, itself terminating in a seta; also the postmarginal vein is longer than the stigmal. Antennæ 10-jointed, the funicle cylindrical.

1. ACHRYSOCHARELLOIDEA PAX Girault. Female. Genotype.

Metallic green and punctate, the wings hyaline; excepting coxæ and base of femora, the legs pale yellow; excepting the pale yellow base of scape, the antennæ black. Club joints a little wider than long, the two funicle joints longest of the flagellum.

*Habitat*: Sydney, New South Wales.

*Type*: No. I. 1349, South Australian Museum, Adelaide.

GENUS CHRYSOCHARELLA Girault.

Differs from *Achrysocharoides* Girault in having the scutellum simple, the funicle 1-jointed, the club 4-jointed; the stigmal vein is sometimes slightly enlarged, the postmarginal more or less equal to it. Mandibles bidentate. Club somewhat compressed, the scape longer than the flagellum which is short and clavate. Pedicel not compressed. (Type re-examined.)

1. CHRYSOCHARELLA PULCHRA Girault. Female. Genotype.

Metallic aeneous green and scaly, the propodeum smooth but not glabrous; a small obscure stained area in the fore wing from the stigmal knob; legs (except articulations and tarsi) and the antennæ black. Club joints moniliform, the funicle joints barely longer than wide.

*Habitat*: Hughenden, Queensland. Forest-downs.

*Type*: No. Hy 1690, Queensland Museum.

2. CHRYSOCHARELLA AENEA new species.

*Female*:—Length, 1.05 mm.

Dark aeneous green, the wings hyaline; thorax very finely, densely scaly, somewhat opaque. Coxæ concolorous, also the femora, the knees, distal parts of tibiae and the tarsi whitish. Antennæ sooty black, the proximal two thirds of the scape white.

Described from one female captured by sweeping the forest-downs, July 14, 1913.

*Habitat*: Hughenden, Queensland.

*Type*: No. Hy 1691, Queensland Museum, the above specimen on a slide.

3. CHRYSOCHARELLA CONSOBRINUS new species.

*Female*:—Length, 1.30 mm.

Very similar to *aenea* but more robust, the postmarginal vein as long as the stigmal, the first two pairs of legs more yellowish, the scape has the distal half blackish, the pedicel is longer, the antennal joints stouter.

*Male*:—Not known.

Described from four females reared from a lot of miscellaneous galls on the foliage of *Eucalyptus*, forest, September 18, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1692, Queensland Museum, two of the foregoing females on a slide.

**4. CHRYSOCHARELLA FASCIATIPENNIS** new species.

*Female*:—Length, 1.05 mm.

Dark metallic green, the abdomen dark blue, the coxæ concolorous with thorax, the legs silvery white, except hind femora and tibiae between the ends, distal tarsal joint at extreme tip, other tibiae below knee and front femora along upper edge. Antennæ black, the pedicel about twice the length of the funicle joint. Mandibles bidentate. Postmarginal vein not quite as long as the stigmal, the fore wing with a rather broad sooty black stripe across it from the distal part of marginal vein (originating against the whole stigmal, the stripe fading somewhat caudad). Parapsidal furrows indicated only cephalad. Spiracle with a boomerang-shaped sulcus over it.

*Male*:—Not known.

Described from one female captured by sweeping in forest, August 5, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1693, Queensland Museum, the above specimen on a slide.

## GENUS BRACHYCHRYSOCHARELLA Girault.

*Female*:—Like *Rhynopeltella* Girault but there are only four small (ring?) joints between the funicle and the club, the antennæ short, strongly clavate and 9-jointed. Two ring-, two funicle joints, the latter barely longer than the ring-joints.

*Male*:—Not known.

*Type*: As indicated on p. 163.

**2. BRACHYCHRYSOCHARELLA HELENA** new species.

*Female*:—Length, 1.45 mm.

Brilliant metallic green and scaly, the wings hyaline, the antennæ and legs intense lemon yellow.

Described from one female found among herbage, May 10, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1694, Queensland Museum, the above specimen on a slide.

**3. BRACHYCHRYSOCHARELLA GLOBA** new species.

*Female*:—Length, 0.75 mm. Small and stout, the abdomen globular.

Dark aeneous green, the wings hyaline, the legs concolorous excepting bases and tips of first two pairs of femora, the knees and proximal four tarsal joints and all tibiae. Pedicel concolorous, the rest of antenna white washed with dusky (the second ring- and two funicle joints dark like the pedicel). Mandibles bidentate. Distal funicle joint twice the size of the first but much shorter than the pedicel. Thorax densely scaly.

*Male*:—Not known.

Described from one female captured by sweeping in forest, August 27, 1913.

*Habitat*: Nelson, Queensland.

*Type*: No. Hy 1695, Queensland Museum, the above specimen on a tag, the head on a slide.

## PSEUDOCRYSOCHARIS new genus.

*Female*:—Like *Chrysocharis* Foerster but the club 3-jointed, the third joint terminating in a seta, the antennæ 9-jointed with one ring-joint; postmarginal vein a little longer than the stigmal; scutellum simple; club narrower than the funicle; parapsidal furrows obscure. Propodeum very short at meson. Mandibles tridentate, the inner tooth small.

*Male*:—Unknown.

*Type*: The following species.

## 1. PSEUDOCRYSOCHARIS SPECIOSUS new species.

*Female*:—Length, 1.00 mm.

Like *Achrysocharis magnifica* Girault but the antennæ and legs white; funicle joints stout, only a little longer than wide, oval. Club joints cylindrical, not long, yet distinctly longer than wide.

Described from one female captured February 18, 1913, by sweeping forest along a public road.

*Habitat*: Ripple Creek (Ingham), Queensland.

*Type*: No. Hy 1696, Queensland Museum, the above specimen on a tag, the head on a slide.

## ACHRYSOCHARELLA new genus.

*Female*:—Like *Achrysocharoides* but the club 3-jointed, the postmarginal vein not as long as the stigmal, the scutellum simple. The two funicle joints longer than wide, cylindrical, the pedicel still longer. Funicle 2-jointed.

*Male*:—Not known.

## 1. ACHRYSOCHARELLA DUBIA new species. Genotype.

*Female*:—Length, 1.15 mm.

Like *Achrysocharis leibnitzii* but the antennæ pale like the legs and with two minute ring-joints; also the single fascia on the fore wing is complete but accented markedly from the stigmal vein; distal club joint dusky.

*Male*:—Not known.

Described from one female captured by sweeping forest, Mount Pyramid (1,500-2,500 feet), June 3, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1697, Queensland Museum, the above specimen on a slide.

## 2. ACHRYSOCHARELLA AUREA new species.

*Female*:—Length, 1.15 mm.

Orange yellow, the scutum washed with metallic purple; a rather large, oval metallic purplish spot filling the axilla centrally from end to end; a fuscous stripe across abdomen distad of middle; tip of abdomen above dark. Scutum scaly. Several obscure fuscous markings

along the propodeum. Legs pale, the antennæ white suffused with dusky. Fore wings with a stain in the blade. Distal club joint black; funicle joints not very much longer than wide. Mandibles tridentate.

*Male*:—Not known.

Described from one female captured by sweeping in a jungle pocket, July 24, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1698, Queensland Museum, the head on a slide (the body was accidentally lost).

### 3. *ACHRYSOCHARELLA SEMIFLAVIFRONS* new species.

*Female*:—Length, 1.10 mm.

Head and thorax bright aeneous green and reticulated, the abdomen, face below antennæ, tegula and its vicinity, golden yellow, the abdomen metallic greenish at distal third, crossed by a dusky stripe just proximad of the green and a second dusky stripe indicated just proximad of the other by a transverse dash from the edge on each side. Wings subhyaline, the postmarginal vein subequal to the stigmal. Parapsidal furrows complete, the propodeum with a short median carina (apparently two or a pair or else a broad, flat one). Legs yellow, the coxæ dark at base. Antennæ black, scape and pedicel white, black above, the pedicel a little shorter than either funicle joint. Mandibles distinctly tridentate.

From one specimen captured by sweeping in forest, April 16, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1699, Queensland Museum, the above specimen on a slide.

### 4. *ACHRYSOCHARELLA AENEA* new species.

*Female*:—Length, 1.25 mm.

Running to *Nesomyia* Ashmead in the *Pediobiini* but the antennæ with two ring-joints, the club 3-jointed, the third joint terminating in a conical or spine-like projection; funicle 2-jointed, both joints somewhat longer than wide and only slightly shorter than the pedicel; club tapering. Propodeum smooth, faintly reticulated, non-carinate but with a boomerang-shaped sulcus over (cephalad of) and partly around the small spiracle. Abdomen sessile, ovate. Scutellum simple. Stigmal vein short, the postmarginal barely developed. Hind tibia with one spur. Fore wings with short marginal cilia. Cheeks rather short, the head usual. Parapsidal furrows obscure but at least half complete, not deep. Dark metallic purple, the abdomen at base blue-green, the wings hyaline; tibiæ yellow-brown, the tarsi pale; antennæ dusky, the scape yellowish brown. Thorax densely, reticulate-punctate, the propodeum much smoother.

*Male*:—Not known.

Described from one female captured by sweeping in a jungle pocket, July 21, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1700, Queensland Museum, the above specimen on a tag, the head and a hind tibia on a slide.

**5. ACHRYSOCHARELLA OLYMPUS** new species.

*Female*.—Length, 1.25 mm.

Brilliant metallic aeneous green, the wings hyaline, the legs white except the concolorous coxæ; antennæ black, the scape yellowish white at proximal two-thirds, the two funicle joints rather long, the second the shorter, only slightly longer than the moderately long pedicel, the second ring-joint large. First club joint a little shorter than the pedicel. Mandibles tridentate. Thorax densely scaly. Parapsidal furrows complete, prominent, curved, obtuse and broad.

*Male*.—Not known.

Described from one female captured by sweeping in forest and slightly in jungle, June 27, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1701, Queensland Museum, the above specimen on a tag, the head on a slide.

**6. ACHRYSOCHARELLA ALBIPES** new species.

*Female*.—Length, 0.75 mm.

Like *olympus* Girault but both funicle joints equal and subquadrate, the pedicel barely longer than them. Mandibles bidentate. Dark aeneous green. Club joints not longer than wide (so in *olympus*).

*Male*.—Not known.

Described from one female captured by sweeping along edges of jungle, January 5, 1913 (A. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1702, Queensland Museum, the above specimen on a tag, the head on a slide.

THE AUSTRALIAN SPECIES OF *ACHRYSOCHARELLA* GIRAULT.

Fore wings hyaline.

Body, excluding appendages, wholly metallic.

Dark metallic purple, the tibiae yellowish brown.

*aenea* Girault.

Aeneous green, the legs white except coxæ.

Mandibles tridentate; funicle joints rather long; brilliant green.

*olympus* Girault.

Mandibles bidentate; funicle joints subquadrate; dark green.

*albipes* Girault.

Body with the lower face, abdomen and tegula golden yellow.

Aeneous green, the abdomen so at distal third; legs yellow, the coxæ dark at base above.

*semiflavifrons* Girault.

Fore wings with a blotch or substigmatal fascia.

Orange yellow, the scutum washed with metallic purple; legs pale; a fuscous stripe across abdomen distad of middle; fore wings with a stain in the blade.

*aurea* Girault.

Dark aeneous green, the antennæ and legs pale; a complete fascia on fore wing from the stigmatal vein.

*ducta* Girault.

## OMPHALOMOMYIA new genus.

*Female*.—Characterized by the 9-jointed antennæ which bear three distinct ring-joints, the club solid. Propodeum with a median carina, the scutellum simple, the parapsidal furrows complete. Hind tibial spurs single. Marginal vein a little longer than the submarginal, the latter only slightly or incompletely broken, the postmarginal absent. Mandibles tridentate. Pedicel elongate, the club with a short nipple. Thorax shagreened. Wings hyaline. More or less anomalous and with elachertine affinities. Abdomen sessile.

*Male*.—Not known.

*Type*: The following species.

## 1. OMPHALOMOMYIA LIVIDICAPUT new species.

*Female*.—Length, 1.47 mm.

Deep orange yellow the head deep blue, the parapsides washed with the same color, the abdomen (dorsad) margined all round with blackish except across base; legs concolorous with thorax. Scape white, the remainder of antennæ dusky, the pedicel suffused with yellowish, the distal or third funicle joint less than half the length of the pedicel, globular, the club more or less equal to the pedicel, the first funicle joint longest, distinctly longer than wide.

Described from one female captured from a window, January, 1912 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1703, Queensland Museum, the above specimen on a tag, the head and a hind leg on a slide.

## RHICNOPELTOMYIA new genus.

*Female*.—Antennæ 10-jointed with three ring-joints, the funicle 2-jointed both joints somewhat longer than wide, the club only slightly wider and with a terminal spine. Scutellum simple. Parapsidal furrows complete. Postmarginal vein subequal to the stigmal. Scutellum very long, cordate.

*Male*.—Not known.

*Type*: The following species.

## 1. RHICNOPELTOMYIA WASHINGTONI new species. Genotype.

*Female*.—Length, 1.00 mm.

Metallic green, the wings hyaline, the scape and legs white, the coxæ concolorous; flagellum black, the funicle joints slightly longer than wide, the second slightly the longest, subequal to the short pedicel. Scape dusky at tip. Thorax finely reticulately scaly, the scutellum, however, opaque, the reticulation absent or nearly, the surface glazed or frosted. Abdomen dark.

Described from one female captured by sweeping in forest along the banks of Cape River, December 24, 1912.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1704, Queensland Museum, the above specimen on a tag, the head on a slide (fragments of other antennæ present).

The species is dedicated to Booker T. Washington.

**2. RHICNOPELTOMYIA DOUGLASSI** new species.

*Female*:—Length, 1.15 mm. Slender.

The same but scutellum finely scaly, more convex, both funicle joints distinctly longer than wide, also the pedicel, the club joints somewhat shorter; scape dusky above at and near tip. Abdomen suffused with brownish. Mandibles 3-dentate, the inner tooth short, abruptly truncate. Propodeum with a lateral sulcus.

*Male*:—Unknown.

Described from one female captured by sweeping in forest, July, 7, 1912.

*Habitat*: Aloomba (Cairns), Queensland.

*Type*: No. Hy 1705, Queensland Museum, the above specimen on a tag, the head on a slide. Dedicated to Frederick Douglass.

**GYROLASOMYIA** new genus.

*Female*:—Like *Rhcnopeltella* Girault but the scutellum with two narrow long grooves near the meson, one on each side, the antennæ 9-jointed, with two ring-joints, the club enlarged, 2-jointed. Propodeum tricarinate. Postmarginal vein shorter than the short stigmal. Marginal fringes short. Grooves of scutellum slightly converging toward apex. Propodeum minutely, densely punctate, short at the meson, the lateral carinæ twice the length of the median, straight, the median forking at apex, the spiracle narrow-reniform, just mesad of the lateral carinæ which run caudo-laterad and are rather distant from the lateral margin. Second abdominal segment occupying about a fourth of the surface, the sessile abdomen conic-ovate. Mandibles tridentate, the third tooth shorter, broader and emarginate at middle of apex nearly forming two teeth. Scutellum long, overhanging the meson of the propodeum. Funicle joints large, wider than long.

*Male*:—Not known.

A genus easily recognized by the tricarinate propodeum, the two grooves on the scutellum which converge and which are near the meson and the 3-jointed funicle, the 2-jointed club.

*Type*: The following species.

**1. GYROLASOMYIA WASHINGTONI** new species.

*Female*:—Length, 1.10 mm.

Grass green, aeneous and metallic, the legs including cephalic coxæ, the antennæ and venation lemon yellow; wings hyaline; thorax densely, finely punctate. Pedicel stout, much longer than any of the funicle joints of which the third is much the longest, 1 and 2 subequal, twice wider than long. Proximal club joint longer of the two, the distal one acutely pointed. Antennæ short and capitate. Scape white.

*Male*:—Not known.

Described from one female captured by sweeping in the forest adjoining the banks of Cape River, January 8, 1913. Dedicated to the great negro, Booker T. Washington.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1706, Queensland Museum, the above specimen on a tag, the head on a slide.



**EUDEROMYIA** new genus.

*Female*:—Antennæ 7-jointed, without ring-joints, the club slender, 3-jointed; scutellum with a punctate groove down each side of the meson, somewhat over midway between it and the lateral margins; abdomen slender. Parapsidal furrows complete. Postmarginal vein barely developed. Mandibles tridentate. Club terminating in a nipple. Submarginal vein broken, much shorter than the marginal.

*Male*:—Not known.

*Type*: The following species.

**1. EUDEROMYIA CARLYLEI** new species.

*Female*:—Length, 0.80 mm.

Dark metallic green, the abdomen purple, the wings subhyaline, the tibiæ and tarsi yellowish. Marginal fringes a little longer than usual, the fore wings with a regular, complete line of discal cilia from apex of stigmal vein to apex of wing. Antennæ black, the scape white except at tip, the pedicel shorter than either of the funicle joints which are distinctly longer than wide, the club joints nearly as long. Fore wings with about a dozen lines of discal ciliation across the widest portion. Abdomen longer than thorax, the latter finely scaly.

Described from one female captured by sweeping in forest, October 9, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1707, Queensland Museum, the above specimen on a slide.

The species is dedicated to Thomas Carlyle.

**CLOSTROCEROIDES** new genus.

*Female*:—Like *Closterocerus* Westwood but the postmarginal and stigmal veins long, the former the longer, the antennæ 9-jointed with two short ring-joints, the funicle 4-jointed, the club solid, long, the flagellum fusiform. Propodeum with an abbreviated median carina at base. Mandibles bidentate.

*Male*:—Not known.

*Type*: The following species.

**1. CLOSTROCEROIDES TRIFASCIATIPENNIS** new species.

*Female*:—Length, 1.26 mm.

Deep metallic green and sculptured like species of *Closterocerus*; legs and antennæ black but the tibiæ whitish before tip, the tarsi white except distal joint. Propodeum smooth or nearly. Mesothorax with two parallel dark stripes down middle to about centre of scutellum; also two parallel dark stripes across vertex (caudad) from each lateral ocellus. Fore wings with three jet black stripes across them, the first one (proximad) narrowest, from the break of the submarginal vein, the second closer to the first than to the third and from near the base of the marginal vein; the third longest and somewhat wider than the second, from under the whole of the postmarginal vein. The blade otherwise slightly, uniformly stained. Face below antennæ yellow. Fourth funicle joint longest, a little wider than long; club as long as the two preceding funicle joints, spined at apex.

Described from one female captured by sweeping in the forest, February, 1913.

*Habitat*: Australia—Seymour (Ingham), North Queensland.

*Type*: No. Hy 1708, Queensland Museum, the above female on a slide.

TABLE TO THE OMPHALINE GENERA OF EULOPHIDÆ.

AUSTRALIA. FEMALES.

The parapsidal furrows are complete or incomplete, always distinctly indicated (but sometimes only by long sulci or by depressions caudad) the mesonotum at least trilobed; the abdomen is sessile, rarely with a short petiole. Species usually metallic green, the propodeum short and without carinae, the thorax usually with a scaly sculpture. Mandibles bi- or tridentate. Scutellum usually without grooves, at the most with two, the scutum without a median grooved line. Tarsi 4-jointed. Stigmal vein usually of moderate length, not sessile, the marginal vein usually of moderate length.

I. Antennæ without ring-joints, 7-jointed.

Scutellum with two punctate grooves; parapsidal furrows complete; marginal vein much longer than the submarginal; club 3-jointed, slender. Postmarginal vein barely developed. **Euderomyia** Girault (Type: *E. carlylei* Girault).

II. Antennæ with but one ring-joint.

Antennæ with the funicle 4-jointed, the club 3-jointed.

Antennæ 10-jointed; wings hyaline, almost glabrous, much of the short discal ciliation arranged in lines; postmarginal vein well developed; abdomen long, conical, longer than the rest of the body, the propodeum short, noncarinate or with only a trace of a median carina, punctate or at least sculptured.

**Secodes** Girault (Type: *S. capensis* Girault).

The same but the propodeum smooth, impunctate, the discal ciliation of the fore wing dense, normal; malar space distinct.

**Euderus** Haliday (Type: *Entedon amplius* Walker).

Antennæ with the funicle 2-jointed, the club 3-jointed; antennæ 8-jointed.

Eyes occupying the whole side of the head, extending to the mouth.

Postmarginal vein long, the stigmal usually with a fascia from the knob. Antennæ cylindrical.

**Zaommomyiella** Girault (Type: *Zaommomyia oculata* Girault).

Antennæ with the funicle 2-jointed, the club 3-jointed; the antennæ 8-jointed.

Scape dilated at apex, the pedicel flat, the flagellum fusiform, flattened, the joints compact, wider than long, the third club joint terminating in a long spur. Fore wings with fasciæ. Ring-joint hidden. Postmarginal vein not well developed usually shorter than the stigmal. Mandibles tridentate. Eyes normal.

**Closterocerus** Westwood (Type: *C. trifasciatus* Westwood).

Scape not dilated at apex, the pedicel normal, the flagellum cylindrical, the third club joint terminating in a long spur; postmarginal vein slightly shorter than the stigmal. Wings usually hyaline.

**Achrysocharis** Girault (Type: *A. magnifica* Girault).

Antennæ with the funicle and club each 3-jointed. Scutum and scutellum simple.

Postmarginal vein a little longer than the stigmal; club narrower than the funicle.

**Pseudochrysocharis** Girault (Type: *P. speciosus* Girault).

Postmarginal vein absent. **Parachrysocharis** Girault\* (Type: *P. javensis* Girault).

\* Java.

## II. Antennæ with two ring-joints.

Antennæ greatly flattened or depressed, the pedicel compressed. As in *Closterocerus* but the funicle is 4-jointed, the club solid and terminating in a long spur; stigmal and postmarginal veins long; otherwise as in *Closterocerus* but the mandibles tridentate.

**Closteroceroides** Girault (Type: *C. trifasciata* Girault).

Antennæ very short and strongly capitate, the funicle joints transverse, barely longer than the ring-joints.

Scutellum simple.

Antennæ 9-jointed; as in *Rhynopeltella*.

**Brachychrysocharella** Girault (Type: *B. dubia* Girault).

Scutellum with two narrow grooved lines near the meson, one on each side.

Antennæ 9-jointed, the club enlarged, 2-jointed.

**Gyrolasomyia** Girault (Type: *G. washingtoni* Girault).

Antennæ normal, rarely compressed, the pedicel always normal.

Scutellum with two grooved lines which are near the lateral margins.

Antennæ 9-jointed, the club 3-jointed, the appendage stout and short, the joints thick; postmarginal vein absent.

**Gyrolasella** Girault (Type: *G. fasciatus* Girault).

Antennæ 10-jointed, the club 4-jointed, the fourth joint minute and terminating in a seta; postmarginal vein longer than the slender stigmal.

**Achrysocharelloidea** Girault (Type: *A. pax* Girault).

Scutellum at the most with a fovea on each side, usually simple.

Antennæ with the funicle 1-jointed, the club 4-jointed. Flagellum somewhat compressed, short; funicle joint much shorter than the pedicel. Mandibles bidentate.

**Chrysocharella** Girault (Type: *C. pulchra* Girault).

Antennæ with the funicle 2-jointed, the club 3-jointed. Postmarginal vein shorter than the stigmal. Flagellum filiform. Club tapering.

**Achrysocharella** Girault (Type: *A. dubia* Girault).

Antennæ with the funicle 3-jointed, the club 2-jointed. Scutellum with a fovea on each side; postmarginal vein longer than the stigmal.

**Achrysocharoides** Girault (Type: *Chrysocharis sarcophagus* Girault).

Antennæ with the funicle 4-jointed, the club 3-jointed; fore wings with the discal ciliation arranged in more or less regular lines; postmarginal vein longer than the stigmal.\*

Abdomen short, ovate.

Propodeum with or without a median carina; parapsidal furrows complete. Fore wings nearly naked.

**Omphalomorpha** Girault (Type: *O. viridis* Girault).

## III. Antennæ with three ring-joints; parapsidal furrows complete.

Antennal club solid, cylindrical, the antennæ normal, the pedicel elongate, some of the funicle joints longer than wide.

\* The same but wings normally ciliate, the postmarginal vein twice longer than the stigmal, longer than marginal, the stigmal long; ring-joints large, distinct. OMPHALOMORPHELLA Girault & Dodd (type: *O. auripes* new species). The genotype is bright aeneous green, the wings lightly stained, the legs golden yellow except coxæ; pedicel elongate. Hind femur compressed. Body densely shagreened, the thorax with some scattered punctures. Melbourne, Victoria.

Propodeum with a median carina; postmarginal vein absent.

**Omphalomomyia** Girault (Type: *O. lividicaput* Girault).

Antennal club 3-jointed, enlarged, the antennæ capitate, the funicle joints wider than long.

Propodeum without a median carina, the postmarginal vein shorter than the stigmal.

**Rhcnopeltella** Girault (Type: *R. immaculatipennis* Girault).

Antennal club 3-jointed, not much enlarged, the two funicle joints somewhat longer than wide.

The same. Abdomen conic-ovate.

**Rhcnopeltomyia** Girault (Type: *R. washingtoni* Girault).

#### TRIBE TETRACAMPINI.

I have not met with any genera of this tribe in Australia except the following which doubtfully belongs here. The tribe is peculiar and must resemble the Pteromalidæ in many respects. Of the tribes of Entedoninæ, this group seems closest to the Entedonini because of the minute stigmal vein and the very long marginal but the elongate body and 6-jointed funicle seem quite characteristic.

#### DIPARELLOMYIA new genus.

*Female*.—Like *Panstenon* Walker of the Pteromalidæ but the antennæ only 10-jointed with one transverse ring-joint, the club solid. Marginal vein somewhat longer than the submarginal, the postmarginal long, the stigmal short but not sessile, about a third the length of the postmarginal which is about a third the length of the marginal. Mandibles bidentate. Petiole subequal to the hind coxæ. Scutellum with a cross-suture. Propodeum pubescent from pin-punctures, with a long median carina which is delicate and paired. Segments 2 and 3 of abdomen subequal, combined occupying half of the surface, the incision between these deep across the meson. Hind tibial spurs double, stout and long, unequal, inserted *before* the tip as in the torymid genus *Perrisocentrus* Crawford nearly but the spurs nearer the tip and not so long. Scutellum without grooves. Pronotum distinctly separated. Postmarginal vein not broken. Axillæ separated. Hind coxa twice the size of the others.

*Male*.—Not known.

This genus, were it not for the double spurs of the caudal tibia I would place within the Diparinæ of the Pteromalidæ since the abdomen is petiolate and the marginal and postmarginal veins very long. The axillæ are not advanced and the genus resembles *Euplectrus*, yet the tarsi are 5-jointed and the tibial spurs not greatly enlarged. It will not go into any of the subfamilies of the Miscogasteridæ.

*Type*: The following species.

#### 1. DIPARELLOMYIA HAECKELI new species.

*Female*.—Length, 1.65 mm.

Metallic green, the pronotum, parapsides, distal third of abdomen, scutum and axillæ purple. Wings hyaline. Legs yellowish brown, the hind coxæ concolorous with the thorax. Mesopleurum polished, the sutures distinct. Petiole coloured like the legs. Scape cylindrical, the club with a short nipple, the first funicle joint over twice longer than wide, longest, 2.4 subequal, a third shorter, 6 distinctly longer than wide, somewhat longer than the pedicel. Thorax finely shagreened. Scape yellowish except at tip; rest of antenna black.

*Male*.—Not known.

Described from one female captured by sweeping in the forest, August 3, 1913.  
Dedicated to Ernst Haeckel.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1709, Queensland Museum. The above specimen on a tag, the head, fore wing and hind legs on a slide.

SUBFAMILY APHELININÆ.\*

TRIBE APHELININI.

GENUS APHELINUS Dalman.

Fore wings with an oblique hairless line from the stigmal vein; antennæ of both sexes 6-jointed, two small funicle joints, the club 2-jointed, the distal joint longest. Ovipositor not much exerted.

Synonym: *Paraphelinus* Perkins.

The forms named *Paraphelinus* Perkins intergrade with the forms of *Aphelinus* Dalman, as the Australian species show, so that obviously there are not two genera represented by them. *Paraphelinus* must therefore fall as a true synonym of *Aphelinus*.

1. APHELINUS DIES Girault. Female.

Black, the antennæ and legs lemon yellow, the hind coxa black; wings hyaline; abdomen lemon yellow and with obscure dusky cross-stripes; discal cilia proximad of hairless line arranged in two long lines with a third short line (2-3 cilia) and six or seven times coarser than the main ciliation.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1710, Queensland Museum.

2. APHELINUS NOX new species.

*Female*:—Length, 1.20 mm.

Like *dies* but the distal two thirds of abdomen concolorous with rest of body, the proximal third lemon yellow; discal cilia proximad of hairless line arranged in two long lines and two or three short ones (type re-examined).

Captured by sweeping, November, 4, 1911.

*Habitat*: Kuranda, Queensland. Jungle.

*Type*: No. Hy 1711, Queensland Museum, the above specimen on a slide.

3. APHELINUS AUSTRALIENSIS (Girault). Female.

*Paraphelinus australiensis* Girault.

Deep orange yellow, immaculate; funicle 2 distinctly more than half the length of the proximal club joint. Discal ciliation very fine and short, the six lines proximad of the hairless line about twice coarser than the main ciliation. Proximal club joint about a third of the length of the distal joint.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1712, Queensland Museum.

\* Elsewhere I give reasons for considering this group the same as the Taneostigmini of the Encyrtidae. The group must form a subfamily of the Encyrtidae.

**4. APHELINUS PAX** new species.

*Male*:—Length, 0.70 mm.

Like *nox* Girault but the fore wings slightly dusky from base out to the end of the venation; also the hind wings are narrower, bearing only about seven lines of discal cilia (about twelve in *nox*).

*Female*:—Not known.

Described from one male captured by sweeping jungle growths along a streamlet in a forest, June 17, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1713, Queensland Museum, the above specimen on a slide with the type *Prospaltella antiopa* Girault.

**5. APHELINUS NIGER** new species.

*Female*:—Length, 1.00 mm.

Like *Aphelinus mali* (Hald.) but proximad of the oblique hairless line of the fore wing there is but one line of discal cilia bounding the oblique line and complete; no cilia under the marginal vein except a row just under it for its entire length and a short line of about four cilia originating at the origin of the line of cilia bounding the hairless line and running more proximad, forming a sort of V-shaped ciliated line. First two funicle joints combined as long as the first club joint. Abdomen brown, lighter across base. Thorax with a dense scaly sculpture.

*Male*:—Not known.

Described from eight females captured by sweeping herbage, June 29, 1913 (H. Hacker); also on another slide several males and females. The males do not differ.

*Habitat*: Brisbane, Queensland.

*Types*: No. Hy 1714, Queensland Museum, the above slide with eight females.

**6. APHELINUS HAECKELI** new species.

*Female*:—Length, 1.05 mm.

Golden yellow, immaculate and like *australiensis* but the fore wings are broader, the body more robust and the club joints much longer, the first club joint over twice the length of the distal funicle joint.

*Male*:—Not known.

Described from one female captured from a window, February 17, 1913. Dedicated to Ernst Haeckel.

*Habitat*: Ingham, Queensland.

*Type*: No. Hy 1715, Queensland Museum, the above specimen on a slide.

**7. APHELINUS GROTIUSI** new species.

*Female*:—Length, 0.75 mm.

Almost exactly like *australiensis* but the second funicle joint is wider than long, subequal to the first, distinctly less than half the length of the first club joint which is somewhat longer than wide. Also the general colour is lemon yellow.

*Male*:—Not known.

Described from one female captured from a window in a building on a sugar-cane farm, December 18, 1911. Dedicated to Hugo Grotius.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1716, Queensland Museum, the above specimen on a slide with a female of *newtoni* and a *Pterygogramma*.

#### 8. APHELINUS DARWINI new species.

*Female*:—Length, 1.00 mm.

Like *grotiusi* but the funicle joints subquadrate, subequal, the fore wings much broader; no distinct median groove down thorax.

*Male*:—Not known.

Described from one female captured by sweeping in forest, August 28, 1913. Dedicated to Charles Darwin.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1717, Queensland Museum, the above specimen on a slide (with several *Signiphoras*).

#### 9. APHELINUS FUSCIPENNIS Howard.

Five females reared from a *Chionaspis* on cockatoo apple with *minutissimus*, forest, Nelson (Cairns), Queensland, December 18, 1911. Is this a native species? Compared with North American specimens; the Australian species could not be distinguished from them.

#### 10. APHELINUS MINUTISSIMUS new species.

*Female*:—Length, 0.35 mm. Minute.

Pale lemon yellow, the wings hyaline, the legs and antennæ concolorous; about four lines of cilia proximad of and bordering the hairless line, these cilia hardly coarser than the main ciliation; wings narrow, shaped like those of a narrow winged species of *Gonatocerus* (about a dozen lines of discal cilia across widest part of blade); funicle joints transverse, the first club joint over twice the length of either, slightly longer than wide and about half the length of distal joint. Scutum probably with a median groove.

*Male*:—Not known.

Described from a single female reared from a *Chionaspis* on foliage of cockatoo apple, forest, December 18, 1911.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1718, Queensland Museum, the above specimen on a slide.

#### 11. APHELINUS NEWTONI new species.

*Female*:—Length, 0.45 mm.

The same as the preceding but somewhat larger and the fore wings are different. Thus, the fore wings are broader, more rounded (at widest portion with about sixteen lines of fine

discal ciliation) and there are 3-4 lines of cilia proximad of the hairless line, these being distinctly (about thrice) coarser than the main ciliation. Hind femur somewhat swollen. Thorax apparently with a complete median groove to end of phragma (specimen not seen out of balsam). Rich golden yellow. Antennæ about the same as with the preceding species.

*Male*:—Not known.

Described from one female captured from a window, March 13, 1912.

*Habitat*: Thursday Island, Torres Strait and Nelson, Queensland.

*Type*: No. Hy 1719, Queensland Museum, the above specimen on a slide with a female of *Alaptus newtoni* Girault.

Later, a female was found on a slide labelled "From windows of men's quarters on a sugar farm, Nelson, Qsld., December 18, 1911."

TABLE TO THE AUSTRALIAN SPECIES OF *APHELINUS* Dalman.

(Compiled from the types.)

Black species, the antennæ and legs yellow.

Abdomen all yellow except for a more or less obscure stripe across middle; cilia proximad of hairless line arranged in two long lines and a third short one. Robust.

*dies* Girault.

Abdomen with the proximal third lemon yellow; cilia proximad of hairless line arranged in two long lines and two short ones. Hind wings with about 12 lines of discal cilia.

*nox* Girault.

The same but the fore wings infuscated slightly along proximal half to end of venation, the proximal patch of ciliation consisting of one long line and three short ones. Hind wings with about 7 lines of discal cilia.

*pax* Girault.

Black and like *mali* but cilia proximad of hairless line consisting of but one long line, which is complete and four cilia representing its second line but nearly parallel with the marginal vein.

*niger* Girault.

Yellow species, the wings hyaline.

Extremely minute.

Pale lemon yellow; pedicel as long as the funicle and first club joint combined; fore wings with about 12 lines of discal cilia at the widest part. Funicle joints rings; proximal ciliation hardly coarser than the main ciliation.

*minutissimus* Girault.

The same but somewhat larger, the fore wings broader bearing about 16 lines of discal cilia at widest portion and the proximal cilia distinctly (about thrice) coarser than the main ciliation.

*newtoni* Girault.

Of normal size or robust; immaculate.

Second funicle joint distinctly larger than the first.

First club joint twice the length of funicle 2.

*haeckeli* Girault.

First club joint plainly not twice the length of funicle 2.

*australiensis* Girault.

Second funicle joint barely longer than the first, subequal to it.

Fore wings broad, bearing about 45 lines of very fine ciliation (widest portion).

Funicle joints a little longer than wide; club 1 nearly half the length of 2.

*darwini* Girault.



Fore wings of moderate width, bearing about 25 lines of very fine ciliation (widest portion).

Funicle joints quadrate or a little wider than long; club 1 plainly not half the length of club 2. *grotiusi* Girault.

Yellow species, the wings infuscated.

Dull honey yellow with obscure transverse stripes across abdomen; both funicle joints transverse and equal; an indefinite fuscous patch below the stigmal vein; cilia proximad of hairless line arranged in about 10 lines. *fuscipennis* Howard.

#### GENUS PERISSOPTERUS Howard.

Fore wings with an oblique hairless line from stigmal vein; antennæ 6-jointed with two small funicle joints; ovipositor plainly exerted; fore wings with an irregular pattern of spots or lines; postscutellum acutely triangular.

A species of this genus was reared in large numbers at Nelson (Cairns), Queensland, in December, 1911, from a *Chionaspis* on the foliage of a native forest tree, but the material unfortunately was badly preserved, and I could not make out with certainty its complicated wing pattern. It is probably a native species and unknown to science.

Later better specimens were found and I am now able to describe the species. The specimens were of the same lot.

#### 1. PERISSOPTERUS INEXPLICABILIS new species.

*Female*:—Length, 0.60 mm.

Brown with a (or several) row of round dots down each margin of abdomen; legs white, conspicuously spotted and banded with black; fore wings with a reticulate pattern of fuscous as in *mexicanus* Howard and *pulchellus* Howard, but there is a less number of inclosed hyaline areas and the arrangement is different; proximad of hairless line, a small patch of coarser discal cilia against origin of stigmal vein and the larger patch incloses a conic-ovate hyaline space; midway between the apex of venation and apex of wing a little cephalad of centre there are two large rounded inclosed clear spaces, their bounding fuscous ciliation forming a complete figure 8; the whole apical margin of the wing is clear, none of the fuscous bands reaching it; femora with four unequal dusky spots, the tibiæ with two (the hind tibiæ with three) encircling bands, the distal two on hind tibiæ adjacent, apparently confluent in one aspect. Proximal and distal tarsal joints in all legs dusky black. Scape white at tip and beneath; third funicle joint white toward tip, narrowing there; antennæ black.

*Male*:—Not known.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1720, Queensland Museum, two females on a slide with the types of *Casca nigra*.

#### 2. PERISSOPTERUS CAPILLATUS Howard.

Howard, 1907, p. 87.

The principal characteristics of this species are taken from its original description: Head uniformly orange yellow; mesonotum lemon yellow; metanotum darker; abdomen marked with alternating transverse bands of light yellow and honey yellow; antennæ light yellowish; legs pallid, femora dusky at tip; middle and hind tibiæ dusky at tips, and with two other

dusky spots or bands; first and fifth tarsal joints dusky. The wings are spotted with patches of dark cilia, not connected in a reticulate pattern as with *pulchellus* and *mexicanus*. Vertex reticulated; thorax smooth.

*Habitat*: Sydney, New South Wales.

*Type*: Cat. No. 10,313, United States National Museum, Washington, D.C., U.S.A.

*Host*: *Lepidosaphes pallens* Maskell on *Xanthorrhœa*.

#### GENUS COCCOPHAGUS Westwood.

Fore wings without an oblique hairless line from stigmal vein; antennæ filiform, 8-jointed, the scape not especially short, the club 3-jointed; stigmal vein present, the marginal cilia of fore wing not long, the marginal vein as long or longer than the submarginal. Hind tibiae normal.

##### 1. COCCOPHAGUS FUNERALIS new species.

*Female*:—Length, 1.05 mm.

Wholly black suffused with brownish, the wings hyaline; legs and antennæ lemon yellow, the posterior coxæ and femora black; funicle joints distinctly longer than the pedicel, the first longest, nearly twice longer than wide, the third distinctly longer than any of the club joints. Thorax finely scaly, without noticeable punctures. Fore wings broad, very finely, densely ciliate. Thorax pubescent.

*Male*:—Not known.

Described from one female reared from coccids, June 28, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1721, Queensland Museum. The above specimen on a slide with an encyrtid and an eulophid.

#### GENUS PHYSCUS Howard.

Fore wings without an oblique hairless line; antennæ 7-jointed, the club 2-jointed, the first funicle joint usually shorter than second or third. Ovipositor scarcely extruded.

##### 1. PHYSCUS NIGRICEPS new species.

*Female*:—Length, 1.00 mm.

Bright golden yellow, the head, the first funicle joint and the club, base of abdomen and of thorax all around and a cross-stripe across abdomen distad of the middle, black. Distal two funicle joints white, all three joints subequal, the distal club joint the longest joint of the flagellum, the proximal club joint a little shorter than the funicle joints. Wings subhyaline, densely ciliate, the marginal cilia short. Hind coxæ dusky, the legs otherwise golden yellow. Hind wings with about seven lines of discal cilia, their caudal marginal cilia thrice or more the length of the longest marginal cilia of the fore wing. Mandibles bidentate, the inner tooth broadly truncate.

*Male*:—Unknown.

Described from one female captured by sweeping foliage in jungle, June 7, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns) and Kuranda, Queensland.

*Type:* No. Hy 1722, Queensland Museum. The above specimen on a slide.

A second specimen of this species was captured in jungle some days later and a third in jungle at Kuranda in September.

## 2. *PHYSCUS FUSCIVENTRIS* new species.

*Female:*—Length, 1.00 mm.

Bright golden yellow, the abdomen, parapsides and axillæ, a large area on each side of meson of distal third or more of scutellum, sides of mesothorax centrally and pronotum narrowly, brownish black; legs pale yellow, the hind femur subfuscous above at base. Antennæ brown, the second funicle joint distinctly shorter than any of the club joints; wings hyaline. Immediate tip of abdomen pale.

*Male:*—Not known.

Described from one female captured by sweeping in forest, January 1, 1912 (A. P. Dodd).

*Habitat:* Nelson (Cairns), Queensland.

*Type:* No. Hy 1723, Queensland Museum. The above specimen on a slide with miscellaneous trichogrammatids and a *Signiphora*.

## GENUS *ENCARSIA* Foerster.

Fore wings without an oblique hairless line from stigmal vein; antennæ 8-jointed, the club 2-jointed. Hind tibiæ without stiff black bristles.

## 1. *ENCARSIA CYBELE* new species.

*Female:*—Length, 1.10 mm.

Black, the abdomen lemon yellow, orange toward tip; across the base and down each side nearly to tip (dorsad), margined with dusky black; wings subhyaline, the legs and antennæ pale lemon yellow; all tarsi plainly 5-jointed; first funicle joint longer than the pedicel, the two club joints subequal. Mandibles minutely tridentate. Funicle cylindrical, the four joints all about equal. Fore wings uniformly ciliated discally to the break in the submarginal vein, the marginal fringes short. *A short postmarginal vein plainly present.* Proximal tarsal joints elongate.

*Male:*—Not known.

Described from one female captured by sweeping the jungle growth along the margins of a forest streamlet, June 17, 1913 (A. P. Dodd).

*Habitat:* Nelson (Cairns), Queensland. Jungle.

*Type:* No. Hy 1724, Queensland Museum. The above specimen mounted on a slide with the type head of *Philotrypesis longiventris* Girault.

On August 7, 1913, a second female was obtained by sweeping grass along a forest streamlet (doubtless edged with jungle growth).

## 2. *ENCARSIA AURITHORAX* new species.

*Female:*—Length, 0.90 mm.

Deep black, the thorax except the axillæ golden reddish, the scutum suffused more or less with dusky; antennæ and legs dusky yellowish, the wings hyaline and characterised by

being very finely densely ciliate over the blade, the marginal cilia moderately short. Joints 3 and 4 of funicle longest, 1 shortest yet distinctly longer than the pedicel. Fore wings slightly stained under the proximal half of marginal vein.

*Male*:—Not known.

Described from two females on a slide in the Queensland Museum labelled "Among undergrowth, June 26, 1913. H. Hacker."

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1725, Queensland Museum. The above specimens.

### 3. *ENCARSIA JUSTICIA* new species.

*Female*:—Length, 0.70 mm.

Deep orange yellow, the head pale greenish yellow, the antennæ and legs pale yellow, the legs the paler; all tarsi 5-jointed. Wings hyaline. Distal club joint dusky. Thorax with a median groove running to end of phragma and crossed by a transverse groove not far from cephalic margin of scutum. First funicle joint about subequal to the pedicel, the flagellum cylindrical, the second funicle somewhat longer than joint 1, the fourth longest yet somewhat shorter than the first club joint which is the longest joint of the flagellum. Longitudinal striation of antennæ apparently absent.

*Male*:—Not known.

Described from one female captured by sweeping in the forest, July 9, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1726, Queensland Museum. The above specimen on a slide.

### GENUS *ASPIDIOTIPHAGUS* Howard.

Fore wings with a long marginal fringe, without an oblique hairless line from the stigmal vein; antennæ 9-jointed, the club 3-jointed, *one ring-joint*. Stigmal vein present. The antennæ in this genus bear a very short ring-joint.

#### 1. *ASPIDIOTIPHAGUS CITRINUS* (Craw).

I have specimens of this species from Babinda and Nelson, North Queensland, associated with Coccidæ on imported citrus fruits near cultivated areas and settlements.

#### 2. *ASPIDIOTIPHAGUS AUSTRALIENSIS* Girault. Female.

Dusky black; a crescentic band around base of scutum, tip of abdomen, the scutellum and the head lemon yellow; legs pallid, the antennæ dusky yellow; face below antennæ dusky black. Wings infuscated as in *citrinus*. Antennal segmentation as in *citrinus* (antennæ 9-jointed with one ring-joint).

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1727, Queensland Museum.

### GENUS *PROSPALTELLA* Ashmead.

Fore wings with comparatively short marginal fringes, the oblique hairless line from stigmal vein absent, the submarginal vein longer than the marginal; antennæ 8-jointed with the club 3-jointed.

**1. PROSPALTELLA ANTIOPA** new species.

*Female*:—Length, 0.55 mm.

Agreeing with the original description of *quercicola* Howard but the legs all pallid, the parapsides piceus except near caudal margin, also the scutum, the antennæ orange yellow and filiform and there is no indication of a postmarginal vein. The blade of the hind wings distad of the venation is naked excepting around each margin where a single row of discal cilia delimits the naked area; under the venation, several additional lines of cilia are present. The band across the fore wing is under the marginal vein but distad extends beyond the apex of the stigmal vein, proximad to the bend of the submarginal; it is not pronounced but dusky, its margins not well defined.

*Male*:—Not known.

Described from one female captured by sweeping jungle (500 feet), October 28, 1912.

*Habitat*: Babinda, Queensland.

*Type*: No. Hy 1728, Queensland Museum, the above specimen on a slide with the type of *Aphelinus pax* Girault.

**2. PROSPALTELLA SEMINIGRICLAVUS** new species.

*Female*:—Length, 1.00 mm.

Bright lemon yellow, the sides of the thorax and the abdomen black, the legs (pallid) and antennæ (orange) yellow, the third or distal club joint black. Fore wings hyaline but crossed by a broad, conspicuous black band (under all of the marginal vein); centre of oeciput black. Distal club joint shorter than the other two, the club rather short, the third funicle joint of the three slightly longest, over twice longer than wide, the first shortest but longer than the pedicel. Hind femur black (and probably all of the coxæ).

*Male*:—Not known.

This magnificent species was described from a single female captured by sweeping in jungle, June 14, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1729, Queensland Museum, the above specimen on a slide.

**3. PROSPALTELLA ALBISCUTELLUM** new species.

*Female*:—Length, 0.80 mm.

Sooty black, the scutellum contrasting, silvery white, the antennæ white, the fore wings distinctly infuscated out as far as the end of the marginal vein; legs whitish. Funicle joints subequal, a half longer than wide or nearly, each longer than the short pedicel, more or less like the three club joints. Proximal tarsal joint much the longest. Ovipositor valves exerted distinctly but shortly.

*Male*:—Not known.

Described from one female from the collections of the Queensland Museum on a slide labelled "Sweeping undergrowth, mostly eucalypts, June 16, 1913. H. Hacker."

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1730, Queensland Museum, the above specimen.

**4. PROSPALTELLA NIGRIVENTRIS** new species.

*Female*:—Length, 0.65 mm.

Bright lemon yellow, the legs and antennæ concolorous, the pronotum and abdomen sooty black; fore wings infuscated under all of marginal vein across to caudal margin, their longest marginal cilia over a fourth the greatest wing width; first funicle joint very short but longer than wide, about half the length of the second, the third longest, somewhat shorter than any one of the next three joints which are subequal and longest of the flagellum (joints 1-3 of club, the latter not differentiated, the flagellum filiform). Pedicel short.

*Male*:—Not known.

Described from one female on a slide from the collections of the Queensland Museum labelled "Among undergrowth, June 26, 1913. H. Hacker."

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1731, Queensland Museum, the above specimen (mounted with the type of *P. aureola*).

**5. PROSPALTELLA AUREOLA** new species.

*Female*:—Length, 0.73 mm.

Deep orange yellow, the abdomen suffused with dusky, the wings hyaline; antennæ subclavate, the first funicle joint subglobose, the second and third longer than wide but short, like the club joints, yet over twice the length of the first; distal club joint a little the longest. Wings with the discal ciliation unbroken. First funicle joint a little longer than the second.

*Male*:—The same but the antennæ filiform, the face pallid ventrad.

Described from a single pair on a slide with the preceding species.

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1732, Queensland Museum, the above pair (mounted with the female type of *nigriventris*).

**6. PROSPALTELLA AURANTII** (Howard).

Adelaide, South Australia.

GENUS ABLERUS Howard.

Synonym: *Azotus* Howard.

Fore wings without an oblique hairless line from stigmal vein, their marginal cilia moderately long to short, the wings usually infuscated; ovipositor plainly extruded. Antennæ 8-jointed, the club solid, joint 3 of funicle more or less quadrate; one ring-joint. Metallic, the antennæ varicolored. When the ovipositor is mentioned, the exerted portion is meant.

**1. ABLERUS MARCHALI** (Howard).

*Azotus marchali* Howard, 1898, pp. 138, 139.

This species is unknown to me.

*Habitat*: Sydney, New South Wales. Paris, France.

*Type*: Probably in the United States National Museum, Washington, D.C., U.S.A.

*Host*: Parasitic upon *Aspidiotus hederæ* Vallot in Australia.

**2. ABLERUS SPECIOSUS** Girault. Female.

Like the North American *clisiocampæ* (Ashmead) but the pedicel is white, the club all black, the fore wings subhyaline, crossed by a subrescenscent stripe of black from the apex of the marginal vein; legs white excepting a black band across femora and tibiæ just above and below knees.

*Habitat*: Nelson (Cairns) and Mackay, Queensland.

*Type*: No. Hy 1733, Queensland Museum.

*Host*: Parasitic upon native coccids.

One female captured at Mackay, October 21, 1911, by sweeping lantana and other bushes in a field.

**3. ABLERUS SEMIFUSCIPENNIS** (Girault). Female.

*Azotus semifuscipennis* Girault.

Dark metallic blue, the legs concolorous except knees, tips of tibiæ, tarsi (first four joints), most of pedicel and scape and joints 2 and 4 of the funicle which are white. Fore wings deeply infuscated from base to apex of stigmal vein, the distal margin of the fumation darker or accented. Funicle 1 a little the longest, 3 wider than long, 2 and 4 subequal in length. Ovipositor valves exerted for a third the length of the abdomen, concolorous.

*Habitat*: Ingham, Queensland.

*Type*: No. Hy 1734, Queensland Museum.

**4. ABLERUS SPECIOSISSIMUS** (Girault). Female.

*Azotus speciosissimus* Girault.

Dark metallic grass green, the valves of ovipositor at tip, the parapsides except lateral end, legs (except distal tarsal joint) and most of antennæ (a spot on scape above, side of club, base of pedicel and funicle joints 1 and 3 dark, submetallic) white. Fore wings hyaline but with a very obscure, faint stain across them under the marginal vein. Funicle 2 a little the longest. Head white.

*Habitat*: Magnetic Island (Townsville), Queensland.

*Type*: No. Hy 1735, Queensland Museum.

**5. ABLERUS NYMPHA** new species.

*Female*:—Length, 1.00 mm., excluding ovipositor which is half the length of the abdomen.

Like *clisiocampæ* (Ashmead) but much more robust and the club is wholly black; also the infuscation of the fore wing is intense, jet black; the first joint of hind tarsi is longer. Distal half of tibiæ yellowish. Face with a transverse black spot.

Captured by sweeping in forest (2,000 feet), June, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1736, Queensland Museum, the above specimen on a slide.

**6. ABLERUS SAINTPIERREI** new species.

*Female*:—Length, 0.85 mm., excluding ovipositor which is half the length of the abdomen.

Like *speciosus* but more robust, the wings broader and the black stripe around hind tibiae is at apex; the fore wings, moreover, bear very short marginal cilia. Stripe of fore wing from the stigmal vein; face blue-green at ventral half.

From one female captured on a window, February 3, 1912.

*Habitat*: Cooktown, Queensland.

*Type*: No. Hy 1737, Queensland Museum, the above specimen on a slide.

**7. ABLERUS HYALINUS** new species.

*Female*:—Length, 1.15 mm., excluding ovipositor which is a fifth the length of the abdomen.

Differing from the preceding species in bearing nearly hyaline wings; otherwise like *speciosus* but the legs are wholly white; ovipositor valves white at tip; mesopostscutellum with a silvery lustre, the parapsides white. Closely allied with *speciosissimus* (see table). Like *speciosissimus* but the thorax with a straight, narrow silvery white band across it between the scutellum and postscutellum. Hind coxae at proximal half concolorous. Silvery white at tip of abdomen centrally and down mesopleurum from apex of the white on the parapside. Face with a metallic wavy stripe across it through the antennae, occiput concolorous at ventral half. The faint stripe across the fore wing in both species originates at about the distal third of the marginal vein. In *hyalinus*, the wing stripe is extremely faint. A second specimen was larger, more robust.

From one female reared from a mass of galls on *Eucalyptus*, September 3, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1738, Queensland Museum, the above specimen on a slide.

**8. ABLERUS GROTIUSI** new species.

*Female*:—Length, 0.70 mm.

Differing from all the Australian species in having a wing pattern like the Javanese *pulchriceps* Zehntner. From that species, however, differing in being smaller, the fore wings narrower, their longest marginal cilia over half the greatest wing width (in the Javanese species less than half); in this Australian species, the wing pattern is less distinct, the spot at the distal margin of the blade is longer and extends over more of the apical margin; of the two large white spots distad of the white stigmal vein, the distal one is larger (hardly so in *pulchriceps* where both are large and subequal); the area leading proximad from the apex of the blade does not form a prong-like fuscous marking. Moreover, in *grotiusi*, the white second funicle joint is subquadrate like the third which it equals, while in *pulchriceps* it is twice the size of the black third joint and only slightly shorter than the first and fourth.

*Male*:—Unknown.

Described from one female captured by sweeping in forest, January 19, 1913.

*Habitat*: Magnetic Island (Townsville), Queensland.

*Type*: No. Hy 1739, Queensland Museum, the above specimen on a slide (mounted with three females of *A. pulchriceps* Zehntner from Java).

Respectfully dedicated to Hugo Grotius.



**9. ABLERUS POINCAREI** new species.

*Female*:—Length, 0.75 mm., excluding ovipositor valves which are black and about a third the abdomen's length.

Like *speciosus* but the femora and tibiae are concolorous except toward tip, not distinctly ringed with the concolorous color, the stripe across the fore wing is fainter and nearly straight and the fore wings are a little narrower; the discal cilia under the marginal vein are more scattered and regular. Antennal joints somewhat shorter and stouter.

*Male*:—Not known.

Described from one female captured by sweeping in the forest along the banks of Cape River, January 6, 1913.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1740, Queensland Museum, the above specimen on a slide (with the type female of *Parufens argentipes* Girault).

**10. ABLERUS LONGFELLOWI** new species.

*Female*:—Length, 1.25 mm., excluding the ovipositor.

Closely resembling both *speciosus* and *saintpierrei*. From the former it may be recognized at once because the band across the fore wing from the apex of the marginal vein is incomplete, fading out before reaching the caudal margin of the blade, the femora and tibiae are wholly black except at tip and at the knees, the fore wings are broader, more densely ciliated and the marginal cilia quite short. From *saintpierrei*, it differs distinctly in having the black femora and tibiae, in having only three or four coarser lines of discal cilia under the marginal vein (this ciliation finer in *saintpierrei* and in about seven or eight lines), in the incomplete stripe across the fore wing and in the fact that this stripe is nearly wholly under the apex of the marginal vein (in the other species—*saintpierrei*—this stripe is somewhat narrower and is from the middle of the stigmal vein which is more colored than in *longfellowi*). Differing from all species known to me in bearing long antennae, the first funicle joint longer than usual, nearly twice the length of the pedicel, the second thrice the length of the short third. Valves of ovipositor whitish at tip.

*Male*:—Unknown.

Described from one female captured by sweeping in the forest, April 18, 1912. This truly remarkable species is respectfully dedicated to Henry W. Longfellow, the poet.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1741, Queensland Museum.

**11. ABLERUS ELEGANTISSIMUS** new species.

*Female*:—Length, 1.00 mm., excluding ovipositor.

Like *grotiusi* and *pulchriceps* in wing pattern and more like the latter but differing as follows:—The clear and naked spot under the marginal vein is smaller being much narrower and shorter, the pattern is darker and more clear; the short third funicle joint is longer, plainly longer than wide (not a little wider than long) and the extreme tip of the valves of the ovipositor are not white. Vertex along margins of eyes silvery white, also a stripe across ventral ends of eyes bordered ventrad by a black cross-stripe. May be distinguished at once from *grotiusi* in having the second funicle joint plainly longer than the third not short and subequal to it.

*Male*:—Not known.

Described from one female captured by sweeping in forest, August 31, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1742, Queensland Museum, the above specimen on a slide with the type of *hyalinus*.

**12. ABLERUS PAN** new species.

*Female*:—Length, 0.65 mm., excluding exerted portion of the ovipositor.

Like *speciosissimus* but the valves of the ovipositor are wholly black.

*Male*:—Not known.

Described from one female captured in the forest, December 15, 1911.

*Habitat*: Hambledon Junction (Cairns), Queensland.

*Type*: No. Hy 1743, Queensland Museum.

**13. ABLERUS BIDENTATUS** new species.

*Female*:—Length, 0.85 mm.

Very similar to *semifuscipennis* but the mandibles bidentate, the hind wings wider and more obtuse at apex and with scattered discal cilia distad of the venation (absent in the type of *semifuscipennis*), the fore tibiae pallid along distal half or more; the eyes are margined with ivory or silvery white.

*Male*:—Not known.

Described from two females one of which was reared from an aleurodid infesting the leaves of acacia, June 17, 1913 and the other captured among undergrowth, April 26, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1744, Queensland Museum, the above specimens on two slides.

TABLE TO THE AUSTRALIAN FORMS OF *ABLERUS* HOWARD.

FEMALES.

(Compiled from the types, excluding *marchali* Howard.)

- I. Fore wings with a network pattern of fuscous (fuscous but broken into large clear areas).  
Valves of ovipositor white at tip; second funicle joint short barely longer than the subquadrate third joint. *grotiusi* Girault.
- Valves of ovipositor wholly concolorous; second funicle joint much longer than the third which is somewhat longer than wide. *elegantissimus* Girault.
- II. Fore wings with or without a distinct or faint rather narrow cross-stripe.  
Femora, tibiae and most of tarsi wholly white; parapsides white.  
Tip of valves of ovipositor white.  
Wings hyaline, translucent. *hyalinus* Girault.
- Wings with a faint but distinct, oblique brownish stripe across them from a little distad of middle of marginal vein. *speciosissimus* Girault.
- Tip of valves of ovipositor black; wings as in *speciosissimus*. *pan* Girault.

Femora and tibiae concolorous; parapsides concolorous.

Joint 1 of funicle four or more times longer than wide; valves of ovipositor white at tip; cross-stripe of fore wing plainly oblique and from end of marginal vein. Robust. *longfellowi* Girault.

Joint 1 of funicle about twice longer than wide; valves of ovipositor black at tip; cross-stripe of fore wing nearly straight and from tip of stigmal vein. *poincarei* Girault.\*

Femora and tibiae concolorous only at one end (with a metallic band around femora and tibiae near knees).

Valves of the ovipositor white at tip; parapsides concolorous; cross-stripe of fore wing broader, distinct. *speciosus* Girault.

Femora and tibiae blotched with metallic; parapsides concolorous.

Valves of ovipositor white at tip; fore wings with very short marginal cilia, the cross-stripe distinct and from the side of the stigmal vein; about 10 lines of cilia under the marginal vein which are much coarser than the very fine main ciliation. Robust. *saintpierrei* Girault.

III. Fore wings more or less uniformly, distinctly blackened from base to end of venation or somewhat farther.

Fumation extending to end of venation, its distal margin straight and accented.

Mandibles tridentate.

Valves of ovipositor concolorous at tips; tibiae concolorous.

*semifuscipennis* Girault.

Mandibles bidentate.

The same but fore tibiae pale along distal half or more, the hind wings broader and more obtuse at apex, and with scattered discal ciliation distad of venation. *bidentatus* Girault.

Fumation the same but deeper and its distal margin is convex or curved.

Tips of valves of ovipositor white; first two tibiae pale at distal half or more.

*nympha* Girault.

#### GENUS TUMIDISCAPUS Girault.

Only the male of this genus is known. It is characterised by bearing an enormous, leaf-like expansion ventrad from the shaft of the scape, but agreeing otherwise with the male of *Aphelinus* Dalman. The second species of this genus (the type species is from North America) is described herewith.

##### 1. TUMIDISCAPUS AUSTRALIENSIS new species.

*Male*:—Length, 0.75 mm.

Golden yellow and like the North American species, except that the second funicle joint is quadrate and barely longer than the first, the proximal club joint somewhat larger than it.

*Female*:—Not known.

Described from one male captured by sweeping in the forest, April, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1745, Queensland Museum, the above specimen on a slide.

\* Fore wing lightly dusky under all of marginal vein, margin to margin. *piceipes* new species (Nelson N Q.).

GENUS MARLATTIELLA Howard.

Fore wings with an oblique hairless line; antennæ in the female 4-jointed, one small funicle joint, the club long, solid. Marginal vein longer than the submarginal, the stigmal normal.

1. MARLATTIELLA ALEYRODESII Cameron.

Cameron, 1912, pp. 215-216.

I take the principal characters of this species from the original description:—Yellow; mesonotum and dorsum of abdomen reddish orange; wings hyaline; body smooth and shining; submarginal vein longer than the marginal; scape a little shorter than the club.

*Habitat*: Broken Hill, New South Wales.

*Type*: Unknown.

GENUS PLASTOCHARELLA Girault.

Differs from *Thysanus* Haliday in having three true funicle joints (instead of three ring-joints, the funicle absent) and the marginal cilia of fore wings very short. Scutum and scutellum with a median grooved line. Antennæ 6-jointed. Fore wings with an oblique hairless line, densely ciliated. Male only.

1. PLASTOCHARELLA FUSCIPENNIS Girault. Male. Genotype.

Orange yellow, the abdomen black, also the legs except the trochanters, knees, tips of tibiæ and the tarsi; antennæ dusky, last two joints black; hind wings embrowned, clearer toward tip, the fore wing similarly so but less clear toward tip, clear and nearly naked proximad of the bend of the submarginal vein. Mesopleurum and tegula black.

*Habitat*: Ingham, Queensland.

*Type*: No. Hy 1746, Queensland Museum.

GENUS MYOCNEMELLA Girault.

Differing from all the genera of the subfamily in being 9-jointed antennæ with two minute ring-joints. With the habitus of *Ablerus* Howard, the ovipositor strongly exerted for a third of the length of the abdomen; intermediate tibiæ and first tarsal joint greatly, foliately flattened, also the femur somewhat flattened toward tip. Third funicle joint abruptly short and transverse, the funicle 3-jointed, the club 2-jointed. Hind femur compressed. Club somewhat as in the genus *Aphelinoidea* of the Trichogrammatidæ. Marginal vein distinctly shorter than the submarginal. The male is not known.

1. MYOCNEMELLA BIFASCIATA Girault. Female. Genotype.

Dark metallic blue, the legs and antennæ black; middle tarsal joints white; fore wings with two crescentric cross-stripes of brownish, one from the apical two thirds of the marginal vein (the broader), the other between the end of the stigmal vein and apex of wing; also a spot proximad at caudal margin which is large and sends out an arm to the first cross-stripe. A patch of coarse cilia under marginal vein, distal half. Other discal ciliation absent except from distal stripe to wing apex and along caudal half or more of first stripe.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1747, Queensland Museum.

## GENUS THYSANUS Haliday.

This genus certainly resembles *Signiphora* Ashmead of the Encyrtidæ in most respects, judging from Haliday's figures and Foerster's description, but if these latter are correct, the resemblance is not very close.

## GENUS MYIOCHEMA Ashmead.

Differs from *Encarsia* Foerster in having the hind tibiae armed with very stiff black bristles.

## 1. MYIOCHEMA PALLIDA Ashmead.

Ashmead, 1900, Canadian Entomologist, London, Ontario, xxxii., p. 349.

*Habitat*: Brisbane, Queensland.

*Type*: Probably in the United States National Museum, Washington, D.C., U.S.A.

*Host*: *Saissetia oleæ* Bernard.

## TABLE TO THE APHELININE GENERA OF EULOPHIDÆ.

## AUSTRALIA. FEMALES.

The following table is adapted from Howard (1907), making changes where necessary. The tribe is characterised by the 5-jointed tarsi. An oblique hairless line is frequently borne by the fore wing.

Fore wings with an obliquely transverse hairless line running back from the stigmal vein.

Antennæ 4-jointed, with one short funicle joint, the club long, solid.

Scape slender, the pedicel swollen; ovipositor somewhat exerted.

**Marlattella** Howard (Type: *M. prima* Howard).

Antennæ 6-jointed without a ring-joint, the club 2-jointed.

Scape normal.

Ovipositor distinctly exerted; fore wings irregularly maculate.

Postscutellum of mesothorax acutely triangular.

**Perisopterus** Howard (Type: *Aphelinus pulchellus* Howard).

Ovipositor scarcely exerted; fore wings usually hyaline, rarely fuscous.

Thoracic notal sclerites normal.

**Aphelinus** Dalman (Type: *Entedon abdominalis* Dalman).

Scape greatly enlarged ventrad (male).

**Tumidiscapus** Girault (Type: *T. flavus* Girault).

Fore wings without an obliquely transverse hairless line running back from stigmal vein.

Antennæ 6-jointed, the funicle 3-jointed, no ring-joints. Marginal cilia of fore wing very short; scutum and scutellum with a median groove. Male.

**Plastocharella** Girault (Type: *P. fuscipennis* Girault).

Antennæ 7-jointed, without a ring-joint, the club 2-jointed.

Ovipositor scarcely extruded; funicle 1 shorter than 2 or 3.

**Physcus** Howard (Type: *Coccophagus varicornis* Howard).

Antennæ 8-jointed, with *one* ring-joint, the club solid.

Ovipositor distinctly exerted; stigmal vein normal; funicle 3 usually abruptly shortened; fore wings infuscated and sometimes reticulately patterned, rarely hyaline.

Marginal cilia of fore wing variable, often long; antennæ varicoloured; body metallic.

**Ablerus** Howard (Type: *Centrodora clisiocampæ* Ashmead).

Antennæ 8-jointed, *without* a ring-joint; flagellum cylindrical; legs normal; marginal cilia of fore wing shorter than the greatest width of that wing.

Club 2-jointed.

Hind tibiæ armed with very stiff black bristles.

**Myiocnema** Ashmead (Type: *M. comperei* Ashmead).

Hind tibiæ simple.

**Encarsia** Foerster (Type: *E. tricolor* Foerster).

Club 3-jointed.

Marginal vein shorter than the submarginal.

**Prospaltella** Ashmead (Type: *Prospalta murtfeldtii* Howard).

Marginal vein as long as or longer than the submarginal.

**Coccophagus** Westwood (Type: *C. pulchellus* Westwood).

Antennæ 9-jointed with *one* ring-joint.

Club 3-jointed; marginal fringes of fore wing long, longer than the greatest width of the wings; fore wings obtusely conical; stigmal vein not prominent. Ovipositor not exerted.

**Aspidiotiphagus** Howard (Type: *Coccophagus citrinus* Craw).

Antennæ 9-jointed with *two* ring-joints.

Club 2-jointed; ovipositor strongly exerted; intermediate tibiæ and first tarsal joint foliaceously flattened; funicle 3 abruptly short and transverse; marginal vein distinctly shorter than the submarginal; fore wings usual in shape, their marginal cilia not as long as the greatest width.

**Myocnemella** Girault (Type: *M. bifasciata* Girault).

#### TRIBE PTEROPTRICINI.

The tribe is characterised by the 4-jointed tarsi. The oblique hairless line of the fore wings rare with the genera if not absent.

#### GENUS BARDYLIS Howard.

Antennæ 7-jointed without a ring-joint, the funicle 2-, the club long ovate, 3-jointed. First tarsal joint of middle legs nearly as long as joints 2 and 3 combined, the middle tibial spur not quite as long as the first tarsal joint. Marginal vein somewhat shorter than the submarginal; marginal cilia of fore wing rather long, the discal cilia dense, no oblique hairless line from stigmal vein. Funicle joints longer than wide, the flagellum clavate.

Male antennæ 8-jointed, more slender, the joints of flagellum not much unequal, the club 3-jointed; the tarsi are longer.

**1. BARDYLIS AUSTRALIENSIS** Howard. Female, male. Genotype

Howard, 1907, pp. 84-85, fig. 21.

Head, pronotum, scutum, tegulae and abdomen brown; scutellum, metaseutum, mesopleura and metapleura dull orange yellow; antennae, coxae and femora light brown. Fore wings with a dusky cloud below marginal vein. Mesoseutum faintly aciculate, the occiput densely and finely so. In the male the clouded portion of fore wing is lighter than in the female.

*Habitat*: Swan River and Perth, West Australia.

*Types*: Cat. No. 10,311, United States National Museum, Washington, D.C., U.S.A.

**GENUS CASCA** Howard.

Antennae 7-jointed, somewhat clavate, the club 3-jointed, its joints subequal, the region long; funicle joints longer than wide. Tarsal joints of middle legs all short and subequal, the intermediate tibial spur as long as the first two tarsal joints of middle legs taken together. Marginal vein somewhat shorter than the submarginal, the fore wings uniformly ciliate, the marginal cilia long; no oblique hairless line. Male not known. Fore wing curved or broken.

**1. CASCA NIGRA** new species.

*Male*:—Length, 0.50 mm.

Black; antennae, knees, distal halves or more of tibiae and tarsi pale yellow; scutellum brownish with slight yellow; fore wings embrowned out to the end of the marginal vein or slightly beyond. Funicle 1 quadrate, no longer than the pedicel, joint 2 transverse, joint 3 a quarter longer than 1; the three club joints subequal in length, each slightly longer than funicle 3. Mandibles tridentate. A very short ring-joint present? Removed from *Archenomus* Howard.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1748, Queensland Museum, the above specimen on a slide.

The female of this species was discovered later, upon which the species was removed to *Casca*, with which it agrees; accordingly, ~~the male of Casca agrees with the female of Archenomus~~. I describe the female herewith. The tarsi of both sexes are alike, also the wings.

*Female*:—Length, 0.45 mm.

Black, the coxae and femora concolorous or dusky, rest of legs white; proximal half of tibia sometimes dusky; fore wing more or less distinctly infuscated out to end of venation and a more or less distinct broad hairless line back from end of venation; longest marginal fringes about a third of the greatest wing width (fore wing); antennae yellowish, the second funicle joint slightly longer than the first. Scutellum yellowish.

Described from six or seven females reared from a *Chionaspis* on cockatoo apple, forest, December 18, 1911.

*Habitat*: Nelson (Cairns), Queensland.

The above male was captured by sweeping jungle growth along a forest streamlet, April 15, 1913.

SUBFAMILY TETRASTICHINÆ.

TRIBE TETRASTICHINI.

GENUS TETRASTICHUS Haliday.

1. **TETRASTICHUS ARSES** Walker. Female.

See De Dalla Torre, 1898, p. 10. Tasmania.

2. **TETRASTICHUS AUTONAE** Walker. Female.

See De Dalla Torre, 1898, p. 11. Tasmania.

3. **TETRASTICHUS BAUCIS** Walker. Female.

See De Dalla Torre, 1898, p. 11. Australia.

4. **TETRASTICHUS DYMAS** Walker. Female.

See De Dalla Torre, 1898, p. 14. Tasmania.

5. **TETRASTICHUS GLYCON** Walker. Female.

See De Dalla Torre, 1898, p. 16. Tasmania.

6. **TETRASTICHUS HIPPASUS** Walker. Female.

See De Dalla Torre, 1898, p. 16. Tasmania.

7. **TETRASTICHUS LELAPS** Walker. Female.

See De Dalla Torre, 1898, p. 17. Australia.

8. **TETRASTICHUS NEIS** Walker.

See De Dalla Torre, 1898, p. 19. Tasmania.

9. **TETRASTICHUS OTYS** Walker. Female.

See De Dalla Torre, 1898, p. 20. New South Wales.

10. **TETRASTICHUS PROTO** Walker. Female.

See De Dalla Torre, 1898, p. 21. Tasmania.

11. **TETRASTICHUS VALENS** Walker. Female.

See De Dalla Torre, 1898, p. 24. Tasmania.

12. **TETRASTICHUS XENARES** Walker. Female.

See De Dalla Torre, 1898, p. 25. Tasmania.

13. **TETRASTICHUS ZALEUCUS** Walker. Female.

See De Dalla Torre, 1898, p. 25. Tasmania.

14. **TETRASTICHUS QUEENSLANDENSIS** Girault. Female.

Dark metallic aeneous green, the tibiae and tarsi straw yellow, pale, the femora and the coxae concolorous with the body; scape black and the rest of antennae. Wings hyaline.



Propodeum reticulated, tricarinate, the spiracle large, elliptical, just mesad of the lateral carinæ; funicle joints each twice or more the length of the pedicel. Median carina of propodeum short but complete.

*Habitat*: Queensland (? Brisbane). Forest.

*Types*: No. Hy 1749, Queensland Museum.

#### 15. **TETRASTICHUS VICTORIENSIS** Girault. Female.

Shining black, the median groove of scutum and the lateral margin of scutellum straw yellow, also the antennæ, venation, tarsi, knees and portion of the tibiæ. Wings very slightly embrowned throughout and a light stain under apex of stigmal vein. Pedicel long, obconic, joints 1 and 3 of funicle subequal, joint 2 shorter and subquadrate.

*Habitat*: Melbourne, Victoria.

*Type*: No. Hy 1200, Queensland Museum.

#### 16. **TETRASTICHUS NELSONENSIS** Girault. Female and male.

Much like *Tetrastichella fasciatus* but the abdomen less regularly banded, there being but five transverse stripes, the proximal one faint, the fourth abbreviated laterad, the fifth consisting merely of a transverse dash on each side of the meson. A round black spot in centre of scutum on each side of meson (sometimes obscure); an elongate spot in the centre of mesal margin of each parapside and a round dot in centre of scutellum at cephalic three fourths; another similar spot on the shoulder, directly cephalad of the base of each parapside. Differs markedly from *fasciatus* in that the discal ciliation of the fore wing beneath the marginal vein is coarser and less dense than that distad of the venation; in *fasciatus* the ciliation is equally fine and dense.

The male averages a half smaller, the discal ciliation of the fore wing less dense but relatively the same. There are three black stripes across the abdomen on distal half, the first interrupted at the meson.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Types*: No. Hy 1750, Queensland Museum.

#### 17. **TETRASTICHUS FLAVIOS** Girault. Female.

Dark aeneous green, the face beneath antennæ straw yellow, the legs white, the hind coxæ blue; wings hyaline. Abdomen longer than the rest of the body, somewhat produced. Tegulæ white, pedicel yellow beneath. Funicle joints not long, the distal one a little longer than wide.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1751, Queensland Museum.

#### 18. **TETRASTICHUS XANTHER** Girault. Female.

Reddish yellow, the abdomen with six black cross-stripes; centre of face and tip of ovipositor also black. Funicle joints cylindrical ovate.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1752, Queensland Museum.

**19. TETRASTICHUS SAINTPIERREI** Girault. Female.

Brilliant metallic grass green; the legs white except hind coxa; proximal third of abdomen orange yellow, the rest purple, the latter projecting at each lateral margin a little cephalad into the yellow; wings hyaline. First funicle joint longest.

*Habitat*: Nelson (Cairns), Queensland. Associated with *Melaleuca*, forest.

*Type*: No. Hy 1753, Queensland Museum.

**20. TETRASTICHUS LADDI** Girault. Female.

Like *queenslandensis* but the femora and pedicel concolorous, the distal funicle joint shorter and the propodeal spiracle is laterad of the lateral carina.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1754, Queensland Museum.

**21. TETRASTICHUS MITTAGONGENSIS** Girault. Female.

Like *laddi* but the propodeum is longer, the distal club joint spined at apex.

*Habitat*: Mittagong, New South Wales.

*Type*: No. I. 1232, South Australian Museum, Adelaide.

**22. TETRASTICHUS POINCAREI** Girault. Female.

Like *queenslandensis* Girault but the femora concolorous and the abdomen produced into a slender stylus. Each funicle joint about twice longer than wide and only slightly unequal. Spiracle of propodeum laterad of the lateral carina.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1755, Queensland Museum.

**23. TETRASTICHUS BICOLOR** Girault. Female.

Like *flavios* but black, the antennæ black, the distal joint of funicle distinctly longer than wide; proximal third of abdomen lemon yellow, also the tegulæ and legs. Hind coxa black. Median carina of propodeum short.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1756, Queensland Museum.

**24. TETRASTICHUS MARGIVENTRIS** new species.

*Female*:—Length, 2.00 mm. With the habitus of *Ootetrastichus*.

Jet black, the wings hyaline, the coxæ concolorous, the legs and abdomen deep orange yellow, the abdomen at distal fourth or less and the lateral margins from base to tip rather broadly (continuously from dorsal to ventral aspects) black. Scape yellowish along proximal two thirds, elsewhere the antennæ black; pedicel elongate but shorter than the third funicle joint which is shortest of the funicle, the very long first funicle joint longer than the club,

nearly twice the length of the pedicel. Club with a short nipple, long, the divisions not very distinct but present. Two large ring-joints. Propodeum with a short median carina which is continued around the caudal margin by forking at the apex; the short lateral carina leads directly from the oval spiracle. Propodeum with a fine sculpture.

*Male*:—Unknown.

Described from a single female captured from the flowers of *Bæckea*, April 22, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1757, Queensland Museum, the above specimen on a tag, the head on a slide.

#### 25. *TETRASTICHUS DARWINI* new species.

*Female*:—Length, 1.65 mm.

Yellow-brown, the wings hyaline, the legs concolorous, the antennæ black except the pale yellowish scape proximad of tip; pronotum dorsad, a large wedge-shaped spot at cephalic half of scutum on each side of meson, propodeum, apex of the parapsides and cephalic half of each axilla dusky black, abdomen with eight dusky, narrow cross-stripes (including one at immediate base), the fifth very broadly interrupted at meson. Pedicel elongate, somewhat longer than the funicle joints which are more or less equal and about twice longer than wide; terminal seta of club much shorter than the first club-joint which is about half of the club and somewhat shorter than the funicle joints. Mandibles 3-dentate.

*Male*:—Not known.

Described from one female captured by sweeping a forest streamlet edged with jungle growth, December 2, 1913 (A. P. Doda).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1758, Queensland Museum, the above specimen on a tag, the head on a slide.

#### 26. *TETRASTICHUS MARGINATUS* new species.

*Female*:—Length, 1.15 mm.

Agreeing with the description of *Quadrastichus sannio* Girault but blacker, the abdomen broadly margined only for proximal two thirds but the extreme tip colored, the legs wholly yellow except coxæ. Mandibles strongly bidentate and with a third minute tooth. Antennæ yellow; first funicle joint as long as the pedicel, the other two subequal, longer than wide; club with a short nipple.

*Male*:—Not known.

Described from a single female captured by sweeping fruit and other trees along a tramway and in mixed jungle and forest along the Herbert River, February 26, 1913.

*Habitat*: Halifax, Queensland.

*Type*: No. Hy 1759, Queensland Museum, the above specimen on a tag, the head on a slide.

**27. TETRASTICHUS COBDENI** new species.

*Female*:—Length, 1.20-1.50 mm.

Somewhat like *bicolor* Girault but nearly the entire head is lemon yellow, the centre of the occiput blackish. The scape is also yellowish. Abdomen yellowish brown at proximal third, otherwise dark brown with more or less obscure cross-stripes.

Described from two females captured by sweeping, summit of Pyramid Mountain (3,000 feet), August 17, 1912. Dedicated with respect to Richard Cobden.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1760, Queensland Museum, the two females together on a tag, one head on a slide.

**28. TETRASTICHUS XANTHICOLOR** new species.

*Female*:—Length, 1.70 mm.

Reddish yellow, the wings hyaline, the abdomen dusky and with more or less obscure transverse stripes; legs yellowish brown, the front coxa dusky at base; cephalic portion of scutum, cephalic end of parapsides, sides of thorax and the propodeum dusky. Pedicel not elongate, somewhat shorter than the first funicle joint which is not quite twice longer than wide, the other two each shortening somewhat; antennæ dusky yellowish brown. Mandibles tridentate.

*Male*:—Not known.

Described from one female captured by sweeping *Leptospermum*, April 16, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1761, Queensland Museum, the above specimen on a slide.

**29. TETRASTICHUS IO** new species.

*Female*:—Length, 1.35 mm.

Greenish yellow marked with black as follows: The abdomen with four transverse stripes, the first one of these interrupted at the meson, not continuous there, the fourth stripe with an acute, triangular projection cephalad at the meson; a round spot at base of scutellum between the first grooves; the propodeum; cephalic half of each axilla; the parapsidal furrows margined rather broadly laterad; cephalic third or less of scutum; tip of abdomen and last tarsal joint; centre of occiput; base of hind coxa and femur the latter along one side; and irregularly, the thoracic pleurum. Wings hyaline, the discal ciliation uniform. Pedicel longer than any of the funicle joints, the latter subquadrate, the first a little the longest; club joints wider than long. Second ring-joint extremely short, the first large, distinct.

*Male*:—Not known.

Described from one specimen captured by sweeping forest growths on Mount Pyramid (1,500-2,500 feet), June 3, 1913 (A. P. Dodd).

*Habitat*: Australia—Nelson (Cairns), Queensland.

*Type*: No. Hy 1762, Queensland Museum, the above specimen on a slide.

DIAGNOSIS OF THE AUSTRALIAN SPECIES OF *TETRASTICHUS* HALIDAY.

The species of Walker (1839) are omitted from the table for the reason that all we know of them is that they bear a median groove on the scutum; most probably they belong to various genera. Walker described all of them in *Cirrospilus* Westwood—an elachertine genus which Westwood describes as bearing 7-jointed antennæ but which Ashmead changes to 9-jointed with one ring-joint without giving reasons for so doing. Thus, if referred to the Tetrastichini they should have been placed more properly with *Aprostocetus*. It is hazardous, however, to consider them other than as most-probable tetrastichine because of the thoracic grooves. To attempt to identify them without seeing their types would be the more hazardous. None of the following species are likely to be Walker's since the latter are mostly from Tasmania.

## I. Metallic green.

Abdomen normal, only slightly produced.

Head and abdomen all concolorous; femora concolorous.

Propodeal spiracle laterad of the lateral carina.

Dark green, the coxæ and femora concolorous; propodeum short, the antennal club without a terminal spur. *laddi* Girault.

The same; propodeum long, the distal club joint spined at apex.

*mittagongensis* Girault.

Propodeal spiracle mesad of the lateral carina. *queenslandensis* Girault.

Either the head or the abdomen partly yellowish; femora white.

Dark aeneous green, the face beneath antennæ straw yellow; legs white, the hind coxæ blue; distal funicle joint a little longer than wide.

*flavios* Girault.

Brilliant metallic green, the legs the same; proximal third of abdomen orange yellow, the rest purple. *saintpierrei* Girault.

Abdomen produced into a stylus.

Dark green; funicle joints about twice longer than wide and more or less equal. *poincarei* Girault.

## II. Black or dark purple.

Abdomen all black.

Median groove of scutum and lateral margins of scutellum straw yellow; also the antennæ, venation, knees, tarsi and portions of the tibiæ; joint 2 of funicle shortest, subquadrate. *victoriensis* Girault.

Abdomen partly or mostly yellow.

Head all black.

Abdomen deep orange yellow, black at distal fourth and down each margin from base; legs colored like the abdomen (except coxæ); antennæ black; pedicel and funicle joints elongate; lateral carina leading directly from the spiracle. *margiventris* Girault.

Abdomen lemon yellow, margined along each side from base to distal third with black and the extreme tip colored; legs except coxa, yellow; funicle joints not elongate. *marginatus* Girault.

Head partly or mostly yellow.

Face beneath antennæ yellow; distal joint of funicle longer than wide; proximal third of abdomen lemon yellow, also the tegulæ and legs; hind coxa black. *bicolor* Girault.

Nearly entire head lemon yellow; abdomen yellowish brown at proximal third, the rest dark brown and with more or less obscure dusky cross-stripes.  
*cobdeni* Girault.

III. Lemon or reddish or brownish yellow.

Reddish yellow.

Thorax immaculate, the abdomen with six black cross-stripes; centre of face and tip of ovipositor black; funicle joints cylindrical ovate.

*xanther* Girault.\*

Cephalic portion of scutum, cephalic end of parapsides, sides of thorax and the propodeum dusky; funicle 1 not quite twice longer than wide, the others shortening.

*xanthicolor* Girault.

Lemon yellow, the antennæ concolorous (see description).

*nelsonensis* Girault.

Greenish yellow, the abdomen with four cross-stripes (see description).

*io* Girault.

Brownish yellow, the legs concolorous, the antennæ black, the scape yellow nearly to tip; see description.

*darwini* Girault.

GENUS MELITTOBIA Westwood.

1. MELITTOBIA AUSTRALICA Girault. Female, male.

Brown-black; proximal two thirds of abdomen lighter; legs yellow, the coxæ and femora washed with dilute dusky; antennæ brownish black; funicle joints 2 and 3 subequal, slightly wider than long, joint 1 subquadrate, slightly wider than the pedicel. Hind wings with about twelve lines of discal cilia where widest. Fore wings about two and a quarter times longer than wide. Distal joint of tarsi longest of the four. The cuneate scutum stained with minute setigerous dots. Scutellum longer than wide. Club with a stout terminal seta.

The male is light honey yellow; abdomen dorsad, femora, distal tarsal joint and scape subfuscous. Fore wings with about eight lines of discal cilia; funicle joints wider than long, the first shortest, transverse; terminal spur of club just traceable.

*Habitat*: Mt. Tambourine and Brisbane, Queensland.

*Host*: *Pison spinolæ*.

*Type*: No. Hy 997, Queensland Museum.

GENUS SYNTOMOSPHYRUM Foerster.

*Neotetrastichus* Perkins, 1912, is a synonym of this genus.

1. SYNTOMOSPHYRUM HYALINIPENNE Girault. Female.

Purplish black; wings hyaline; femora and coxæ more or less concolorous, the rest of legs yellowish. Antennæ yellow-brown, the club not terminating in a spine; pedicel slightly longer than either of the funicle joints which are subequal and one and a quarter times longer than broad. Propodeum shining, with a median carina.

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1763, Queensland Museum.

\* *Epitetrastichus*.

**2. SYNTOMOSPHYRUM GREGI** new species.

*Female*:—Length, 1.00 mm.

Brown, the abdomen with four faint dusky transverse stripes, the wings hyaline; distal two thirds of scutum and the legs yellow, the antennæ black, filiform, slender, the pedicel elongate, nearly as long as the first funicle joint which is longest of the flagellum; distal funicle joint longer than any of the club joints but barely more so than the first two of that region which are subequal and twice longer than wide, the third joint ending in a stout, rather long seta.

*Male*:—Not known.

Described from a single female captured by sweeping *Leptospermum*, April 16, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1764, Queensland Museum, the above specimen on a slide.

**3. SYNTOMOSPHYRUM PULLUM** new species.

*Female*:—Length, 1.05 mm.

Brownish black, the scutellum laterad of first groove yellowish brown, the head except the cheeks just below the eyes which are dusky, golden yellow. Legs pale lemon yellow. Antennæ dusky black but otherwise as in *Aprostocetus obscurus* except the pedicel is distinctly shorter than the first funicle joint which is just about twice longer than wide.

*Male*:—Not known.

Described from one female captured by sweeping in a jungle pocket, May 26, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1765, Queensland Museum, the above specimen on a slide.

**4. SYNTOMOSPHYRUM FLAVISCUTELLUM** new species.

*Female*:—Length, 0.85 mm.

Brownish black, the scutellum, postscutellum, lateral and cephalic margins of scutum and most of the head bright lemon yellow, the wings hyaline; legs bright pale lemon yellow, the coxæ and hind femora at proximal half concolorous with the body; antennæ pallid, the funicle joints all wider than long. Mandibles tridentate.

From one female captured by sweeping in forest (Ayr), November 7, 1912 and another same situation, Townsville, January 27, 1913.

*Habitat*: Ayr and Townsville, Queensland.

*Type*: No. Hy 1766, Queensland Museum, the above specimen on a slide.

DIAGNOSIS OF THE AUSTRALIAN SPECIES OF *SYNTOMOSPHYRUM* FOERSTER.

Club not terminating in a distinct stout seta or spine.

Purplish black, the tibiæ, tarsi and antennæ yellowish; funicle joints a fourth longer than wide, subequal, the pedicel a little longer.

*hyalinapenne* Girault.

Brown-black, the scutellum, postscutellum, lateral and cephalic margins of scutum and most of head bright lemon yellow; legs lemon yellow, except coxæ and basal half of hind femur; funicle joints all wider than long. *flaviscutellum* Girault.

Club terminating in a distinct seta or spine.

Brown, the abdomen with four dusky cross-stripes; distal two thirds of scutum and the legs yellow, the antennæ black, filiform, slender, the pedicel elongate and nearly as long as funicle 1. *gregi* Girault.

Brown-black, the scutellum laterad of first groove yellowish brown, the head golden yellow; legs pale lemon yellow. Antennæ dusky black; funicle 1 twice longer than wide. *pullum* Girault.

#### GENUS TETRASTICHODES Ashmead.

##### 1. TETRASTICHODES FROGGATTI Ashmead.

*Tetrastichodes froggatti* Ashmead, 1900, pp. 346-347.

Yellow; a dusky band across vertex inclosing the ocelli; scutum, a dot on inner hind angle of parapsides, a spot on scutellum at anterior middle, propodeum and segments 3, 4 and 5 (more or less) of dorsal abdomen brown or brown-black. Wings hyaline. Legs pale yellowish. Antennæ light brownish.

*Habitat*: Hornsby, New South Wales. Gall on *Eucalyptus*.

*Types*: Cat. No. 4900, United States National Museum, Washington, D.C., U.S.A.

##### 2. TETRASTICHODES MORUM new species.

*Female*:—Length, 0.70 mm. Short and robust.

Brownish black, the wings hyaline, the legs (plus coxæ), base of abdomen broadly and a more or less distinct yellowish stripe just beyond, also the antennæ, lemon yellow (scape not seen); front tibia with a black dot centrally, latero-ventrad, the proximal half of hind femur slightly embrowned. Head mostly lemon yellow. Mandibles tridentate; joint 1 of funicle as long as the other two combined which are much wider than long, 1 being quadrate.

*Male*:—Not known.

Described from two females captured with the preceding.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1767, Queensland Museum, one of the above specimens on a slide (with two foreign specimens, the type head under a different cover with one of the foreign specimens).

##### 3. TETRASTICHODES LINEATUS new species.

*Female*:—Length, 0.85 mm.

Golden yellow, the wings hyaline, marked with black as follows: Four stripes across abdomen, the first three interrupted rather widely along the meson and all thin, the fourth barely interrupted at meson and stout; immediate base of abdomen more or less obscurely at centre, a round dot on pronotum dorso-laterad, disk of propodeum, two wedge-shaped spots on scutum cephalad, one on each side of meson, one on each parapside, a rather large round spot in centre of scutellum at base, the tegulæ and parts of axillæ. Mandibles tridentate. Funicle joints all rather much wider than long, the last shortest, transverse.



*Male*:—The same or nearly.

Described from one male and two females captured by sweeping in the forest along the banks of Cape River, December 26, 1913.

*Habitat*: Capeville (Pentland), Queensland.

*Types*: No. Hy 1768, Queensland Museum, the above specimens on a slide.

#### 4. TETRASTICHODES AUSTRALICUS new species.

*Female*:—Length, 1.15 mm.

Orange yellow, the abdomen lemon yellow and transversely striped with many obscure round dusky stripes; wings hyaline; legs lemon yellow; cephalic portion of scutum deep fuscous, the propodeum lemon yellow. Scape and pedicel yellow at sides and beneath, the rest of the antenna black, excepting the ring-joints; funicle and club joints elongate, those of the former subequal, twice the length of the pedicel nearly, the club joints shortening in succession, the first a fourth shorter than one of the funicle joints, the last no longer than the pedicel yet terminating in a long, stout spine-like process which is as long as the first club joint. Pedicel short. Mandibles tridentate. A fuscous spot at base of scutellum at meson; median carina of propodeum forked just before apex, the disk on each side of it fuscous. Apex of each parapside and axilla (cephalad) fuscous.

*Male*:—Not known.

Described from a single female captured by sweeping forest growth along a roadside, February 18, 1913. The peculiar antennæ are unique for the genus.

*Habitat*: Ripple Creek (Ingham), Queensland.

*Type*: No. Hy 1769, Queensland Museum, the above specimen on a tag, the head on a slide.

#### 5. TETRASTICHODES MARGISCUTUM new species.

*Female*:—Length, 1.55 mm. Short and robust, the abdomen almost round from lateral aspect.

Chocolate brown, the legs except the coxæ and hind femora; sides of pronotum, tegulae, sides of scutum narrowly and each side of the grooves of scutellum, pale yellow or white. Thorax microscopically sheened or satiny; non-metallie. Wings very broad, hyaline. Antennæ pale brown, the scape compressed, the pedicel much longer than any of the funicle joints, the third joint of the funicle transversely cup-shaped, the other two subequal and about twice longer but still wider than long. Mandibles tridentate. Head pale yellow or white.

*Male*:—The same but smaller and the incisions of abdominal segments pale and sometimes, if not usually, conspicuous.

Described from many specimens of both sexes reared from a gall on the foliage of *Eucalyptus* in forest, September 18, 1912. Also reared in large numbers from a tuber-like gall on *Eucalyptus*, September 2, 1913 (E. J. Girault).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1770, Queensland Museum, one male, one female together on a tag, two female heads on a slide.

**6. TETRASTICHODES AURISCUTELLUM** new species.

*Female*:—Length, 0.85 mm. Short, compact and robust.

Funicle as in *morum*. Golden yellow, the wings hyaline, the pronotum, the abdomen except down the whole of the median line and a large wedge-shaped spot at cephalic margin of scutum on each side of meson, dusky black. Incisions of abdominal segments and the legs white, the hind coxæ more or less dusky. First funicle joint somewhat shorter than the pedicel.

*Male*:—Not known.

Described from one female captured by sweeping in a jungle pocket, July 24, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1771, Queensland Museum, the above specimen on a slide.

**7. TETRASTICHODES CONSOBRINUS** new species.

*Female*:—Length, 1.80 mm.

Like *fasciatus* but the abdomen bears five narrow stripes of black across it, all of which are interrupted at the meson except the third, the fifth stripe merely represented by a short, transverse dot in the centre of each medial half; also the dorsum of thorax is unmarked excepting for a small ovate spot at the apex of each axilla, a larger spot near the tegula just caudo-laterad of the first and the cephalic margin of the propodeum and the latter's meson. Centre of scutellum a little brownish. Second funicle joint shorter than the other two. Compared with specimens of *fasciatus*.

*Male*:—Unknown.

Described from three females reared with *fasciatus* from a lot of miscellaneous galls on *Eucalyptus*, September 18, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1772, Queensland Museum, one of the above specimens on a tag, two heads on a slide.

**8. TETRASTICHODES FASCIATUS** (Girault). Female.

*Zagrammosomoides fasciatus* Girault. Genotype.

Flavous, the wings hyaline the appendages concolorous. Conspicuously marked with black as follows: In the dorsal aspect the abdomen is banded across the posterior margins of the segments commencing at base, there being six transverse stripes which lengthen (widen) distad. The propodeum is black, also the pronotum cephalad in the dorsal aspect on each side of the median line appearing like two large cuneate spots, a large ovate spot in the centre of the mesoscutellum, an ovate spot on each side of (not upon) the scutum, in the cephalic angle of each axilla and a smaller spot at the caudo-lateral angle of the pronotum. Cephalad in the disk the scutum is distinctly stained except along the median line; each parapside is similarly stained and also the vertex may be so the stained area projecting into the face (cephalic aspect) like wedges on each side. The antennæ are suffused with dusky as are also the femora of the legs more or less. The proximal club joint is nearly half as long as the entire club. Whole body finely polygonally reticulated, the vertex and face with more or less obscure umbilicate punctures. Funicle joints much smaller than the pedicel, subquadrate.

*Male*:—Somewhat smaller; the same but the dark areas on the cephalic part of the scutum usually black and nearly coalesced; the abdomen bears only five transverse stripes which lengthen (become thicker) caudad, the second concaved at the meson, the fifth twice longer than the fourth, none of the distal four stripes with parallel margins. (Types re-examined.)

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1169, Queensland Museum.

TABLE TO THE AUSTRALIAN FORMS OF *TETRASTICHODES* ASHMEAD.

FEMALES.

It is well to point out that there are two distinct types in *Tetrastichodes*, the one robust, the antennæ short, the abdomen short and globular, the propodeum short and usually non-carinate; the other more slender, the antennæ with longer joints and slenderer club, the abdomen conic ovate, the propodeum long and with a distinct median carina. The former belong to the subgenus *Zagrammosomoides* Girault which I described as a genus in the *Elacher-tini*. However, its somewhat broken submarginal vein, the fine sculpture and the thoracic grooves serve to show its true affinities. It seems entitled to generic rank but I do not know the characteristics of the genotype of *Tetrastichodes*.

Yellow species.

Scutum wholly black-brown.

A dot on inner hind angles of parapsides, a spot at base of scutellum at meson, propodeum and segments 3-5 of abdomen brown or black-brown. Legs pale yellow. *froggatti* Ashmead.

Scutum only partly black-brown or dusky.

Funicle joints elongate (much longer than wide).

Orange yellow, the abdomen lemon yellow and with many obscure, narrow dusky cross-stripes; cephalic portion of scutum fuscous; scape and pedicel yellow at sides and beneath, the antennæ black; funicle joints subequal, twice the length of the pedicel or nearly; a fuscous spot at meson, base of scutellum; median carina on propodeum. Disk of propodeum on each side of meson, apex of parapsides and axillæ cephalad, fuscous. *australica* Girault.

Funicle joints short, quadrate or wider than long.

Abdomen with cross-stripes.

Golden yellow; four cross-stripes on abdomen, the first three interrupted at meson, a dot on pronotum dorso-laterad, disk of propodeum, two wedge-shaped spots on cephalic scutum, another on each parapside, a round spot at centre of scutellum at base, black. Funicle joints all wider than long. *lineatus* Girault.

Yellow; six complete cross-stripes on abdomen; pronotum cephalad on each side of median line, propodeum, a large ovate spot in centre of scutellum, an ovate spot on each side (not upon) scutum at cephalic angle of each axilla and a smaller spot on pronotum caudo-laterad black; scutum stained cephalad on each side of meson, also each parapside and the vertex (more or less). Proximal club joint nearly half the club. *fasciatus* Girault.

The same; five narrow cross-stripes on abdomen, all interrupted at the meson except the third, the fifth represented by a transverse dot centrally on each side; thorax unmarked excepting for a small ovate dusky spot at the apex of each axilla, a larger spot near the tegula just caudo-laterad of the first and cephalic margin of propodeum and the meson of the latter. Funicle 2 shorter than others. *consobrinus* Girault.

Abdomen without cross-stripes.

Golden yellow; pronotum, abdomen except down the whole of the median line and a large cuneate spot on each side of meson of cephalic scutum, dusky black. Legs pale. Funicle 1 quadrate, the other two wider than long. *auriscutellum* Girault.

Brown or brownish black species.

Scutellum concolorous.

Brownish black; head, base of abdomen and a cross-stripe distad a little farther and the legs lemon yellow; joint 1 of funicle equal to 2 and 3 combined. *morum* Girault.

Scutellum with the grooves pallid yellowish.

Chocolate brown; head, sides of scutum narrowly, legs except coxæ and hind femora and the antennæ pallid; funicle 1 shorter than 2 and 3 combined, subequal to 2. *margiscutum* Girault.

GENUS APROSTOCETUS Westwood.

**1. APROSTOCETUS KURANDENSIS** (Girault). Female.

*Tetrastichus kurandensis* Girault.

Bright dark metallic green-blue, tibiae and tarsi straw yellow, the femora more or less metallic; scape brown, the pedicel dark fuscous; rest of antennæ black; propodeum tricarinate, the large spiracle laterad of the lateral carina; funicle joints each twice or more the length of the pedicel; third club joint with a terminal spur. Abdomen conic-ovate. Wings hyaline.

*Habitat*: Kuranda, Queensland. Jungle?

*Type*: No. Hy 1773, Queensland Museum.

**2. APROSTOCETUS IMPERIALIS** new species.

*Female*:—Length, 1.15 mm.

Dark metallic purple including dorsum of abdomen excepting a large round lemon yellow spot centrally at base; rest of abdomen and legs pale lemon yellow; antennæ pale dusky yellow, the second funicle joint subequal to the pedicel, the first a little longer; the third shortest of the funicle, a little longer than the first club joint which is longer than wide. Pedicel long.

*Male*:—Not known.

From two females captured August 2, 1913 by sweeping in forest (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1774, Queensland Museum, the above specimen on tag, the head on a slide.

**3. APROSTOCETUS VIRIDIFLAVUS** new species.

*Female*:—Length, 1.60 mm.

Intense greenish yellow, the wings hyaline; immaculate, flagellum darker, the funicle joints long, the second one a little the longest, the first a little the shortest, subequal to the rather long pedicel which is black above at base; distal club joint nipped, dusky, shortest (excluding the nipple); flagellum with scattered, long hairs. Mandibles tridentate. A dark area on abdomen just before tip.

*Male*:—Unknown.

Described from one female captured by sweeping in forest, June 27, 1913 (slight jungle was encountered).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1775, Queensland Museum, the above specimen on a tag, the head on a slide.

Later, on August 5, 1913, another female of this beautiful species was captured in the forest.

**4. APROSTOCETUS FLAVUS** new species.

*Female*:—Length, 1.18 mm.

Bright lemon yellow, the wings hyaline, the antennæ and legs concolorous; two cross-stripes of black-brown on dorsal abdomen just at the middle, the first or proximal one only represented by a short part on each side, medially widely separated. A long subfuscous spot down cephalo-mesal side of each axilla and the middle of each half of the scutum is embrowned or stained; pronotum with a short, tolerably wide cross-marking at meson. Propodeum with a short median carina, its cephalic margin fuscous. Funicle joints all a little longer than wide, shorter than the elongate pedicel; ring-joint large. Mandibles tridentate.

*Male*:—Not known.

Described from one female captured by sweeping on the forest downs, July 14, 1912.

*Habitat*: Hughenden, Queensland.

*Type*: No. Hy 1776, Queensland Museum, the above specimen on a tag, the head on a slide.

**5. APROSTOCETUS MARGIVENTRIS** new species.

*Female*:—Length, 1.20 mm.

Dark metallic purple, the wings hyaline, the abdomen, knees, tibiæ and tarsi pale lemon yellow, the rest of the legs concolorous; abdomen margined down each side rather broadly with metallic purple nearly to tip and crossed on the distal half by thin, rather faint purplish stripes; immediate tip of abdomen purple and the base very narrowly so. Antennæ pale, the club rather dusky. Second and third funicle joints subequal, distinctly longer than the first and subequal to the pedicel which is purplish above at base. Club with a short terminal spine. Mandibles tridentate.

*Male*:—Not known.

Described from a single female captured by sweeping in a jungle pocket, July 21, 1913 (A. P. Dodd):

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1777, Queensland Museum, the above specimen on a slide.

**6. APROSTOCETUS OBSCURUS** new species.

*Female*.—Length, 1.10 mm.

Yellowish brown, the wings hyaline, the pronotum, cephalic part of scutum and its median grooved line, inner sides of parapsides, propodeum, postscutellum and three cross-stripes on abdomen beginning just distad of middle, dusky blackish; antenna except scape and lower part of pedicel (white or pallid), vertex and oral region, dusky. Mandibles tridentate, scutellum with four grooves. Pedicel slightly shorter than first funicle joint, the next two joints longest of the flagellum, subequal; club terminating in a long seta, the flagellum cylindrical. First funicle joint over twice longer than wide.

*Male*.—Not known.

Described from one female captured by sweeping in jungle, July 26, 1913.

*Habitat*: Meerawa (Cairns), Queensland.

*Type*: No. Hy 1778, Queensland Museum, the above specimen on a slide, with type head of *Quadrastichus aeneus* Girault.

**7. APROSTOCETUS NIGRITHORAX** new species.

*Female*.—Length, 1.15 mm.

Black, the wings hyaline, the abdomen brownish, lemon yellow at base, the legs lemon yellow (coxae not seen); inner margins of parapside yellow; antennae dusky yellowish, the funicle joints all subquadrate, the first a little the longest, somewhat shorter than the pedicel.

*Male*.—Not known.

Described from one female captured by sweeping young eucalypts, April 20, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1779, Queensland Museum, the above specimen on a tag, an antenna on a slide.

**8. APROSTOCETUS SEXGUTTATUS** new species.

*Female*.—Length, 0.80 mm.

Golden yellow and like *flavus* but on dorsal abdomen along proximal half there is a line of three rather large spots down each side; the scutum is not noticeably embrowned and there is a fuscous dot on pronotum at latero-caudal angle. Funicle joints subquadrate, the third a little longer, all shorter than the pedicel which is not elongate, only of moderate length. Club with a minute nipple, its middle joint subtransverse.

*Male*.—Not known.

From one female captured by sweeping in forest, banks of Cape River, December 26, 1913.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1780, Queensland Museum, the above specimen on a slide. I have compared this species with the type of *Epentastichus* which it so closely resembles; the antennal differences are easily seen, since here the pedicel is not elongate but usual in length. It is necessary that more material be seen, however, before it can be stated positively that the club is 3-jointed, plainly indicated in the above specimen of *sexguttatus*.

**9. APROSTOCETUS MONTANUS** new species.

*Female*:—Length, 1.33 mm.

Dark metallic green, the wings hyaline; sculpture usual for the tribe; legs intense lemon yellow except the coxæ (second coxæ yellow except at base); proximal half or more of hind femora concolorous, abdomen suffused with brownish; tegulæ, side of prothorax (propluræ), cephalic margin of pronotum and a narrow transverse line near caudal margins of same on each side of meson, bright lemon yellow. Antennæ yellow, the pedicel dusky at base, the first funicle joint a little longer than the others which are subquadrate, each a little shorter than the pedicel. Club with a very minute nipple. Mandibles weakly tridentate, the head more or less yellowish about the face.

*Male*:—Not known.

Described from a female captured by sweeping forest along top of second coast range of mountains (1,500 feet), May 21, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1781, Queensland Museum, the above specimen on a tag, the head on a slide.

The pronotum, between the marginal lines of yellow, is more or less yellow, leaving a rather broad concolorous path down the meson. This species is probably a *Syntomosphyrum*.

**10. APROSTOCETUS PURPUREUS** new species.

*Female*:—Length, 1.30 mm.

Very much like *montanus* but purple, the caudal margin of pronotum, head (except occiput), a large spot near each lateral margin of pronotum, propleuræ, inner and cephalic margins of the axillæ, base of abdomen on each side and a narrow cross-stripe just before tip, lemon yellow; abdomen brown. Funicle joints all wider than long, all distinctly shorter than the pedicel, joints 2 and 3 nearly twice wider than long; club nipple small but distinct. Mandibles with three long slender teeth.

Described from one female captured in the forest, November 29, 1911.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1782, Queensland Museum, the above specimen on a tag, the head on a slide.

**11. APROSTOCETUS FLAVICAPUT** new species.

*Female*: Length, 1.20 mm.

Dark metallic green, the wings hyaline, the abdomen longer than the thorax, conic-ovate, dark; legs except coxæ, white, the head yellow, the antennæ dusky yellow, the scape and pedicel paler; joints 2 and 3 of funicle subequal, shortest, joint 1 longer than the pedicel which is subequal to joint 2 of the funicle which is somewhat longer than wide; club with a small nipple. Propodeum very short at the meson. Mandibles tridentate.

*Male*:—Not known.

Described from one female captured from a window in an iron foundry, December 26, 1911.

*Habitat*: Mareeba, Queensland.

*Type*: No. Hy 1783, Queensland Museum, the above specimen on a tag, the head on a slide.

**12. APROSTOCETUS GOBIUS** new species.

*Female*.:—Length, 0.89 mm.

Chocolate brown, the scape and pedicel pallid, the funicle and club pallid dusky, the legs yellow brown; scutellum darker; wings hyaline, the marginal fringes lengthened somewhat, the stigmal vein long and very slender, the postmarginal developed somewhat. Ovipositor distinctly but shortly extruded. Propodeum with a median carina only. Antennæ slender, filiform and loosely jointed, funicle 1 distinctly longer than the rather long pedicel (which narrows proximad), funicle 3 subequal to pedicel and first club joint; distal club joint with a long terminal spine. Funicle with scattered, soft long hairs. Scape slender. Mandibles tridentate.

*Male*.:—Not known.

Described from one female captured by sweeping in jungle, September 14, 1913 (A. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1784, Queensland Museum, the above female on a tag, the head on a slide with the type of *Ooetonus gigas* Girault.

**13. APROSTOCETUS POMOSUS** new species.

*Female*.:—Length, 1.10 mm.

Golden yellowish brown, the wings hyaline; pronotum, all of abdomen except at base and tip rather broadly, cephalo-lateral portion of propodeum and the flagellum black; scape and distal half of pedicel pale yellowish, the flagellum filiform, clothed with scattered long hairs and as in *gobius* but the funicle joints are all equal, or 2 and 3 slightly longer than 1, the pedicel is shorter than in *gobius*, distinctly shorter than funicle 3. Propodeum with a pair of delicate median carinæ. Postmarginal vein wholly absent. Mandibles tridentate.

*Male*.:—Not known.

Described from one female captured by sweeping in the jungle, September 15, 1913 (A. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1785, Queensland Museum, the above specimen on a slide.

TABLE TO THE SPECIES OF *APROSTOCETUS* WESTWOOD OF AUSTRALIA.

## FEMALES.

Metallic green or purple species.

Body wholly metallic green (excluding appendages).

Dark metallic green, the tibiæ and tarsi straw yellow, the femora washed with metallic; scape brown, the pedicel fuscous, rest of antenna black. Propodeum tricarinate; funicle joints each twice or more the length of the pedicel.

*kurandensis* Girault.

Body (excluding appendages) more or less yellow.

Dark metallic green, the wings hyaline; legs intense lemon yellow except coxæ; proximal half or more of hind femur green; tegulæ, propleuræ, cephalic margin of pronotum and a narrow transverse line near caudal margin of same on each side of meson, lemon yellow. Antennæ yellow, the funicle joints subquadrate, joint 1 a little longer.

*montanus* Girault.



Dark metallic purple; abdomen, knees, tibiae and tarsi pale lemon yellow; abdomen margined down each side rather broadly nearly to tip with purple and crossed on the distal half by thin faint purplish stripes. Joints 2 and 3 of funicle subequal, each distinctly longer than the first. *margiventris* Girault.

The same; hind margin of pronotum, head, a large spot near lateral margin on pronotum, propleuræ, inner and cephalic margins of axillæ, abdomen at base on each side and a stripe just before tip, lemon yellow. *purpureus* Girault.

Dark metallic purple; a large round yellow spot centrally at base of abdomen dorsad; venter of abdomen and legs lemon yellow; pedicel long, joint 3 of funicle shortest. *imperialis* Girault.

Dark metallic green, the head yellow, the legs white except coxæ; pedicel subequal to joint 2 of funicle. *flavicaput* Girault.

Black species.

Abdomen brownish, lemon yellow at base, the legs and inner margins of parapsides, yellow; funicle joints subquadrate, 1 a little the longest, slightly shorter than the pedicel. *nigrithorax* Girault.

Greenish, brownish or golden yellow species.

Lemon yellow, the antennæ and legs concolorous; two cross-stripes of fuscous on abdomen just at middle, the first widely interrupted at middle; a long dusky spot down cephalo-mesal side of each axilla; funicle joints all a little longer than wide, shorter than the elongate pedicel. *flavus* Girault.

Golden yellow; the same but there is a line of three rather large dots along each side of abdomen at proximal half and a fuscous dot on pronotum at latero-caudal angle. Pedicel not elongate, longer than the subquadrate funicle joints.

*sexguttatus* Girault.

Intense greenish yellow, non-metallic and immaculate; funicle joints long, 2 a little the longest, 1 subequal to the rather long pedicel which is black above at base; a dark area on abdomen just before tip. *viridiflavus* Girault.

Yellowish brown; pronotum, cephalic part of scutum and its median sulcus, inner sides of parapsides, propodeum, postscutellum and three cross-stripes on abdomen just distad of middle, blackish; joints 2 and 3 of funicle longest, 1 over twice longer than wide. *obscurus* Girault.

(See descriptions of *gobius* and *pomorus*.)

#### GENUS OOTETRASTICHUS Perkins.

Synonym: *Trichaporoides* Girault.

The original description of this genus is not very clear but the elongated funicle joints and the long 2-jointed club are characteristic and I have very little doubt but that I have correctly described the genus under the name of *Trichaporoides* which is thus a true synonym. The antennæ show four ring-joints.

#### 1. OOTETRASTICHUS BEATUS Perkins. Genotype.

*Ootetrastichus beatus* Perkins, 1905, pp. 263-265, pl. xx., fig. 8.

*Ootetrastichus beatus* Perkins, 1912, pp. 7, 9, 10.

Pale or greenish yellow marked with dark fuscous or black as follows: Two subcontiguous spots on mesonotum in front, extending on to the pronotum and there connected; one at each

posterior angle of pronotum; anterior angles of parapsides and of the axillæ; a line and one or two obscure marks near the tegulæ; propodeum toward the sides; four or five pairs of marginal dots on the abdomen dorsad, the ovipositor and the tip of the tarsi. In certain lights, these dark markings show metallic green. Only slightly variable.

*Habitat*: Queensland, Australia; Fiji.

*Types*: (?) In the collections of the Hawaiian Sugar Planters' Association, Honolulu.

**2. OOTETRASTICHUS FASCIATIVENTRIS** (Girault). Female. Type of *Trichaporoides*.

Light lemon yellow marked with metallic greenish black or purplish as follows: The abdomen with about five transverse stripes and a longitudinal row of three spots on each side, the distal two just distad of the first and second stripes respectively; an inverted subcordate marking at the middle of the cephalic margin of scutum, the dorsal aspect of propodeum, the axillæ and a large spot, just before base (cephalad) cephalo-mesad on each parapside; a short elliptico-transverse, oblique dash just cephalad of the parapside; the distal tarsal joints and the tip of the valves of the ovipositor. Differs from *beatus* in the rather faint abdominal stripes, the wholly purplish propodeum and the solid marking on cephalic scutum.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1786, Queensland Museum.

**3. OOTETRASTICHUS VIRIDITHORAX** Girault. Female.

*Trichaporoides viridithorax* Girault.

Bright metallic green, the abdomen very pale yellow with the centre broadly blackish along the meson from apex proximad a little more than half way to base, this coloration verging to metallic green at apex; a line of blackish around base and down each side (dorsal aspect) for a quarter the length of the abdomen; rather faint cross-stripes on abdomen. Lower half of face yellowish. Hind coxa concolorous, rest of legs pale yellow. Pedicel as long as the third funicle joint.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1787, Queensland Museum.

**4. OOTETRASTICHUS FLAVUS** (Girault). Female.

*Trichaporoides flavus* Girault.

Differs from *fasciiventris* in lacking the metallic coloration, in having but four abdominal stripes, in having the pedicel plainly shorter than the distal funicle joint and in being brownish yellow, the thorax obscurely dusky, more especially at cephalic margin of scutum centrally.

*Habitat*: Babinda (Cairns), Queensland. Jungle.

*Type*: No. Hy 1788, Queensland Museum.

**5. OOTETRASTICHUS NYMPHA** (Girault). Female.

*Trichaporoides nympha* Girault.

Differing from *viridithorax* in having the proximal half of the abdomen pale lemon yellow and the entire head the same color; also the hind coxa is yellow like the rest of the legs.

Sides of thorax around wing insertion and the prepectus, pale yellowish. Ocellar area metallic green. Scape yellow, the funicle joints subequal, the first somewhat longest.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1789, Queensland Museum.

#### 6. OOTETRASTICHUS GROTIUSI new species.

*Female*:—Length, 1.25 mm.

Bright metallic green, the wings hyaline, the head, legs except the concolorous hind coxa and the black distal tarsal joints, abdomen except distal fourth which is metallic green and three or four cross-stripes of dusky at middle, pale lemon yellow; ocellar area colored somewhat. Sides of pronotum lemon yellow, also the prepectus. First funicle joint distinctly longer than the second which is subequal to the third. A black stripe across between the eyes (but on the occiput?). Allied with *nympha*.

*Male*:—Not known.

Described from one female captured by sweeping in the forest, July 9, 1913 (A. P. Dodd).

Dedicated to Hugo Grotius.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1790, Queensland Museum, the above specimen on a tag, the head on a slide.

Another female was captured in a similar situation, August 3, 1913.

#### 7. OOTETRASTICHUS INGHAMENSIS new species.

*Female*:—Like the preceding (*grotiusi*) but the distal third of abdomen green, the cross-stripes absent, but the distal green continued up each margin to base. Prepectus concolorous and propleura also.

From one female captured by sweeping a boggy meadow, July 17, 1912.

*Habitat*: Ingham, Queensland.

*Type*: No. Hy 1791, Queensland Museum, the above specimen on a slide.

#### 8. OOTETRASTICHUS LUSTRIS new species.

*Female*:—Length, 1.25 mm.

Like *sublustris* but the margins of the eyes are yellowish and the scape all dusky, the antennæ differing as follows:—The funicle joints are shorter and stouter, also the club whose two joints are subequal (in *sublustris*, the proximal joint distinctly shorter than the distal); the first funicle joint is not more than twice its width (somewhat over thrice in *sublustris*); the pedicel is subequal to the distal club joint (distinctly shorter than it is in *sublustris*). The three teeth of the mandibles one short but distinct (in *sublustris* the two inner teeth are hardly separated).

*Male*:—Not known.

Described from one female captured by sweeping in forest, June 27, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1792, Queensland Museum. The above specimen on a tag, the head on a slide.

**9. OOTETRASTICHUS SUBLUSTRIS** new species.

*Female*:—Length, 1.25 mm.

Differing from the other species in being wholly metallic dark green, the scutum coppery, the legs white except the concolorous hind coxa, the abdomen striped with white due to the white incisions showing; scape white, rest of antennæ black, the first funicle joint longest, not as long as the club, the third funicle joint distinctly longer than the pedicel.

*Male*:—Not known.

Described from one female captured by sweeping grass in a forest streamlet, July 9, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1793, Queensland Museum, the above specimen on a slide.

**10. OOTETRASTICHUS MISERICORDIA** new species.

*Female*:—Length, 1.05 mm. Slender and with the habitus somewhat of *Gonatocerus*.

Dark aeneous green, the head above the antennæ (including vertex and upper fourth, more or less, of occiput), scape, pedicel and ring-joints and a rather broad band around base of abdomen, pale lemon yellow, also the legs excepting the concolorous hind coxa. Rest of abdomen dusky, submetallic at distal half; rest of antennæ dusky, the first funicle joint a little shorter than the club, the second and third subequal to the pedicel.

*Male*:—Not known.

Described from one female captured by sweeping jungle along a forest streamlet, June 16, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1794, Queensland Museum, the above specimen on a slide.

**11. OOTETRASTICHUS CONSIMILIS** new species.

*Female*:—Length, 1.50 mm.

Like *flavus* but the pedicel as long as the distal funicle joint and the pronotum and propodeum are black, the abdomen margined down each side with fuscous nearly to tip and with four cross-stripes of fuscous (no other markings); upper part of occiput transversely fuscous. Distal club joint not greatly longer than the proximal.

*Male*:—Not known.

Described from one female captured by sweeping the jungle along a forest streamlet, December 1, 1912 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1795, Queensland Museum, the above specimen on a tag, the head on a slide.

**12. OOTETRASTICHUS SILVENSIS** new species.

*Female*:—1.45 mm.

Metallic green, tinged with purple and like *speciosissimus* Girault but the whole head concolorous and excepting for an elliptical spot in centre at base, nearly the proximal half of abdomen all around pale whitish; the legs are white except the concolorous hind coxa (white, however, at distal third); scape white, the flagellum dusky yellow, the first funicle joint distinctly shorter than the club, the pedicel distinctly shorter than the third funicle joint.

*Male*:—Unknown.

Described from one female captured by sweeping a jungle-edged forest streamlet, January 3, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1796, Queensland Museum, the above specimen on a slide.

**13. OOTETRASTICHUS GUTTATA** new species.

*Female*:—Length, 1.15 mm.

Orange yellow; wings hyaline, other appendages concolorous; cephalic two thirds of axilla, five large subquadrate spots along each side of abdomen and a large oval spot in centre of abdomen at about proximal third, fuscous. First funicle joint not as long as the club but distinctly the longest. Tip of valves of ovipositor black.

*Male*:—Not known.

Described from a female captured by sweeping low vegetation in the forest on the side of Mount Pyramid, November 21, 1911 (elevation about 500 feet).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1797, Queensland Museum, the above specimen on a slide.

**14. OOTETRASTICHUS SPECIOSISSIMUS** new species.

*Female*:—Length, 1.40 mm.

Metallic purple, the face centrally above antennæ, the mesal margins of each eye, the scape, ring-joints and pedicel, the legs (except the concolorous hind coxa) and somewhat over proximal third of abdomen pale lemon yellow; antennæ blackish, also the pedicel above. The yellowish proximal third of abdomen crossed distad by a cross-stripe of narrow dusky and distad of this stripe, the yellow is narrowed by the short space being margined at each side with purplish. A very narrow stripe, triangularly accented, at immediate base of abdomen. First funicle joint as long as the club, the other two more or less equal (not subequal), the third somewhat shorter than the pedicel.

*Male*:—Not known.

Described from one female captured by sweeping jungle, May, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1798, Queensland Museum, the above specimen on a tag, the head on a slide with the type head of *Dialomella australiensis* Girault.

**15. OOTETRASTICHUS SPECIOSUS** new species.

*Female*:—Length, 1.60 mm.

Metallic aeneous green, the mouth, the legs except last two pairs of coxæ, a stripe across base of abdomen broken by a small green triangle at immediate centre of base and a broad stripe down each side (lateral aspect) from base nearly to apex, golden or lemon yellow. Wings hyaline. First funicle joint nearly twice the length of the third. Scape and pedicel suffused with yellow.

*Male*:—Not known.

Described from one female captured by sweeping in forest, July 9, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1799, Queensland Museum, the above specimen on a tag, the head on a slide.

**16. OOTETRASTICHUS PROSERPINENSIS** new species.

*Female*:—Length, 2 mm. Slender.

Dark metallic aeneous green, the broad wings hyaline, the venation, legs (excepting hind coxæ, the others not seen), head below the antennæ and the scape pale lemon yellow; funicle and club black (antennæ lost before examined under the microscope). A deep orange yellowish spot in centre of abdomen just out from base. Thorax densely sculptured as in *Tetrastichus*, the propodeum with a long median carina, densely polygonally punctate. Last tarsal joint black. Mandibles 4-dentate.

*Male*:—Not known.

Described from a single female captured on a window, November 4, 1912.

*Habitat*: Proserpine, Queensland.

*Type*: No. Hy 1800, Queensland Museum, the above specimen on a slide.

TABLE OF THE AUSTRALIAN SPECIES OF *OOTETRASTICHUS* PERKINS.

FEMALES.

I. Wholly metallic dark green (excluding appendages).

Legs except hind coxæ, and the scape white; rest of antennæ black; funicle 3 distinctly longer than the pedicel, funicle 1 longest, thrice longer than wide, not as long as the club.  
*sublustris* Girault.

II. Metallic green or purple (excluding appendages), marked more or less with yellow.

Thorax entirely metallic.

Abdomen wholly metallic.

Wholly dark metallic green except the margins of the eyes; scape dusky; like *sublustris* but the two club joints subequal, the funicle joints shorter and stouter, funicle 1 twice its width; pedicel subequal to funicle 3.

*lustris* Girault.

Abdomen marked more or less with yellow.

Metallic green.

Bright green, the abdomen very pale yellow, the centre from apex broadly blackish along the meson a little more than half way to base and around base and along each side dorsad for the proximal fourth margined with black; pedicel as long as the first funicle joint. Legs pale, except hind coxæ. Faint cross-stripes on abdomen. Lower face yellow.  
*viridithorax* Girault.

Deep aeneous green; a deep orange yellow spot in centre of abdomen just out from base; legs and face as in preceding species.

*proserpinensis* Girault.

Aeneous green, the mouth, legs except last two pairs of coxæ, a stripe across base of abdomen and down each side (lateral aspect) from base nearly to apex, golden yellow; funicle 1 nearly twice the length of 3.

*speciosus* Girault.

The same; the head above the antennæ, scape, pedicel and a rather broad band around base of abdomen pale lemon yellow; also the legs; hind coxa metallic; abdomen dusky verging to metallic distad of middle; joints 2 and 3 of funicle subequal to pedicel.

*misericordia* Girault.

The same but tinged with purple; scape, legs (except hind coxa) and nearly proximal half of abdomen whitish; pedicel distinctly shorter than funicle 3.

*silvensis* Girault.

(See description of *inghamensis*.)

Metallic purple.

Face above antennæ centrally, mesal margins of eyes, scape, pedicel, legs (except hind coxa) and somewhat over proximal third of abdomen, pale lemon yellow, the yellow of the abdomen crossed distad by a cross-stripe of narrow dusky; funicle 1 as long as the club.

*speciosissimus* Girault.

Thorax mostly but not wholly metallic.

Hind coxa yellow like the rest of the legs.

Bright green, the head, proximal half of abdomen, sides of thorax around wing insertion and the prepectus, pale lemon yellow. Funicle 1 somewhat the longest.

*nympha* Girault.

Hind coxa metallic, not like the rest of the legs.

Bright metallic green, the head, sides of pronotum, the prepectus and proximal three fourths of abdomen pale lemon yellow; abdomen with three or four dusky cross-stripes at middle. Funicle 1 distinctly longer than either 2 or 3 which are subequal.

*grotiusi* Girault.

### III. Pale lemon yellow or yellowish brown or orange.

Pale yellow marked with metallic green.

Two subcontiguous spots on mesonotum cephalad (extending on to the pronotum and there connected), one on each hind angle of pronotum, cephalic angles of the parapsides and of the axillæ, sides of propodeum and four or five pairs of marginal dots on dorsal abdomen, blackish or metallic.

*beatus* Perkins.

An inverted subcordate marking on cephalic scutum, dorsal aspect of propodeum, the axillæ, a large spot on each parapside cephalo-mesad, five transverse stripes across abdomen and three pairs of marginal spots, the distal two just distad of the first and second stripes respectively, metallic greenish or purple.

*fasciiventris* Girault.

Brownish or orange yellow.

Brownish yellow, the thorax obscurely dusky especially at cephalic scutum centrally; abdomen with four transverse stripes; pedicel plainly shorter than the distal funicle joint.

*flavus* Girault.

The same but the pronotum and propodeum black, the abdomen margined down each side with fuscous nearly to tip and with four cross-stripes; pedicel as long as funicle 3.

*consimilis* Girault.

Orange yellow, including appendages; cephalic two thirds of axillæ, five large subquadrate spots along each side of abdomen and a large oval spot in centre of abdomen at about proximal third, fuscous. Funicle 1 distinctly the longest but distinctly shorter than the club.

*guttata* Girault.

OOTETRASTICHELLA new genus.

Differs from *Ootetrastichus* Perkins in having the abdomen at tip produced into a long slender process, the ovipositor exerted at length; the process above and two thirds the length of the exerted portion of ovipositor which is as long as the abdomen.

*Type*: The following species.

1. OOTETRASTICHELLA LONGIVENTRIS new species.

*Female*:—Length, 2.00 mm., excluding the ovipositor which is exerted for a length nearly equal to that of the abdomen.

Brown, the head and body (above, especially mesonotum) with aeneous purplish greenish tinges, the very broad wings subhyaline; scape and legs pale yellowish brown, including the coxæ. Antennæ black, the three funicle joints very long and slender, the last two subequal, the first longer than them nearly as long as the club of which the distal joint is the longer of the two; first ring-joint large (four ring-joints). Pedicel about half the length of joint 2 of the funicle. Face below antennæ yellowish. Abdomen at tip produced into a long slender process nearly two thirds the length of the exerted part of the ovipositor.

*Male*:—Not known.

From one female captured by sweeping in virgin jungle, December 31, 1911.

*Habitat*: Australia—Malanda, North Queensland.

*Type*: No. Hy 1801, Queensland Museum, the above specimen on a tag, the antennæ and fore wings on a slide.

GENUS TRICHAPOROIDEELLA Girault.\*

Differs from *Ootetrastichus* Perkins in having the club solid and in bearing but three ring-joints. Scutum simple.

1. TRICHAPOROIDEELLA AENEA Girault. Female. Genotype.

Dark metallic green, the wings hyaline, the legs lemon yellow, the coxa metallic at base; antennæ black, the scape and pedicel with some yellow; funicle 1 subequal to the long club; propodeum with a median carina.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1802, Queensland Museum.

\* See p. 241, footnote.



**2. TRICHAPOROIDELLA DECORA** new species.

*Female*:—Length, 2.10 mm.

Wholly dark metallic green excepting face below antennæ (and the corresponding part of occiput), margins of eyes on vertex narrowly, the scape (except along upper edge) and legs (except hind coxa) which are lemon yellow (also pedicel slightly beneath). Club slightly longer than the first funicle joint which is over one and a half times longer than the pedicel, the latter distinctly shorter than the third funicle joint, two thirds (about) the length of the club. Propodeum with a median carina, densely scaly, rougher than the usual fine sculpture of rest of thorax.

*Male*:—Not known.

Described from one female captured by sweeping grass along a forest streamlet, August 7, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1803, Queensland Museum, the above specimen on a tag, the head on a slide.

**3. TRICHAPOROIDELLA SUBAENEA** new species.

*Female*:—Length, 1.25 mm.

Like *aenea* but the lower part of the face, an ovate spot in the centre of the abdomen at base and the abdomen at proximal fifth beneath, golden yellow. Propodeum densely scaly.

*Male*:—Not known.

Described from one female captured by sweeping in forest, July 9, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1804, Queensland Museum, the above specimen on a tag, the head on a slide.

**4. TRICHAPOROIDELLA DUBIA** new species.

*Female*:—Length, 2.30 mm.

Like *aenea* but the face below antennæ yellow; propodeum as in *decora*, punctate but the surface no coarser in grain than the scaly scutellum. Median carina well developed and as in *decora*. One mandible bidentate, the second tooth broadly truncate, the other the same but a scooped-out portion intervenes between the two teeth and the second tooth is only slightly broad at apex and there obliquely truncate. In *decora* both mandibles are tridentate, the two outer teeth acute and distinct; in *subaenea* they are about the same. Spiracle small, round, over its own width from the postscutellum; no lateral carina. The legs are intense lemon yellow while those of *decora* are pale. Tips of coxæ yellow.

*Male*:—Not known.

*Habitat*: Ayr, Queensland. Forest.

*Type*: No. Hy 1805, Queensland Museum, the above specimen on a tag, the head on a slide.

**5. TRICHAPORODELLA ELEGANTA** new species.

*Female*:—Length, 1.30 mm.

Golden yellow, the propodeum, all of scutum except lateral margins, scutellum between the first grooves (median line broadly nearly to first grooves), meson of pronotum broadly, cephalic half or less of each parapside, over cephalic half of each axilla (except a small space centre of cephalic margin) and the margins of abdomen brokenly along slightly over cephalic half, dark metallic green; also thorax just laterad of each axilla and a spot on abdomen at meson dorsad at distal three fourths; abdomen with about four dusky cross-stripes along the margined proximal part and an obscure fifth one across at the isolated spot. Tip of ovipositor valves black. Propodeum scaly. Antennæ dusky; funicle 1 longest, 3 much shorter, slightly longer than the pedicel; club with a stout nipple, more or less equal to joint 1 of funicle. Wings hyaline. Mandibles tridentate. Propodeum without true lateral carinæ.

*Male*:—Not known.

Described from one female captured by sweeping in forest, February 20, 1913 (A. P. Dodd). A second specimen was seen later.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1806, Queensland Museum, the above specimen on a tag, the head on a slide.

## GENUS SELITRICHODELLA Girault.

Antennæ 7-jointed with one ring-joint, the club solid. Scutum with a median sulcus, the scutellum with four grooves. Propodeum tricarinate, the spiracle minute, round. Male antennæ 8-jointed, the funicle 4-jointed.

**1. SELITRICHODELLA MIRA** Girault. Female, male. Genotype.

Metallic purple, the abdomen light lemon yellow with a broad purplish stripe down each side from base to distal third or fourth. Appendages yellow, the wings hyaline. Distal two funicle joints subequal, longest of the funicle.

In the males the distal third of abdomen is purple, the marginal stripe absent.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1807, Queensland Museum.

**2. SELITRICHODELLA ACUMINATA** new species.

*Female*:—Length, 1.55 mm.

Purplish black, the wings hyaline; lateral margins of scutum narrowly, scutellum laterad of first groove and distal half or more, parapsides, cephalic portion of axilla, the legs and antennæ pale lemon yellow. Scutum very long; propodeum with a short, broad median carina. Abdomen long and conical, sordid yellowish. Flagellum dusky yellow, the funicle joints subequal, all somewhat longer than wide, combined longer than the club which bears a small nipple-like spine at tip; pedicel slightly shorter than the funicle joints. Mandibles tridentate.

*Male*:—Not known.

Described from a female captured by sweeping in forest near the banks of Cape River, January 8, 1913.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1808, Queensland Museum, the above specimen on a tag, the head on a slide.

## GENUS NEOMPHALOIDES Girault.

Scutum with a median groove, the scutellum with four; propodeum with a pair of median carinae. Antennae 11-jointed with three ring-joints, the club 3-jointed; abdomen distad produced into a moderately long stylus.

1. **NEOMPHALOIDES CINCTIVENTRIS** Girault. Female. Genotype.

Dark metallic green, the thorax bronzy, the abdomen above at base with a broad orange band; legs, ventral half of occiput and face and the cheeks, pale yellow; scape and pedicel brownish, rest of antenna black. Wings hyaline. Vertex yellowish along the eye margins. Funicle joints elongate, also the pedicel which is subequal to funicle 3; funicle 1 nearly as long as the club.

*Habitat*: Sydney, New South Wales.

*Type*: No. Hy 1197, Queensland Museum.

## GENUS SELITRICHODES Girault.

Antennae 8-jointed with two ring-joints, the club solid; scutum simple, the scutellum with a narrow groove along each side of the meson.

1. **SELITRICHODES FASCIATIVENTRIS** Girault. Female. Genotype.

Lemon yellow, the dorsal abdomen with two transverse black stripes across it both interrupted at the meson; a black marginal spot at base on each side. Appendages concolorous, the wings hyaline. Pedicel longer than any of the funicle joints.

*Habitat*: New South Wales.

*Types*: No. Hy 1198, Queensland Museum.

2. **SELITRICHODES VARIGATUS** new species.

*Female*:—Length, 1.15 mm.

Honey yellow, the legs concolorous, the wings hyaline; two triangular spots on the face of the pronotum, the propodeum and three transverse stripes across the abdomen just before middle, black. Scutum on each side of meson, brownish. Antennae dusky yellow, the pedicel longer than any of the funicle joints. Scutellum with four grooved lines; scutum simple. Mandibles 4-dentate.

*Male*:—Not known.

Described from a single female captured by sweeping in forest, August 17, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1909, Queensland Museum, the above specimen on a tag, the head on a slide.

3. **SELITRICHODES FLAVA** new species.

*Female*:—Length, 1.20 mm.

Pale lemon yellow, the wings hyaline; a minute black dot just mesad of insertion of fore wing and another on each lateral angle of pronotum; otherwise immaculate. Mandibles tridentate. Otherwise as in *varigatus*.

*Male*:—Not known.

Described from one female captured by sweeping in open forest, April 18, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1810, Queensland Museum, the above specimen on a tag.

GENUS TETRASTICHOMORPHA Girault.

Differing from *Tetrastichus* Haliday in that the club is solid and there are four ring-joints.

1. **TETRASTICHOMORPHA FLAVA** Girault. Female. Genotype.

Cadmium yellow, the abdomen lemon yellow, also the legs, scape and pedicel; a black marginal stripe on dorsal abdomen from base a little over a third the distance to apex; extreme apex of each parapside, black. Funicle 1 four or more times longer than wide, subequal to the club.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1811, Queensland Museum.

2. **TETRASTICHOMORPHA BICOLOR** new species.

*Female*:—Length, 1.20 mm.

Brownish black, the wings hyaline, the hind margins of the eyes, the vertex, the mesal margin of each parapside (except cephalad) and the antennæ yellowish white, also the legs (except coxæ and hind femora) and sutures of thoracic pleura. Funicle joints all a little longer than wide, subequal to the pedicel.

*Male*:—Not known.

Described from two females captured by sweeping in the forest, April 9, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Types*: No. Hy 1812, Queensland Museum, the above specimens on a tag, the heads on a slide with the type head of the following species.

3. **TETRASTICHOMORPHA PARTISCUTELLUM** new species.

*Female*:—Length, 1.15 mm.

The same as the preceding species but the median line of scutum and the four grooved lines of scutellum are white also.

*Male*:—Not known.

Described from a single female captured with the preceding species.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1813, Queensland Museum, the above specimen on a tag, the head with the type appendages of *bicolor*.

## GENUS NEOTETRASTICHODES Girault.

Differing from *Tetrastichodes* <sup>Ashm.</sup> ~~Girault~~ in bearing four ring-joints; funicle 3-jointed.

1. NEOTETRASTICHODES FLAVUS Girault. <sup>Male +</sup> Female. Genotype.

Light orange yellow, the appendages concolorous, the wings hyaline; middle of face and dorsum of abdomen obscurely dusky; funicle joints subequal, each slightly shorter than the pedicel. Male abdomen dusky with a white area at base; the male funicle is 4-jointed, the last joint longest, the antennæ with long hairs.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1814, Queensland Museum.

## 2. NEOTETRASTICHODES AENEUS new species.

*Female*:—Length, 1.35 mm. Short and stout, the abdomen globular.

Dark metallic green, the wings hyaline; coxæ dusky, the legs pale yellowish except the dusky hind femur; antennæ dusky yellowish, the long pedicel black, the scape compressed, the three funicle joints stout, subequal, subquadrate, each distinctly shorter than the elongate pedicel. With the usual fine tetrastichine sculpture.

*Male*:—Not known.

Described from a single female captured by sweeping in forest, August 4, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1815, Queensland Museum, the above specimen on a tag, the head on a slide.

Another female was obtained the following day in the same place. This species differs from the type species in having a short propodeum and globular abdomen.

## 3. NEOTETRASTICHODES CANDIDUS new species.

*Female*:—Length, 1.60 mm.

Brilliant metallic green, the legs except last two pairs of coxæ intense lemon yellow, the wings hyaline. Like *aenea* structurally but the distal two funicle joints distinctly wider than long, joint 1 distinctly longer than them, subquadrate. The elongate pedicel orange. Mandibles 4-dentate, the first two teeth apparently minute and shortest. Scape enlarged at apex and with a coarse scaly sculpture.

*Male*:—Not known.

Described from one female captured by sweeping in forest, September 12, 1913 (A. P. Dodd.)

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1816, Queensland Museum, the above specimen on a tag, the head on a slide.

The two species *aeneus* and *candidus* have short propodeums, the abdomen short and globular, the scape more or less distinctly enlarged and with a coarse scaly sculpture.

(*candidus*), the pedicel elongate. They form at least a subgenus. Their ring-joints are large and distinct like those in the Pteromalidæ. In *aeneus*, the scape is compressed along the middle and without coarse scaly sculpture, while in the third species it is enlarged at apex and coarsely scaly. The species *candidus* has a more distinct terminal nipple on the club than has *aeneus* (type antennæ of both species re-examined).

GENUS EPITETRASTICHUS Girault.

Synonym: *Pentastichodes* Girault.

Differs from *Tetrastichus* Haliday in bearing four ring-joints; the propodeum is variable, sometimes very short, with a short median carina, the abdomen conic-ovate, the form robust. (Type species re-examined.)

1. EPITETRASTICHUS SPECIOSISSIMUS Girault. Female. Genotype.

Golden yellow, characteristically marked with black, thus: A large obconical area from cephalic margin of scutum to proximal third of scutellum; most of interior of each axilla; a triangular spot at cephalo-mesal margin of parapside, lateral pronotum, propodeum, much of mesopleurum and sides of propodeum and six broad stripes across the abdomen, each stripe with a large, roundish yellow spot centrally on each side of meson, forming a paired longitudinal row (six pairs, the fifth largest); vertex and centre of occiput. Funicle 1 longer than the pedicel, joint 3 shorter than it. First ring-joint distinct, the others transverse-linear.

*Habitat*: Babinda and Nelson (Cairns), Queensland. Grass and forest.

*Type*: No. Hy 1817, Queensland Museum.

A female was captured at Nelson by sweeping in forest, August, 1913.

2. EPITETRASTICHUS FLAVIPOSTSCUTELLUM (Girault). Female. Type of

*Pentastichodes* Girault.

*Pentastichodes flavipostscutellum* Girault.

Black, the postscutellum and all of abdomen except tip of ovipositor valves, lemon yellow, also the legs and antennæ (coxæ not seen). Funicle 1 subequal to the pedicel, the distal two joints subequal; mandibles tridentate. Propodeum with a median carina, scaly.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1818, Queensland Museum.

A second female of this species has been seen, captured with the type specimen.

3. EPITETRASTICHUS LONGFELLOWI new species.

*Female*:—Length, 1.30 mm.

Dark metallic green, the wings hyaline, the legs including coxæ, scape and pedicel, orange yellowish, the rest of antenna black. Sculptured finely as in *Tetrastichus*. Cephalic femur fuscous, the cephalic coxa concolorous. Ring-joints yellowish, the first funicle joint elongate, as long as the club, a third longer than the pedicel, second and third each in turn distinctly shorter, the third subequal to the long pedicel, half or more the length of the club;

the latter paler toward tip. Reticulation of propodeum coarser or less dense. Abdomen yellowish at extreme base. Propodeum with two narrow median carinæ, paired but diverging widely at about the middle. *Abdomen with a short petiole which is distinct.*

*Male*:—Not known.

Described from two females captured by sweeping in jungle country, June, 1913 (F. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1819, Queensland Museum, one of the above specimens on a tag, the head on a slide with the type appendages of *Eurydinotella viridicoxa* Girault.

Respectfully dedicated to H. W. Longfellow.

#### 4. EPITETRASTICHUS RUFISCUTELLUM new species.

*Female*:—Length, 1.65 mm.

Black, the abdomen dusky, suffused with yellowish across extreme base and with some more or less obscure cross-stripes of black, the distal third of scutum, the scutellum, parapsides except at cephalic apex, caudal third of each axilla and the tegulæ deep orange yellow; face ventrad yellowish, also the vertex more or less. Legs lemon yellow; pronotum laterad and extreme cephalo-lateral angle of scutum, orange yellow. Scape yellowish, the rest of antennæ dusky, the funicle joints ovate, the first a little the longest, subequal to the pedicel which is of usual length. Antennæ with five (?) ring-joints. Mandibles 3-dentate. Club with a prominent nipple.

*Male*:—Not known.

Described from one female captured by sweeping along a jungle-edged forest streamlet. April 14, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1820, Queensland Museum, the above specimen on a tag.

#### 5. EPITETRASTICHUS FULVIPOSTSCUTELLUM new species.

*Female*:—Length, 2.25 mm. Robust.

Dark metallic green, the postscutellum bright lemon yellow; tegulæ, legs (except coxæ at basal half), scape and pedicel (except above), yellow; antennæ black, funicle 1 longest, elongate but not as long as the club whose proximal joint is a little longer than the pedicel but distinctly shorter than funicle 3. Propodeum with a short median carina which forks at each end. Wings hyaline. Lateral carina near (mesad) the spiracle, curving caudo-laterad to the carinated caudal margin, then looping back to the other side of the spiracle.

*Male*:—Unknown.

Described from one female captured by sweeping in forest, November 6, 1913.

*Habitat*: Ayr, Queensland.

*Type*: No. Hy 1821, Queensland Museum, the above specimen on a tag, the head on a slide (and a tag with the variety *purpureus*).

A second female captured at the same time differed in being dark metallic purple. I name it the variety *purpureus* and deposit it with the type of the species; a second female of the variety had the groove of scutum only at distal fourth!

**6. EPITETRASTICHUS TRIFASCIATUS** new species.

*Female*:—Length, 2.05 mm.

Honey yellow, the wings hyaline, the scutum reddish; tip of valves of ovipositor black; abdomen margined along each side with black from base to distal two thirds just within the proximal half crossed by three black stripes. Antenna with four ring-joints, black, the pedicel rather long, subequal to the distal joint of funicle. Mandibles tridentate. Propodeum short at meson, the caudal margin strongly carinate and the median carina quadrate. Abdomen long, conic-ovate.

*Male*:—Not known.

Described from a single female captured by sweeping in the jungle, July 13, 1913.

*Habitat*: Harvey's Creek (Cairns district), Queensland.

*Type*: No. Hy 1822, Queensland Museum, the above specimen on a tag, the head on a slide.

**7. EPITETRASTICHUS NYMPHA** new species.

*Female*:—Length, 2.00 mm.

Agreeing with the description of *longfellowi* but the pedicel nearly concolorous with the rest of the antenna, the abdomen is not yellowish at extreme base and the propodeum has a single, distinct median carina which forks at apex. Pronotum and scutum with obscure thimble punctures.

*Male*:—Not known.

Described from one female captured from herbage, April 6, 1913 ("6.4.13," H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1820, Queensland Museum, the above specimen on a tag, the head on a slide.

**8. EPITETRASTICHUS NIGRIVENTRIS** new species.

*Female*:—Length, 1.65 mm.

Orange yellow, the abdomen and middle of occiput black; flagellum dusky black, the proximal half of the scape yellowish. Mandibles tridentate. Legs orange yellow; face of pronotum black; wings hyaline. First funicle joint only slightly longer than the other two, all cylindrical-oval and not much longer than wide. First ring-joint apparently divided into two transverse ones (making five in all). Propodeum with a short median carina, the lateral carinae running directly from the rather large oval spiracle. Abdomen pointed, conic-ovate.

*Male*:—Not known.

Described from a single female captured by sweeping in a jungle, July 13, 1913.

*Habitat*: Harvey's Creek, Nelson and Kuranda (Cairns), Queensland.

*Type*: No. Hy 1824, Queensland Museum, the above specimen on a tag, the head on a slide.

Later, a second female was captured August 1, 1913, at Nelson, N.Q., by sweeping jungle growths along a forest streamlet and a third in September, jungle, Kuranda (A. P. Dodd).



TABLE TO THE AUSTRALIAN SPECIES OF *EPITETRASTICHUS* GIRAULT.

## FEMALES.

Metallic green or purple species.

Dark metallic green, all of legs (except first coxa) scape and pedicel orange yellow; rest of antenna black; funicle 3 subequal to pedicel, joint 1 subequal to the club; abdomen yellowish at extreme base; propodeum with a pair of widely diverging median carinae. *longfellowi* Girault.

The same but pedicel nearly black, the abdomen without yellow; propodeum with a single median carina which forks at apex. *nympha* Girault.

Whole body dark metallic green or purple, the postscutellum, legs (except bases of coxae), tegulae, scape and pedicel lemon yellow; funicle 3 longer than pedicel; propodeum with a median carina and a lateral carina just mesad of the spiracle which at apex loops back to the lateral side of spiracle. *fulvipostscutellum* Girault.

Black species.

Postscutellum, abdomen except tip of ovipositor valves, legs and antennae, pale lemon yellow. Funicle 1 subequal to pedicel. *flavipostscutellum* Girault.

Distal third of scutum, scutellum, parapsides except cephalad, caudal third of axillae, deep orange; abdomen dusky, suffused with yellowish at extreme base; vertex and ventral face orange, also extreme latero-cephalic angle of scutum and sides of pronotum; legs yellow. Funicle 1 subequal to pedicel. *rufiscutellum* Girault.

Golden or honey yellow species.

Golden yellow; a large, obconical area from cephalic margin of scutum to proximal third of scutellum, most of axillae, propodeum and six broad stripes across abdomen each stripe with a yellow spot in it on each side of meson centrally, black. Funicle 1 longer, funicle 3 shorter, than the pedicel. *speciosissimus* Girault.

Honey yellow; scutum reddish; abdomen along each margin from base to distal two thirds, tip of valves of ovipositor and three cross-stripes on abdomen within proximal half, black; funicle 3 subequal to pedicel; median carina quadrate. *trifasciatus* Girault.

Orange yellow; abdomen, middle of occiput, flagellum, distal half of scape and face of pronotum, black; funicle joints not much longer than wide; lateral carina running directly from the spiracle. *nigriventris* Girault.\*

GENUS *QUADRASTICHUS* Girault.

Synonym: *Epichrysocharis* Girault.

Differs from *Pentastichus* Ashmead in bearing short marginal cilia on the fore wing, the antennae 8-jointed with one ring-joint, the club 2-jointed. Abdomen depressed, ovate, the ovipositor not exerted.

1. *QUADRASTICHUS NIGRINOTATUS* Girault. Female. Genotype.

Canary yellow; the wings hyaline; meson of pronotum, meson of scutum centrally (divided along median line), outer lateral angle of pronotum, apices of axillae, median line of

\* *Xanther*, p. 205.

propodeum and three broken stripes (distinct laterad) across abdomen out from base, dusky black. Scape, pedicel and legs concolorous, rest of antenna dusky yellow. Second funicle joint longest, joint 1 shortest of the funicle, longer than wide, subequal to the pedicel. Mandibles tridentate. Club with a spinelike seta.

*Habitat*: Mittagong, New South Wales.

*Type*: No. I. 1230, South Australian Museum, Adelaide.

## 2. QUADRASTICHUS LATITHORAX new species.

*Female*:—Length, 1.15 mm.

This species is like *Pentastichus* Ashmead but the antennæ 8-jointed with one distinct ring-joint, the club only two-jointed, the pedicel not much longer than the first funicle joint, rather subequal to it, all the funicle joints longer than wide. Body very short and stout, with a peculiar habitus, resembling somewhat a *Hadronotus*, the abdomen very short, flat, triangular. Mandibles bidentate, the inner tooth broadly truncate. Otherwise as in *Tetrastichus* Haliday. Marginal cilia short. Purple-black, the antennæ and legs lemon yellow, also the abdomen but in the dorsal aspect margined all around (apically broadest) rather broadly with purple-black. Wings hyaline. Sculpture of thorax like that of *Tetrastichus* but exceedingly fine. Pedicel black above near base. Distal club joint a little the longer, with a short nipple, the funicle joints subequal.

*Male*:—Not known.

Described from a single female captured by sweeping foliage of lantana and other trees in an open field near town, October 21, 1911.

*Habitat*: Mackay, Queensland.

*Type*: No. Hy 1825, Queensland Museum, the above specimen on a slide.

## 3. QUADRASTICHUS SANNIO new species.

*Female*:—Length, 1.60 mm.

Like the preceding but much larger and normal, the tibiæ ringed with purple just below knees, the antennæ sooty, the club white, its two joints coalesced or nearly. Mandibles tridentate. Scape pale, purple along dorsal edge; pedicel purple.

*Male*:—Not known.

Described from one female captured by sweeping in forest, July 3, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No Hy 1826, Queensland Museum, the above specimen on a tag, the head on a slide.

## 4. QUADRASTICHUS AENEUS new species.

*Female*:—Length, 1.00 mm., excluding valves of ovipositor which are exerted for a third of the length of the abdomen.

Dark metallic green, the wings hyaline; coxæ and proximal parts of the femora concolorous, the rest of the legs pale straw yellow. Sculpture as in *Tetrastichus*; propodeum finely transversely rugulose, the median carina apparently absent. Antennæ brownish black, the three funicle joints subequal, each a little longer than wide. Mandibles tridentate.

*Male*:—Not known.

Described from one female captured by sweeping in forest, July 9, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1827, Queensland Museum, the above specimen on a tag, the head on a slide.

##### 5. QUADRASTICHUS FUSCA (Girault). Female.

*Epichrysocharis fusca* Girault.

Dusky yellow, the scutum yellow; legs and antennæ pale yellow; wings hyaline. Pedicel longer than any of the funicle joints, the second of the latter smallest, transverse, ringlike, the first longest but wider than long. Ring-joints very minute. Fore wings densely ciliate. Impunctate. Type re-examined.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1828, Queensland Museum.

The mandibles are tridentate; club with no nipple, the distal joint twice the length of the proximal.

##### GENUS QUADRASTICHODES Girault.

Differs from *Tetrastichodes* Ashmead in having the antennæ 13-jointed, four funicle and ring-joints, the third club joint conelike but articulated; scape enlarged distad, clavate and together with the pedicel with a coarse scaly sculpture. Propodeum with a median carina; postmarginal vein three-fourths the length of the stigmal.

##### 1. QUADRASTICHODES CYANEIVIRIDIS Girault. Female. Genotype.

Brilliant metallic blue-green; wings hyaline; legs straw yellow, the coxæ metallic; femora darkened proximad; pedicel as long as funicle 1 which is longest of the funicle, much longer than wide (about two and a quarter times); joint 1 of club somewhat longer than wide, subequal to funicle 3.

*Habitat*: Port Lincoln, South Australia.

*Types*: No. I. 1231, South Australian Museum, Adelaide.

##### GENUS NEOMPHALOIDEA Girault.

*Synonym*: *Eulophotetrastichus* Girault.

Like *Neomphaloides* Girault but the funicle joints usually shorter, the three ring-joints uneven, the abdomen depressed and broadly ovate, the propodeum usually with a single median carina. The synonymic genus was erroneously described, the scutum with but a single groove.

##### 1. NEOMPHALOIDEA FASCIATIVENTRIS Girault. Female. Genotype.

Black, the wings hyaline; face and cheeks, lateral margins of scutum rather broadly, occipital angles of vertex, cephalic third of parapsides, all margins of scutellum (except cephalic), postscutellum, legs except base of coxæ, antennæ and more or less obscure transverse stripes across the abdomen, lemon yellow. Funicle joints subquadrate, joint 1 slightly longest.

*Habitat*: King Island, Tasmania.

*Type*: No. I. 1223, South Australian Museum, Adelaide.

**2. NEOMPHALOIDELLA IO** (Girault). Female. Genotype of *Eulophotetrastichus*.*Eulophotetrastichus io* Girault.

Black, the wings hyaline, the scutellum and apex of scutum contrasting orange yellow, the postscutellum, abdomen and legs (except coxæ at base), lemon yellow, the abdomen conspicuously margined with black from base to apex (**dorsad and ventrad**), **the dorsal meson** broadly yellow. Scape and pedicel pale. Propodeum with a short, stout median carina which tapers distad; joint 1 of funicle longest, joint 3 much longer than the pedicel.

*Habitat*: Kuranda, Queensland. Jungle.*Type*: No. Hy 1829, Queensland Museum.**3. NEOMPHALOIDELLA FUSCA** (Girault). Female.*Neomphaloides fusca* Girault.

Yellow-brown; the funicle and club black; a row of dark spots down each side of abdomen; funicle joints thrice longer than wide, the club with a long spur; pedicel half the length of funicle 1; wings narrow, the marginal fringes longer than usual.

*Habitat*: Nelson (Cairns), Queensland. Forest.*Type*: No. Hy 1830, Queensland Museum.**4. NEOMPHALOIDELLA SILVENSIS** new species.*Female*:—Length, 2.50 mm.

Jet black; distal third of scutum and along each lateral margin, parapsides, sides and venter of thorax except prothorax, tegulæ and axillæ deep orange yellow; abdomen deep lemon yellow except the black of distal third, edged from base on each side with black, conspicuously in the dorsal aspect. Legs concolorous with abdomen. Ovipositor not exerted. Face near mouth and scape except tip, yellow, rest of antenna black, the first funicle joint very long, as long as the very long club, the other two more or less equal, a third shorter but much longer than the long pedicel. Mandibles tridentate.

*Male*:—Not known.

Described from one female captured by sweeping in a jungle pocket, August 7, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.*Type*: No. Hy 1831, Queensland Museum, the above specimen on a tag, the head on a slide.**5. NEOMPHALOIDELLA WESTWOODI** new species.*Female*:—Length, 1.50 mm.

Jet black, the wings hyaline, the abdomen reddish brown, its margin and distal third fuscous; coxæ black, rest of legs concolorous with the abdomen; propodeum with two short diverging median carinæ at distal half at the middle meeting a basal carina-loop. Mandible tridentate. Scape yellowish beneath, the antennæ otherwise black, the first funicle joint one and a half times longer than broad, subequal to the pedicel, the other two funicle joints each shortening, the third somewhat longer than wide; nipple very short; the club joints not quite as long as the distal funicle joint. Propodeum and rest of thorax polygonally reticulated.

*Male*:—Not known.

Described from three females captured amongst undergrowth, April 26, 1913 (H. Hacker). Dedicated to John Obadiah Westwood.

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1832, Queensland Museum, the above specimens on a tag, two antennæ and a head (fragments) on a slide.

#### 6. NEOMPHALOIDELLA SANNIO new species.

*Female*:—Length, 1.70 mm.

Like *fasciiventris* but the face yellow only below antennæ, the distal fourth of scutum lemon yellow, the lateral margin of each parapside the same color and only the distal halves of the lateral margins of scutellum. The antennæ are dusky, the club not quite as long as the funicle, the pedicel rather long, longer than any of the funicle joints, the first of the latter rather distinctly longer than the second.

*Male*:—Not known.

Described from one female captured by sweeping in the forest, July 9, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1833, Queensland Museum, the above specimen on a tag, the head and fore legs on a slide.

#### TABLE OF THE SPECIES OF NEOMPHALOIDELLA Girault.

##### Black species.

Scutellum mostly or all black; legs yellow.

Scutellum all black.

Distal third of scutum and each lateral margin, parapsides, sides and venter of thorax except prothorax, tegulæ and axillæ, orange yellow; abdomen lemon yellow margined from base to apex with black, the distal third black; mouth and scape yellow; pedicel long but shorter than funicle 3, funicle 1 very long, as long as the club. *silvensis* Girault.

Abdomen reddish brown, the scape yellow beneath; abdomen margined with fuscous, its distal third fuscous; coxæ black; funicle 1 subequal to pedicel. *westwoodi* Girault.

Scutellum margined with yellow.

Face and cheeks, lateral margins of scutum, occipital angles of vertex, cephalic third of parapsides, margins of scutellum (except cephalic), postscutellum, antennæ and obscure stripes across the abdomen, lemon yellow; funicle joints subquadrate. *fasciiventris* Girault.

Face below antennæ, distal fourth of scutum, lateral margin of parapside and distal half of each lateral margin of scutellum, lemon yellow. *sannio* Girault.

Scutellum wholly orange yellow.

Apex of scutum orange yellow; postscutellum, abdomen and legs lemon yellow; margins of abdomen conspicuously black from base to apex; scape and pedicel pale; propodeum with a short, broad, median carian which tapers distad; joint 3 of funicle much longer than the pedicel. *io* Girault.

Yellow-brown species.

Funicle and club black; a row of dark spots down each side of abdomen; funicle joints thrice longer than wide, the club with a long spur; pedicel half the length of funicle 1; wings narrow. *fusca* Girault.

GENUS QUADRASTICHODELLA Girault.

Scutum with a median groove; antennæ with four ring-joints; scape clavate and coarsely scaly. Otherwise as in *Tetrastichus* Haliday.

1. QUADRASTICHODELLA BELLA Girault. Female. Genotype.

Brilliant metallic green, the legs (except hind coxa), tegula and scape lemon yellow; rest of antenna dark brown; pedicel longest of the flagellum, joints 2 and 3 of funicle wider than long, joint 1 longer than wide. Propodeum glabrous in dorsal aspect.

*Habitat*: Lawson, New South Wales.

*Type*: No. I. 1234, South Australian Museum.

2. QUADRASTICHODELLA AENEA new species.

*Female*:—Length, 2.50 mm. Robust.

Metallic aeneous purplish, the wings hyaline, the legs including coxæ lemon yellow; hind coxa concolorous. Antennæ brownish black, the scape yellow, the pedicel elongate, much longer than any of the following joints, the first funicle joint barely longer than wide, the other two subequal, wider than long. Mandibles tridentate. Postmarginal vein over half the length of the rather short stigmal. Club as long as the funicle. Propodeum densely scaly, with a short median carina meeting a semicircular carina at apex. Evidently like the type of the genus but differing in general coloration and the scaly dorsal aspect of the propodeum. Hind tibial spur single.

*Male*:—Not known.

Described from one female captured by sweeping in jungle pocket, July 21, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1834, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

GENUS TETRASTICHELLA Girault.

Differing from *Tetrastichus* Haliday in bearing three ring-joints in the antennæ, the club only 2-jointed. Postmarginal vein usually developed.

1. TETRASTICHELLA FUSCIPENNIS Girault. Female. Genotype

Metallic green; scutum laterad and caudad, the scutellum and the base of each axilla more broadly, margined with yellow; a yellow spot in each parapside at base. Fore wings infuscated from base of marginal vein distad to about three fourths the distance from apex of stigmal vein to apex of blade, the fumated area narrowing distad. Oral area yellowish. Pedicel longer than any of the funicle joints of which 2 is largest. Club without a nipple.

*Habitat*: Murray Bridge, South Australia.

*Type*: No. I. 1348, South Australian Museum, Adelaide.

**2. TETRASTICHELLA NOVIFASCIATUS** (Girault). Female.*Tetrastichus fasciatus* Girault.

Lemon yellow, the abdomen darker, the wings hyaline; centre of scutum with a round fuscous spot on each side of meson; pronotum cephalad, parapsidal furrows and suture between scutum and scutellum black; also lateral margin of scutellum more broadly; abdomen with from six to seven black cross-stripes. Appendages concolorous, the antennæ more or less dusky. Propodeum and cephalic half of scutum centrally darker. Funicle joints more or less quadrate. Two club joints, three ring-joints. Pedicel twice the length of any of the funicle joints. (Type antennæ re-examined.)

*Habitat*: Queensland (? Brisbane). Forest.

*Types*: No. Hy 1201, Queensland Museum.

**3. TETRASTICHELLA ACUMINATIVENTRIS** new species.

*Female*:—Length, 1.70 mm., including the ovipositor which is exerted for a third the length of the abdomen, the latter nearly twice the length of the thorax.

Very dark metallic bluish, the wings hyaline; distal third of first two pairs of femora, knees, tibiae and tarsi yellow, the rest of the legs concolorous; antennæ dusky yellowish, the first ring-joint large, distinct, the other two extremely short but easily found, the funicle joints longer than wide, subequal to each other and to the pedicel; first club joint much shorter than the second which bears a small nipple. Mandibles tridentate. Postmarginal vein absent. Characterized by the slender abdomen and the longly exerted ovipositor.

*Male*:—Not known.

Described from two females captured by sweeping in forest, August 4, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1835, Queensland Museum, the above specimen on a tag together, their heads together on a slide.

**4. TETRASTICHELLA HAECKELI** new species.

*Female*:—Length, 1.00 mm.

Deep golden yellow, the legs and antennæ concolorous, the wings hyaline; scutum interiorly except the margins and median line, median line of scutellum broadly (almost to first groove), axillæ centrally to apex, parapside along mesal margin and pronotum broadly along each side of the narrow yellow meson, embrowned. Propodeum laterad, a small round spot on pronotum just cephalad of the parapsidal furrows and five or six narrow stripes across abdomen black or dark fuscous. Propodeum with a median carina. Pedicel stout, over twice the length of any of the funicle joints which are subequal and only slightly longer than wide. Mandibles tridentate. Postmarginal vein absent.

*Male*:—Not known.

Described from one female captured by sweeping undergrowth, mostly eucalypts, April 30, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1836, Queensland Museum, the above specimen on a tag, the head and a fore wing on a slide.

**5. TETRASTICHELLA HYALINA** new species.

*Female*:—Length, 1.00 mm.

Dark metallic purple, the wings subhyaline, the legs concolorous excepting most of front femora, the knees, tibiae and tarsi which are lemon yellow. Postmarginal vein absent. Antennae lemon yellow suffused with dusky, the three funicle joints more or less subquadrate and no longer than the pedicel; club with a small terminal seta.

*Male*:—Unknown.

Described from five females captured by sweeping miscellaneous flowers in a garden, February 18, 1913.

*Habitat*: Ripple Creek and Halifax, Queensland.

*Type*: No. Hy 1837, Queensland Museum, three of the above specimens on a slide with detached heads.

Several days later, three females by sweeping grass along a road at Halifax.

## GENUS APROSTOCERELLA Girault.

Differs from *Tetrastichella* Girault in that there are four ring-joints.

**1. APROSTOCERELLA KELLOGGI** Girault. Female. Genotype.

Honey yellow, the wings hyaline, the abdomen with three to five black cross-stripes from base; the propodeum, a large triangular spot on each side of meson of scutum (cephalic half), pronotum and a crescentic bar across dorsal half of occiput, black or purplish black. Scape pale; antennae black, the first funicle joint slightly longer than the other two. Club joints subequal. Mandibles tridentate.

*Habitat*: Rossville (Cooktown), Queensland.

*Type*: No. Hy 1838, Queensland Museum.

**2. APROSTOCERELLA IO** new species.

*Female*:—Length, 1.90 mm.

Dark metallic green, the legs (except hind coxa) and a large spot in centre of abdomen just out from base above, lemon yellow, the scape pale, the pedicel less so; antenna black, the pedicel long but shorter than any of the funicle joints of which the first is longest; distal club joint not as long as the distal funicle joint. Ovipositor valves somewhat exserted. Mandibles tridentate. Wings hyaline. Club 1 shorter of the two. Propodeum with two delicate median carinae which diverge at each end, both short. Valves of ovipositor exserted for a fifth of the abdomen.

*Habitat*: Nelson (Cairns), Queensland. Jungle, June 5, 1913.

*Type*: No. Hy 1839, Queensland Museum, the above specimen on a slide.

**3. APROSTOCERELLA CINCTIVENTRIS** new species.

*Female*:—Length, 1.20 mm.

Resembling *Ootetrastichus nympha* (Girault) but the hind coxae are metallic green and less than the proximal half of the abdomen is lemon yellow. Sides of mesothorax concolorous. Mandibles tridentate. Ovipositor exserted for a fifth the length of the abdomen. Funicle and club blackish.



*Male*:—Not known.

Described from one female captured by sweeping jungle growth along a forest streamlet, June 10, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1840, Queensland Museum, the above specimen on a tag, the head on a slide.

#### 4. APROSTOCERELLA FLAVA new species.

*Female*:—Length, 2.10 mm.

Somewhat like *Neotrichoporoides uniguttata* Girault but the median carinæ of propodeum fork a little only at extreme apex and there is no black spot in the centre of the abdomen near middle; also the edging of the proximal half of the abdomen is blacked and interrupted and the line down the meson of thorax is only from apex of scutum a little over the base of scutellum; the axillæ are not darker. Otherwise like the species named except the generic character. Scutum near cephalic margin orange yellow and each parapside has an orange spot across it near cephalic apex. *Scutum with a distinct median grooved line.* Mandibles tridentate.

*Male*:—Not known.

Described from one female captured by sweeping in jungle, May 9, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1841, Queensland Museum, the above specimen on a tag, the head on a slide.

#### GENUS EPOMPHALOIDES Girault.

Like *Neomphaloidella* Girault but the scutum without a median groove. Otherwise like *Tetrastichus* Haliday.

#### 1. EPOMPHALOIDES FLAVUS Girault. Female. Genotype.

Lemon yellow, the wings hyaline; a little rounded spot on propleurum, dorso-caudad just off the notum, two small spots near the tegula, the propodeal spiracle and two dots in a longitudinal line on each side of abdomen, segments 3 and 4, black. An obscure brownish dot on each side, cephalic third of scutum; legs, scape and pedicel pale yellow, the antennæ dusky yellowish. Pedicel longer than the funicle joints. Club without a noticeable terminal spur.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1842, Queensland Museum.

#### 2. EPOMPHALOIDES VIRIDIS new species.

*Female*:—Length, 1.65 mm.

Metallic green, dark and aeneous, the legs except first two coxæ, orange yellow; wings hyaline; scape, pedicel and ring-joints concolorous with the legs, the pedicel somewhat dusky; pedicel elongate, a little longer than joint 2 of funicle, funicle joint 1 elongate, a fourth longer than the pedicel. Propodeum scaly, the median carina forking before apex. Mandibles tridentate.

*Male*:—Not known.

Described from one female captured from a window in a hotel, July 13, 1913.

*Habitat*: Harvey's Creek (Cairns), Queensland.

*Type*: No. Hy 1843, Queensland Museum, the above specimen on a tag, the head on a slide.

**3. EPOMPHALOIDES NIGER** new species.

*Female*:—Length, 1.55 mm.

Jet black, the wings hyaline, the coxæ concolorous, the legs yellow, also the scape, the pedicel dusky yellow, rest of antenna black; pedicel elongate, intermediate between the first and second funicle joints, the first funicle joint about as long as the club, nearly twice the length of the third; nipple not long, distinct. Mandibles tridentate, the two inner teeth smaller and close together. Median carina of propodeum paired, forked at each end (*i.e.*, a fine pair of carinæ, each curving off laterad at base and apex following the cephalic and caudal margins).

*Male*:—Not known.

Described from one female captured amongst herbage, April 6, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Types*: No. Hy 1844, Queensland Museum, the above specimen on a tag, the head on a slide.

GENUS NEOTRICHAPOROIDES Girault.\*

Differs from *Trichaporoidella* Girault in bearing four ring-joints.

**1. NEOTRICHAPOROIDES UNIGUTTATUS** Girault. Female. Genotype.

Honey yellow, the wings hyaline; a little less than the proximal half of the abdomen along each margin dorsad and a stripe down thorax from middle of scutum to a little distad of middle of scutellum, metallic green; a round dot in centre of abdomen slightly distad of middle and tip of ovipositor valves, blackish. All of scutum cephalad of the median stripe reddish brown margined with lemon yellow, scape and pedicel lemon yellow except above, rest of antenna black; pedicel much shorter than the distal funicle joint, the first funicle joint over four times its own width. Mandibles tridentate. Median carina of propodeum forking a little cephalad of middle, prong-shaped.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1845, Queensland Museum.

GENUS EPENTASTICHUS new genus.

*Female*:—Like *Quadrastichus* Girault but the scutum without a median grooved line.

*Male*:—Unknown.

*Type*: *Epentastichus nugatorius* new species.

**1. EPENTASTICHUS NUGATORIUS** new species.

*Female*:—Length, 1.00 mm.

Black suffused with brown, the antennæ and legs lemon yellow, the wings hyaline; hind coxæ brown-black; propleurum lemon yellow, also the head and scutellum except the base of the latter between the first grooves. First funicle joint slightly shorter than the pedicel but distinctly longer than wide, longer than the length of 2 and 3 combined, 2 shortest, 3 cup-shaped. Pedicel dusky. Mandibles tridentate.

\* This genus is probably founded upon erroneous observation and is probably *Trichaporoidella*. A second specimen has been seen of the genotype.

Described from one female specimen captured by sweeping in forest, November 6, 1912.

*Habitat*: Ayr, Queensland.

*Type*: No. Hy 1846, Queensland Museum, the above specimen on a tag, the head on a slide (with the antennæ of a *Rhienopeltella*).

## 2. EPENTASTICHUS FUSCUS new species.

*Female*:—Length, 0.65 mm.

Brown, the wings hyaline, the scutellum yellow, the abdomen with three or four narrow transverse stripes across it, these stripes blackish and not very distinct. Legs paler, the antennæ pallid, the pedicel much longer than any of the funicle joints which are wider than long; distal club joint nearly twice the length of the proximal, the club somewhat longer than the funicle. Mandibles tridentate.

*Male*:—Not known.

Described from one female specimen captured by sweeping lantana and other shrubs in an open field near town, October 20, 1911.

*Habitat*: Mackay, Queensland.

*Type*: No. Hy 1847, Queensland Museum, the above specimen on a slide.

## 3. EPENTASTICHUS SEXGUTTATUS new species.

*Female*:—Length, 0.95 mm.

Bright golden yellow, the wings hyaline, the abdomen with a blackish stripe across extreme base followed along each margin by a line of three short transverse black spots, the caudal one of these a little distad of middle. Pronotum at the meson, scutum across cephalic third nearly to each margin, apex (cephalic end) of each axilla and the propodeum dusky black. Legs wholly concolorous, also the antennæ but the pedicel dark except at tip, the scape pallid, slender, the first funicle joint shortest, subquadrate, the second longest, nearly twice the length of the first, longer than the pedicel. Mandibles tridentate. First club joint not much longer than the second.

*Male*:—Not known.

Described from one female captured by sweeping forest, summit of second coast range (1,500 feet), May 26, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1848, Queensland Museum, the above specimen on a slide.

## 4. EPENTASTICHUS NIGRIVENTRIS new species.

*Female*:—Length, 1.00 mm. Short, robust, the abdomen globose.

Reddish brown, the abdomen black; cephalic half each of scutum and axillæ, the parapsides and pronotum darker; wings hyaline; thorax extraordinarily, finely, densely, longitudinally lined; mandibles tridentate; legs yellow (coxae not seen); antennæ yellow. the distal club joint over twice the length of the proximal, the pedicel stout, much larger than any of the funicle joints of which the first is much the longest, yet cupshaped and somewhat

wider than long; second funicle joint shortest, narrower, transverse and like a ring-joint, the third twice longer, plainly wider than long, about half or more the length of 1. Stigmal vein long.

*Male*:—Not known.

Described from two females captured by sweeping undergrowth, mostly eucalypts, April 20, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Types*: No. *Hy* 1849, Queensland Museum, the above specimens on a tag, the heads on a slide.

**5. EPENTASTICHUS FLAVUS** (Girault). Female.

*Quadrastichodes flavus* Girault.

Honey yellow; dot on pronotum caudo-laterad, a triangular spot on axilla meso-cephalad, dorsal aspect of propodeum, several spots on each side of abdomen near base followed by an apparent short cross-stripe near the middle; ring-joint large, the pedicel long but not quite as long as joints 1 and 2 of the funicle united, these joints longer than wide, joint 3 barely so.

*Habitat*: Hughenden, Queensland. Forest-downs.

*Type*: No. *Hy* 1850, Queensland Museum.

APROSTOCEROLOIDES new genus.

*Female*:—Like *Trichaporoidella* Girault but the scutum with a median grooved line. Mandibles tridentate.

*Male*:—Not known.

*Type*: The following species (*speciosus*).

**1. APROSTOCEROLOIDES SPECIOSUS** new species. Genotype.

*Female*:—Length, 2.10 mm.

Honey yellow; centre of vertex and flagellum black. Abdomen above shining coppery brown, but centrally near base this is broken by a large, triangular yellow area. Pedicel dusky, scape dusky along upper edge. Wings hyaline. Scutum (except cephalo-lateral angles), scutellum and propodeum metallic light blue, also the centre of each axilla. Propodeum with a strong median carina, densely reticulate scaly like the rest of the thorax. Funicle joints elongate, the first longer than the club, the third a little shorter than the club, the second subequal to it. Axillæ not advanced.

*Male*:—Not known.

Described from a single female captured by sweeping in the forest, July 9, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. *Hy* 1851, Queensland Museum, the above specimen on a tag, the head on a slide.

**2. APROSTOCEROLOIDES MARGIVENTRIS** new species.

*Female*:—Length, 1.80 mm.

Deep orange yellow, the wings hyaline; legs concolorous; proximal half of abdomen margined with black (dorsal edge), the extreme tip of abdomen black and a minute dot in centre about opposite the ends of the marginal stripes; an obscure black spot near tegula in the cephalic part of each axilla. Scape concolorous, also the pedicel (but black above), the flagellum black. First funicle joint distinctly longer than the club, the second more or less subequal to the club, the third distinctly shorter than it yet over a third longer than the pedicel.

*Male*:—Not known.

Described from one female captured by sweeping low vegetation in the forest on the side of Mount Pyramid, November 21, 1911 (elevation about 500 feet).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1852, Queensland Museum, the above female on a tag, the head on a slide with the type head of *Ootetrastichus grotiusi* Girault.

**SYNTOMOSPHYRELLA** new genus.

*Female*:—Like *Syntomosphyrum* Foerster but the antennæ with two ring-joints, the club only 2-jointed, nine joints in all. Scutum simple. Mandibles tridentate. Scutellum with four grooved lines. Postmarginal vein distinctly developed, three fourths the length of the stigmal; marginal vein as long as the submarginal.

*Male*:—Not known.

*Type*: The species described herewith (*fuscipennis*).

**1. SYNTOMOSPHYRELLA FUSCIPENNIS** new species.

*Female*:—Length, 1.10 mm.

Black, the abdomen brown, the sculpture as in *Tetrastichus*; abdomen with metallic lustre; fore wing with a broad fuscous stripe across it from the marginal vein; legs concolorous except tibiae and tarsi and much of cephalic femora which are yellowish. Antennæ and face dusky yellow, the funicle joints barely unequal, more or less quadrate, each shorter than the pedicel.

Described from one female captured by sweeping along the side of Mount Pyramid (1,000 feet), forest, August 17, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1853, Queensland Museum, the above specimen on a slide.

**2. SYNTOMOSPHYRELLA AURIFLAVA** new species.

*Female*:—Length, 1.18 mm. Short and stout.

Deep golden yellow, the wings hyaline, the other appendages concolorous; cephalic margin of pronotum narrowly, a spot near insertion of fore wing and several incisions of the abdomen (obscurely but forming two-four narrow transverse stripes, wide apart and broadly interrupted at meson), dusky; scape dusky above, compressed, the third funicle joint sub-

globular (but wider than long), decidedly larger than the other two, the pedicel much longer than either three; first club joint longest, the second with a slight nipple. (One antenna in this specimen was abnormal, the second funicle joint not at all divided from the third but the articulation merely indicated by a deep incision or sinus from one side). Mandibles tridentate.

*Male*:—Unknown.

Described from one female captured August 5, 1913, by sweeping in forest.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1854, Queensland Museum, the above specimen on a slide.

Another female was captured in the same place, three days later. The abdomen bears four narrow dusky stripes and a fifth represented by two spots, one on each side of the meson.

### 3. SYNTOMOSPHYRELLA AURA new species.

*Female*:—Length, 1.50 mm.

Deep golden yellow, immaculate excepting for a dot on pronotum at lateral angle and another near the tegulae; otherwise like *auriflava* except that the club is short, the distal joint obliquely truncate. The median groove of scutum is apparently present (at least cephalad). Intermediate tibial spur long and slender.

*Male*:—Unknown.

Described from one female specimen captured by sweeping undergrowth, mostly eucalypts, April 20, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1856, Queensland Museum, the above specimen on a slide.

### 4. SYNTOMOSPHYRELLA QUADRIMACULATA new species.

*Female*:—Length, 1.00 mm.

Golden yellow, the legs paler, the wings hyaline; a round spot in centre of scutellum at base, a diamond-shaped spot on each parapside at middle of mesal margin and more or less of the propodeum, dusky black; funicle joints 2 and 3 subequal, a little wider than long, joint 1 a little longer and wider than either but somewhat shorter than the pedicel.

*Male*:—Not known.

Described from two females captured on the foliage of *Eucalyptus* in forest, November 9, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1856, Queensland Museum, the above specimen on a slide.

### SELITRICHODELIA new genus.

*Female*:—Like *Selitrichodella* Girault but there are two ring-joints. Mandibles weakly 4-dentate. Lateral carinae absent on propodeum, the median carina also absent but the carinated cephalic and caudal margins meeting at the short meson.

*Male*:—Not known.

*Type*: The species described herewith (*aenea*).

**1. SELITRICHODELIA AENEA** new species.

*Female*:—Length, 1.60 mm.

Dark metallic aeneous green, the wings hyaline; tegulae and legs (except intermediate and hind coxae) deep lemon yellow, the antennae dusky yellow; funicle joints distinctly longer than wide but stout, joints 1 and 2 subequal, each a fourth longer than 3 which is very nearly as long as the pedicel. Club with a nipple, about as long as the two preceding joints.

Described from one female captured by sweeping the floor of forest, May 26, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1857, Queensland Museum, the above specimen on a tag, the head on a slide.

**2. SELITRICHODELIA AURIOS** new species.

*Female*:—Length, 2.00 mm. Slender, the abdomen elongate, longer than the slender thorax.

Jet black, the wings hyaline, the legs reddish brown (coxae darker toward base), the antennae wholly yellow; clypeus and immediate surrounding portion orange yellowish (but not up to antennal insertion by far); thorax and abdomen very finely shagreened. First funicle joint elongate but not quite as long as the club, the others shortening in succession, the third more or less equal to the rather long pedicel.

*Male*:—Not known.

From one female captured by sweeping *Leptospermum*, April 16, 1913 (H. Hacker).

*Type*: No. Hy 1858, Queensland Museum, the above on a slide.

**3. SELITRICHODELIA FUSCIPENNIS** new species.

*Female*:—Length, 1.05 mm.

Jet black, the forewings with a broad fuscous stripe under the marginal vein; legs mostly concolorous, the antennae greyish or neutral, the funicle joints all shorter than the pedicel, the first two a little longer than wide, the third subquadrate, the two ring-joints distinct.

*Male*:—Not known.

Described from two females captured among herbage, May 10, 1913 (H. Hacker) and a third on the flowers of *Baeckea*, April 22, 1913.

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1859, Queensland Museum, the above specimens on two tags (heads of all and abdomens of two destroyed).

**4. SELITRICHODELIA TRIMACULOSA** new species.

*Female*:—Length, 0.60-0.80 mm.

Pale lemon yellow, the wings hyaline; appendages concolorous; a long, wedge-shaped spot (acute end caudad) on each axilla and a shorter, triangular or rounded spot at base of scutellum mesad, dusky black; propodeum dusky at meson; an obscure spot about the tegulae

dusky. Pedicel stout, very much longer than the three funicle joints, the last two of which are wider than long, the first somewhat longer, only slightly wider than long.

*Male*:—Unknown.

Described from two females captured from the leaves of *Eucalyptus* in forest, November 9, 1911.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1860, Queensland Museum, the above specimen on a slide.

#### 5. SELITRICHODELIA QUADRIMACULATA new species.

*Female*:—Length, 0.85 mm.

Like *trimaculata*, but there is an additional dark reddish spot (round) at the lateral angle of pronotum (dorsal aspect), one on each side; first funicle joint somewhat shorter than the other two. Mandibles tridentate. Abdomen with several obscure cross-stripes. Scutum with an obscure long, wedge-shaped sordid marking its whole length, one on each side of meson, from base to apex, the acute end caudad.

*Male*:—Not known.

Described from one female captured by sweeping lantana and other shrubs in an open field near town, October 20, 1911.

*Habitat*: Mackay, Queensland.

*Type*: No. Hy 1861, Queensland Museum, the above specimen on a tag.

#### 6. SELITRICHODELIA OCCULTA new species.

*Female*:—Length, 1.25 mm.

Pale honey yellow, the wings hyaline, the legs and antennæ concolorous; four fuscous stripes across the abdomen (a fifth indicated just out from base) between base and apex, the third and fourth joined along the meson by a longitudinal stripe; propodeum, base of abdomen and axilla except along caudal margin and extreme latero-cephalic angle, jet black; a large round spot at base of scutellum between the first grooves and cephalic half of the long scutum broadly nearly to margins, deep fuscous, the median line of scutum cephalad more or less yellowish. Face of pronotum black. Median carina of propodeum extremely short, forking at both ends, the propodeum scaly. Pedicel longer than any of the funicle joints of which the first is longest but only slightly longer than 2, both somewhat longer than wide, joint 3 subequal to 2 but wider, globate-oval. Mandibles 3-dentate, the two inner teeth more or less confluent.

*Male*:—Not known.

Described from one female captured by sweeping in forest, November 6, 1912.

*Habitat*: Ayr, Queensland.

*Type*: No. Hy 1862, Queensland Museum, the above specimen on a tag, the head on a slide.



7. *SELITRICHODELIA VIVATA* new species.

*Female*.—Length, 0.75 mm. Short, stout.

Thorax intense green yellow, the propodeum jet black, the cephalic half of scutum (except along margins) and distal two thirds of abdomen brown; wings hyaline. Parapsides pale brown except caudad. Proximal third of abdomen very pale yellow. Brown part of abdomen with more or less obscure cross-stripes. Legs and antennæ lemon yellow, the pedicel very much longer than any of the funicle joints of which 1 is longest, cup-shaped, small, joint 3 shortest, a half shorter than 2, which is a little shorter than 1. Mandibles with three well-separated teeth.

*Male*.—Not known.

Described from one female captured November 6, 1912, from a window in a smithy.

*Habitat*: Ayr, Queensland.

*Type*: No. Hy 1863, Queensland Museum, the above specimen on a tag, the head on a slide.

TABLE TO THE SPECIES OF *SELITRICHODELIA* Girault.

## FEMALES.

Dark metallic green.

Tegulæ and legs (except last two pairs of coxæ) deep lemon yellow; antennæ dusky yellow; funicle joints distinctly longer than wide but stout, 1 and 2 subequal, 3 a fourth shorter and nearly as long as the pedicel; mandibles weakly 4-dentate.

*aenea* Girault.

Black.

Wings hyaline.

Legs reddish brown, the antennæ yellow, also the clypeus; funicle 1 elongate, 3 subequal to the rather long pedicel.

*aurios* Girault.

Wings with a fuscous or sooty stripe across them under the marginal vein.

Antennæ greyish; funicle joints shorter than the pedicel, joint 3 (funicle) subquadrate.

*fuscipennis* Girault.

Yellow and nonmetallic.

Joint 3 of funicle transverse, a half shorter than joint 2 and much the shortest.

Intense green-yellow, the propodeum jet black; cephalic half of scutum, parapsides except caudad and distal two thirds of scutum brown; proximal one third of abdomen pale yellow; mandibles with three distinct teeth.

*vivata* Girault.

Joint 3 of funicle not so formed; not a half shorter than joint 2.

Pale lemon yellow; a long, wedge-shaped spot on axillæ, a rounded spot at base of scutellum mesad, propodeum at meson and an obscure spot about the tegulæ dusky; funicle joints 2 and 3 wider than long, the first joint somewhat longer, all much smaller than the pedicel.

*trimaculosa* Girault.

The same but a dark reddish round spot at lateral angle of pronotum and the abdomen with obscure cross-stripes; scutum with an obscure, long, wedge-shaped, sordid marking on each side of meson for whole length; joint 1 of funicle somewhat shorter than the other two.

*quadrinaculata* Girault.

Pale honey yellow; four fuscous stripes across abdomen, the third and fourth joined along the meson; propodeum, base of abdomen and most of axilla jet black; a spot at base of scutellum between the first grooves and the cephalic half of the long scutum deep fuscous; funicle 1 longest, 2 and 3 subequal in length but 3 wider.

*occulta* Girault.

GENUS ASYNTOMOSPHYRUM Girault.

Differs from *Syntomosphyrum* Foerster in being small, the abdomen pointed conic-ovate, a little longer than the rest of the body.

1. **ASYNTOMOSPHYRUM PAX** Girault. Female. Genotype.

Sooty black, the wings hyaline, the scutellum chocolate brown, the lower face and vertex lemon yellow; trochanters, knees, tips of tibiae and tarsi (also cephalic tibiae) whitish yellow. Scape pallid, the antennae dusky yellow, 9-jointed with one ring-joint, the funicle joints shorter than the pedicel, the first subquadrate, the second transverse, short, smallest, the third twice longer than 2, hemispherical. Club much wider than the funicle and longer than it and a little longer than the moderate scape which is compressed. The abdomen pointed conic, a little longer than the head and thorax combined, the ovipositor not exerted. Fore wings ample, very closely, densely, uniformly ciliate, the marginal cilia short, the stigmal vein long and slender. Mandibles tridentate.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1864, Queensland Museum.

2. **ASYNTOMOSPHYRUM ACUTIVENTRIS** new species.

*Female*:—Length, 1.00 mm., excluding ovipositor. Small and slender.

Very dark metallic blackish green and sculptured as in *Tetrastichus* but most finely, the wings hyaline. Abdomen long and conically produced, (excluding ovipositor) over twice the length of the thorax, the ovipositor longly exerted, the exerted portion nearly as long as the thorax. Lateral grooves of scutellum nearly in the lateral aspect, hardly visible from above. Antennae 9-jointed, with one ring-joint, the funicle joints all longer than wide, the distal two subequal and longest, subequal in length to the pedicel. Scape and pedicel pallid, the flagellum dusky. Tibiae pale yellowish, the tarsi dusky.

*Male*:—Not known.

Described from two females captured by sweeping in jungle country, June, 1913 (F. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1865, Queensland Museum, one of the above specimens on a tag, the head on a slide with the type appendages of *Neorileyella fasciatus* Girault.

DIAGNOSIS OF THE GENERA OF TETRASTICHINE EULOPHIDÆ.

FEMALES. AUSTRALIA.

TETRASTICHINI.

The tribe is characterised by the sessile abdomen.

I. Funicle 3-jointed.

1. Mesoscutum without a median sulcus; scutellum with four grooved lines.

Antennal club solid.

Antennae 8-jointed with two ring-joints, the scape somewhat swollen, the funicle joints not elongate, more or less quadrate.

**Selitrichodes** Girault (Type: *S. fasciiventris* Girault).

Antennae 9-jointed with three ring-joints, the scape slender, the funicle joints elongate.

**Trichaporoidella** Girault (Type: *T. aenea* Girault).

\* The thoracic grooves are distinct sulci and not to be confused with impressions due to shrivelling; those of the scutum and scutellum are alike.

Antennæ 10-jointed with four ring-joints, the scape slender, the funicle joints elongate; median carina of propodeum forking before the middle.

**Neotrichaporoides** Girault (Type: *N. uniguttata* Girault).

**Antennal club 2-jointed.**

Abdomen slender, conic-ovate, not produced at tip, the ovipositor not exerted.

Antennæ 8-jointed with one ring-joint, the funicle joints not long but longer than wide. **Epentastichus** Girault (Type: *E. nugatorius* Girault).

Antennæ 9-jointed with two ring-joints; postmarginal vein distinctly developed; funicle joints not elongate.

<sup>160</sup> **Syntomosphyrella** Girault (Type: *S. fuscipennis* Girault).

Antennæ 11-jointed with four ring-joints; funicle joints elongate.

**Ootetrastichus** Perkins (Type: *O. beatus* Perkins).

Abdomen produced at tip into a long slender process, the ovipositor longly exerted.

**Antennæ 11-jointed with four ring-joints.**

**Ootetrastichella** Girault (Type: *O. longiventris* Girault).

**Antennal club 3-jointed.**

Antennæ 9-jointed with one ring-joint.

Pronotum long, conical.

Antennæ inserted near the mouth border; abdomen longer than the rest of the body.

**Melittobia** Westwood (Type: *Cirrospilus acasta* Walker).

Pronotum not especially long, transverse (more or less).

Antennæ inserted nearer to the middle of the face, the funicle joints variable, sometimes long, the abdomen stout, no longer than the thorax and usually broader. Club usually with a terminal seta.

**Syntomosphyrum** Foerster (Type: *Eulophus cyclogaster* Ratzeburg).

Abdomen pointed conic-ovate, a little longer than the rest of the body; funicle joints shorter. Slender, small.

**Asyntomosphyrum** Girault (Type: *A. pax* Girault).

Antennæ 10-jointed with two ring-joints.

Abdomen conic-ovate; funicle joints sometimes elongate.

**Tetrastichodes** Ashmead (Type: *T. floridanus* Ashmead).

**Antennæ 11-jointed with three ring-joints.**

Funicle joints not elongate; abdomen broadly ovate.

**Epomphaloides** Girault (Type: *E. flavus* Girault).

Antennæ 12-jointed with four ring-joints.

**Neotetrastichoides** Girault (Type: *N. flavus* Girault).

2. Mesoscutum with a median grooved line; scutellum with four sulci.

**Antennal club solid.**

Antennæ 7-jointed with one ring-joint.

Abdomen depressed ovate; funicle joints not elongate.

**Selitrichodella** Girault (Type: *S. mira* Girault).

Antennæ 8-jointed with two ring-joints.

**Selitrichodelia** Girault (Type: *S. aenea* Girault).

Antennæ 9-jointed with three ring-joints, the funicle joints usually elongate.

**Aprostoceroloides** Girault (Type: *A. speciosus* Girault).

Antennæ 10-jointed with four ring-joints; funicle joints elongate to subquadrate.

**Tetrastichomorpha** Girault (Type: *T. flava* Girault).

Antennal club 2-jointed.

Antennæ 8-jointed with one ring-joint; marginal cilia of fore wing short; funicle joints longer than wide, the flagellum a little capitate.

**Quadrastichus** Girault (Type: *Q. nigrinotatus* Girault).

Antennæ 10-jointed with three ring-joints; postmarginal vein slightly developed; fore wings sometimes infuscated.

**Tetrastichella** Girault (Type: *T. fuscipennis* Girault).

Antennæ 11-jointed with four ring-joints.

**Aprostocerella** Girault (Type: *A. kelloggi* Girault).

Antennal club 3-jointed.

Antennæ 9-jointed with one ring-joint; abdomen conic-ovate. Legs normal.

**Aprostocetus** Westwood (Type: *A. caudatus* Westwood).

Antennæ 10-jointed with two ring-joints.

**Tetrastichus** Haliday (Type: *Eulophus miser* Nees).

Antennæ 11-jointed with three ring-joints.

Abdomen distad produced into a moderately long stylus; pedicel and funicle joints elongate.

Propodeum with a pair of median carinæ.

**Neomphaloides** Girault (Type: *N. cinctiventris* Girault).

Abdomen normal, depressed, broadly ovate; pedicel short, the funicle joints variable.

Propodeum with a single median carina.

**Neomphaloidella** Girault (Type: *N. fasciiventris* Girault).

Antennæ 12-jointed with four ring-joints.

Propodeum usually long with a median carina.

Scape strongly clavate and with coarse scaly sculpture.

**Quadrastichodella** Girault (Type: *Q. bella* Girault).

Scape normal, slender; propodeum variable but with a median carina which is often very short.

**Epitetrastichus** Girault (Type: *E. speciosissimus* Girault).

II. Funicle of antenna 4-jointed.

3. Mesonotum without a median grooved line, scutellum with four grooved lines.\*

Antennæ 13-jointed with four ring-joints, the scape strongly clavate and with a coarse sculpture; third joint of club spine-like but articulated; postmarginal vein three fourths the length of the stigmal.

**Quadrastichodes** Girault (Type: *Q. cyaneiviridis* Girault).

#### TRIBE CERATONEURINI.†

This tribe is characterised by the distinctly petiolate abdomen; the type genus lacks all thoracic grooves and its hind wings bear a long, clavate marginal vein. Otherwise it is like the Tetrastichini. The following genera bear the thoracic grooves.

#### GENUS CERATONEURONELLA Girault.

Scutellum with five grooved lines, one median; antennæ 11-jointed with three ring-joints, the club 3-jointed; propodeum with a V-shaped median carina and a hood-like neck; petiole of abdomen distinctly longer than wide. Scutum with a median grooved line.

\* *Eulophoscotolinx* Girault; see p. 265.

† The tribe seems to be characterised by the great variation in the number of grooves or sulci on the scutellum.

**1. CERATONEURONELLA NIGRIVENTRIS** Girault. Female. Genotype.

Yellowish red, the base of scutellum lemon yellow, the body of the abdomen black, the petiole red; legs red, the hind coxa with a linear black spot down the side; scape pale, pedicel yellowish, rest of antennæ dusky yellowish. Fore wings with a large, subovate smoky spot centrally under distal venation. Funicle 1 much longer than the pedicel and only slightly longer than 2.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1866, Queensland Museum.

**CERATONEURONOMYIA** new genus.

*Type*: The following species.

**1. CERATONEURONOMYIA ARNOLDI** new species.

*Female*:—Length, 1.70 mm.

Shining black, the wings hyaline, the tegulae and legs (except the black coxae), reddish brown; also the scape. Propodeum with a strong median carina and rugose, the short, stout petiole also rugose, the second and third segments of abdomen longest, subequal, together occupying half of the surface. Sculpture otherwise as in *Tetrastichus* as are also all other characters except that the first funicle joint is elongate, as long as the club, the pedicel also longer than usual, subequal to the second funicle joint, the third funicle joint distinctly longer than wide, longer than any of the three club joints, about half or less the length of the first funicle joint. Abdomen smooth. Mandibles tridentate. Second ring-joint very short, the first distinct; club with a short nipple. Abdomen short, ovate. Antennæ inserted in the middle of the face, the head triangular, the mandibles tridentate.

*Male*:—Unknown.

Described from one female captured by sweeping jungle foliage, July 25, 1912. The genus differs from *Ceratoneura* Ashmead in bearing the grooves on the thorax as in *Tetrastichus*. The species is respectfully dedicated to Matthew Arnold.

*Habitat*: Goondi (Innisfail) and Kuranda, Queensland.

*Type*: No. Hy 1867, Queensland Museum, the above specimen on a tag, the head on a slide.

**2. CERATONEURONOMYIA LONGISCAPUS** new species.

*Female*:—Length, 1.75 mm.

Dark metallic green, the wings hyaline, the scape long and slender, white, the flagellum black, the pedicel and ring-joints dusky, the pedicel elongate, subequal to funicle 2; funicle 1 elongate, over twice the length of 3 which is somewhat longer than wide; club pale toward tip. Mandibles tridentate. Club with a short nipple. Propodeum rugulose, with a distinct median carina and neck, the abdomen with a short petiole. Coxæ mostly concolorous. Segments 2 and 3 of abdomen occupying only over a fourth of the surface.

*Male*:—Not known.

From one female, forest, September 16, 1913 (A. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1869, Queensland Museum, the above specimen on a tag, the head on a slide.

Differs from the type species in being smaller and slenderer, metallic and the propodeum has a distinct neck; also the first two segments of abdomen are much shorter; the pedicel a little more slender, the scape white. Types of both species examined.

**CERATONEUOPSIS** new genus.

*Female*:—Of small build, somewhat resembling a small *Spalangia* but the head is not oblong, the antennæ not inserted far down. Like *Tetrastichus* but the abdomen distinctly petiolate, the antennæ as in *Ootetrastichus* except that the club is solid, 10 joints in all, including four ring-joints. Scutum, however, simple. Fifth abdominal segment very long, as long as half of the body of the abdomen and as segments 2-4 united; of the latter 3 is shortest. Propodeum rather long, with a distinct median carina. Mandibles tridentate. Sculpture as usual in the subfamily, the abdomen polished, like the surface of tar. Stigmal vein long, the marginal as long as the submarginal. Petiole longer than wide.

*Male*:—Not known.

*Type*: The following species.

**1. CERATONEUOPSIS POINCAREI** new species.

*Female*:—Length, 1.10 mm.

Black, the wings hyaline, the knees, tibiæ and tarsi straw yellow, also the scape, the rest of the antenna dusky. Distal two funicle joints a little longer than the proximal, each about twice (or somewhat less) longer than wide, the first funicle joint only slightly longer than the pedicel which is yellowish beneath; club as long as the first two funicle joints combined, slightly nipped at tip.

Described from one female captured by sweeping the edges of a jungle pocket, May 26, 1913 (A. P. Dodd).

Respectfully dedicated to Jules Henri Poincaré.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1868, Queensland Museum, the above specimen on a tag, the head on a slide.

TABLE TO THE CERATONEURINE GENERA OF EULOPHIDÆ.

AUSTRALIA. FEMALES.

The tribe is characterised by the distinctly petiolate abdomen and variable sulci.  
**Mesonotum with a median grooved line.**

Scutellum with five grooved lines, one median.

Antennæ 11-jointed with three ring-joints, the club 3-jointed; propodeum with a V-shaped median carina and a hood-like neck; petiole of abdomen distinctly longer than wide. **Ceratoneuronella** Girault (Type: *C. nigriventris* Girault).

Scutellum with four grooved lines, the median absent.

Like *Tetrastichus* Haliday the antennæ 10-jointed with two ring-joints; second and third abdominal segments occupying half of the surface; pedicel elongate; petiole short and stout.

**Ceratoneuromyia** Girault (Type: *C. arnoldi* Girault).

Mesonotum without a median grooved line, the scutellum with four grooves.\*

Antennæ 10-jointed with four ring-joints, the club solid; segment 5 of abdomen very long, occupying half of the surface, the petiole longer than wide.

*Ceratoneuropsis* Girault (Type: *C. poincarei* Girault).

#### SUBFAMILY ELACHERTINÆ.

##### TRIBE ELACHERTINI.

##### GENUS ZAGRAMMOSOMA Ashmead.

Abdomen sessile; antennæ 8-jointed with one very short ring-joint, the funicle 2-jointed; vertex elevated; flagellum subcompresed; body spotted or striped; scutellum with two grooved lines; wings maculate or banded.

#### 1. ZAGRAMMOSOMA PULCHRA Girault. Female.

Thorax dark metallic green, the head pale yellow, the face with a line running down it to about the level of the antennæ, the line wavy and metallic green; a short green line from end of eye to end of head; a fuscous line down the length of the stigmal vein, the wings otherwise hyaline; legs yellow, the hind femur black centrally, the hind tibia black just below knees. Abdomen blackish, one round spot on each side just out from base followed by a suberescence transverse line, followed on the next segment by an irregular marking on each side and on the next segment by a still wider subsimilar marking, on the next segment a subobconical spot near lateral margin and on the next a similar but larger subquadrate obscure spot. Ring-joint apparently present. Funicle 1 largest, subglobose; third joint terminating in a little spine. Head triangular. Propodeum tricarinate. Mandibles 5-dentate.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1870, Queensland Museum.

##### GENUS CIRROSPILOIDELLEUS Girault.

Like *Cirrospilus* Westwood (Ashmead) but the antennæ 9-jointed with two ring-joints and two funicle joints; third joint of club terminating in a very long spur. Scutellum without grooves. Abdomen with a very short petiole. Mandibles 4-dentate. Propodeal spiracle minute, round.

#### 1. CIRROSPILOIDELLEUS BICOLOR Girault. Female. Genotype.

Submetallic blue-black, the proximal half of abdomen orange yellow. Wings with a slight discoidal stain. Legs lemon yellow, also the antennæ but the club black. Thorax scaly, the propodeum rugose. Pedicel longer than either funicle joint; terminal spine as long as funicle 1 which is slightly longer than wide.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1871, Queensland Museum.

#### 2. CIRROSPILOIDELLEUS PURPUREUS new species.

*Female*:—Length, 1.50 mm. With the habitus of *Tetrastichus*.

Dark metallic purple, the wings hyaline, the legs pale lemon yellow except the coxæ. Sculpture fine as in *Tetrastichus*, the propodeum rather short, like the rest of the thorax, not

\* The same but only the lateral grooves of scutellum are present. Antennæ 11-jointed, three ring-joints, three club joints; petiole short. CERATOTRASTICHUS Girault and Dodd, n. gen. (type: *C. bisulcatus* n. sp. Gir. & Dodd). The genotype is dark aeneous, the scutum with setigerous punctures, the wings hyaline.

rugose, without carinæ; abdomen sessile. Antennæ pale lemon yellow, short and stout, the club enlarged, the funicle joints quadrate (the first somewhat longer, slightly shorter than the pedicel); pedicel dusky. Mandibles tridentate. Hind tibial spur forked at tip. Parapsidal furrows deep. Antennal club without a nipple.

*Male*:—Not known.

Described from one female captured by sweeping in forest, July, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1872, Queensland Museum, the above specimen on a tag, the head and a hind leg on a slide.

### 3. CIRROSPILOIDELLEUS FASCIATIVENTRIS new species.

*Female*:—Length, 1.30 mm.

Mandibles with six teeth; propodeum honeycombed; antennæ terminating only in a short, stout seta, the club not enlarged. Orange yellow, the abdomen crossed by four narrow transverse stripes; marginal vein longer than the submarginal which, however, is not broken. Face lemon yellow. Antennæ brown, the first funicle joint rather long, over twice longer than wide, a third longer than the second joint which is subequal to the pedicel. Thorax densely scaly.

*Male*:—Not known.

Described from a single female captured by sweeping in jungle, July 13, 1913.

*Habitat*: Harvey's Creek, Queensland.

*Type*: No. Hy 1873, Queensland Museum, the above specimen on a tag, the head and hind tibiae on a slide.

### PSEUDIGLYPHELLA new genus.

*Type*: The following species.

#### 1. PSEUDIGLYPHELLA CÆLESTIS new species.

*Female*:—Length, 1.50 mm.

Like *Pseudiglyphus grotiusi* but the ovipositor not exerted, the scutellum between the grooves is reticulately scaly like the rest of the thorax, the propodeum is short at the meson and with a slight ridge there but no true carinæ and the tarsal joints are long as in *Elasmus*. (Mandibles 4-5 dentate); moderately dark, aeneous green, the legs white except the concolorous coxæ, the hind femur with an elliptical black spot centrally against upper edge (lateral aspect). Scape yellowish, the flagellum dusky, the pedicel somewhat longer than both funicle joints which are subequal (nearly, the first a little shorter), the second distinctly longer than wide. Otherwise the same. Postmarginal vein slightly broken. Parapsidal furrows distinct, complete.

*Male*:—Unknown.

Described from one female captured by sweeping in forest, August 4, 1913.

*Habitat*: Nelson and Cooktown, Queensland.

*Type*: No. Hy 1874, Queensland Museum, the above specimen on a tag, the hind legs and head on a slide.



A second female was obtained, same place, August 30, 1913. The spot on hind femur was absent. A third female was captured at Cooktown by sweeping in open fields, February 4, 1912. This specimen also lacked the spot on the hind femur while funicle 1 was longer than 2.

GENUS ASCOTOLINX Girault.

Antennæ 9-jointed with two ring-joints, the club 3-jointed, the two funicle joints petiolate. Scutellum with two grooves; propodeum with a broad, smooth median carina, the lateral carinæ present. Segment 2 of abdomen occupying nearly half of the surface. Scutellum with *no* transverse suture before apex.\* Abdomen conic-ovate.

1. ASCOTOLINX FUNERALIS Girault. Female. Genotype.

Black, the tibiæ and tarsi brown, the wings hyaline; scutellum and second abdominal segment glabrous, the scutellum really very finely reticulated. Thorax roughly scaly; propodeum very finely shagreened. Antennæ black; funicle 2 a little wider than long.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1875, Queensland Museum.

GENUS CIRROSPILOMYIA Girault.

Like *Cirrospiloidelleus* Girault but the abdomen sessile, the club 4-jointed, the fourth joint minute and conic, without a nipple; antennæ 10-jointed with two ring-joints. Mandibles 3-dentate. Scutellum without grooves, the propodeum non-carinate. Abdomen large, much wider than the thorax and a half longer, ovate. Parapsidal furrows deep.

1. CIRROSPILOMYIA MAGNIVENTRIS Girault. Female. Genotype.

Dark aeneous green, the wings hyaline, the abdomen purplish black and with a banded appearance due to the light incisions. Legs whitish, also the scape, the flagellum dusky. Pedicel longer than either of the funicle joints which are subequal and longer than wide.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1876, Queensland Museum.

GENUS ATOPOSOMA Masi.

Differs notably from *Zagrammosoma* Ashmead in bearing two ring-joints in the antennæ.

1. ATOPOSOMA ZOLAI Girault. Female.

Lemon yellow; pronotum, scutum except lateral margins, meson of scutellum broadly and conically nearly to tip, 7-8 narrow stripes across the abdomen (4-6 broadly, the rest narrowly, joined by a longitudinal median stripe), two wavy stripes across face, all of propodeum and parapsides and two diamond-shaped spots on each axilla dark metallic green. A dusky spot against the stigmal vein. Funicle joints subequal. Two stripes across fore wing. (Type re-examined.)

*Habitat*: Capeville (Pentland), Queensland. Forest.

*Type*: No. Hy 1877, Queensland Museum.

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\* But the grooves join around the margin. The genus is hemiptarsine.

2. **ATOPOSOMA LANEI** new species.

*Female*:—Length, 1.00 mm.

Intense lemon yellow. A broad stripe down median line of thorax, a narrower one down meson of abdomen forking near each end and intersecting five cross-stripes, the margins of the abdomen (dorsad) to fourth cross-stripe and around apex, a stripe along each side of thorax (dorsad), converging, crossing over each side of propodeum and joining broadly around its base, black. A narrow stripe across occiput at ventral ends of eyes and two diverging stripes from it up the occiput. Substigmatal spot present. Mandibles 6-dentate.

From one female captured by sweeping along a roadway near the Herbert River, February 28, 1913. Dedicated to Ralph Lane for his book *The Great Illusion, A Study of the Relation of Military Power in Nations to their Economic and Social Advantage*.

*Habitat*: Halifax (Ingham), Queensland.

*Type*: No. *Hy* 1878, Queensland Museum, the above specimen on a slide.

3. **ATOPOSOMA CHANNINGI** new species.

*Female*:—Length, 1.05 mm.

Like *saintpierrei* Girault but the abdomen bears six distinct cross-stripes and the whole of the median line of scutum is black, the short apical median stripe on abdomen absent. The fore wings in both species are faintly banded as in species of *Closterocerus*; the heads are also striped in both species but I could not make out the pattern.

*Male*:—Not known.

Described from a single female captured by sweeping in jungle, July 26, 1913.

*Habitat*: Meerawa (Cairns District), Queensland.

*Type*: No. *Hy* 1879, Queensland Museum, the above specimen on a slide with the type head of *Zagrammosomoides consobrinus*.

4. **ATOPOSOMA SAINTPIERREI** new species.

*Female*:—Length, 1.00 mm.

Orange yellow marked with black almost as in *variegatum* as figured by Masi but the pattern on the abdomen is different consisting of about five narrow cross-stripes, a more or less obscure mesical blotch centrally and a short median dark stripe at apex. Also, the fore wings are obscurely infuscated and bear a distinct substigmatal spot which embraces the stigmal knob. Three narrow black stripes down the long pronotum; parapsidal furrows dark except at each end and the middle of the median line of scutum, scutellum and postscutellum is black; also cephalic margin of scutum (accented on each side of middle, triangularly); a wavy black line across propodeum, resembling a bat with the wings out but not expanded. Scutum with two grooved lines. Legs and antennae yellow; two ring-joints. (Head markings not seen.) Mandibles with six teeth, the sixth minute.

*Male*:—Not known.

Described from one female captured by sweeping in the forest, September 13, 1912. Later, a second female was found in a bottle labelled "Nelson, October, 1912. Sweeping in forest."

*Habitat*: Quingilli and Nelson, Queensland.

*Type*: No. *Hy* 1880, Queensland Museum, the first specimen on a slide.

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**5. ATOPOSOMA GROTIUSI** new species.

*Female*:—Length, 1.10 mm.

Greenish or lemon yellow, the pronotum pale green, the head orange yellow, wonderfully marked with black metallic green in this manner: The parapsides, a broad stripe down meson and each side of the long pronotum, two spots in the upper part of the occiput, a bullet-shaped spot at base of scutellum at the meson, a rounded spot at cephalic margin of each axilla nearly centrally, the scutum with a large acuminate conical marking whose broad base fills rest from side to side but quickly recedes, all of propodeum and 6 or 7 narrow stripes across the abdomen (stripes 4 and 5 close together; there is also a narrow median stripe); also a spot in centre of postscutellum, a broad stripe across occiput below the eyes and various stripes on the head (not definitely seen in this specimen). Legs pale yellow but the hind femur and tibia with two dusky bands. Antennae dusky yellowish. The usual substigmatal spot.

*Male*:—Not known.

Described from one female captured by sweeping in forest, April 13, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1881, Queensland Museum, the above specimen on a slide (with the head type of *Selitrichodelia aenea* Girault).

**6. ATOPOSOMA GREGI** new species.

*Female*:—Length, 1.45 mm.

Greenish yellow, the wings bifasciate, one broader stripe around apex, the other from the stigmal knob. Marked with bright metallic green as follows:—Meson (conically) and each margin of pronotum, parapsides, an oval spot in centre of cephalic end of each axilla, scutum across cephalic margin, the caudal margin of the green oblique caudo-mesad to the meson, shortly and then conically, slenderly prolonged down whole of meson so that it is acute when caudal margin is reached, an elongate, conical spot on scutellum down meson from base, all of propodeum except transversely just laterad of postscutellum and six cross-stripes on the abdomen, the first four stripes each with a caudal triangular projection from them on each side half way to margin, the projection increasing in size caudad. Head pattern not seen. Antennae dusky. Hind legs as in *grotiusi* nearly, the hind tibiae with a stripe below knee and before tip. Somewhat similar to *grotiusi* but less green on the scutum, the wings are banded and so on. Tegulae green.

*Male*:—Not known.

Described from one female captured by sweeping in the forest, August 23, 1913 (A. P. Dodd). Dedicated to W. R. Greg.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1882, Queensland Museum, the above specimen on a slide.

**7. ATOPOSOMA ARNOLDI** new species.

*Female*:—Length, 1.35 mm.

Orange yellow, the abdomen with seven black cross-stripes including the one at base, stripes 3-6 usually thickened centrally and confluent; fore wings with a small substigmatal spot and infuscated slightly distad of the stigmal vein and caudad of a straight line drawn longitudinally through the knob of that vein. Little over caudal half of median line of

scutum narrowly, proximal half of same of scutellum similarly, thoracic sutures narrowly, median line of propodeum more broadly and the cephalic and caudal margins, a number of spots on the mesopleura and a dot on each side of pronotum, black. Legs uniformly orange yellow, the antennæ orange. Head immaculate. Both funicle joints distinctly longer than wide. Abdomen with a very short petiole, usually concealed. Mandibles with at least five teeth.

*Male*.—The same but the scutum and scutellum immaculate, the seventh abdominal stripe obscure, the abdomen more depressed, less acute; the fore wings hyaline. Mandibles not seen.

Described from one male, six females captured on the flowers of *Bæckeia*, April 22, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1883, Queensland Museum, the above specimens on a slide.

The species is respectfully dedicated to Matthew Arnold.

#### 8. ATOPOSOMA MAZZININI new species.

*Female*.—Length, 1.30 mm.

Very similar to *saintpierrei* but greenish yellow, the abdomen with seven stripes, the fore wings hyaline (excepting the stigmal spot which runs along the entire vein), the median stripe of thorax is continuous and complete (propodeum not seen); there is also a distinct ovate spot in the axillæ. A short broad stripe across the cheeks from the eyes; a narrow stripe up the occiput on each side continuing over on to the vertex. Lateral stripes of the several thoracic regions complete. First funicle joint quadrate, the second wider than long, the scape margined along dorsal edge with black, the pedicel coloured dorsad, the antennæ dusky. Otherwise with the markings so far described for *saintpierrei*.

*Male*.—Not known.

Described from one female captured by sweeping undergrowth, mostly eucalypts, April 16, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1884, Queensland Museum, the above specimen on a slide.

Dedicated to Giuseppe Mazzini.

#### TABLE OF THE SPECIES OF ATOPOSOMA MASI.

##### AUSTRALIA. FEMALES.

(Compiled from the types.)

The colours of the markings are metallic or submetallic.  
Legs immaculate.

Wings hyaline (excluding a more or less obscure substigmal spot).

Whole of median line and lateral margins of thorax black; meson of abdomen, five cross-stripes and margins to fourth stripe from base and around apex, black.

Whole of median line and lateral margins of thorax not continuously coloured but only those of pronotum narrowly and the middle of the median line of scutum, scutellum and postscutellum are black and the cephalic margin of scutum. A wavy stripe across propodeum.

*lanei* Girault.

*mazzinini* Girault.

Wings with a stigmal and apical cross-stripe and infuscated more or less longitudinally proximad of the stigmal stripe.

Pronotum with median line and lateral margins narrowly black; also middles of median line of scutum, scutellum and postscutellum; also cephalic margin of scutum and five abdominal cross-stripes and a short apical median longitudinal stripe. *saintpierrei* Girault.

The same but whole of median line of scutum is black and the abdomen bears six cross-stripes, the short apical median longitudinal stripe is absent.

*channingi* Girault.

Wings generally infuscated, without distinct stripes, the infuscation distad.

Orange yellow; seven cross-stripes on abdomen, caudal half of median line of scutum narrowly, proximal half of same of scutellum, thoracic sutures, median line of propodeum more broadly and the cephalic and caudal margins, spots on mesopleura and a dot on each side of pronotum, black. *arnoldi* Girault.

Wings with a distinct stigmal and apical cross-band, otherwise hyaline.

Pronotum, all of scutum except lateral margins, meson of scutellum broadly and conically nearly to tip, 7-8 narrow abdominal cross-stripes, propodeum and parapsides and two spots on axilla, metallic green. *colai* Girault.

Legs with distinct bands, the fore wings with two more or less distinct cross-stripes.

Cross-stripes of fore wings obscure, the apical one indicated centrally.

Greenish yellow, the pronotum pale green; parapsides, three stripes down pronotum, a spot at base of scutellum mesad, another at cephalic margin of axilla, a large conical marking on scutum cephalad, abdominal stripes and propodeum metallic greenish; hind femur and tibia with two dusky bands.

*grotiusi* Girault.

Stripes of fore wing distinct.

The same; meson of pronotum conically and an elongate conical spot on scutellum at base bright metallic green; first four abdominal stripes with a caudal triangular projection from them on each side half way to margin; hind tibiae with two bands. *gregi* Girault.

#### PSEUDELACHERTEUS new genus.

*Female*:—Antennæ inserted somewhat below the middle of the face, 9-jointed, two ring-joints, the club solid; scutellum with two grooved lines united around the apical margin; parapsidal furrows complete, deep. Mandibles 5- and 6-dentate. Abdomen distinctly petiolate. Hind tibial spur normal. Pronotum as in the Eurytomidæ. Propodeum with a long median carina, lateral carinæ also present. Second abdominal segment occupying half of the surface, the petiole short. Postmarginal and stigmal veins subequal, the marginal two and a half times longer than the stigmal.

*Male*:—Not known.

*Type*: The following species.

#### 1. PSEUDELACHERTEUS NIGRITHORAX new species.

*Female*:—Length, 1.50 mm.

Shining black, the abdomen (except the black petiole) dull brown, also the legs and antennæ but the scape lemon yellow. Wings hyaline. Pronotum and scutum finely reticulated.

the scutellum and propodeum subglabrous. Pedicel and first funicle joint subequal, the four funicle joints more or less equal and subquadrate. Club half the length of the funicle.

Described from one female captured from a window, January 11, 1912.

*Habitat*: Innisfail, Queensland.

*Type*: No. *Hy 1885*, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

### 2. *PSEUDELACHERTEUS SILVENSIS* new species.

*Female*:—Length, 1.50 mm.

Like the type species but the second abdominal segment is only a third the surface, the abdomen margined all around with black, the pedicel distinctly shorter than the first funicle joint, the flagellum more or less dusky.

*Male*:—Not known.

Described from one female captured by sweeping the edge of jungle, May 17, 1913 (A. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. *Hy 1886*, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

### 3. *PSEUDELACHERTEUS AURIPES* new species.

*Female*:—Length, 1.40 mm.

Like *silvensis* but the scape usually concolorous with the rest of the antenna, while the body of the abdomen is reddish brown margined as in *silvensis* but darker and less distinctly margined. Scutellum and propodeum quite smooth. Ring-joints apparently absent but the proximal margin of first funicle joint plainly rimmed, appearing like a ring-joint.

*Male*:—The same but only the centre of the abdomen is yellowish centrally.

Described from one male, three females, captured by sweeping herbage, June 29, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. *Hy 1887*, Queensland Museum, one male, two females on a single tag and a slide bearing a female.

### ENTEDONOMORPHA new genus.

*Female*:—Head rounded, the antennæ inserted below the middle of the face on a level with the ventral ends of the eyes, the scape long and slender, the funicle 3-jointed, the club 4-jointed, two ring joints. Mandibles 4-dentate. Scutellum with two foveate grooved lines. Abdomen petiolate, the petiole somewhat longer than wide. Hind tibial spur small. Post-marginal and stigmal veins moderately long, subequal. Propodeum with a median carina which forks at apex; lateral carinæ complete, regularly curved. Spiracle minute, round. Pronotum subquadrate, nearly as long as the scutum. Abdomen conic-ovate, short.

*Male*:—Not known.

*Type*: The following species. See p. 270.

**1. ENTEDONOMORPHA TENNYSONI** new species.

*Female*:—Length, 1.00 mm.

Shining black, the wings hyaline, the whole of the interior of abdomen dorsad and ventrad lemon yellow; legs pale yellow including coxæ (at least the hind and intermediate coxæ, others not distinctly seen). Thorax coarsely reticulated, the lines not raised, the scutellum at apex and the propodeum glabrous. Scape white, the pedicel, ring-joints and first funicle joint pallid dusky, rest of antenna black; funicle joints subequal, cylindrical ovate, longer than the pedicel (the first somewhat longest) or than any of the club joints; club rather compact, the fourth joint like a large nipple but distinctly articulated and black, the three preceding ones more or less square. First ring-joint very short, the second collar-like, very distinct.

Described from one female captured September 3, 1913, by sweeping in a jungle pocket (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1888, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

## GENUS GYROLASELLA Girault.

The following additional species:

**1. GYROLASELLA PULCHRA** new species.\*

*Female*:—Length, 2 mm. Robust.

Honey yellow, the wings hyaline; the mandibles only tridentate; scutellum with an obscure second grooved line, nearly as in *Tetrastichus*, but very far laterad and thus not easily visible (most probably imaginary); vertex not at all elevated; antennæ more slender than with *Atoposoma*; antennæ inserted in the middle of the face like those of *Atoposoma*. Like *channingi* but most of the green is lacking on the parapsides and the coxæ are all yellow except for a spot on hind coxa laterally; femur above near base with a short green line; scape bordered with green along each upper side, the pedicel green above; no spot on postscutellum, the marking of scutum conically pointed distad, that of scutellum narrow, cylindrical; each ocellus in a green spot and at the front corner of vertex near the eye is a caret-shaped green mark; head otherwise not marked except on occiput. Sculpture fine scaly reticulation.

*Male*:—Not known.

Described from six females reared from a gall on the foliage of *Eucalyptus* in forest, September 18, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Types*: No. Hy 1889, Queensland Museum, three of the above on a tag.

**2. GYROLASELLA ELEGANTISSIMA** new species

*Female*:—Length, 1.60 mm.

Bright lemon yellow, the wings hyaline; marked with brilliant metallic grass green as follows:—A round spot in centre of pronotum, a short slender spot in caudo-lateral angle of

\* For treatment of the genus, see pp. 166-168.

same, cephalic sixth of scutum, inner margins of parapsides, centre of axilla from middle to cephalic apex, centre of scutellum conically between the grooves to distal sixth, a round dot at base of postscutellum at meson and a triangular one at apex of scutum at meson, propodeum (forming a U from dorsal aspect) and three short rather broad transverse marks across meson of abdomen (excluding at base centrally a more or less rounded, submetallic area) between base and apex. Valves of ovipositor black. Legs concolorous. Antennæ yellowish, the scape crossed by a metallic stripe from middle of dorsal margin; also the pedicel above at base metallic; the first funicle joint subequal to pedicel, the second slightly longer than wide. Scutellum with two grooves. Mandibles with six teeth. Hind tibial spur slender.

*Male*:—Not known.

Described from one female captured in forest, August 28, 1913.

*Habitat*: Nelson, Queensland.

*Type*: No. Hy 1890, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

### 3. *GYROLASELLA CHANNINGI* new species

*Female*:—Length, 1.50 mm.

Like *Atoposoma zolai* but the wings perfectly hyaline, no substigmatal spot, the yellow lateral margins of the scutum narrow and the facial markings differ, also somewhat the arrangement of the abdominal stripes; the axilla bears only one large dark green spot, hung from the cephalo-mesal margin. The area on the scutellum is subquadrate and fills nearly the whole space in between the lateral grooves. Inner three or four teeth of mandibles very weak and minute. Hind coxæ metallic green, the others the same at proximal half; hind femur blackish, the first femur broadly margined ventrad with metallic green.

*Male*:—Unknown.

Described from one female captured by sweeping on the forest-downs, July 14, 1912.

Respectfully dedicated to William E. Channing for his Discourses on War.

*Habitat*: Hughenden, Queensland.

*Type*: No. Hy 1891, Queensland Museum, the above specimen on a slide.

### 4. *GYROLASELLA QUADRIFASCIATA* new species.

*Female*:—Length, 1.25 mm.

Dull honey yellow, the legs concolorous, the wings wholly hyaline, the abdomen with four narrow cross-stripes of black across the portion between each end, the third and fourth stripes curved cephalad at the meson. Propodeum with a distinct median carina. Otherwise agreeing generically. Thorax scaly. Mandibles with six teeth. First funicle joint longer than the pedicel, the second quadrate. Scutellum with two grooves.

*Male*:—Not known.

Described from one female captured by sweeping in the forest, April 13, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1892, Queensland Museum, the above specimen on a tag, the head on a slide.



5. **GYROLASELLA WORCESTERI** new species.

*Female*:—Length, 0.90 mm., excluding ovipositor which projects beyond tip of abdomen for over half the latter's length.

Like *Atoposomoidella channingi* Girault but much less robust and the legs are all pallid; also the large area on the scutum is conical, its acute apex just reaching the distal margin and the metallic green centre of the scutellum is rectangular, slightly narrowing distad, extending from base not quite to apex and not reaching from side to side to the two grooves; the parapsides are only narrowly green along the caudal half or more of the mesal margin; propodeum with two stripes across it. Wings hyaline. (Pronotum not seen well but all green.) Head dusky, vertex orange yellow. Mandibles 5-dentate. Pedicel distinctly longer than any joint of the funicle or club.

*Male*:—Not known.

Described from a single female captured by sweeping along the banks of Cape River in forest, January 6, 1913.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1393, Queensland Museum, the above specimen on a slide.

This species was at first mistaken for an *Atoposoma*, but the submarginal vein is more broken than usual with that genus and the pronotum is short.

## ELACHERTETRASTICHUS new genus.

*Female*:—With the build of *Tetrastichodes margiscutum* Girault, that is short and compact, the abdomen almost round from lateral aspect, no longer than the thorax. Scutellum without grooves. With the habitus and structure of *Tetrastichus* except as noted, yet the submarginal vein with only a slight break, not broken in the usual way and plainly different; postmarginal vein barely developed, the marginal plainly shorter than the submarginal. Head normal, the mandibles tridentate, the antennæ short and stout, inserted somewhat below the middle, 11-jointed, the funicle 2-, the club 3-jointed as in *Gyrolasella*, but there are four distinct ring-joints. Propodeum very short, the median carina very weak or absent. Scutum simple, the parapsidal furrows very deep.

*Male*:—(See beyond.)

*Type*: The following species.

1. **ELACHERTETRASTICHUS PURPUREUS** new species.

*Female*:—Length, 1.65 mm.

Dark metallic purple with bluish tinges, the wings hyaline, the knees, tibiae and tarsi white, the distal tarsal joint dusky black; antennæ dusky black, the club paler, the scape white beneath, the two funicle joints short, equal, somewhat wider than long; no nipple on club; pedicel a little longer than either funicle joint; club somewhat enlarged. Mesopleurum bluish. Thorax finely, densely scaly. Hind tibia with a small dusky spot some distance below knee.

Described from one female reared from a gall on the foliage of *Eucalyptus* in forest, September 18, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type:* No. *Hy 1894*, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

(What seemed to be a male of this species was captured August 22, 1912, by sweeping in forest at Nelson; the tibiae were all concolorous, the venation noticeably darker, the antennae very thickly hispid but otherwise the same.)

## 2. *ELACHERTETRASTICHUS AENEIPES* new species.

*Female:*—Length, 1.75 mm.

Like *purpureus* but dark aenous green, the legs concolorous except knees, tips of tibiae, all of cephalic tibiae and three basal tarsal joints, the mandibles are only bidentate and the first funicle joint not half the length of the second which is slightly wider than long. Scape concolorous. Pedicel longer than second funicle joint.

*Male:*—Not known.

Described from one female captured August 30, 1913, by sweeping in forest.

*Habitat:* Nelson (Cairns), Queensland.

*Type:* No. *Hy 1895*, Queensland Museum, the above specimen on a tag, the head and a hind leg on a slide.

## CIRROSPILOMELLA new genus.

*Female:*—Like *Cirrospilomyia* Girault, but wholly nonmetallic, the mandibles with about six teeth, the five inner ones small, the pedicel shorter than the first funicle joint; propodeum with interlacing carinae. Abdomen with a very short petiole, depressed, conic-ovate. Scutellum with a median impressed line (not a groove).

*Male:*—Not known.

*Type:* The following species.

### 1. *CIRROSPILOMELLA FASCIATUS* new species.

*Female:*—Length, 1.45 mm.

Deep orange yellow, the tip of the ovipositor valves and five stripes across abdomen black, none of the stripes especially near base or tip, the last two with each arm obliqued cephalo-mesad to the meson; ovipositor exerted slightly. Fore wings uniformly stained. Thorax punctate. Legs lemon yellow. Postmarginal vein subequal to the stigmal. Antennae brown-black, the scape yellow, the second funicle joint a little shorter than the pedicel.

Described from one female captured by sweeping in a jungle pocket, July 30, 1913 (A. P. Dodd).

*Habitat:* Nelson (Cairns), Queensland.

*Type:* No. *Hy 1896*, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

## EULOPHOSCOTOLINX new genus.\*

*Female:*—Head normal, the antennae inserted somewhat below the middle of the face, 9-jointed, with one ring-joint, four funicle and two club joints, the second club joint terminating in a nipple. Parapsidal furrows deep, the scutellum with two grooved lines. Abdomen sessile,

\* Tetrastichini.

conic-ovate, somewhat longer than the head and thorax combined. Propodeum short, with a median carina which meets a semicircular carina at apex; also several obscure carinate folds mesad of the spiracle but no true lateral carina. Venation resembling that of *Tetrastichus*, the postmarginal vein barely developed but the submarginal vein is only about half broken. Hind tibial spurs single. Mandibles weakly bi- or tridentate. Type re-examined.

*Male*:—Not known.

*Type*: The following species.

**1. EULOPHOSCOTOLINX VIRIDIS** new species.

*Female*:—Length, 2.00 mm.

Grass green, metallic, the wings hyaline, the legs deep lemon yellow (excluding most of all coxæ); tegula yellow; antennæ brown, the scape pallid yellow. Head and thorax finely densely scaly, including the propodeum. First funicle joint longest, longer than the first club joint, about a half longer than wide, the fourth shortest, a little longer than wide, but longer than the short pedicel.

Described from one female captured by sweeping grasses and weeds along a roadside, March 4, 1913.

*Habitat*: Halifax (Ingham district), Queensland.

*Type*: No. Hy 1897, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

**EURYSCOTOLINX** new genus.

*Female*:—Non-metallic; head triangular (cephalic aspect), the antennæ inserted near the middle, 10-jointed with two ring-joints, the club 2-jointed and with a short nipple. Parapsidal furrows complete, distinct, the pronotum large, the scutellum with two grooves, the propodeum with the mesial portion elevated and with an X-shaped median carina and short neck; abdomen with a distinct but short petiole, the second segment longest, occupying about a fourth or more of the surface. Postmarginal vein lengthened, twice longer than the stigmal. Mandibles about 5-dentate. Grooves of scutellum joined around the apex.

*Male*:—Not known.

*Type*: The following species.

**1. EURYSCOTOLINX GUTTATIVERTEX** new species.

*Female*:—Length, 1.45 mm.

Orange yellow, the centre of the vertex with a large, round black spot and a little over proximal half of abdomen margined with fuscous and centrally, opposite the ends of the marginal stripe, a rather large dusky black spot; also the tip is black. Wings hyaline. Legs and scape concolorous, the pedicel dusky, rest of antennæ black. Thorax with a scaly sculpture. Distal two funicle joints longest, the first slightly longer than the pedicel, the club divided slightly beyond the middle, its first joint shorter than funicle 4.

Described from one female captured August 14, 1913, by sweeping grass along a forest streamlet (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1898, Queensland Museum, the above specimen on a tag, the head and last two pairs of legs on a slide.

## PSEUDIGLYPHOMYIA new genus.

*Female*:—Like *Pseudiglyphella* Girault but nonmetallic, the abdomen with a short stout petiole, the propodeum usually rugulose (no distinct carinæ), the second abdominal segment covering a third of the surface, the others much shorter than it; mandibles with about five teeth. Pronotum conical. Postmarginal vein a little longer than the stigmal, neither long.

*Male*:—Not known.

*Type*: The following species.

## 1. PSEUDIGLYPHOMYIA BIGUTTATA new species.

*Female*:—Length, 1.80 mm.

Orange or reddish yellow, the wings hyaline, the legs whitish; propodeum, tip of abdomen, a broad stripe across a little distad of middle, two subquadrate spots just out from base of abdomen from each lateral margin, cephalic fourth or more of scutum and a dot on each axilla at cephalic margin laterad, black. Antennæ dusky, the scape and pedicel dusky, the pedicel black above, the first funicle joint longer than the second which is longer than the pedicel. Thorax reticulately scaly. Caudal half of pronotum lemon yellow.

Described from one female captured by sweeping jungle growths along a forest streamlet, August 1, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1899, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

## 2. PSEUDIGLYPHOMYIA FUSCA new species.

*Female*:—Length, 1.35 mm.

Like *biguttata* but with no markings other than about seven narrow, obscurely dusky stripes across abdomen from base to tip, the distal half of pronotum paler; tegulæ fuscous. A more or less distinct median carina on propodeum. Mandibles with six (?) teeth. Otherwise the same.

*Male*:—Not known.

Described from one female captured by sweeping lantana and other growths in an open field near town, October 20, 1911.

*Habitat*: Mackay, Queensland.

*Type*: No. Hy 1900, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

## 3. PSEUDIGLYPHOMYIA CARINATUS new species.

*Female*:—Length, 1.15 mm.

Pale lemon yellow, the wings hyaline, the abdomen beyond the second segment crossed by a half dozen or more black stripes (or the appearance of such stripes), all close together and nearly fused (practically so in death, making somewhat over distal half of abdomen black). Propodeum black, densely punctate and with a distinct median carina and no others. Abdomen with a short petiole, just out from base with a short longitudinal fuscous mark near each

margin. Parapsidal furrows and divisions between pronotum and mesonotum black. Thorax scaly. Mandibles 6-dentate. Funicle joints stout, both longer than wide, the first somewhat longer, both much longer than the pedicel.

*Male*:—Not known.

Described from one female captured by sweeping in forest, August 26, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1901, Queensland Museum, the above specimen on a tag, the head and a hind tibia on a slide.

#### 4. PSEUDIGLYPHOMYIA RUSTICUS new species.

*Female*:—Length, 1.30 mm.

Lemon yellow, the wings hyaline, the legs white; propodeum, an exclamation-point-like (inverted) marking from base of scutellum (reaching to distal third), suture between pro- and mesonotum, parapsidal furrows, centre of occiput (transversely), face of pronotum, suture between scutum and scutellum and about four to five stripes across distal two thirds of the abdomen (more or less fused in death), black; also a dot at cephalic margin of each axilla. Propodeum glabrous or nearly, with a median carina; thorax reticulated into scale-like areas. Antennæ yellow, the terminal spine of the antennæ forked, one of the branches less stout and shorter than the others. Joint 1 of funicle slightly longer than wide, joint 2 wider than long, also the three club joints; pedicel somewhat shorter than the first funicle joint.

*Male*:—Not known.

Described from one female captured September 6, 1913, by sweeping in forest.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1902, Queensland Museum, the above specimen on a tag, a hind leg and the head on a slide.

#### GENUS SECODELLA Girault.

Like *Secodes* Girault but the antennæ with two ring-joints, hence 11-jointed, the third club joint terminating in a seta; propodeum with a short median carina. (From the *Omphalini*.) Submarginal vein long, entire.

##### 1. SECODELLA LINEATA Girault. Female. Genotype. (Type re-examined.)

Dark metallic green, the ample wings hyaline; antennæ and legs black, the proximal three joints of tarsi snow white. Second funicle joint longest, a fifth longer than wide, the first and fourth more or less subequal, subquadrate; distal club joint a little shorter than the other two.

*Habitat*: Mackay and Seymour, Queensland.

*Type*: No. Hy 1903, Queensland Museum.

##### 2. SECODELLA PULCHRA new species.

*Female*:—Length, 2.60 mm.

Like *lineata* but longer, more robust, the abdomen compressed and longer, nearly twice longer than the head and thorax combined. Joint 2 of the funicle is plainly much longer than

wide, about twice longer than wide, joint 4 plainly longer than wide, much longer than the pedicel. Distal club joint plainly shorter than the other two taken separately. Funicle 2 a third longer than funicle joint 3.

*Habitat*: Little Mulgrave River (Cairns), Queensland. Jungle.

*Type*: No. Hy 1904, Queensland Museum.

### 3. SECODELLA RUFISCAPIS new species.

*Female*:—Length, 2.25 mm.

Like *lineata* but the scape reddish brown, the general coloration dark metallic blue; thorax (excluding propodeum) finely reticulately punctate as with *lineata*. Joints 1 and 2 of funicle subequal, each a third longer than wide.

*Male*:—Not known.

Described from two females captured March 29 and April 22, 1913, among grass and herbage and on the flowers of *Bæckea* respectively (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 1905, Queensland Museum, the above specimens on a tag, the heads on a slide.

Later, two females were found, each captured with one of the others (on two slides—not types).

### 4. SECODELLA PETULANS new species.

*Female*:—Length, 1.00 mm.

Like *lineata* but the funicle joints all quadrate and equal, the sculpture (reticulate-punctuation) of the scutum not coarser than that of the scutellum. The body is much less robust, the ovipositor less prominent. Hind tibial spur single.

*Male*:—Not known.

Described from one female captured by sweeping forest along the banks of Cape River, January 9, 1913.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1906, Queensland Museum, the above specimen on a tag (minus abdomen), the head and a hind leg on a slide with the type appendages of *Gyrolasomyia washingtoni*.

### GENUS MESTOCHARELLA Girault.

Differing from *Mestocharis* in having four funicle joints and the scutellum with two grooved lines; propodeum with a median carina and a number of irregular carinae. Pronotum long; stigmal vein very short; segments 2 and 3 of abdomen occupying half of the surface.

#### 1. MESTOCHARELLA FERALIS Girault. Female. Genotype.

Shining black. The venter of abdomen and a large ovate area in centre of its dorsum yellow; legs brownish yellow except coxae; wings hyaline; antennae brownish yellow, the distal three joints blackish. First funicle joint longest of the funicle. Thorax scaly. Length, 1.20 mm. Funicle 4 ovate, longer than either of the club joints.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1907, Queensland Museum.

The genus and species transferred from the Entedonini, the type re-examined because yellow was noticed to be present on the body. The propodeum is rugulose but a median carina shows for its entire length. Submarginal vein slightly broken, shorter than the marginal and as the stigmal vein is very short, the venation is very similar to that of the tribe from which, on the grounds of composite characters, this genus is removed. Petiole of abdomen a little longer than wide. Hind tibial spur short, mandibles tridentate. One ring-joint, the club 2-jointed.

GENUS ENTEDONOMORPHA Girault.

*Female*.—With the form of the Entedonini but with yellow coloration on the abdomen, the submarginal vein not broken, long but somewhat shorter than the long marginal, the stigmal long and slender but shorter than the long postmarginal. Antennæ 11-jointed, two ring-, three funicle and four distinct club joints, the conical distal joint with a short, stout, curved spine from the side of its apex. Scutellum with two foveate grooves, the propodeum tricarinate. Abdomen depressed, ovate, with a distinct, quadrate petiole, the second segment occupying somewhat over half the surface. Hind tibial spur slender. Metallic green. Mandibles 4-dentate. Antennæ inserted below the middle of the face.

*Male*.—Not known.

1. ENTEDONOMORPHA RENANI new species.

*Female*.—Length, 1.35 mm.

Dark shining metallic green, the wings hyaline, the thorax reticulately scaly, the lines not raised; propodeum much smoother. Legs, scape, pedicel, ring-joints and abdomen yellow, the latter margined all around with dark greenish. Antennæ black-green, the first three club joints subquadrate, the three funicle joints subpetiolate, cylindrical, 1 longest, 2 and 3 subequal, a fourth shorter than 1, a little longer than the pedicel.

Described from one female captured in the jungle September, 1913 (A. P. Dodd). Dedicated to Ernest Renan.

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1908, Queensland Museum, the above specimen on a slide.

GENUS CLUTHAIRA Cameron.

Eyes pilose, occupying three fourths of the cheeks; scutellum without two dorsal grooves; propodeum with median and lateral sulci. Abdomen distinctly petiolate, the second segment occupying as much space as the others united. Intermediate tibial spurs two thirds, the hind spurs half, the length of the metatarsus. Marginal vein more than twice the length of the submarginal, the postmarginal and stigmal veins short. Club 3-jointed? Abdomen upturned. Head triangular.

1. CLUTHAIRA AGARISTÆ Cameron. Female. Genotype.

Cameron, 1912, p. 212.

Dark blue, segment 2 of abdomen bright blue, also hind femora; legs concolorous; knees and tips of tibiae more or less testaceous; tarsi white except last joint. Wings hyaline. Smooth, shining, mesonotum transversely striated. Length, 2 mm.

*Habitat*: Sydney, New South Wales. Associated with *Agarista glycine*.

*Type*: Query.

This poorly described genus, I think, belongs to the Entedonini—abdomen petiolate, its second segment lengthened, marginal vein very long, postmarginal and stigmal veins short, metallic blue color, the upturned abdomen. It will be difficult to recognise without seeing the type.

**SPECIES UNKNOWN.**

*Cœlocyba viridilineata* Froggatt, 1907, p. 79, fig. 48.

Described in an agricultural journal as a merisine pteromalid, figured with 4-jointed tarsi and in form resembling the Elachertini.

*Cirrospilus* species of Walker—de Dalla Torre, 1898.

**DIAGNOSIS OF THE ELACHERTINE EULOPHIDÆ.**

**FEMALES. AUSTRALIA.**

The tribe is characterised by bearing but a single normal spur on the caudal tibiæ.

1. Scutellum with two dorsal grooved lines.

(1) Antennæ with the funicle 2-jointed.

Club 3-jointed; one (?) ring-joint.

Head much longer than wide and very thin; flagellum subcompressed, the ring-joint usually hidden, apparently present; body variegated, the wings banded or with a substigmal fascia or a pattern.

**Zagrammosoma** Ashmead (Type: *Hippocephalus multilineata* Ashmead).

Club 3-jointed; two ring-joints.

Propodeum very short, more or less hidden at the meson by the postscutellum. Body variegated.

Vertex elevated; pronotum long triangular.

Postmarginal vein shorter than the stigmal; flagellum subcompressed.

Fore wings usually with a substigmal spot, often with fasciæ.

**Atoposoma** Masi (Type: *A. variegatum* Masi).

Vertex not elevated; pronotum transverse.

Wings usually hyaline.

**Gyrolasella** Girault (Type: *G. fasciatus* Girault).

Propodeum long, easily visible at the meson.

Body all metallic or all black the abdomen sessile; propodeum with a distinct median carina (single or paired).

Propodeum tricarinate, the median carina broad, solid; second abdominal segment occupying nearly half of the surface, scutellum with no transverse suture before apex; funicle joints petiolate.

**Ascotolinx** Girault (Type: *A. funeralis* Girault).

Propodeum bicarinate, short, with an obscure paired median carina at the meson; antennæ short, capitate; second abdominal segment occupying less than a fourth of the surface; scutellum without a cross-suture before apex; funicle joints not petiolate.\*

**Pseudiglyphella** Girault (Type: *P. cælestis* Girault).

Body nonmetallic, yellowish; propodeum usually rugulose, the abdomen shortly petiolate.

Pronotum conical; second abdominal segment occupying about a third of the surface; postmarginal vein a little longer than the stigmal.

**Pseudiglyphomyia** Girault (Type: *P. biguttata* Girault).

\* Propodeum sometimes with a distinct median carina. *Ascotolinx* is misplaced. *Pseudiglyphus* Girault omitted by mistake; it is characterized by the short scutum and the much advanced axillæ.



Club 4-jointed; two ring-joints.

Body nonmetallic; mandibles about 6-dentate; propodeum with interlacing carinae, the abdomen with a short petiole, depressed, conic-ovate.

**Cirrospilomella** Girault (Type: *C. fasciatus* Girault).

- (2) Antennae with the funicle 3-jointed, the club 4-jointed; two ring-joints.

Metallic; abdomen petiolate; propodeum tricarinate; segment 2 of abdomen occupying half of the surface. **Entedonomorpha** Girault (Type: *E. tennysoni* Girault).

- (3) Antennae with the funicle 4-jointed.

Club solid; two ring-joints.

Grooves of scutellum united around the apex; pronotum large, as in the Eurytomidae, cephalo-ventrad conically produced; propodeum tricarinate; second abdominal segment occupying from a third to a half of the surface; mandibles 5- and 6-dentate; abdomen distinctly, shortly petiolate; the habitus of *Euplectrus*; body black.

**Pseudelacherteus** Girault (Type: *P. nigrithorax* Girault).

Club 2-jointed.

Antennae 9-jointed with one ring-joint; abdomen sessile, conic-ovate; propodeum short, with a median carina which meets a semicircular carina at apex; no true lateral carina; mandibles weakly bi- or tridentate; postmarginal vein barely developed. Metallic.

**Eulophoscotolinx** Girault (Type: *E. viridis* Girault).\*

The same but nonmetallic, the abdomen distinctly petiolate, the stigmal vein very short, the pronotum long, segments 2 and 3 of the abdomen long, together occupying half of the surface.

**Mestocharella** Girault (Type: *M. feralis* Girault).

Antennae 10-jointed with two ring-joints; propodeum with the mesal portion elevated and with an X-shaped median carina and short neck; abdomen with a distinct but short petiole; postmarginal vein lengthened, twice the length of the stigmal. Mandibles about 5-dentate. Nonmetallic.

**Euryscotolinx** Girault (Type: *E. guttativertex* Girault).

2. Scutellum without dorsal grooved lines.

- (1) Antennae with the funicle 2-jointed.

Antennae 9-jointed with two ring-joints, the club 3-jointed, the third joint terminating in a long spur; abdomen with a short stout petiole; propodeum rugose; mandibles 4-dentate. Submetallic.

**Cirrospiloidelleus** Girault (Type: *C. bicolor* Girault).

Antennae 10-jointed with two ring-joints, the club 4-jointed, the fourth joint minute and conic, not with a spur; abdomen large, ovate, sessile; propodeum without a median carina; mandibles 3-dentate. Metallic.

**Cirrospilomyia** Girault (Type: *C. magniventris* Girault).

Antennae 11-jointed with four ring-joints, the club 3-jointed, the flagellum short and stout; body short and compact, the abdomen almost round from lateral aspect; parapsidal furrows very deep; postmarginal vein barely developed; mandibles tridentate; propodeum very short, with a weak median carina or without carinae.

**Elachertetrastichus** Girault (Type: *E. purpureus* Girault).

\* Tetrastichini.

- (2) Antennæ with the funicle 4-jointed, the club 3-jointed; two ring-joints.  
Fore wings with the discal ciliation arranged in more or less regular lines; postmarginal vein longer than the stigmal; propodeum short but with a median carina; abdomen sessile, long, conical, pointed ovate. Mandibles tridentate.

**Secodella** Girault (Type: *S. lineata* Girault).

(Compare *Cluthaira* Cameron.)

TRIBE EUPLECTRINI.

Characterised by bearing two unequal, elongate spurs on the hind tibiae.

GENUS EUPLECTRUS Westwood.

The Australian forms described by me have a 2-jointed club, the funicle 4-jointed, the scutellum with no grooves. The antennæ 9-jointed. Mandibles absent?

1. **EUPLECTRUS AUSTRALIENSIS** Ashmead. Female.

Ashmead, 1900, p. 347.

Black, antennæ light brownish; abdomen except extreme tip above and the legs except the black hind coxæ, peach yellow. Pronotum rather coarsely, confluent punctate, mesonotum with sparse, moderately large punctures cephalad but smooth caudad; scutellum feebly shagreened.

*Habitat*: Australia.

*Type*: Cat. No. 4901, United States National Museum, Washington, D.C., U.S.A.

2. **EUPLECTRUS AGARISTÆ** Crawford. Female.

(Crawford, 1911, p. 281. Cameron, 1912, p. 212.)

Black, the abdomen largely reddish-testaceous; clypeal region whitish, all of legs reddish-testaceous; funicle 1 distinctly longer than the pedicel, the following joints shortening; joint 4 about equal to pedicel in length. Scutum with a median longitudinal carina and rather finely rugose, the rugæ more or less transverse, the parapsidal area more finely sculptured than the median lobe; axillæ much more finely striate; scutellum finely indistinctly lineolately reticulated, the lines more or less longitudinal; wings slightly yellowish; proximal joint of hind coxæ slightly longer than second; abdomen margined all around with dark brown.

*Habitat*: Sydney, New South Wales. Larvæ of *Agarista glycine*.

*Type*: Cat. No. 13,972, United States National Museum, Washington, D.C., U.S.A.

According to Cameron (l.c.), the larvæ of this species feed exteriorly on the larvæ of its host, forming their cocoons in company, "enveloping them in a mass of dark greyish, coarse, woolly hair, on the remains of the devoured caterpillars." Thus, the Australian members of the genus have the usual larval habits of its extra-Australian species. Cameron in the same place supposes this species to be common and variable, the median carina of scutum present or absent.

3. **EUPLECTRUS XANTHOCEPHALUS** Girault. Female.

Like *australiensis* Ashmead but the head and hind coxa also honey yellow; petiole of abdomen black; a broad brownish stripe across the abdomen distad of middle followed by a narrow stripe, the two joined along the middle; scrobes blackish. Wings slightly stained

under venation. Thorax sculptured nearly as in species of *Tetrastichus* but the scutum densely scaly except at cephalic third. Abdomen margined with brown. Antennæ 10-jointed, one ring-joint and a 3-jointed club, the third joint of the latter very minute like a nipple yet apparently articulated. Funicle joints subequal, each slightly longer than the pedicel. Propodeum with a long median carina, apparently smooth. Longest hind tibial spur not quite half the length of the hind tarsus.

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1909, Queensland Museum.

#### 4. *EUPLECTRUS CAIRNSSENSIS* Girault. Female.

The same as in *xanthocephalus* but the head is black, the wings hyaline; longest spur of hind tibia over half the length of the hind tarsus. Joints 1 and 4 of funicle a little longer than either of joints 2 or 3. Median carina of propodeum straight, single.

*Habitat*: Cairns and Nelson, Queensland and Thursday Island, Torres Strait. Jungle and forest.

*Type*: No. Hy 1910, Queensland Museum.

What appears to be a male of this species was captured by sweeping in forest, March 12, 1912, on Thursday Island.

#### 5. *EUPLECTRUS MELANOCEPHALUS* Girault. Female.

Differing from *cairnsensis* in having the third coxa black; like *australiensis* but the sides of the abdomen dorsad margined with purplish black while the whole distal third of that region is the same colour; pronotum not punctate, feebly alutaceous, the vertex nearly smooth; sculpture otherwise as in *xanthocephalus*; antennæ blackish toward tip.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1911, Queensland Museum.

#### 6. *EUPLECTRUS NIGRIFEMUR* Girault. Female.

Differing from *melanocephalus* in having the cephalic coxa black, the legs brown, the hind femur black, the first femur blackish around the middle. Flagellum pale dusky yellow; distad somewhat less than third of abdomen blackish above. Median carina of propodeum forked at proximal fourth as in the others but the fork longer. Scutellum and scutum rugose, the axillæ nearly smooth, the parapsides alutaceous, the pronotum along cephalic margin with a cross-row of deep foveæ. Head nearly smooth. Scutellum with two foveate grooves.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1912, Queensland Museum.

#### 7. *EUPLECTRUS SCOTTI* new species.

*Female*:—Length, 3.20 mm.

Like *cairnsensis* but the scutellum is longitudinally wrinkled and the scutum with a distinct median carina. Like *agaristæ* but all legs, abdomen and antennæ pale lemon yellow, funicle 4 distinctly longer (by a fourth) than the pedicel, funicle 1 about one and a half times the length of the pedicel. Long striation of scutellum distinct; parapsides sculptured like the

scutum. Pronotum very finely reticulated like the cephalic part of scutum. Vertex smooth. Clypeal area and tegula lemon yellow. Abdomen margined with blackish along sides for proximal three fourths, the margining black then crossing the dorsum. Wings yellowish. Axillæ glabrous.

One female by sweeping along a road near the Herbert River, February 28, 1913.

*Habitat*: Halifax (Ingham), Queensland. Jungle.

*Type*: No. Hy 1913, Queensland Museum.

Dedicated with respect to Mr. Harlan Scott, an American negro.

**8. EUPLECTRUS KURANDAENSIS** Girault. Female.

Like *melanocephalus* but the scutum with a median carina; the axillæ smooth mesad.

*Habitat*: Kuranda, Queensland. Jungle.

*Type*: No. Hy 1914, Queensland Museum, the above specimen on a tag.

TABLE TO THE AUSTRALIAN SPECIES OF *EUPLECTRUS* WESTWOOD.

The species seen by me do not have the axillæ advanced and the submarginal vein is partly broken.

The types of the species described by me have been re-examined in making up the table.

Black species.

Head yellow.

All of each leg and the abdomen yellow, the latter margined with brown and with a brownish stripe distad of middle followed by a narrow stripe; wings slightly stained under venation; funicle joints subequal, each slightly longer than the pedicel. Longest hind tibial spur not quite half the length of the hind tarsus.

*xanthocephalus* Girault.

Head black or nearly all so.

Hind coxa black.

Femora yellow or mostly so.

Abdomen not margined with black.

Pronotum rather coarsely, confluent punctate; abdomen black at extreme tip; mesonotum with sparse moderately large punctures cephalad, smooth caudad.

*australiensis* Ashmead.

Abdomen margined all around with black; scutellum finely reticulated, finer than cephalic part of scutum.

Distal third of abdomen black; pronotum feebly alutaceous; scutum densely scaly except at cephalic third. Scutum without a median carina. Axillæ finely reticulated. Wings clear.

*melanocephalus* Girault.

The same; scutum with a median carina; mesal half of axilla smooth.

Wings stained.

*kurandaensis* Girault.

Hind femur black.

Cephalic coxa black; scutellum and scutum rugose, the parapsides alutaceous, the pronotum with deep foveæ across cephalic margin. Wings clear.

*nigrifemur* Girault.\*

\* *Euplectromorpha*.

Hind coxae yellow.

Scutum with a distinct median carina.

Abdomen margined all around with brownish; funicle 4 subequal to pedicel; parapsides more finely sculptured than scutum. *agaristæ* Crawford.

Abdomen margined along proximal three fourths with brownish, then with a cross-stripe; funicle 4 a fourth longer than the pedicel; parapsides sculptured like the scutum. Scutellum finely longitudinally lined. Axillæ glabrous or nearly *scotti* Girault.

Scutum without a median carina.

Abdomen marked as in *xanthocephalus*; joints 1 and 4 of funicle subequal, longest. Longest tibial spur of hind legs over half the length of the hind tarsus. Scutellum and axillæ finely polygonally reticulated. *cairnsensis* Girault.

#### GENUS EUPLECTROMORPHA Girault.

Like *Euplectrus* but the abdomen less depressed, the ovipositor longer, the submarginal vein is not broken and the antennal club is solid. Type re-examined and mistakes in original description corrected. Antennæ 9-jointed with two ring-joints, the first very short. Scutellum with a lateral groove as in many elachertine genera. The scutellum has not a cross-furrow in the sense in which usually understood but in the type species the caudal margin is indented. Wings as in *Euplectrus*. Propodeum with a median carina. The species are more inclined to yellow than to black.

#### 1. EUPLECTROMORPHA UNIFASCIATA Girault. Female. Genotype.

Bright orange yellow, the wings subhyaline, the legs, scape and head paler, also the abdomen which has a rather broad black stripe across it somewhat distad of the middle. Funicle 1 somewhat longer than wide, longer than the pedicel, the other large, subquadrate. Club solid. Head and thorax very finely reticulated.

*Habitat*: Babinda, Queensland. Jungle.

*Type*: No. Hy 1915, Queensland Museum.

#### 2. EUPLECTROMORPHA MALANDAENSIS new species.

*Female*:—Length, 2.95 mm.

Head, scutellum, caudal margin of pronotum and scutum except cephalad, deep orange-yellow, also all of the legs and abdomen (except margins all around). Otherwise black. Thorax with a fine dense scaly sculpture, the propodeum somewhat finer, its median carina thickened at base. Scutum with setigerous punctures. Antennæ and distal half of scutellum lemon yellow. Wings slightly yellowish. Occiput black. Caudal margin of scutellum not indented. Type re-examined.

From one female captured by sweeping in virgin jungle, December 31, 1911.

*Habitat*: Malanda, Queensland. Jungle.

*Type*: No. Hy 1916, Queensland Museum.

**3. EUPLECTROMORPHA FLAVA** new species.

*Female*:—Length, 1.70 mm.

Like *unifasciata* but there is a *dusky* stripe across the abdomen somewhat *proximal* of the middle and a second fuscous spot in middle at tip; also the first funicle joint is distinctly longer, nearly as long as the club, distinctly shorter in the type species. The club is solid in both species, since I have re-examined the type species. The mandibles appear to be absent. Two ring-joints; nine antennal joints.

*Male*:—Not known.

Described from one female captured by sweeping in forest, August 13, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. *Hy* 1917, Queensland Museum, the above specimen on a tag, the head on a slide.

TRIBE OPHELININI.

GENUS OPHELINUS Haliday.

Antennæ 9-jointed with one ring-joint, the club thickened, 3-jointed; tibial spurs long; scutellum simple; abdomen sessile or subsessile.

**1. OPHELINUS URSIDIUS** (Walker). Female. Genotype.

*Eulophus ursidius* Walker, 1839, pp. 44-45.

*Ophelinus ursidius* Walker—Haliday, 1843, p. 301.

*Habitat*: Tasmania (Hobart).

*Type*: Probably in the Natural History Museum, London.

**2. OPHELINUS FANNIUS** (Walker). Female.

*Cirrospilus fannius* Walker, 1839, p. 49.

*Ophelinus fannius* Walker—Haliday, 1843, p. 301.

*Tetrastichus fannius* Walker, 1846, p. 79.

*Habitat*: Tasmania (Hobart).

*Type*: Probably in the Natural History Museum, London.

**3. OPHELINUS SABELLA** (Walker). Female

*Eulophus sabella* Walker, 1839, pp. 41-42.

*Cirrospilus Prymno* Walker, *ib.*, p. 50.

*Ophelinus sabellus* Walker—Haliday, 1843, p. 301.

*Habitat*: Tasmania (Hobart).

*Type*: Probably in the Natural History Museum, London.

## GENUS ALOPHOMORPHA Girault.

Metallic; antennæ 11-jointed with two ring-joints, the club 3-jointed; parapsidal furrows shallow; grooves on scutellum curving toward each other around tip but not joining. Propodeum with a distinct median carina with a short sulcus on each side of it at middle. Postmarginal vein longer than the stigmal. Hind tibial spurs short, strong. Abdomen sessile, broadly ovate. Club not widened.

**1. ALOPHOMORPHA PULCHRA** Girault. Female. Genotype.

Dark metallic blue, the scutellum between the grooves and second segment of abdomen green, the wings hyaline; coxæ and femora concolorous, the hind femur white at proximal half; tibiæ and tarsi white. Scutum and pronotum densely punctate-reticulate, the scutellum between the grooves densely shagreened, the postscutellum and propodeum smoother, very finely reticulate, the axillæ more grossly so. Second segment of abdomen glabrous. Funicle 1 large, as long as the club, the others shortening, the fourth not much longer than wide, subequal to the pedicel but larger. Small distal club joint without a nipple.

*Habitat*: Nelson (Cairns), Queensland. Jungle.

*Type*: No. Hy 1918, Queensland Museum.

## GENUS SYMPIESOMORPHELLEUS Girault.

Antennæ 10-jointed with two ring-joints, the club 2-jointed; abdomen subsessile, long, ovate, segments 2 and 3 longest, subequal. Nonmetallic. Median carinæ of propodeum forked just before base, their ends parallel, the propodeum with a short neck. Parapsidal furrows well defined. Scutellum with two grooves. Mandibles about 6-dentate. Spiracular sulci present, carinated along each margin.

**1. SYMPIESOMORPHELLEUS SUTTNERI** Girault. Female. Genotype.

Ochreous yellow, the wings hyaline, the antennæ black except under parts of scape, the legs wholly concolorous but somewhat paler than the body; abdomen at base centrally pale yellow, elsewhere purplish black, this color at dorsal meson projecting obtusely into the proximal yellow area. Thorax scaly, the surface of the propodeum less so. Funicle 1 longest, about as long as the club, longer than the pedicel.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1919, Queensland Museum.

**2. SYMPIESOMORPHELLEUS SPECIMENIPENNIS** new species.

*Female*.—Length, 1.55 mm.

Orange yellow, the parapsides, apex of scutum and scutellum faded or lemon yellow, the abdomen brownish yellow with very obscure, narrow blackish cross-stripes and black across immediate base; legs concolorous, the coxæ pale. Antennæ yellowish white, the club white, joints 3 and 4 of funicle black. Fore wings with a smoky loop (crescentic mark), from proximal third of marginal vein round to apex of stigmal, the apex of the curve extending caudad beyond midlongitudinal line of the blade. Ring-joints short; funicle 1 longest, nearly as long as the club, the following joints shortening, funicle 4 longer than wide,

stout, longer than club joint 1 which is subequal to the pedicel. Mandibles about 7-dentate; funicle joints subpetiolate and with a nipple-like spine from each latero-distal angle. One spur of hind tibiae very short, stout. Grooves of scutellum near lateral margin and joined round apex. Axillae not advanced. Thorax reticulate-punctate, the axillae smooth, faintly reticulate. Propodeum glabrous.

*Male*.—Not known.

Described from one female captured by sweeping in heart of jungle, September 12, 1913 (A. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1920, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

#### GENUS PARENTEDON Girault.

Scutellum with two grooves. Antennae 10-jointed with two ring-joints, the club 2-jointed. Body mostly metallic; abdomen subsessile, short, ovate; propodeum tricarinate; antennae inserted below the ventral ends of the eyes; mandibles 13-dentate. Postmarginal vein somewhat longer than the rather long stigmal. Hind tibial spurs normal, the spur of the intermediate legs long and slender. Propodeal spiracle minute. This genus was removed from the Entedonini on suspicion because when compiling the portion of this manuscript on that tribe it was noticed in the description of the type species that the latter was partly nonmetallic. Consequently, the type was re-examined with the result that the true position of the genus is ascertained. Occipital margin of vertex acute.

##### 1. PARENTEDON AUSTRALIS Girault. Female. Genotype.

Dark metallic green, the abdomen (except distad, more or less, where it is metallic) and legs reddish brown. Eyes hairy. Thorax scaly, the axillae smoother. Funicle 1 somewhat longer than the pedicel, the fourth joint a little longer than wide; scape pale, the flagellum dusky brownish. Fore wings indefinitely stained (yellowish). Inner eleven teeth of mandibles comblike, minute.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1921, Queensland Museum (altered now from that published originally: A thorax and two abdomens on one tag and a slide with three hind, one intermediate, legs and two antennae).

#### GENUS OPHELIMINUS Girault.

Like *Alophomorpha* Girault in antennal structure and otherwise but the scutellum simple, the propodeal median carina has not the short sulci on each side; also the abdomen is long pointed conic-ovate. Mandibles 5-dentate.

##### 1. OPHELIMINUS GROTIUSI Girault. Female. Genotype

Brilliant metallic green, the wings hyaline, the abdomen dark purplish, dorsad with a pale yellowish, large subquadrate area centrally a short distance from base; this yellow area larger ventrad. Legs white except proximal part of hind coxa; scape white, dusky above, the flagellum black; funicle 1 about twice the length of the pedicel, joints 2 and 3 of funicle



subequal, a little the longest and stoutest; joint 1 of club equal to the combined length of the other two. Reticulated, including the propodeum. Fore wings with dense discal ciliation, the marginal cilia very short.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1922, Queensland Museum.

## 2. *OPHELININUS LONGFELLOWI* new species.

*Female*:—Length, 2.25 mm.

Same structurally as the type species but the abdomen somewhat shorter and stouter and wholly dark purplish, blue at base; coxæ suffused with dusky. Pedicel only slightly longer than wide, the first funicle joint much more than twice its length, a little the longest of the funicle, the fourth the shortest yet longer than the first club joint and nearly twice the length of the pedicel. Hind tibial spurs distinct, rather stout. Propodeum with no carinæ laterad.

*Male*:—Not known.

Described from a single female captured by sweeping in a jungle pocket, July 24, 1913 (A. P. Dodd).

Dedicated to Henry W. Longfellow.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1924, Queensland Museum, the above specimen on a tag, the head and a hind leg on a slide.

On July 29, a second female was captured in the same place; this was more robust and there was a distinct elongate black spot on front femur about the middle beneath (present in the type specimen but smaller). A third female from the same place, August 7.

## DIGLYPHOMORPHELLA new genus.

*Female*:—Like *Diglyphomorpha* Ashmead but the scutellum without a median grooved line only with lateral grooves; funicle 4-jointed, the club 2-jointed. Propodeum with a strong median carina but without lateral carinæ. Antennal club terminating in a nipple-like spur. One spur of hind tibiæ short. Abdomen sessile, stout and ovate. Postmarginal vein longer than the long stigmal. Spur of antennal club apparently articulated but I do not think so.

*Male*:—Not known.

*Type*: The following species.

### 1. *DIGLYPHOMORPHELLA DELIRA* new species

*Female*:—Length, 1.10 mm.

Dark metallic blue-green, the scutellum and abdomen coppery; wings subhyaline; legs and antennæ dusky. Propodeum shiny steel blue but polygonally reticulated, the rest of the thorax more noticeably so. First funicle joint a little longer than wide, the others a little wider than long; pedicel barely longer than the first funicle joint. Portion of face yellowish.

Described from one female captured from a window in a railway dépôt, July 11, 1912.

*Habitat*: Townsville, Queensland.

*Type*: No. Hy 1923, Queensland Museum, the above specimen on a tag, the hind tibiæ and the head on a slide.

**2. DIGLYPHOMORPHELLA SANNIO** new species.

*Female*:—Length, 1.50 mm.

Dark metallic green with a peculiar pattern as follows: Lateral and caudal margins of pronotum and scutellum, all of postscutellum, extreme cephalo-lateral corner of scutum, the axillæ except a central portion, golden yellow; also the blackish stout abdomen down the centre with elongate transverse lemon yellow marks and with reciprocal roundish spots of the same color down each side; venter of abdomen yellow. Pronotum as in *Atoposoma*, the propodeum short but with a median carina and no others. Head with more or less yellowish (not distinctly seen). Wings hyaline. Flagellum black, the scape pale, marked with dusky, the funicle joints all short, wider than long. Mandibles 5-dentate. Club without a nipple. Ring-joint very short, probably absent.

*Male*:—Not known.

Described from one female captured by sweeping in the forest, August 23, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1925, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

DIGLYPHOMORPHOMYIA new genus.

*Female*:—Like *Diglyphomorphella* Girault but nonmetallic and the scutellum instead of the grooved lines bears a line of isolated punctures along the caudal and lateral margins in one continuous line. Parapsidal furrows complete. Postmarginal vein slightly longer than the stigmal. Mandibles with six teeth. One short ring-joint, 4 funicle and 2 club joints. The propodeum is tricarinate. Abdomen flat, ovate, the second segment with its distal margin spherical, along the meson the segment covering a third of the surface and much the longest. Funicle joints with short peduncles. Propodeum with a neck, the abdomen sessile or subsessile.

*Male*:—Not known.

*Type*: The following species.

**1. DIGLYPHOMORPHOMYIA NIGRISCUTELLUM** new species.

*Female*:—Length, 1.30 mm.

Blood red, the abdomen yellowish brown, margined laterally with black (not to tip), crossed by very obscure darker stripes and with a roundish blackish spot about centrally; scutellum jet black and with scattered pin-punctures in the disk. Wings hyaline. Legs white including the coxæ; also the scape and distal antennal joint, the rest of antenna black. Thorax scaly. First funicle joint elongate, twice the length of the fourth, which, however, is broader and not much longer than wide, about as long as the pedicel. Face yellow, the vertex dusky.

Described from one female captured by sweeping in jungle, July 30, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1926, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

ALOPHOMOPSIS new genus.

*Female*:—Scutellum without grooves; antennæ 7-jointed without ring-joints, the club solid, the funicle 4-jointed; abdomen sessile, short, conic-ovate. Postmarginal vein distinctly longer than the stigmal. Mandibles 5-dentate. Propodeum apparently with a median carina and no others, the spiracle minute. Metallic.

*Male*:—Not known.

*Type*: The following species.

**1. ALOPHOMOPSIS SPENCERI** new species.

*Female*:—Length, 0.95 mm.

Dark green, the wings hyaline, the abdomen purplish, the thorax finely shagreened. Legs yellowish, the hind coxa concolorous, the hind femur concolorous or else blackish along the middle. Antennæ dusky, short, the funicle joints subglobular, shorter than the short club which is longer than wide. Pedicel globular. Mandibles minute. Club without a terminal spur.

Described from one female captured by sweeping in the forests adjoining Cape River, January 8, 1913.

Dedicated to Herbert Spencer.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 1927, Queensland Museum, the above specimen on a tag, the head and hind leg on a slide.

**ALOPHOMORPHELLA** new genus.

*Female*:—Like *Alophomorpha* Girault but the abdomen petiolate, the propodeum strongly tricarinate, the sulci on each side of the median carina absent or nearly. Scutum and scutellum at base with a longitudinal median depression. Grooves of scutellum joining around distal margin. Mandibles with seven teeth. Parapsidal furrows deep. Petiole short but distinct. Habitus of *Euplectrus*.

*Male*:—Not known.

*Type*: The following species.

**1. ALOPHOMORPHELLA ILLUSTRIS** new species.

*Female*:—Length, 2.50 mm.

Brilliant metallic aeneous green, the wings hyaline, the abdomen purplish black, white ventrad except at tip and also all along the middle portion dorsad at proximal half. Legs white except the sides of hind coxæ. Thorax finely, transversely wrinkled somewhat as in *Megastigmus*, the propodeum, however, glabrous. Scape and tegulæ white. All funicle joints longer than the pedicel, the first long, over a third longer than the fourth. Scutum with scattered, long, soft pubescence.

Described from one female captured by sweeping in jungle, July 10, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1928, Queensland Museum, the above specimen on a tag, the head and hind tibiae on a slide.

**GROTIUSELLA** new genus.

*Female*:—Like *Opheliminus* Girault but there is only one ring-joint, the club 2-jointed, the flagellum somewhat fusiform, stout and subcompressed; propodeum short as in the *Omphalini*, noncarinate; abdomen sessile, not long, conic-ovate. Mandibles with more than three

teeth, several very minute inner ones. Club without a terminal seta, the pedicel globular, not compressed, smaller than the funicle joints. Parapsidal furrows short but attaining the advanced axillæ. Hind tibial spurs short, unequal. Postmarginal vein longer than the slender stigmal, the marginal about two and a half times the length of the stigmal. Metallic and with an omphaline habitus.

*Male*:—Not known.

The genus is respectfully dedicated to the jurist and historian Hugo Grotius.

*Type*: The following species.

**1. GROTIUSELLA FASCIATIFRONS** new species.

*Female*:—Length, 1.15 mm.

Dark metallic aeneous green, the wings hyaline, the face with two cross-stripes of silvery white, one above, the other below, the antennæ; vertex more or less whitish; legs white except the concolorous coxæ, the femora proximad (to tip in caudal femur) and a band around intermediate tibiæ faintly (distinct on caudal femur), sooty. Antennæ concolorous, the scape silvery white except above at tip, the first funicle joint subglobular, the others stout but distinctly wider than long, the club short.

Described from one female captured by sweeping in forest, October 24, 1912.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1929, Queensland Museum, the above specimen on a slide.

**EUPLECTROPHELINUS** new genus.

*Female*:—Nonmetallic. Head triangular, the eyes widely separated and moderately small, the antennæ inserted far down on the face, somewhat near the clypeus, below the ventral ends of the eyes, 9-jointed with two ring-joints (the first very short), the club ovate, solid; scape slender. Scutellum with four dorsal grooved lines, the mesal one in the usual lateral position, the lateral ones dorso-lateral but distinct. Abdomen shortly petiolate, the second segment occupying about half the surface. Postmarginal vein longer than the well developed stigmal. Pronotum transverse quadrate; axillæ not advanced. Propodeum strongly tricarinate, the spiracle oval, moderate in size. Mandibles not seen. Hind femora stout.

*Male*:—Not known.

*Type*: The following species.

**1. EUPLECTROPHELINUS SAINTPIERREI** new species.

*Female*:—Length, 1.80 mm.

Red; wings hyaline; face of pronotum, thoracic notum on each side of postscutellum, most of propodeum (except cephalo-laterad), distal third or more of abdomen and flagellum black. Legs, scape, petiole and proximal two thirds or less of abdomen brownish yellow. Pedicel elongate, a little longer than the cylindrical first funicle joint which is much longer than the following funicle joints of which 2 is subquadrate, the others a little shorter and wider; club longer than pedicel. Proximal tarsal joint of hind legs rather long. Thorax with isolated, long black setæ, finely polygonally reticulated, the propodeum similarly sculptured. Segment 2 of abdomen glabrous.

From one female captured by sweeping in open forest, September 16, 1913.

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1930, Queensland Museum, the above specimen on a tag, hind tibiae, head and a fore wing on a slide.

#### DIAGNOSIS OF THE OPHELININE EULOPHIDÆ.

##### FEMALES. AUSTRALIA.

The tribe is characterised by bearing two normal spurs on the caudal tibiae.

##### I. Scutellum with two grooved lines.\*

###### 1. Antennæ with two ring-joints.

**Funicle of antenna 4-jointed, the club 3-jointed, the antennæ 11-jointed; metallic.**

Abdomen distinctly petiolate; grooves of scutellum joining around distal margin; propodeum strongly tricarinate; mandibles 7-dentate.

***Alophomorphella*** Girault (Type: *A. illustris* Girault).

**Abdomen sessile; grooves of scutellum not joining around distal margin, merely convergent; propodeum with a distinct median carina with a short sulcus on each side of it at middle; lateral carinae absent.**

***Alophomorpha*** Girault (Type: *A. pulchra* Girault).

**Funicle of antenna 4-jointed, the club 2-jointed, the antennæ 10-jointed.\***

Abdomen subsessile, long-ovate; propodeum with a median carina and a short neck, the median carina really a pair of very thin, parallel carinae; segments 3 and 4 of abdomen subequal, longest; mandibles 6-dentate. Non-metallic.

***Sympiesomorphelleus*** Girault (Type: *S. suttneri* Girault).

**Partly metallic; abdomen subsessile, short ovate; propodeum tricarinate; antennæ inserted below the ventral ends of the eyes; mandibles 13-dentate.**

***Parentedon*** Girault (Type: *P. australis* Girault).

###### 2. Antennæ with only one ring-joint; funicle 4-jointed, the club 2-jointed.

Propodeum tricarinate; nonmetallic.

**Grooved lines of scutellum consisting of isolated punctures.**

***Diglyphomorphomyia*** Girault (Type: *D. nigriscutellum* Girault).

**Propodeum without lateral carinae; metallic.**

**Grooved lines of scutellum normal.**

***Diglyphomorphella*** Girault (Type: *D. delira* Girault).

##### II. Scutellum without grooves.

###### 1. Antennæ with two ring-joints; the funicle 4-, the club 3-jointed.

Propodeum with a median carina; abdomen conic-ovate, depressed, sessile; mandibles about 5-dentate; metallic. ***Opheliminus*** Girault (Type: *O. grotiusi* Girault).

###### 2. Antennæ with only one ring-joint; the funicle 4-, the club 2-jointed.

Propodeum short, noncarinate, the abdomen sessile; parapsidal furrows attaining the advanced axillæ; marginal vein about two and a half times the length of the stigmal; flagellum somewhat fusiform, stout.

***Grotiusella*** Girault (Type: *G. fasciatifrons* Girault).

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\* Scutellum with four grooved lines . . . ***Euplectrophelinus*** (see description).

3. Antennæ without ring-joints; funicle 4-jointed, the club solid.

Propodeum apparently with a median carina and no others; abdomen sessile, conic-ovate, short; postmarginal vein longer than the stigmal; metallic.

*Alophomopsis* Girault (Type: *A. spenceri* Girault).

The genus *Grotiusella* should be transferred to the Eulophini, perhaps. Its 2-jointed club separates it from *Eluophus* (also the 4-jointed funicle).

#### SUBFAMILY EULOPHINÆ.

#### TRIBE EULOPHINI.

#### GENUS EULOPHUS Geoffroy.

Antennæ inserted below the middle of the face, 9-jointed, noncompressed, with one ring-joint, the funicle and club each 3-jointed, the former black. Thorax not robust, the scutellum simple, the propodeum usually tricarinate, the median carina always present. Wings hyaline, the marginal vein not long but only about twice the length of the stigmal.

This genus appears to be very rare in Australia if not elsewhere. The large number of species in the catalogue of De Dalla Torre (1898) in most instances, I dare say, belong elsewhere and in this category are the species of Walker's listed below. Unless very strikingly coloured or characteristic in other ways, it would be hazardous to attempt to identify them at this distance from the types and for the present they had best be left alone. Whoever attempts their identification must show that the types have been examined.

#### 1. EULOPHUS CICUTA Walker.

De Dalla Torre, 1898, p. 59.

*Habitat*: Sydney, New South Wales.

The scutellum bears two grooved lines. This species is probably the representative of an undescribed genus near *Diulomorpha* Ashmead, the antennæ probably 9-jointed with one ring-joint and as in *Eulophus*.

#### 2. EULOPHUS ITEA Walker.

De Dalla Torre, 1898, p. 62.

*Habitat*: Tasmania (Hobart).

#### 3. EULOPHUS TELESTAS Walker.

De Dalla Torre, 1898, p. 68. (The specific name is misspelled in the catalogue.)

*Habitat*: Sydney, New South Wales.

#### GENUS ASYMPIESIELLA Girault.

= *Sympiesis*

Like *Sympiesis* but the club only 2-jointed, the propodeum with only an abbreviated median carina at base or with a complete median carina and incomplete lateral ones; spiracle large, oblong-oval; male antennæ with rami; abdomen long and conically produced; postmarginal vein over thrice the length of the stigmal, the marginal over five times the length of the stigmal; one ring-joint, the antennæ 9-jointed. Pronotum only half the length of the scutum.

**1. ASYMPIESIELLA NELSONENSIS** (Girault) Female, male. Genotype.*Sympiesis nelsonensis* Girault.

Bright metallic purplish blue; wings hyaline; coxæ white, the legs white, the tarsi fuscous. Head and thorax roughly polygonally reticulated, the axillæ smoother, the propodeum smooth. Antennæ black, the first funicle joint longest of the four, about twice the length of 4. Propodeum with a short median carina at base, the lateral carinæ absent.

In the male, the hind femur is metallic, the axillæ, scutellum and distal half of scutum metallic green, the abdomen with a whitish stripe across some distance out from base. **Antennæ with three long rami, 9-jointed, funicle 4 over twice the length of the club joint, longest of the whole, joint 1 of funicle subequal to the pedicel.**

*Habitat*: Nelson (Cairns), Queensland. Forest.

*Type*: No. Hy 1931, Queensland Museum.

**2. ASYMPIESIELLA PROSERPINENSIS** (Girault). Female.*Sympiesis proserpinensis* Girault.

Dark steel blue, not bright, the propodeum bright metallic green, the coxæ blue, the legs white, the tarsi more or less fuscous; wings hyaline. Head and thorax raised polygonally reticulated forming areas nearly like punctures; propodeum similarly sculptured but smooth and shiny, scaly. A complete median carina on propodeum and a more or less irregular lateral carina. Mandibles 6-dentate; funicle joints at apex armed with nipple-like projections. Otherwise as in *nelsonensis*. Male unknown.

*Habitat*: Proserpine, Queensland. Forest.

*Type*: No. Hy 1932, Queensland Museum.

## GENUS EULOPHINUSIA Girault.

Antennæ 8-jointed, the funicle 4-jointed, the club solid, one ring-joint. Scutellum simple. Propodeum with a short median carina. Mesopostscutellum rather large. Postmarginal vein a third longer than the stigmal, the marginal vein shorter than the submarginal, about two and a quarter times the length of the stigmal. Mandibles with four or five minute teeth. Abdomen ovate.

**1. EULOPHINUSIA CYDIPPE** Girault. Female. Genotype.

Dark metallic green, the abdomen coppery, the wings hyaline, the antennæ dusky; legs yellowish white but the coxæ more or less concolorous; thorax densely scaly reticulate but the scutellum and propodeum much finer, opaque or very finely alutaceous. Joints 1 and 2 of funicle longer than wide, subequal, longest, the remaining two more or less equal, wider than long; club short, longer than any of the funicle joints.

*Habitat*: Thursday Island, Torres Strait. Forest.

*Type*: No. Hy 1933, Queensland Museum.

## GENUS PSEUDOPHELIMINUS Girault.

Like *Notanisomorphella* Girault but the abbreviated median carina at base of propodeum, the shorter pronotum, the absence of lateral grooves on the propodeum and the elongated,

depressed abdomen are characteristics. Pronotum only half the length of the scutum; abdomen sessile; mandibles 7-dentate. Antennæ 10-jointed, with two ring- and club joints. Scutellum simple. Metallic. Postmarginal vein slightly longer than the stigmal.

**1. PSEUDOPHELOMINUS LONGIVENTRIS** Girault. Female. Genotype.

Bright aeneous green with bluish tinges, the wings hyaline, the coxæ concolorous, the legs white; abdomen coppery black. Thorax polygonally reticulated, the propodeum smooth and shining (very faintly reticulated). Scape white, flagellum black, the first funicle joint as long as the club, the proximal joint of the latter slightly longer than wide, shorter than funicle 4.

*Habitat*: Nelson (Cairns), Queensland. Braconid cocoons.

*Type*: No. Hy 1934, Queensland Museum.

GENUS NOTANISOMORPHELLA Girault.

Scutellum without lateral grooves; antennæ 10-jointed with two ring- and club-joints; pronotum not as long as the scutum; propodeum with a strong, long median carina, the lateral carinae represented by a curved line of foveæ; abdomen sessile. Mandibles 6-dentate.

**1. NOTANISOMORPHELLA AUSTRALIENSIS** Girault. Female. Genotype.

Dark metallic blue, the propodeum and base of abdomen dorsad, green; coxæ blue, the legs white; wings hyaline; scape and parts of pedicel white, rest of antennæ black. Funicle 1 as long as the club, joints 2 and 3 subequal, 4 shortest of the funicle but distinctly longer than wide. Thorax sculptured with raised polygonal figures, the postscutellum and propodeum shining yet scaly. First ring-joint short.

*Habitat*: Nelson and Kuranda, Queensland. Frequent.

*Type*: No. Hy 1935, Queensland Museum.

**2. NOTANISOMORPHELLA FEMORATUS** new species.

*Female*: Length, 2.40 mm.

Dark aeneous green, the distal half of abdomen purplish black, the proximal half with a tolerably large, ovate orange yellow spot centrally. Coxæ and femora concolorous, the knees broadly and hind tibiae brownish yellow; tarsi and other tibiae white. Wings hyaline; marginal vein over thrice the length of the stigmal which is only about half the length of the post-marginal. Whole thorax reticulately punctate. Abdomen with a short but distinct petiole, depressed, conic-ovate. Spiracular sulcus of propodeum shallow and broad, somewhat broken but not foveate, its mesal margin carinate; spiracle oval, moderate. Marginal vein a little longer than submarginal. Mandibles about 7-dentate. Scape white, not long, the flagellum black, compressed; funicle 1 subelongate, nearly as long as the scape, a little longer than the club, joint 2 a third shorter, 4 quadrate; second club joint much the smaller, its nipple distinct; funicle joints subpedunculate, clothed with stout, flattened setæ; pedicel very short. Pronotum only a third the length of the scutum (as seen from dorsal aspect). Hind tibial spurs moderate in length, stout.

*Male*:—Not known.

Described from one female captured by sweeping in jungle, September 12, 1913.

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 1936, Queensland Museum, the above specimen on a tag, the head on a slide.



## NECREMNOIDES new genus.

*Female*.—Antennæ 10-jointed with two ring-joints, the club 2-jointed, ending in a stout spur; scutellum simple; propodeum tricarinate; abdomen conic-ovate, sessile; mandibles 5-dentate. Hind tibial spurs moderately stout. Marginal vein a little over twice the length of the stigmal which is slightly shorter than the postmarginal. Second abdominal segment occupying somewhat less than a fourth of the surface. Median carina paired, diverging at base (cephalad), the lateral carinæ straight, near (mesad of) the small, round spiracle.

*Male*.—Not known.

*Type*: The following species.

## 1. NECREMNOIDES TRICARINATUS new species.

*Female*.—Length, 1.33 mm.

Olive green, metallic, the wings hyaline, the legs reddish brown including the coxæ; antennæ black, the scape reddish brown except at distal fourth, the pedicel shorter than any of the funicle joints of which the first is slightly the longest, the other three gradually shortening, all oval; thorax polygonally reticulated, the lines not raised, the sculpture finer on the axillæ and at base of scutellum. Propodeum shining, pronotum about a third the length of the scutum or slightly more. Marginal vein about equal to the submarginal or a little longer.

Described from two females captured by sweeping in forest, August 24 and 29, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1937, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

Two more females were captured in forest, August 31, 1913.

## 2. NECREMNOIDES FLAVIVENTRIS new species.

*Female*.—Length, 1.65 mm.

Burnished black, the abdomen orange yellow with a row of black dots along each edge (dorsad) and the extreme tip black. Wings hyaline. Scape and legs orange yellow (including coxæ). Densely, reticulately punctate including the propodeum. Marginal vein thrice the length of the stigmal. Pronotum transverse. Parapsidal furrows barely indicated, the scutum short. Propodeum tricarinate. Antennæ with two ring-joints, the pedicel much shorter than the first funicle joint which is thrice longer than wide (besides two funicle joints, rest of antenna missing). Mandibles with six teeth. Otherwise like the genus to which referred. Abdomen short, conic ovate.

*Male*.—Not known.

From one female captured by sweeping in forest, April 9, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1938, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

This species is probably not a member of this genus.

## NOTANISOMORPHOMYIA new genus.

*Type*: The following species.

## 1. NOTANISOMORPHOMYIA ALBICOXA new species

*Female*:—Length, 1.80 mm.

Like the type species of *Notanisomorphella* but the coxæ are also white and the propodeum has complete lateral carinæ joined to the median carina by a cross-carina about centrally. Also the body is dark metallic green, the abdomen darker. Propodeum with a distinct neck, the first abdominal segment ring-like, the abdomen certainly subpetiolate. Mandibles with five teeth, the inner tooth very minute. Antennæ black, scape white toward base, the fourth funicle joint distinctly longer than the first club joint, long yet shortest of funicle. Axillæ much smoother than scutellum, the postscutellum and propodeum polished, without visible sculpture.

*Male*:—Not known.

Described from one female captured by sweeping the jungle along a forest streamlet, August 1, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1939, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

## DIAULOMELLA new genus.

*Type*: The following species.

## 1. DIAULOMELLA AUSTRALIENSIS new species.

*Female*:—Length, 1.60 mm.

Dark metallic green, the abdomen darker, and with a long central yellowish area out from base which is more or less prong-shaped and with the handle proximad. Wings hyaline; postmarginal vein over twice the length of the stigmal. Legs white except coxæ. Metathorax with a median carina only at base, no distinct lateral carinæ. Mandibles with six teeth. Antennæ black, the scape white, the pedicel hardly longer than wide, the first three funicle joints long and subequal, each as long as the club without its short distal joint. Pronotum almost as long as the scutum. Thorax scaly.

*Male*:—Not known.

Described from one female captured by sweeping jungle growth along a forest streamlet, June 10, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1940, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide.

Differs from *Dimmockia* Crawford in having one more antennal joint, the club being 3-jointed instead of two.

## DIAULOMYIA new genus.

*Female*:—Allied with *Diaulinus* Schulz but the antennæ 11-jointed with two ring-joints, the club 3-jointed, the third joint very small and with a minute nipple. Scutellum with two grooves. Propodeum with a strong median carina, glabrous. Mandibles with 8 teeth, the 6 inner ones minute. Stigmal vein about half the length of the marginal or somewhat less,

shorter than the postmarginal, the fore wing with a fuscous blotch under the marginal vein. Abdomen sessile, ovate, depressed, as long as the thorax. Parapsidal furrows half complete, not very distinct. Propodeum with a more or less distinct lateral sulcus from caudad. Marginal vein somewhat shorter than the submarginal.

*Male*:—Not known.

*Type*: The following species.

**1. DIAULOMYIA MACULATIPENNIS** new species.

*Female*:—Length, 2.60 mm.

Dark metallic green, the scutellum, propodeum and abdomen coppery and darker; blotch on fore wing ovate, under the marginal and stigmal veins, its disto-cephalic end touching the stigmal knob. Coxæ and femora concolorous, the tibiæ and tarsi white; inner half or more of hind femur white, also. Scape white, antennæ black, the first funicle joint elongate, over twice the length of the pedicel, 2 and 3 subequal, a third shorter, 4 hardly longer than wide, 3 and 4 subpedunculate; first funicle joint half the length of the slender scape. Pedicel brown. First ring-joint short. Scutum coarsely reticulated with raised lines, the scutellum finely scaly.

Described from one female captured by sweeping in a jungle pocket, July 27, 1913 (A. P. Dodd).

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1941, Queensland Museum, the above specimen on a tag, the head and hind legs on a slide with the type head of *Elachertetrastichus purpureus* Girault.

**GENUS DIAULOMORPHA** Ashmead.

The generic diagnosis given by Ashmead (1904) disagrees with the original description and since the former is not stated to be given upon re-examination, I must follow the latter. According to the original description the antennæ are 8-jointed, the funicle 3-jointed (leaving as alternatives 2- or 3-jointed club and one or no ring-joints); flagellum subcompressed; postscutellum half the length of the scutellum. Metathorax (propodeum) short, with a median carina. Marginal vein nearly as long as the submarginal, the stigmal and postmarginal veins more than half the length of the marginal. Scutellum with two delicate grooved lines.

**1. DIAULOMORPHA AUSTRALIENSIS** Ashmead. Female. Genotype.

Ashmead, 1900, pp. 347-348.

Golden green, reticulately shagreened, the wings hyaline; antennæ black, joints 1 and 2 of funicle longer than wide, joint 3 subquadrate; legs brownish yellow, the coxæ concolorous, the hind coxæ golden green, strongly punctate.

*Habitat*: Australia (? New South Wales).

*Type*: Cat. No. 4902, United States National Museum, Washington, D.C., U.S.A.

In the diagnosis, Ashmead (1904) gives the following: Scutellum with two dorsal grooved lines; antennæ inserted below the middle of the face; cephalic aspect of the head nearly twice wider than long; stigmal vein nearly two thirds the length of the marginal; pronotum semicircular, not short, narrower than the mesonotum; abdomen ovate, depressed above, hardly as long as the thorax; antennæ 9-jointed, the flagellum subclavate, the funicle 4-jointed.

DIAGNOSIS OF THE EULOPHINE EULOPHIDÆ.

AUSTRALIA. FEMALES.

The tribe is characterised by the double caudal tibial spurs. Rarely nonmetallic.\*

I. Scutellum with two grooved lines.

Antennæ 11-jointed with two ring-joints, the club 3-jointed, the third joint very small and with a minute nipple; propodeum with a strong median carina; abdomen sessile, ovate; stigmal vein about half the length of the marginal.

**Dialomyia** Girault (Type: *D. maculatipennis* Girault).

Antennæ 8-jointed with a ring-joint, the funicle 3-jointed; head from cephalic aspect much wider than long; stigmal vein nearly two thirds the length of the marginal; abdomen ovate, depressed; propodeum with a median carina.

**Dialomorpha** Ashmead (Type: *D. australiensis* Ashmead).

II. Scutellum without grooves, simple.

Funicle 4-jointed.

Club solid.

Antennæ 8-jointed with one ring-joint; propodeum with a short median carina; postmarginal vein a third longer than the stigmal; abdomen sessile.

**Eulophinusia** Girault (Type: *E. cydippe* Girault).

Club 2-jointed; two ring-joints.

Marginal vein long, thrice longer than the stigmal.

Pronotum not a third as long as the scutum; propodeum with a strong, long median carina, the lateral carinæ represented by a curved line of foveæ; abdomen sessile or subpetiolate.

**Notanisomorphella** Girault (Type: *N. australiensis* Girault).

Pronotum the same; propodeum with a distinct neck and tricarinate, the lateral carina joined to the median carina by a cross carina about centrally; abdomen subpetiolate.

**Notanisomorphomyia** Girault (Type: *N. albicoxa* Girault).

Pronotum half as long as the scutum; propodeum with an abbreviated median carina at base; abdomen sessile, elongate, depressed; mandibles 7-dentate.

**Pseudophelimys** Girault (Type: *P. longiventris* Girault).

Marginal vein shorter.

Pronotum somewhat shorter; propodeum quadricarinate, the median carina paired; abdomen shorter; marginal vein a little over twice the length of the stigmal.

**Necremnoides** Girault (Type: *N. tricarinatus* Girault).

Club 3-jointed; one ring-joint.

Postmarginal vein over twice the length of the stigmal; metathorax without carinæ except an abbreviated median one at base; pronotum almost as long as scutum; marginal vein thrice or more the length of the stigmal.

**Dialomella** Girault (Type: *D. australiensis* Girault).

Club 2-jointed; one ring-joint.

Postmarginal vein over thrice the length of the stigmal, the marginal over five times the length of the stigmal; propodeum with only an abbreviated median carina at base or with a complete median carina and incomplete lateral ones, the spiracle large, oblong-oval; male antennæ with *rami*; abdomen long and conically produced. Antennæ 9-jointed.

**Asympiesiella** Girault (Type: *Sympiesis nelsonensis* Girault).

\* If these diagnoses disagree with the descriptions, they are to be held as corrective.

**Funicle 3-jointed, the club 3-jointed; one ring-joint.**

Antennæ inserted below the middle of the face, the funicle black; propodeum with a distinct median carina and usually lateral ones; wings hyaline, the marginal vein not long, usually only about twice the length of the stigmal. Flagellum not compressed. **Eulophus** Geoffroy (Type: *Ichneumon pecticornis* Linnaeus).

#### HEMIPTARSENINI.

NECREMNOMYIA new genus.

*Female*.—Like *Hemiptarsenus* Westwood but the antennæ 9-jointed with two short ring-joints, the club solid, short. Parapsidal furrows barely indicated; mandibles with 6-7 teeth. Propodeum with a distinct median carina but no others, the spiracle near the postscutellum, small and round. Stigmal vein short, not a sixth the length of the marginal vein and slightly shorter than the postmarginal. Scutellum simple. Abdomen sessile, slender, conic-ovate, somewhat longer than the head and thorax combined. Funicle 4-jointed. Marginal vein slightly shorter than the submarginal.

*Male*.—Not known.

*Type*: The following species.

#### 1. NECREMNOMYIA SAINTPIERREI new species.

*Female*.—Length, 1.20 mm.

Dark metallic blue, the wings hyaline; tibiae and tarsi more or less white; thorax reticulated with raised lines, the propodeum subglabrous; femora dusky; scape and pedicel dark blue, rest of antenna dusky; pedicel very short, as long as wide, much smaller than any of the funicle joints which are all short and subglobular, but moderately large and stout, the first somewhat the largest; club distinctly longer than any of the funicle joints, with a minute nipple.

*Male*.—Unknown.

Described from one female captured August 25, 1913, by sweeping in forest.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. Hy 1942, Queensland Museum, the above specimen on a tag, the head and a hind leg on a slide.

#### SYMPIESONECREMNUS new genus.

*Female*.—Face sunken, the antennæ inserted a little below its middle, 10-jointed, the club 2-jointed, the funicle compressed, 4-jointed, the joints subpetiolate. Scutellum simple, the parapsidal furrows hardly evident cephalad; mandibles about 7 or 8-dentate. Marginal and submarginal veins long, subequal, four or more times the length of the stigmal, the latter very short and somewhat shorter than the postmarginal. Abdomen sessile, conic-ovate, about as long as the rest of the body. Propodeum with a pair of narrow median carinae which are rather close together but diverge at apex; lateral carinae and sulci absent, the spiracle large, elliptical; apparently, a spiracle-like fovea at cephalic margin somewhat more than half way to the spiracle from the median carina. Hind tibial spur stout. Pronotum transverse.

*Male*.—Not known.

*Type*: The following species.

**1. SYMPIESONECREMNUS BOASI** new species.

*Female*:—Length, 1.85 mm.

Metallic blue, the wings hyaline, the legs and antennæ concolorous (except most of cephalic tibiae and all tarsi which are brownish, the tarsi paler); all funicle joints much larger than the pedicel which is but slightly longer than wide; funicle 1 longest, distinctly longer than wide, joints 2-4 subequal, oval, slightly longer than wide and more or less equal to club joint 1, the larger of the two club joints; club terminating in a minute nipple. Thorax moderately finely, polygonally reticulated, the lines raised, the propodeum similarly sculptured but smoother.

Described from one female captured by sweeping in the jungle, May 10, 1913.

*Habitat*: Nelson (Cairns), Queensland.

*Type*: No. *Hy* 1943, Queensland Museum, the above specimen on a tag, the head and hind tibiae on a slide.

Dedicated to Franz Boas for his book *The Mind of Primitive Man*.

**ELACHERTONECREMNUS** new genus.

*Female*:—Pronotum transverse; scutum long, large, the parapsidal furrows delicate and only at cephalic third; scutellum oblate spherical, without grooves, postscutellum triangular, propodeum distinct, moderately short, with a median carina, no others. Abdomen sessile, depressed, pointed ovate, no longer than the thorax, segment 2 longest, occupying a fourth of the surface. Head somewhat wider than long, the antennæ short and stout, inserted distinctly below the middle and slightly below the ventral ends of the eyes which are short, the scape short, the pedicel also, the funicle 4-jointed, the joints wider than long, increasing in width distad, the club missing; funicle joints subpetiolate; one short ring-joint. Mandibles broad, with one short, acute outer tooth and about nine inner minute, comblike ones. Hind tibial spur very small, the hind coxæ strongly compressed, the hind femur swollen somewhat. Body metallic marked with lemon yellow. Propodeal spiracle small. With the habitus of *Zagrammosoma* Ashmead.

*Male*:—Not known.

**1. ELACHERTONECREMNUS CIRCUMJECTUS** new species.

*Female*:—Length, 1.15 mm.

Dark metallic green, the head golden yellow and with two rather broad dark greenish parallel stripes across the face from side to side, the ventral one passing through the antennæ; upper half or more of occiput concolorous; outer margins of axillæ, scutellum all around (except at meson of caudal margin) and the lateral margins of the triangular postscutellum, golden or yellow. Thorax finely, densely scaly, the propodeum glabrous centrally. Abdomen purplish black. Scape white, dusky black at distal half; flagellum black. Eyes softly pubescent. Mandible white, along tip brown.

From one female captured in jungle by sweeping, September 13, 1913.

*Habitat*: Kuranda, Queensland.

*Type*: No. *Hy* 1944, Queensland Museum, the above specimen on a tag.

The species may easily be recognised by its peculiar coloration.

## DIAGNOSIS OF HEMIPTARSENINE EULOPHIDÆ.

The tribe is characterised by bearing but one spur on the caudal tibiæ.

Scutellum with grooved lines; funicle 4-jointed; two ring-joints.

Club solid, the antennæ 9-jointed; propodeum with a median carina only, the spiracle small and round; stigmal vein not a sixth the length of the marginal; abdomen sessile, slender, conic-ovate. Mandibles 6 or 7-dentate.

**Necremnomys** Girault (Type: *N. saintpierrei* Girault).

Scutellum without grooved lines; funicle 4-jointed.

Antennæ 10-jointed, two ring-joints, the club 2-jointed; propodeum with a median carina only, the spiracle large, elliptical; stigmal vein about a fourth or more the length of the marginal.

**Sympiesonecremnus** Girault (Type: *S. boasi* Girault).

Antennæ with but one ring-joint; propodeum the same but the spiracle small; hind tibial spur small; mandibles about 10-dentate.

**Elachertonecremnus** Girault (Type: *E. circumjectus* Girault).

(*Ascotolinx*, p. 256.)

## TABLE TO THE SUBFAMILIES OF THE EULOPHIDÆ.\*

Submarginal vein of fore wing usually entire, not distinctly broken distad just before curving up to the marginal or not with all of the long proximal portion proximad of the bend abruptly slenderer than the short curved portion. Submarginal vein usually as long as or longer than the marginal, the stigmal rarely very short or sessile, the postmarginal vein always present, usually as long as or longer than the stigmal. Species metallic or nonmetallic, usually rather large and slender, comprising the larger forms of the family. Mandibles most frequently 5-dentate or more, rarely 3-dentate or less. Scutellum frequently with two grooved lines. Sculpture usually scaly. Parapsidal furrows complete or incomplete. Propodeum usually long. Tarsi 4-jointed.

Parapsidal furrows complete, entire, usually distinct; abdomen frequently petiolate, the body frequently nonmetallic. Rarely, the hind tibial spurs very long, the axillæ not advanced.

**Elachertinae**.<sup>27</sup>

Parapsidal furrows wanting or incomplete, usually present along cephalic third or half; abdomen usually sessile, the body usually metallic, the hind tibial spurs never very large.

**Eulophinae**.<sup>29</sup>

Submarginal vein of fore wing broken distad just before curving up to the marginal or the long proximal portion abruptly slenderer than the short, distal curved portion, the vein usually distinctly shorter than the marginal, frequently much shorter; stigmal vein usually of moderate length, frequently short and sessile, rarely long and slender; postmarginal vein most frequently absent or only slightly developed, rarely as long as or longer than the stigmal; species metallic or nonmetallic, usually of moderately small size, rarely minute or large, usually short but frequently slender, comprising the smaller forms of the family. Mandibles most frequently bi- or tridentate. Scutellum frequently with from two to four grooved lines, rarely with five, the scutum often with a median groove. Parapsidal furrows variable, the sculpture usually polygonal reticulation or very fine shagreening. Tarsi sometimes 5-jointed.

Submarginal vein usually much shorter than the marginal which is frequently very long, the postmarginal vein variable, usually as long as the stigmal, rarely very short, sometimes much longer than the stigmal, the latter of moderate length but frequently sessile or subsessile; metapleura small, the propodeum variable, the

\* This table is intended for the student unfamiliar with the subfamilies but it should be used with caution since exceptions are occasionally met with; if the main characters fail, use composites.

abdomen often petiolate. Parapsidal furrows frequently incomplete, sometimes wanting. Second abdominal segment often lengthened. Sculpture most frequently a scaly reticulation, the lines often raised, rarely punctate. Scutellum often with two grooved lines, rarely with three, the scutum rarely with an incomplete grooved median line.

**Entedoninae.** 152, 153, 177

Submarginal vein usually more or less equal to the marginal, the postmarginal vein always wanting, rarely slightly or fully developed, the stigmal usually of moderate length, sometimes sessile. Abdomen very rarely petiolate. Parapsidal furrows always complete, the mesopleura often without a femoral furrow. Sculpture usually very fine shagreening. Scutellum often with four grooves, rarely with two or five, the scutum frequently with a median groove.

Scutellum with four (rarely with two or five; if without grooves, the abdomen petiolate) grooved lines; mesopleura with a femoral furrow, antennæ usually inserted near the middle of the face, the funicle usually 3-jointed (rarely 2- or 4-jointed) and from one to four transverse-linear ring-joints present; abdomen usually sessile, rarely petiolate, never (?) with a phragma, the propodeum most frequently visible from above, long and with a median carina. Marginal fringes of fore wings rarely long, the fore wing never with an oblique hairless line back from the stigmal vein. Sculpture nearly uniform fine shagreening. Tarsi always 4-jointed, the strigils absent. Scutum frequently with a median groove. Metallic or nonmetallic.

**Tetrastichinae.** 249, 253

Scutellum without grooved lines, rarely with a median groove; scutum rarely with a median groove; mesopleura often without a femoral furrow; antennæ inserted below the middle of the face, the funicle variable, sometimes absent or composed of ring-like joints, usually with from two to four joints, true ring-joints rarely present. Abdomen always broadly sessile and always (?) with a phragma, the propodeum very short and hidden; marginal fringes of fore wing frequently long and often there is an oblique hairless line back from the stigmal vein. Sculpture fine reticulation, alutaceous or fine punctation or striation, not uniform. Tarsi usually 5-, often, 4-jointed, the strigils always (?) strongly developed. Nonmetallic, rarely metallic (*Ablerus*).

**Aphelininae.** 196

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