AUSTRALIAN
HYMENOPTERA CHALCIDOIDEA—VII.*

The Family Encyrtidae with Descriptions of New Genera and Species.

By A. A. Girault.

INTRODUCTION.

This great group, in the Australian fauna, is very nearly as numerous in species as the Eulophidae. Five distinct subfamilies are recognized—the Encyrtinae, the Eupelminae, the Encyphorine, the Taneostigmata and the Aphelininae. The latter group in recent years has been placed with the Eulophidae, untenably so.

From a distance, this is the most unlikable family in the chalcoid series but close acquaintance reveals so many fascinating qualities that students, after some experience, will no doubt choose it as a favorite. The remarkable diversity in structure, the wonderful color patterns, the unique and odd special structural enornities, the great structural likeness of the members of a genus, the jumping habit, the present uncertainty regarding relationships, the whole diverse and varied panorama is such that the most torpid of interests must finally become conscious of a spell.

The family was to me a "black beast." It had been left until last and finally attacked with the determination born of despair. This was due mainly to my inability to place species in their proper genera and I must confess that for the first three months during which species in this group were steadily described hardly one was placed into its proper genus. My interpretation of a genus became gradually clearer as experience increased and Ashmead's (1904) tables of the Encyrtinae, formerly thrown aside as worthless, are now accepted in the main as good. The generic differences are smaller than I had thought. Such characters, however, as pubescence, sculpture and wing pattern must be ignored as regards genera.

The genus Eupelmus is large. Ashmead's table of the Eupelmus must be condemned; it is based, in this instance, upon too trifling characters—pubescence on the eyes and the incisions of the caudal margins of the abdominal segments are highly variable characters; some of the language used is misleading; a number of the genera must fall as synonyms.

In some of the encyrtine genera, it is extraordinary that two species may occur which are alike in every detail except for some structural characteristic easily overlooked; for example Booosea maccullouchi and B. persevialis; in the latter, the axilla are a little separated while in the former they are joined and with the usual carina between them.

The family is open to philosophical treatment of the highest order.

SUBFAMILY EUPELMINÆ.

Many of the genera in this group have been founded upon two variable characters and Ashmead's table of genera, as stated before, is very poor. It is surprising that the antennæ have not been used more for principal divisions. Some of the genera, apparently, do not possess these organs for all we know to the contrary.

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MEMOIRS OF THE QUEENSLAND MUSEUM.

GENUS EUPELMUS Dalman.

Where ring-joint is mentioned funicle 1 is intended, this joint often ring-like. The species may have one or two spurs on the caudal tibiae. The axillae are separated yet rather close together.

1. EUPELMUS VARICOLOR (Girault). Genotype of Episolindelia Girault.

Length, 2.10 mm., excluding extruded part of ovipositor which is two thirds or more the length of the abdomen.

Bright metallic green, the conic-ovate abdomen golden yellowish and with a metallic con dorso-lateral stripe down each side for proximal two thirds, its dorsal base also somewhat metallic. Antennae black, the ring-joint and tip of pedicel whitish, the third funicle joint longest, subequal in length to the pedicel. Legs lemon yellow, the coxae black except at tip, the intermediate tibiae ringed with black a short distance below the knees, the intermediate femora with a black spot above on one side, the same distance before the knees. Wings hyaline. Ovipositor valves white, broadly black at base, narrowly brown at tip, the brown tip about half the length of the black proximal portion. A yellow stripe down each side of the thorax, broader cephalad. Head and thorax polygonally reticulated. Scapes black. Ring-joint somewhat wider than long; funicle 1 somewhat longer than wide, 3 longest of the funicle. Hind tibial spur single. Mandibles tridentate. Front femur stout. Type re-examined.

Described from one female captured by sweeping miscellaneous vegetation in forest, December 5, 1912 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2826, Queensland Museum, Brisbane, the specimen on a card point plus a slide bearing an antenna and one of each pair of legs.

2. EUPELMUS VULGARELLUS new name.

Idoleupelmus vulgaris Girault, 1913, p. 94.

Eupelmus vulgaris (Girault), preoccupied.

Female:—Length, 4.50 mm., excluding the extruded portion of the ovipositor which is as long as the abdomen and yellowish white except broadly at base and tip.

Bright aeneous green, the wings hyaline, the legs and tegulae lemon yellow (except the coxae, a dusky brownish spot above before apex on hind femur, one just below knee and another just ventral of the first and a spot on same place on middle femur, a ring around middle tibia just out from the knee). Sides and venter of abdomen yellow. Head and thorax very finely shagreened. Antennae 13-jointed, no ring-joint, the club 3-jointed; pedicel rimmed with whitish at apex, the first funicle joint similarly rimmed at base. Postmarginal vein longer than the stigmatic. Propsectus golden yellow.

Habitat: Gordonvale (Cairns), Queensland. Forest, May 3, 1913.

Type: No. Hy 2827, Queensland Museum, Brisbane, the female on a tag, the head and hind legs on a slide.

3. EUPELMUS AUSTRALIENSIS (Girault). Female.

Idoleupelmus australiensis Girault, 1913, pp. 94-95.

Length, 1.20 mm. Same as vulgaris but much smaller and the valves of the ovipositor are wholly black, the hind legs lack the black spots.

Antennae 13-jointed, inserted just below the ventral ends of the eyes, the first funicle joint minute, white, not a true ring-joint, 2 twice longer, 3 still longer, quadrate, the following joints longer, all much shorter than the pedicel. Mandibles tridentate. Middle tibiae without black teeth, with scattered light ones. Abdomen mostly yellowish above.

Habitat: Gordonvale (Cairns), Queensland. Forest, April 4, 1913.

Type: No. Hy 2828, Queensland Museum, Brisbane, two females on separate tags.
4. EUPELMUS GROTHI new species. Female; male.

Length, 3.20 mm., excluding extruded ovipositor which is white and not quite as long as the abdomen.

Metallic green; the abdomen, axilla and scutellum burnished purplish coppery. Legs concolorous except the articulations and the tips of tibiae which are yellowish brown, the tarsi whitish. Fore wings with a narrow, rather indistinct brownish line across it at base of marginal vein, more obscure centrally. Ovipositor valves black at base. Scapae metallic green; rest of antenna black. Hind tibia with only one spur. Antennae 13-jointed with one quadrante ring joint; funicle 1 longest, subequal to pedicle, over twice the length of the ring-joint, 4th distal funicle joint plainly wider than long.

Male.—The same but the wings hyaline, the antenna and legs yellow, the hind femur within with a midlongitudinal, elliptical fuscous marking. The distal funicle joint is only slightly longer than wide, the antennae 10-jointed excluding the club, the ring-joint present. The abdomen as in Anasatus.

Habitat: Port Darwin, Northern Territory. Parasite upon the eggs of mantids in forest.

Types: No. Hy 2823, Queensland Museum, Brisbane, one male, four females on tags (two pins).

Dedicated to Hugo Grotius.

5. EUPELMUS ANTIPODA Ashmead. Female.

Length, 3 mm. Head metallic green, thorax bottle blue, mesopleura with a greenish tinge; abdomen annulated black; ovipositor prominent, yellow for two thirds its length; wings fuscous except at proximal third which is hyaline; all coxae metallic green; sutures of trochanters, tips of tibiae and tarsi yellowish white; rest of legs annulated black.

Habitat: Sydney, New South Wales. Mantid eggs.

Type: Catalogue No. 4894, United States National Museum, Washington, D.C., U.S.A.

Cameron (1911, pp. 651-652) gives Sydney and Darrigo, New South Wales, September. And also "This appears to be a variable species in regards of coloration: Some specimens have the green tint that others; the blue merges into violaceous, and there may be brassy tints. The male is green with brassy tints, and, on the metanotum, the green merges into violaceous, the antennal scape and four front legs are yellow tinged with fulvous, especially on the femora; the hind legs are coloured as in the female, except that the femora are green for the greater part; and the tibiae are not so deeply black, while their base may be testaceous. The color of the wings varies, some having the fuscous tint on the apical two-thirds much lighter than the others; in the males they may be almost hyaline."

Which part of the ovipositor is yellow?

6. EUPELMUS TESTACEIVENTRIS Cameron. Female.

Length, 2 mm.; length of teretra 5 mm. (†)

Blue with brassy tints on the base and sides of mesonotum; suture dark green, flagellum black; third and following segments of abdomen dorsad and all ventrad yellowish testaceous; sides of third segment blue, base of 1 yellow, ventral keel black; extruded part of ovipositor about half the length of the abdomen, its proximal third black, the rest yellow; legs pale straw yellow; coxae blue to near apex; apex of tarsi black. Wings hyaline, the venation straw yellow.

Face finely, closely aciculated; malar suture distinct, curved. Palpi pale testaceous; setum closely, finely, almost transversely striated, the middle lobe clearly separated, longer than wide at base, the apex broadly rounded, the lateral lobes with a distinct transverse furrow
at base, the middle one surrounded by a wide furrow which is widest at the apex where it is transverse. Scutellum pyriform, roundly narrowed to a blunt point cephalad. An irregular black spot near apex of middle femur, a more distinct line or band near base of middle tibia and a broad black line on either side of the basal half of hind femur; hind tibia infuscated at base. Allied with Eupelmus antipoda Ashmead.


Types: Query.

7. EUPELMUS BURMEISTERI new species.

Female:—Length, 1.65 mm., excluding the ovipositor which is extruded for a third the length of the abdomen.

Dark metallic green, the first funicle joint white, the wings hyaline; not quite distal two thirds of extruded valves of ovipositor soiled white. Thorax and abdomen finely scaly. Funicle 2 a little wider than long, 4 longest yet scarcely longer than wide. Antennae and coxae concolorous. Legs golden yellow; middle femur with a dusky band just proximad of knee; middle tibia with one joint distad of knee (both separated from the knee, however). First femur centrally washed with metallic green. Axillae not approximate yet not much separated. No conspicuous pubescence on thorax. Teeth on middle tarsi not black. Hind tibial spur single. First femur simple. Postmarginal vein longer than the stigmata. Hind femur proximal submetallic. Ovipositor valves slightly black at tip.

Described from two females on slides in the collections of the Queensland Museum, Brisbane, labelled ‘Among grass and herbage, March 29, April 8, 1913. H. Hacker.’

Habitat: Brisbane, Queensland. Forest.

Types: No. Hg 2830, Queensland Museum, Brisbane, a female on a slide.

Dedicated to Hermann Burmeister.

8. EUPELMUS RENANI new species.

Female:—Length, 1 mm., excluding extruded portion of ovipositor which is only one third the length of the abdomen.

Agrees with the description of Anastatus par (Girault) but much smaller and funicle 2 is short, smaller than the pedicel, about a third of its length, the pedicel much longer than any of the funicle joints of which 4 is largest, a little longer than wide. Moreover, the color is dark metallic green, the extruded valves of ovipositor, the antennae and legs concolorous. Body finely scaly. Axillae distinctly separated, but not much. Fore wing lightly infuscated to apex from about the middle of the marginal vein.

From one female caught by sweeping Leptospermum, April 16, 1913 (H. Hacker).

Habitat: Brisbane, Queensland.

Type: No. Hg 2331, Queensland Museum, Brisbane, the body (minus wings) on a tag, the head on a slide.

Dedicated to Ernest Renan.

9. EUPELMUS MONTAIGNEI new species.

Female:—Length, 1.50 mm., exclusive of ovipositor whose extruded portion is a third the length of the abdomen.

Similar to masini but the antennae wholly concolorous, the intermediate femur and tibia immaculate, the first femur only very lightly washed with metallic, the legs pale lemon yellow except coxa and lightly, cephalic femur. Postmarginal and stigmatic veins shorter, subequal. Distal fourth of ovipositor distinctly black, longer than the black proximal portion. Mesoopleurum suffused with brownish. Body finely scaly. Teeth on middle tarsi black.
From one female caught by sweeping in forest, January 6, 1914.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 2832, Queensland Museum, Brisbane, the specimen on a tag.

Respectfully dedicated to the French essayist.

10. **EUPELMUS PUDICUS** new species.

*Female:*—Length, 1.25 mm., exclusive of ovipositor.

Like the preceding but funicle 1 white, proximal half of scape also; femora, tibiae and tarsi lemon yellow; proximal fourth of ovipositor white, rest black, the extruded portion somewhat shorter. Funicle 4 plainly longer than wide yet not much more so. Postmarginal and stigmal veins not seen. Pedicel a little longer than funicle 4, not elongate.

From one female taken by sweeping forest, April 10, 1913.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 2833, Queensland Museum, Brisbane, the female on a tag; head and hind leg on a slide.

11. **EUPELMUS COMPRESSICAUDA** new species.

*Female:*—Length, 2.10 mm., exclusive of extruded portion of ovipositor which is as long as the slender abdomen.

Long and slender, the abdomen acuminating and longer than the rest of the body, the exserted portion of ovipositor black, the valves compressed, their tips silvery white. Wings hyaline. Dark metallic blue, the knees, distal third or more of tibia and the tarsi pale straw yellow. Teeth of middle tarsi colored like the tarsi, Hind tibial spurs single. Scape subcompressed; funicle 1 distinctly longer than wide, longer than 8 which is quadrate, shorter than the pedicel, the latter only slightly longer than funicle 2 which is longest, somewhat over twice longer than wide; 3 somewhat shorter than 2; 4 still shorter yet somewhat longer than 1. Mandibles tridentate. Thorax and abdomen finely scaly; segments 2 and 3 of abdomen deeply incesed at meson of caudal margin, the next three segments much less so, 2 and 3 rather long. Postmarginal vein longer than the stigmal. Scutellum rather narrow, declivous, the axilae slightly separated inwardly, their meso-caudal sutures very faint, the axilae barely defined.

From one female caught by sweeping in jungle, April 16, 1913 (A. P. Dodd).

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 2834, Queensland Museum, Brisbane, the female on a tag, the head and a fore and hind leg on a slide.

12. **EUPELMUS FELDINGI** new species.

*Female:*—Length, 1.80 mm., exclusive of ovipositor which is extruded for a length equal to two thirds of the abdomen.

Like the preceding but dark metallic green, the abdomen normal, the normal valves of ovipositor not so long and the middle tibia is wholly pale yellow; also funicle 1 is wider than long, the body is much shorter. Hind tibial spur single. Scape very slightly flattened; pedicel a little longer than funicle 2 which is longest, 3 slightly shorter than 2, 8 quadrate. Postmarginal vein short, a little longer than the stigmal. Axilae separated but not very widely. At least segments 2-4 of abdomen incesed at meson of caudal margin. Whole body densely scaly. Axilae well defined, the scutellum not declivous.

From one female taken by sweeping in forest, November 13, 1912.

**Habitat:** Proserpine, Queensland.

**Type:** No. Hy 2835, Queensland Museum, Brisbane, the female on a tag; antenna and hind tibia on a slide.

Dedicated to Henry Fielding.

* Meaning the valves; the color of the ovipositor itself is always brown.
13. EUPELMUS LAVOIRSIERI new species. Female.

Like grasi but the middle white part of the valves of the ovipositor is smaller, distinctly shorter than the proximal black part which is only slightly shorter than the distal black portion (in grasi the middle white is distinctly longer than the proximal black). Funicle 1 is a little wider than long. The first two or three segments of abdomen, at least, incised at meson of caudal margin.

From one female caught in forest, November 3, 1912.

Habitat: Proserpine, Queensland.

Type: No. Hy 2836, Queensland Museum, Brisbane, the female on a tag, an antenna and hind tibia on a slide.

14. EUPELMUS LONGICORPUS new species.

Female:—Length, 3.50 mm. Shaped like motschulskii Girault.

Dark metallic green, the wings hyaline, the coxae and sides of cephalic femur laterad (exteriorly) concolorous; rest of legs yellowish brown. Ovipositor distinctly but shortly exerted (a sixth or less the length of the abdomen), a little over proximal half of the exerted part white, rest concolorous. Postmarginal vein only slightly longer than the stigmal. Funicle 1 a little wider than long, 2 much longer, over thrice longer than wide, a little the longest, 3 and 4 somewhat shorter than it, longer than the pedicle which is subequal to 6. Hind tibial spur single. Vertex broad. Axille just separated at meson. Sculpture as in the scutum of worcesteri, the pronotum, abdomen and head scaly punctate like the scutum. Segments 2-6* incised at meson, the incisions lessening in succession caudad. Ridges of scutum pubescent.

From one female taken in forest, March 21, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2837, Queensland Museum, Brisbane, the female on a tag; antenna and a hind leg on a slide.

A second female, same place on April 4.

15. EUPELMUS AUSTRALIS new species.

Female:—Length, 2 mm., exclusive of ovipositor which is extruded to a length equal to that of the abdomen.

Similar to australiensis but much more robust and only the side of the abdomen centrally is golden yellow. Also funicle 1 is a little wider than long, 2 quadrate, 3 somewhat longer than wide. Propsectus golden yellow. Legs except coxae bright golden yellow, the two spots on middle legs distinct.

From one female caught in forest, April 20, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2838, Queensland Museum, Brisbane, the female on a tag.

16. EUPELMUS GREENLY new species.

Female:—Length, 2.10 mm., excluding ovipositor which is extruded for a length a little exceeding that of the body.

Colored like variicolor Girault but the marginal stripe of abdomen is somewhat longer, the legs are all pale yellow except the concolorous coxae. Middle tibia, however, with a more or less obscure metallic dot just below knees, outwardly, the middle femur with one just above knees. Extruded valves of ovipositor black, whitish rather obscurely on second fourth.

* Of abdomen.
Propectus yellowish white. Axillum a little separated. Thorax scaly. Postmarginal vein somewhat longer than the stigmal, both well developed. Funicle 1 white, quadrate, 2-4 longest, each a little shorter than the pedicel, distinctly longer than wide; funicle 8 a little longer than wide.

From one female caught by sweeping along a jungle path, February 25, 1912.

Habitat: Rossville (Cooktown), Queensland.

Type: No. Hy 2889, Queensland Museum, Brisbane, the female on a tag; head on a slide.

Dedicated to A. W. Greely.

17. EUPELMUS LAMBI new species.

Female:—Length, 1.15 mm., the ovipositor barely exerted.

Like mawsoni but middles of femora and tibiae lateral darker except ephallic femur; funicle 1 wider than long, 2 quadrate, plainly not twice longer than wide, subequal to 3, 4 longer than any of the others, a little longer than wide; rest of funicle joints wider than long but 5 somewhat longer than the following. Postmarginal and stigmal veins slender, the former a little the longer. Axillum distinctly but not very widely separated. Pubescence short, sparse, the whole body scaly. Hind tibial spur single. Hind femur all metallic lateral except ends.

From one female caught in forest, December 25, 1912.

Habitat: Capeville (Pentland), Queensland.

Type: No. Hy 2840, Queensland Museum, Brisbane, the specimen on a tag; head and a hind tibia on a slide.

Dedicated to Charles Lamb.

A second female, same place, September 5, 1914 and a third the following day.

18. EUPELMUS CRAWFDORI new species.

Female:—Length, 1.35 mm., excluding the extruded portion of ovipositor which is as long as a third of the abdomen.

Brown washed with metallic purple, the abdomen honey yellow, the wings hyaline; extruded portion of ovipositor white, black at base, brown at distal fourth, this part longer than the black basal part, the white portion forming over half. Scape and legs pale, the coxae and femora washed with brownish, rest of antenna brown-black. Ring-joint a little wider than long, the pedicel much longer than any of the funicle joints of which 2 and 3 are longest, subequal, each somewhat longer than wide; funicle 1 one and a half times longer than the ring-joint; distal funicle joint somewhat wider than long. Head and thorax finely scaly reticulate. Axillum distinctly, moderately, widely separated, the seutelum dehiscent. Hind tibial spur single. Front femur simple. Postmarginal and stigmal veins subequal, distinctly much shorter than the marginal. Middle tibiae with black teeth.

From one female caught by sweeping jungle along a forest streamlet, December 2, 1912 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2841, Queensland Museum, Brisbane, the female on a tag; head and middle legs on a slide.

Respectfully named for J. C. Crawford for his careful work on Chalcidoid Hymenoptera.

19. EUPELMUS FOLSOMI new species.

Female:—Length, 1.75 mm.

Like varicolor Girault but the marginal stripe of abdomen reaches only to middle (sometimes farther), the coxae nearly all black, the yellow absent on side of thorax, the abdomen not colored at base above and the front femur centrally is broadly concolorous with the body. Postmarginal vein somewhat longer than the stigmal.
From one female caught by sweeping *Leptospermum*, April 16, 1913 (H. Hacker).

**Habitat:** Brisbane, Queensland.

**Type:** No. Hy 2812, Queensland Museum, Brisbane, the specimen on a slide.

Another female by sweeping *Eucalyptus*, April 16, 1913, same place.

Named for Justus Watson Folsom.

**20. EUPELMUS BAILEYI** new species.

**Female:**—Length, 1.87 mm. The same as *folsomi* but the ovipositor a fourth shorter, the marginal stripe of abdomen extending to the anal spiracle or nearly to apex and the proximal half of hind femur is concolorous, the hind knee above is so and a small spot just distal of it on tibia. Also, the spot on middle femur is more elongate than usual; the front tibia also have a dusky ring around them just ventrad of knee.

From one female caught by sweeping *Eucalyptus*, April 16, 1913 (H. Hacker).

**Habitat:** Brisbane, Queensland.

**Type:** No. Hy 2843, Queensland Museum, Brisbane, the female on a slide with a female of *folsomi*.

Named for P. Manson Bailey.

**21. EUPELMUS AUSTRALICUS** new species.

**Female:**—Length, 2 mm., excluding exerted portion of ovipositor which is four fifths the length of abdomen and wholly black.

Like *varicolor* Girault but the marginal stripe extends for a little over proximal three fourths, the ovipositor is black, the base of the abdomen lacks metallic coloration to any extent and the sides of the thorax any yellow. The coxæ are wholly concolorous.

From two females caught sweeping undergrowth, mostly *Eucalyptus*, April 16, 1913 (H. Hacker).

**Habitat:** Brisbane, Queensland.

**Types:** No. Hy 2844, Queensland Museum, Brisbane, two females on a slide.

Also one female was caught on Magnetic Island, off Townsville, Queensland, January 9, 1913 (A.A.G.).

**22. EUPELMUS WORCESTERI** new species.

**Female:**—Length, 4.50 mm.

Similar to *motschulskyi* but the wings are hyaline, the scape slenderer, the postmarginal vein shorter, the hind tibia concolorous except at tip, body dark metallic green, the scutellum not declivous, the ridges of the scutum less carinated, the axillae very widely separated, the vertex broad between the eyes, the ovipositor not at all exerted, its tip black, funicles 3 and 4 are longest, 2 a little shorter than either of them, 3 somewhat shorter than the pedicel, 1 distinctly longer than wide, over half the length of 2. Hind tibia with one spur (another one seems present but though a little stouter it is no longer than the apical fringes [setæ] of tibia and several similar ones occur among those on the opposite side of the spur). Hind margin of segment 2 of abdomen incised but the cut is not deep along the meson like a slit; the next three segments are less and less incised canted. Scutum and scutellum densely scaly punctate. Rest of body densely scaly. Axillae small.

From one female caught by sweeping in forest pocket, September 12, 1913 (A. P. Dodd).

**Habitat:** Kuranda, Queensland.

**Type:** No. Hy 2845, Queensland Museum, Brisbane, the specimen on a tag; antenna and a hind leg on a slide.

A second female at Gordonvale, forest, 2,000 feet, June 3 (A. P. Dodd).
23. EUPELMUS MOTSCHULSKIN new species.

**Female:**—Length, 4.30 mm. Long and slender. Valves of ovipositor extruded a short distance, distal half whitish.

Dark metallic purple, the antennae and legs concolorous except the brownish tarsi and tips of all tibiae; but hind tibiae at a little over proximal half silvery white. Middle tibiae with black teeth. Hind tibial spurs double. Scape compressed, the pedicel long but a little shorter than funicle 2 which is longest; pedicel subequal to funicles 3 and 4; funicle 1 small, quadrate, somewhat less than a third the length of 2. Funicle 8 a little wider than long, much longer than 1, not quite half the length of 2. Fore wing infuscated slightly at extreme base and from the head of the submarginal vein out distal of venation but there are two more or less distinct crossbands formed by accentuations, one (more obscure) at proximal margin of the infuscation and one in the form of a rectangle from the postmarginal vein and not reaching caudad of the middle of the blade. A clear streak across the middle of the infuscation but obscure. Vertex narrow between the eyes. Scutum pilose. Segments 2-5 of abdomen incised at meson of caudal margin, the abdomen longer than the rest of the body, the incision of segment 2 very deep, of 4 shallow, concave. Abdomen densely scaly, segment 7 longest, somewhat longer than 2. Head and thorax alutaceous. Scutellum deciduous. Ridges of scutum carinately.

From one female taken in forest, March 12, 1912.

**Habitat:** Thursday Island, Torres Strait.

**Type:** No. Hy 2846, Queensland Museum, Brisbane, the specimen on a tag; head and hind leg on a slide.

24. EUPELMUS GRAYI new species.

**Female:**—Length, 1.50 mm., excluding extruded portion of ovipositor which is a third the length of the abdomen.

Dark metallic blue, the wings hyaline, the knees, middle tibiae, tips of other tibiae broad and the tarsi yellowish white. Teeth on middle tarsi black. Middle of valves of ovipositor white, the distal black portion subequal to the white and longer than the proximal black portion.

Antennae wholly concolorous; funicle 1 quadrate, 2 twice longer than 1, distinctly longer than wide, 3 and 4 longest, each slightly longer than 2, a little shorter than the pedicel; distal funicle joint quadrate but larger than 1. Hind tibiae with but one spur. Front femur not swollen. Postmarginal and stigmatic veins short, subequal. Body (wholly) rather coarsely scaly.

From one female captured in forest, January 4, 1914 (A. P. Dodd).

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 2547, Queensland Museum, Brisbane, the specimen on a tag; head on a slide.

Dedicated to Asa Gray.

25. EUPELMUS MAWSONI new species.

**Female:**—Length, 2.25 mm.; the ovipositor not extruded.

Dark metallic green, the wings hyaline, the legs golden yellow (except coxae), obscurely yet distinctly washed with submetallic on the femora and tibiae (except cephalic tibiae). Antennae concolorous; scape compressed; pedicel elongate, longer than any of the funicle joints of which 3 and 4 are longest, 1 a little longer than wide, 2 a little shorter than 3, about twice its own width. Distal two funicle joints plainly wider than long. Middle tibiae with black teeth; hind tibiae with one spur. Very finely scaly, the abdomen coarset. Mesopleurum naked. Segment 2 of abdomen deeply incised at meson caudad. Pubescence sparse, white; most of middle tibiae except just below knee lemon yellow. Postmarginal vein
distinctly longer than the stigmatic, the venation pale, the stigmatic vein moderately long; blade of fore wing densely, finely ciliate.

From one female captured in forest, January 4, 1914 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hμ 2348, Queensland Museum, Brisbane, the specimen on a tag; head and hind leg on a slide.

Dedicated to Sir Douglas Mawson.

26. EUPELMUS MULTICOLOR new species.

Female: Length, 2.70 mm., excluding extruded portion of ovipositor which is three fourths the length of the abdomen. Abdomen intermediate between Eupelmus and Anastatus but more like the former.

Metallc purple green, the fore wing deeply embrowned from the head of the sub-marginal vein distad to apex but distinctly clearer some distance proximad of the apex; pronotum, except lateral margins, scapes, legs, ventral face, caudal three fourths of mesopleurum, a line down latero-dorsal aspect of thorax above the tegula, axillae and cephalic two thirds of scutellum rich reddish brown. Fore wings invested above immediate base. Proximal two thirds of distal half of ovipositor white, distal third of the half black, proximal half dusky. Proximal third of abdomen silvery white; also tarsi of middle legs (except the distal black joint) and proximal portion of the proximal joint of each of the other tarsi. Front and hind femora and tibiae rather strongly compressed, the middle tibiae with the comblike teeth white. Hind tibiae with one spur. Pedicel somewhat longer than femur 4 which is longest, 1 a little longer than wide, 7 and 8 quadrate, two thirds the length of 4, longer than 1; scapes slender, antennae inserted near the clypeus, distinctly below the long eyes which converge, the vertex narrow, the scrobes short, semicircular, not reaching to middle of the face. Axillae distinctly separated, together with the scutellum densely finely punctate. Scutum and abdomen finely scaly but distad the former glabrous, the cephalic raised, triangular piece sculptured like the scutellum; pronotum finely scaly, also the head. Caudal margins of first two or three abdominal segments slightly incised at meson.

From one female caught in forest, January 4, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hμ 2349, Queensland Museum, Brisbane, the specimen on a tag; legs and antenna on a slide.

27. EUPELMUS CLAUDUS new species.

Female:—Length, 2.60 mm., excluding ovipositor, which is extruded for a length equal to half that of the abdomen.

Variecolored. Very deep orange yellow, the eyes greenish, the second segment of abdomen (or proximal fourth or somewhat more), coxae, distal third of scape, distal three fourths of pedicel, funicle joints 1 to 6, articulations of the legs, tips of tibia and the tarsi silvery white; rest of abdomen honey yellow, the silvery white followed by three cross-strips of darker yellow, close together; middle of silvery white of abdomen with a rather broad dusky black cross-stripe which is incised at meson of caudal margin. Distal two funicle joints and club jet black. Proximal two thirds of scape yellow, the distal margin of the yellow dusky black and oblique. Distal edge at meson and caudo-lateral portions of propodeum and the scutum (between the 'parapsidal forrows' and caudal of the raised triangular piece, the marking longer than wide) metallic green. Somewhat over proximal third and the immediate tip of extruded part of valves of ovipositor black, the intermediate portion yellowish white. Legs concolorous; middle femora and tibiae with black streaks along margins; caudal femur with the distal edge black; caudal tibia dusky, except broadly at tip. Abdomen with a rather large silvery white spot in lateral aspect somewhat distad of middle. Fore wings lightly
embrowned from the origin of the curve of the submarginal vein distad to apex, a darker brown spot under the stigmal vein and a faint, curved, rather narrow, subhyaline cross-striet from apex of postmarginal vein; also deeper brown transversely from bend of submarginal vein. Postmarginal vein somewhat longer than the stigmal.

Club obclavate; pedicel not long, a little longer than funicle 4 which is longest, somewhat longer than wide; funicle 1 like a ring-joint, much wider than long, 2 a little longer than wide, over two and a half times longer than 1, 5-8 subquadrate; second club joint shortest, much wider than long. Hind tibial spurs double. Head and thorax densely shagreened, the metallic portion of setum with silvery pubescence. Segment 2 of abdomen rather deeply incised at meson caudad, the next three segments only slightly so. Axillae separated a very short distance. Fore wings perfect. A silvery streak cephalad on mesothorax dorsad in lateral aspect. Teeth on middle tibia not black.

From two females caught in jungle, April 2, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2850, Queensland Museum, Brisbane, one a female on a tag; antenna, hind tibia and part of fore wing on a slide.

In the second specimen, the dusky stripe across the silvery base of abdomen was divided along the meson by a narrow silvery space and the yellowish white portion of the ovipositor was much shorter, less than two thirds the length of the black proximal portion (subequal to it in the type).

28. EUPELMUS BABINDAENSIS new species.

Female:—Length, 2 mm., excluding extruded portion of ovipositor which is as long as two thirds of the abdomen’s length.

Dark metallic green, the wings lightly stained (yellowish) except near base. Scapes, tarsi, tibiae, second coxae and femora and hind femora, yellowish brown; knees white, rest of legs concolorous. Cephalic tibia with a concolorous band just below knees, hind femora and tibiae a little dusky toward base. Abdomen at immediate base dorsoad and at base of sides rather broadly, silvery white; somewhat over distal half of ovipositor yellowish white. Hind tibial spurs double, the smaller spur no longer than the apical setae but stouter. Mandibles tridentate, maxillary palpi black. Pedicel longer than any of the funicle joints of which 4 is longest, four fifths the length of the pedicel, one and a third times longer than wide; funicle 1 quadrature, also 8 but the latter over twice the size of 1. Thorax scaly. Axillae just separated at meson. Teeth on middle tibia concolorous with the legs.

From one female caught by sweeping jungle, February 11, 1914 (A. P. Dodd).

Habitat: Babinda, Queensland.

Type: No. Hy 2851, Queensland Museum, Brisbane, the female on a tag; head and a hind tibia on a slide.

29. EUPELMUS HOOKERI new species.

Female:—Length, 4.50 mm., excluding ovipositor which is extruded for not quite a third of the length of the long abdomen.

Dark metallic green, the abdomen and mesopleuron purple, the fore wings infuscated from the bend of the submarginal vein distad to apex; the infuscation deeper longitudinally a little cephalad of middle from base of marginal vein to apex of stigmal (forming a rather broad longitudinal stripe) and rather broadly across along its proximal margin. Postmarginal vein over twice the length of the stigmal. Legs concolorous except knees, tips of tibiae, tarsi and intermediate tibia which are reddish brown. Tip of ovipositor white, also proximal tarsal joints of middle and hind legs, the proximal joint of the latter twice longer or nearly than the same joint of the middle legs. Ovipositor concolorous except at tip, the long, intermediate portion brownish black. Hind tibial epurs double, distinct. Hind tibia with a rather
broad yellow band somewhat proximad of middle. Funicle 1 a little longer than wide but much smaller than 8 which is quadrate; 2 elongate, longest, five or more times longer than wide, 3 and 4 subequal, each a little shorter than 2, longer than the pedicel; following joints gradually shortening but 7 still longer than wide. Teeth on middle tarsi black, ovipositor horizontal. Abdomen longer than the rest of body, straight, segments 2 and 3 deeply notched at meson of caudal margin, segment 4 slightly so; abdomen scaly reticulate, the head and thorax uniformly more densely so. Axilleae distinctly but not very widely separated. Scutellum longitudinally, finely, linedolate.

From one female taken by sweeping jungle, February 13, 1914 (A. P. Dodd).

**Habitat:** Babinda, Queensland.

**Type:** No. Hy 2852, Queensland Museum, Brisbane, the speciment on a tag; head and hind legs on a slide.

### 30. *EUPELMUS LONGICAUDA* new species

**Female:**—Length, 1 mm., excluding ovipositor which is exerted for a length equal to that of the abdomen.

Dark metallic green, the wings hyaline, the legs pale yellow, the coxae concorolous at base; funicle 1 suffused with white, wider than long, 2 quadrate, 3 longest, slightly longer than wide, 8 wider than long. Postmarginal vein slightly longer than the stigmal. Proximal fourth and somewhat over distal third of extruded portion of ovipositor concorolous, the remainder white, the distal dark subequal to the white. Scape concorolous. Axilleae slightly separated. Thorax and abdomen finely scaly. Fore femur slender.

From one female caught on mainland, December 24, 1911.

**Habitat:** Double Island (Cairns), Queensland.

**Type:** No. Hy 2853, Queensland Museum, Brisbane, the female on a tag; head, fore and hind legs on a slide.

### 31. *EUPELMUS CAUCERI* new species

**Female:**—Length, 4.50 mm., excluding ovipositor which is extruded for nearly half the length of the abdomen.

Very robust. Dark metallic blue, the wings hyaline, the scape, knees, distal half of cephalic tibiae, middle legs except coxae and the caudal tibiae, rich reddish brown, the knees darker. Tarsi and tip of caudal tibiae yellowish. A little over the distal three fourths of the extruded portion of the ovipositor valves yellowish white, the short proximal part blue. Differs from *babindacnae* in being very much more robust, the hyaline wings and in coloration. Pedicel slightly longer than funicle 3 which is longest, somewhat longer than wide, 2 and 4 nearly as long as 3, 1 a little wider than long; last two funicle joints subequal, each a little wider than long and thrice the size of 1; club short, ovate. Abdomen conice-ovate, produced beneath. Hind tibial spur single; middle tarsi beneath with black teeth. Postmarginal vein slightly longer than the stigmal. Segments 2 and 3 of abdomen deeply incised at meson of caudal margin, 4 much less so, 5 only slightly so; abdomen densely scaly. Axilleae distinctly a little separated mesad. Thorax and head densely scaly. Scrobes deep, triangular, their margins obtuse; a thick ridge between antennae and separating the scrobes at base. Pubescence not conspicuous.

From one female taken in forest, May 8, 1914.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 2854, Queensland Museum, Brisbane, the female on a tag with the type of *babindacnae*.

### 32. *EUPELMUS NELSONENSIS* new species

**Female:**—Length, 3.50 mm., excluding extruded valves of ovipositor which are a third the length of abdomen, white, a little dusky just before tip, proximal sixth black.
Dark metallic green, the legs and scape yellowish white except cephalic and caudal coxae, cephalic femur and proximal half dorsal and ventral of cephalic tibia; caudal femur darker along proximal half. Wings hyaline. Runs to *chaecri* but differs in being not quite so robust, the scutellum is declivous, the legs and scape paler, the venation pale, funicles 2 and 3 are subequal, longest and the caudal femur is not concolorous. Otherwise about the same. Froms broad in both species.

From one female caught in forest, November 30, 1913.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2855, Queensland Museum, Brisbane, the female on a tag with type of *chaeceri* and *babindoensis*.

33. **Eupelmus Listeri** new species.

*Female*:—Length, 1.30 mm., excluding extruded valves of ovipositor which are about as long as the abdomen, wholly black.

Diffrers both from *australis* and *australicus* in having the first three funicule joints about subequal and wider than long, 4 longest and from *australicus* in having only the side of the abdomen golden yellow, the dorsum and ventral washed with metallic green, the yellow showing through and on proximal third there are about three dusky cross-stripes. In *australis*, the abdomen is dark metallic green except the sides rather narrowly. Prepectus golden yellow in all three species.

From four females caught by sweeping sand-ridges near coast, May 15, 1914 (A. P. Dodd).

*Habitat*: Chinderah (Tweed River), New South Wales.

*Type*: No. Hy 2856, Queensland Museum, Brisbane, two females on a slide with the type of *burmesiferi*.

Dedicated to Joseph Lister.

34. **Eupelmus Scudder* new species.

*Female*:—Length, 1.40 mm., excluding extruded valves of ovipositor which are a third the length of abdomen and with the middle white portion longer than the two black portions.

Runs close to *folosmi* but differs in that the abdomen is margined along proximal three fourths, crossed on the distal half of dorsum by three dusky stripes, the first short at middle; also the hind tibia bears a spot dorsal below knee, the hind femur distinctly concolorous along proximal two thirds ventro-lateral and the cephalic tibia bears also a spot below knee dorsal. Otherwise the same. Prepectus concolorous in both species.

From one female caught in forest, May 15, 1914 (A. P. Dodd).

*Habitat*: Chinderah (Tweed River), New South Wales.

*Type*: No. Hy 2857, Queensland Museum, Brisbane, the female on a slide with type of *folosmi*.

Dedicated to Samuel Hubbard Scudder.

35. **Eupelmus Brunnella** new species.

*Female*:—Length, 1.90 mm., exclusive of ovipositor which is extruded for about a third the length of the abdomen.

Runs to *crawfordii* but differs in that the abdomen is concolorous (i.e. brown), the legs all pale yellow except cephalic coxae and femur, the body more robust, the head, scutum and scutellum (sometimes the entire thorax) dark metallic (the scutellum declivous in both species), the fore wing is stained yellow under all of marginal vein, the funicle joints are all slightly longer, the pedicel also. Postmarginal vein a little shorter than the stigmatic. Otherwise the same. Compared with type of *crawfordii*. Hind tibial spur single.
From two females caught in jungle, January 15, 1914 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2858, Queensland Museum, Brisbane, the female on a tag with the type of crawfordii.

38. EUPELMUS ARGENTINOTATUS new species.

Female:—Length, 1.80 mm., exclusive of extruded valves of ovipositor which are two thirds the length of the abdomen, dusky at tip, proximal two thirds purple, rest white.

Runs to babiodactylus but a little over proximal half of scape is concolorous, its distal third or more, the pedicel and funicle 1 silvery white; the cephalic tibie are concolorous (in both species) just below knees.

From one female caught in jungle, May 2, 1914 (A. P. Dodd).

Habitat: Tweed Heads (Tweed River), New South Wales.

Type: No. Hy 2859, Queensland Museum, Brisbane, the specimen on a tag; hind tibia, antennae and a fore wing on a slide with type of longicorpus.

37. EUPELMUS DUMASI new species.

Similar in all respects to renani but the wings are hyaline, all the tibiae pale, the femora dusky (washed lightly with metallic) and funicle 2 is a little the longest, 3 and 4 subequal, each a little longer than wide, a little shorter than 2.

From two females caught in forest, January 6, 1913.

Habitat: Capeville (Penland), Queensland.

Type: No. Hy 2860, Queensland Museum, Brisbane, two females on a tag with type of renani, two heads on a slide.

Dedicated to Alexandre Dumas, père.

38. EUPELMUS PAGANUS new species.

Female:—Length, 2 mm., the ovipositor not extruded, the abdomen conical, distinctly longer than the thorax. Slender.

Runs to worcestri and resembles that species in all respects yet not half as large, the pale parts of the legs are silvery white, funicles 1 and 2 are wider than long, 4 longest (3 a little the longest in worcestri) yet only a little longer than wide, distinctly shorter than the pedicel. Both species are exceptional in having the ridges of the scutum subobsolete and the axile widely separated. Hind tibial spur single.

From one female caught by sweeping in forest, November 8, 1913.

Habitat: Stewart's Creek, Queensland.

Type: No. Hy 2851, Queensland Museum, Brisbane, the female on a tag with type of worcestri; head and a hind leg on a slide with type of dumasi Girault.

39. EUPELMUS CHARITOLOPHOIDES new species.

Female:—Length, 2.50 mm., the ovipositor not extruded, slightly (not distinctly) pale at tip.

Runs closest to worcestri and resembles that species in thoracic structures. Wings subhyaline. Dark metallic purple, the abdomen green, the mesopleurum and hind coxae dark blue. Scape except slightly at tip above, tarsi, tip of fore tibia and rest of legs except coxae, reddish brown. Middle tibial spur white, middle tarsi with black teeth beneath. Caudal margins of segments 2 and 3 of abdomen distinctly incised at meson, 4 slightly so, others straight, entire. Funicle 1 longer than wide, 2 longest, somewhat longer than wide and barely longer than 3 or 4, shorter than the pedicel, 7 and 8 a little wider than long. Venation dusky.
the postmarginal vein somewhat longer than the stigmal, the latter curved, not especially short. Head and thorax coarsely scaly, nearly scaly-punctate, the abdomen coarsely scaly. Lateral ocelli their own diameter from the eye margins. Segment 2 of abdomen short. Caudal tibial spurs double, one spur no longer than the apical seta yet stouter. Antennae inserted about in the middle of the face.

From one female caught in jungle, July 11, 1914.

_Habitat_: Gordonvale (Cairns), Queensland.

_Type_: No. _Hy_ 2852, Queensland Museum, Brisbane, the specimen on a tag.

**40. EUPELMUS ALBIPES** new species.

_Female_:—Length, 2 mm., excluding the extruded valves of ovipositor which are as long as the abdomen.

_Runs to crawfordi_. Brown, the scutum metallic green. Differs from _crawfordi_ in that the valves of the ovipositor are distinctly longer, the legs are silvery white except the caudal coxae and the abdomen is concolorous with rest of the body. Also the scape is brown and the scutellum is not declivous. The single specimen had the abdomen so much compressed as to form a line from dorsal aspect. Otherwise like _crawfordi_.

From one female caught April 1913, in forest.

_Habitat_: Gordonvale (Cairns), Queensland.

_Type_: No. _Hy_ 2863, Queensland Museum, Brisbane, the specimen on a tag with type of _crawfordi_.

**41. EUPELMUS AURIVENTRIS** new species.

_Female_:—Length, 1.60 mm., excluding ovipositor which is extruded for nearly two thirds length of abdomen, yellowish white, black only at base, dunky at extreme tip.

_Runs close to testaceiventris_ Cameron. _Anacrus_ purplish, the wings stained yellowish, the abdomen and legs bright golden yellow. Coxae, cephalic femur, cephalic tibia at proximal half, a round spot on each side of middle femur some distance before knee, a distinct ring around middle tibia a short distance out from knee and a marginal spot on abdomen at base, dark metallic green. Tip of scape, pedicel and funicle 1 silvery white; funicle 1 subquadrate, 4 nearly twice longer than wide, longest, over twice the length of 1 which is smallest. Pedicel a little longer than funicle 1. Scape compressed. Funicle 2 nearly twice longer than 1, shorter than 3. Body finely reticulated.

From two females caught January 23, 1913. Forest.

_Habitat_: Townsville, Queensland.

_Types_: No. _Hy_ 2864, Queensland Museum, Brisbane, the two females on a tag, their heads on a slide.

**42. EUPELMUS SOROR** new species.

_Female_:—Length, 2.05 mm., excluding ovipositor which is a little longer than the slender abdomen.

_Runs to australiensis_ differing from that species in being more robust and the abdomen is wholly golden yellow except at base above for a short distance (the dorsum washed with metallic in _australiensis_); also funicle 3 is distinctly longer than wide, 2 slightly longer than wide, 4 longest, longer than 3. Differs from _australis_ in not having the abdomen nearly wholly dark metallic green and _australis_ in not having the abdomen margined with metallic green, funicle 4 is longest and so on. Differs from _latiseta_ in the color of the abdomen and the longer and more unequal proximal funicle joints. Funicle 4 somewhat shorter than the pedicel which is white at apex, together with funicle 1, the latter a little wider than long. Scape compressed a little. A narrow line of yellow down side of thorax from and including
the prepectus. Spots of middle femur ventrad. Funicles 2 and 3 subequal, each a little longer than wide, 1 distinctly shorter than either.

From one female caught in forest, January 23, 1913.

Habitat: Townsville, Queensland.

Type: No. Hg 2865; Queensland Museum, Brisbane, the specimen on a tag; head on a slide with type appendages of *E. auricentrus*.

**43. EUPELMUS PACHYSCAPHA** new species.

**Female:**—Length, 1.70 mm., excluding ovipositor which is black and extruded for a length equal to three fourths that of the abdomen, the valves minutely densely feathery.

Dark metallic blue, the tarsi and tips of Tibiae white, the abdomen pale yellowish brown washed with metallic purple along the distal half dorsally and along the lateral aspects, the form slender and like that of *australiens*. Fore wings with a midlongitudinal dusky rather narrow stripe from apex to a point about opposite apex of the submarginal vein, otherwise hyaline, the venation very pale. Scape greatly, foliaceous flattened, rectangular, the flagellum subelliptical, the funiculi joints all cup-shaped and wider than long, larger distad, all smaller than the small pedicel which is hardly longer than wide. Postmarginal vein longer than the stigmal.

Described from one female captured by sweeping in forest, September 22, 1914.

Habitat: Capeville (Pentland), Queensland.

Type: No. Hg 2866; Queensland Museum, Brisbane, the above specimen in alcohol with the type of *Atoposoma angustatipes*.

Of the foregoing species, *neceteri*, *paganus* and *charitophoides* probably belong to *Charitophus* Forster but do not agree with the diagnosis as given by Ashmead (1904) as regards the insertion of the antennae. It is not safe to trust solely to the following table for species in this genus since the species referred to *Anastatus* may become confused. Tables to both genera should be used conjointly. The species are common in forest grasses.

**DIAGNOSIS OF THE AUSTRALIAN SPECIES OF EUPELMUS.**

**Females.**

1. Body, excluding appendages, wholly metallic green.

Extruded portion of valves of ovipositor wholly concolorous (if not extruded, tips not white). Compare *paganus*, *charitophoides* and *pachyseca*.

Valves of ovipositor not or barely extruded; wings hyaline.

Legs concolorous; very large.

Axillae very widely separated; funicles 3 and 4 longest, 1 longer than wide.

Tips of Tibiae brownish . . . . *neceteri* Girault.

Only some of the legs more or less concolorous. Of normal size.

Legs golden yellow except coxae, washed obscurely with submetallic on last two pairs of femora and tibiae; scape compressed; pedicel elongate, longer than funiculae in adjacent; funicula 2 about twice longer than wide; most of middle tibia yellow. Funiculum 1 a little longer than wide . . . . . . . . . . *maurosoni* Girault.

Legs with middle of femora and tibiae darker (except cephalic femora); the same but funicula 2 plainly not twice longer than wide; funiculum 1 wider than long, 3 subequal to 2, quadrate . . . . . *lambi* Girault.

Valves of ovipositor extruded for third the length of abdomen. Wings infuscated from about middle of marginal vein to apex.

Legs concolorous except tips of tibiae and the tarsi; pedicel much longer than any of the funiculae of which 4 is longest. Compare *dumai* . . . . *renaudi* Girault.
Extruded portion of valves of ovipositor white at extreme tip only, the valves extruded for some length.

Fore wing infuscated from head of submarginal vein to apex. Valves of ovipositor a third the length of abdomen.

Very robust. Legs concolorous except knees, tips of tibiae, tarsi and middle tibiae which are reddish brown; hind tibia with a rather broad yellow band somewhat proximad of middle; funicle 2 elongate. Scutellum longitudinally, finely lineolate ... ... hookeri Girault.

Fore wing hyaline. Valves of ovipositor extruded for two thirds or more the length of the abdomen. Not very large.

Long and slender, the valves of ovipositor compressed, as long as the long abdomen; knees, distal third of tibiae and the tarsi pale yellow; funicle 2 longest, over twice longer than wide, 1 longer than wide ... ... tarsi: compressicauda Girault.

Not long and slender, the valves of ovipositor normal, two thirds the length of the abdomen; middle tibiae wholly pale yellow; funicle 1 wider than long fieldingi Girault.

Extruded valves of ovipositor white distad along much more than extreme tip. (Compare grotti, description.)

Fore wings distinctly infuscated.

Infuscation of fore wing along distal two thirds; valves of ovipositor much extruded, two thirds white; tips of tibiae and the tarsi yellowish. Species not very large ... ... ... ... antipoda Ashmead

Infuscation of fore wing from bend of submarginal vein distad to beyond venation, the infuscation accented in two places; valves of ovipositor only shortly extruded, white at distal half; legs the same but hind tibiae silvery white along little over proximal half; very large. Funicle 2 long. From narrow. Scutellum declivous ... ... ... motchalskii Girault.

Fore wings hyaline; distal two thirds or more of valves of ovipositor whitish.

Very robust. Scrape reddish brown; ovipositor valves extruded for half the length of abdomen; legs concolorous except middle legs, tips of cephalic tibiae, hind tibiae and knees which are reddish brown; tips of hind tibiae and all tarsi yellow. Funicle 2 not long ... ... chaucer Girault.

See description ... ... ... ... nelsonensis Girault.

Small. Funicle 1 white; ovipositor valves extruded for a third the length of abdomen; legs golden yellow; a dusky band on middle legs each side of knees; coxae concolorous ... ... burmeisteri Girault.

Extruded valves of ovipositor with an intermediate white portion. Wings hyaline.

Valves of ovipositor extruded for a length equal to that of the abdomen.

Legs pale yellow except coxae at base; proximal fourth and distal two thirds of ovipositor concolorous, the rest white. Funicle 1 wider than long, 3 longest. Small ... ... ... ... longicauda Girault.

Valves of ovipositor extruded for not more than a third the length of the abdomen.

Legs pale lemon yellow except coxae and the cephalic femur lightyellow; distal fourth of ovipositor black ... ... montagni Girault.

Legs concolorous except knees, middle tibiae, tips of tibiae broadly and the tarsi which are whitish. Distal black portion of ovipositor subequal to the white portion and longer than the proximal black portion ... ... ... ... grayi Girault.

The same but the middle white portion of ovipositor distinctly shorter than the black proximal portion which is but slightly shorter than the distal black portion ... ... ... ... lavoirsi Girault.
Extruded portion of valves of ovipositor white at base only. Wings hyaline.

Valves of ovipositor extruded for nearly a third the length of the abdomen, the proximal fourth white. Body small. Legs lemon yellow except coxae; proximal half of scape and funicle 1 white. Pedicel a little longer than funicle 4

*pedicosa* Girault.

Valves of ovipositor extruded for only about a sixth of abdomen, the proximal half white. Body large.

Legs brownish yellow except coxae and sides of cephalic femur. Pedicel shorter than funicle 4

... *longicorpus* Girault.

11. Body, excluding appendages, brown washed with metallic, the abdomen honey yellow.

Wings hyaline; valves of ovipositor extruded for a third the length of abdomen, white, black at base, brown at distal fourth; scape and legs pale except coxae and femora. Pedicel much longer than any of the funicle joints. Middle legs all pale

... *crawfordi* Girault.

See descriptions

... *albipes* and *brunella* Girault.

111. Body, excluding appendages, dark metallic green or blue, the abdomen mostly, or with much, yellow. Wings hyaline. Slender, graceful species.

Valves of ovipositor wholly black, plainly not as long as the body. Compare *soror*.

Legs except coxae lemon yellow; middle femora with a spot above on each side, just before knee; sides and venter of abdomen yellow; funicle 3 quadrate, 1 white (more or less). Middle tibiae with a spot just below knee

... *australianus* Girault.

The same but the body stouter, ovipositor valves longer, funicle 3 a little longer than wide; also only the sides of abdomen are yellow

... *australis* Girault.

The same but abdomen margined down each side for proximal three fourths; middle knees with a spot above and below them. Funicle 3 longest, somewhat longer than wide

... *australicus* Girault.

Compare description

... *lateri* Girault.

Valves of ovipositor partly white. Wings hyaline.

Valves of ovipositor extruded for a length equal to that of the body.

Abdomen yellow, margined with metallic along proximal three fourths. A spot above and below middle knees; rest of legs (except coxae) yellow; valves of ovipositor rather obscurely whitish on second proximal fourth. Prepectus yellowish. Funicle 1 white, quadrate, 2-4 longest. Apex of pedicel white

... *gregyi* Girault.

Valves of ovipositor extruded for a length much less than that of the body.

The valves white centrally. Compare *auricentrus*.

Legs golden yellow, the middle knees with a spot above and below them. Coxae concolorous.

Abdomen yellow, margined along proximal two thirds; a yellow stripe down each side of thorax; ovipositor valves brownish distad, the brown about half the length of the black proximal portion. Valves of ovipositor extruded for two thirds the length of abdomen.

Funicle 4 longest

... *varicolor* Girault.

The same, the abdomen margined along proximal half, the thorax wholly metallic, the cephalic femur broadly concolorous centrally, funicle 2 quadrate, 1 white

... *folsomi* Girault.

See description

... *scudder* Girault.

Legs golden yellow, the caudal two pairs of knees with a spot above and below them. Coxae concolorous.

Ovipositor as long as the abdomen, the latter yellow along sides and venter. Prepectus yellow; a dusky spot on caudal tibia ventrad of the spot below knee

... *motarellus* Girault.
Legs the same but the spot on middle femur is long and there is a spot below cephalic and caudal knees.

Abdomen yellow, margined from base nearly to apex; proximal half of caudal femur concolorous ... ... baileyi Girault.

The valves white along distal two-thirds.

Abdomen yellow, blue along sides of segment 3 dorsad and dorsum of segment 2 except at base; legs yellow except coxa; a spot above and one below middle knees; hind tibia dusky at base and a broad black line on either side of proximal half of caudal femur testaceiventris Cameron,

IV. Body dark metallic green, the abdomen marked with white. Scape yellowish white.

Abdomen silvery white at immediate base dorsad and rather broadly so laterad; ovipositor two-thirds the length of abdomen, somewhat over its distal half yellowish white; tibie, tarsi, middle femur and coxa and caudal femur yellowish brown. Pedicel longer than any of the funicle joints ... ... ... babindaensis Girault.

See argentinotatus Girault.

V. Body, excluding appendages, varicolored. Fore wings infuscated to apex or nearly from head of submarginal vein.

Metallic purple-green; valves of ovipositor with an intermediate white portion; most of pronotum, scape, legs, ventral face, caudal three-fourths of mesopleuron, axilla and cephalic two thirds of scutellum rich reddish brown. Proximal third of abdomen white. Funicle 4 longest. Immediate apex of fore wing hyaline. See description ... . multicolor Girault.

Orange yellow; segment 2 of abdomen, coxa, distal third of scape, distal three-fourths of pedicel, funicles 1-6, leg articulations, tips of tibia and the tarsi silvery white; rest of abdomen honey yellow; distal two funicle joints and club jet; caudal scutum metallic green. Dorsal edge of caudal femur black. See description ... ... ... claudus Girault.

GÉNUS ANASTATUS Motschulsky.

Synonyms: Paragnaya Girault; Ooderelloides Girault.

I thought this genus would prove the same as Eupelmus but the shape of the abdomen, though not greatly different, may be constant. The genus may be distinguished from Eupelmus by reason of the fact that the abdomen gradually widens nearly to apex and then rapidly narrows to form an obtuse apex. In Eupelmus, the abdomen gradually widens from base to about middle or a little distad of middle, then gradually narrows to apex. Also in Anastatus the dorsum is usually more depressed, sometimes markedly so. The species often bear bifasciate wings and a silvery band about the base of the abdomen. The ring-joint is really funicle 1; it may be distinctly longer than wide.

1. ANASTATUS PIPUNCULI Perkins. Female.

Length, 2 mm. Head and face reddish purple, the vertex with short black hairs; the face with white, short but conspicuous pubescence; the surface dull, rough with indefinite sculpture. Antennae subchavate, dark, metallic in some aspects; 13-jointed with one ring-joint. Eyes divergent cephalad, the ocelli in a triangle which is much widest at base, the caudal one near the eye margines. Thorax blackish purple, the mesonotal ridges sharp, parallel, the clothing white and conspicuous and, like the sculpture, very similar to that of the face. Wings fuscous, hairy, a hyaline, hairless, rather narrow, slightly curved transverse band beneath the marginal vein (at about its middle) and a clear space at the base of the wing. Stigmal vein long but shorter than the postmarginal. Hind tibial spur double, much unequal. Tarsi more or less yellowish brown, the caudal tarsi darker; nearly all of caudal legs blackish, also the middle and cephalic tibiae, their femora largely dark brown or blackish also. Abdomen purplish black,
depressed at proximal two thirds and with a transverse subbasal white band, the three segments following this subequal. Ovipositor barely exposed. Eyes probably bare. Funicle 1 longest, over twice its own width and longer than the pedicel.

_Habitat:_ Bundaberg, Queensland. Parasitic upon _Pipunculus cinereascens._

_Type:_ Query.

2. **ANASTATUS NIGRIPURPUREUS** (Girault). Female. Genotype of _Ooderelloides_ Girault.

Length, 3.60 mm. Bluish black, the head and thorax deep blue; tip of ovipositor valves, scape and tarsi whitish; trochanters and tips of tibiae white. Fore wings lightly stained from the base of the marginal vein to apex. Distal two funicle joints wider than long. Stigmal and postmarginal veins subequal, moderate in length. Funicle 2 long, subequal to the pedicel, 1 subquadrate, narrow. Valves of ovipositor slightly extruded. Hind tibial spur single.

_Cephalic femur somewhat swollen, emarginate ventral near apex. Scutellum decilious._

_Habitat:_ Cairns District, Queensland.

_Type:_ No. I. 1272, South Australian Museum, Adelaide.

3. **ANASTATUS PAX** (Girault). Female.

_Ooderelloides pax_ Girault.

Length, 4.10 mm. Differs from _nigripurpureus_ in that the abdomen is more depressed and somewhat longer, the valves of the ovipositor exerted somewhat farther and wholly black, the scutellum is not decilious and the stigmatic vein is slightly shorter, straighter and stouter. Scutellum wedge-shaped, the narrow end cephalad.

_Habitat:_ Mount Tambourine, Queensland.

_Type:_ No. I. 1273, South Australian Museum, Adelaide.

4. **ANASTATUS SPLENDIDUS** (Girault). Female.

_Ooderelloides splendidus_ Girault.

Length, 3 mm. Brilliant metallic blue-green with purplish reflections, the abdomen and mesopleurum coppery, the scape metallic blue, the antennae black, the legs concolorous, the tips of tibiae and tarsi whitish; extruded portion of ovipositor as long as in _pax_, whitish, its distal third black. Fore wings with a distinct dusky blotch from the marginal and postmarginal veins and slightly beyond (distal), the apex and rest hyaline; the blotch disappears (or nearly) two thirds the way across to the caudal margin, so it is rectangular but irregularly so. Abdomen shaped as in _pax_.

Otherwise as in _nigripurpureus_ except that the venation and scutellum differ a little.

_Habitat:_ Lawson, New South Wales.

_Type:_ No. I. 1274, South Australian Museum, Adelaide.

5. **ANASTATUS COLEOPTERORUM** (Girault). Female.

_Calosoter coleopterorum_ Girault.

Length, 4 mm. Metallic blue-black, the wings hyaline, the face with slight metallic green; antennae and legs black, the tarsi brownish. Densely, finely punctate. Funicle 1 longer than wide, all the funicle joints shorter than the pedicel, 3 and 4 longest, 2 subquadrate, slightly shorter than 3; the distal joint wider than long. Postmarginal and stigmal veins rather long, subequal, the stigmatic curved, not half the length of the marginal. Caudal tibia with two short spurs; cephalic femur somewhat bent, all the legs normal. Abdomen depressed, the ovipositor not exerted.

_Habitat:_ Hobart, Tasmania. Reared from wood.

_Type:_ No. I. 1276, South Australian Museum, Adelaide.
6. ANASTATUS FREDERICI new species.

**Female:**—Length, 3 mm., excluding ovipositor which is extruded for a little over a fourth the length of the abdomen.

Slightly like *Trypelmus hookeri* but somewhat smaller, the valves of the ovipositor shorter, dusky at tip, black at proximal third, the rest white; the scape is reddish brown; the abdomen is shorter; the postmarginal vein is much shorter, subequal to the stigmal; the middle tibia is a little purplish just below knee; the distal third of caudal tibia is yellowish white; the funicle joints are shorter and the infusation of the fore wing differs in that the longitudinal deeper infusation is less distinct. Hind tibial spur single. Funicle 1 quadrate, 2 longest, a little over thrice longer than wide at base, 3 a little shorter than 2, 4 still shorter, somewhat longer than wide, 6 quadrate, 7 and 8 subequal, each a little wider than long. Pedicel somewhat shorter than funicle 2. Segments 2-5 of abdomen incised at meson of caudal margin but obtusely so and not very deeply. Head and body finely scaly, the scutum rather coarsely so (coarser than in *hookeri*); scutellum scaly, not striate as in *hookeri*. Compared with type of *hookeri*. Axilla separated but not widely so. From one female taken in forest, May 8, 1914.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 2667, Queensland Museum, Brisbane, the specimen on a tag.

Also one female same place, April 27, 1914.

7. ANASTATUS PENTATOMIDIVORA new species.

**Female:**—Length, 2.95 mm.

Dark metallic purple, the scape rufous, the antennae otherwise and the legs concolorous. Fore wings sooty from the curve of the submarginal vein distad to end of postmarginal vein, the sooty part bearing two oblique eye-spots, the cephalic one against marginal vein a little beyond its middle, the caudal and opposite one from the caudal margin, both elliptical in shape. Abdomen depressed, narrowed toward base, the caudal margins of segments 2-5 incised at meson, the incision deepest on 2 but not very large. Front femur distinctly swollen; middle tibia with strong black teeth. Antenna 13 jointed, the ring-joint large, funicle 1 longest, over two and a half times longer than wide, 2 a fourth or more shorter, 3 subequal to 2 but a little wider, next joints wider and shorter, the last two funicle joints wider than long; funicle 4 subequal to the pedicel. Club short. Hind tibial spurs double, very unequal, one long, the other very short. Antenna inserted about on a level with the eyes. Head shagreened, the eyes naked, the lateral ocelli not touching the eyes. A large triangular portion of scutum from meson of cephalic margin (apex caudad) and the scutellum, densely, rather finely punctate; rest of scutum shining but really extraordinarily finely lined. Abdomen very finely scaly. Tip of ovipositor whitish, not excoriated.

From three females reared from pentatomid eggs, forest, December, 1913 (A. P. Dodd).

**Habitat:** Gordonvale (Cairns), Queensland.

**Types:** No. Hy 2668, Queensland Museum, Brisbane, three females on a tag; legs and antenna on a slide.

A female was taken in April, type habitat.

A. ANASTATUS NONEXCUSIS new variety (of *pentatomidivora*).

**Female:**—Like the typical form, the fore wings hyaline rather broadly around the apex but only the caudal margin of segment 2 of abdomen is incised at meson. This margin is white in both.

From one female taken in forest in December.

**Habitat:** Gordonvale (Cairns), Queensland.
8. ANASTATUS BLATTIDIFURAX new species

Female:—Length, 3 mm.

Dark metallic blue, the abdomen with a white band at apex of proximal fourth; tip of valves of ovipositor white, the valves not everted. Legs and antennae concolorous; antenna 13-jointed with one ring-joint which is a little wider than long; funicle 1 subequal to 2 and 3 and longest, 7 a little wider than long, less than half the length of 1 which is much longer than the pedicel. Hind tibia with but one spur, the middle tibia with black teeth, the front femur somewhat swollen. Fore wings embrowned slightly at immediate base and distinctly from the bend of submarginal vein to apex, the infuscation interrupted by a rather narrow white curved transverse stripe from about a little distad of the middle of the marginal vein and faded around apex. Thorax very finely scaly. Postmarginal vein much longer than the stigma. Cephalic half of mesopleurus hairy.

Male:—A third smaller and the tibiae of cephalic legs are pale. The mesopleura bear a femoral furrow, the wings are hyaline, the scutum convex and with complete parapodial furrows. Antenna thick, cylindrical, 11-jointed, one transverse-linear ring-joint, the club solid, the first funicle joint a little longer than wide, as long as the scape without its bulla, the scape short.

Described from four males, twelve females labelled ‘13. Bred from ootheca of cockroach from Queensland (on banana). F. P. Spry. 27-1-03.’

Habitat: Queensland.

Types: No. Hg 2863, Queensland Museum, Brisbane, one male, three females on a tag. Also four females reared from cockroach eggs in the jungle, Gordonvale, October, 1913 (A. P. Dodd) and one female, Stradbroke Island, 5-12-1913 (H. Hacker).

This species is closely allied with pipunculii Perkins but the very shortly projecting part of the ovipositor is pure white, the cross-band of the fore wing appears to be distinctly narrower, the face and scutum do not bear conspicuous white pubescence, there is only one hind tibial spur, the fore wing is embrowned under the proximal half of submarginal vein, clear from margin to margin under distal half and the antennae appear different, since funicle 1 is subequal to 2 and 3 (in pipunculii as figured 1 is plainly longer than 2, the latter a little longer than 3). The host is also different.

9. ANASTATUS INSULARIS new species.

Female:—Length, 1.80 mm., excluding extruded portion of ovipositor which is about a third the length of the abdomen.

Dark metallic purple, the wings a little yellowish, the legs concolorous except tarsi, middle tibiae except a dusky band below knee and distal half of other tibiae which together with a band round abdomen just out from base, the pedicel and first two funicle joints, are white. Extruded valves of ovipositor black. Funicle 1 quadrate, small, 2 longest, a little longer than the pedicel, 3 subequal to pedicel, 8 subquadrate, large. Scape obelavate. Hind tibiae with two spurs, one very short. Thorax with obscure, fine scaliness; caudal half or more of scutum glabrous. Teeth on middle tibiae white. Fore wings rather slender, the discal cilia very fine and dense; stigma vein much shorter than the postmarginal, the marginal vein very long, longer than submarginal. Abdomen scaly. Funicle 2 nearly twice longer than wide.

From one female caught in forest, March 12, 1912.

Habitat: Thursday Island, Torres Strait.

Type: No. Hg 2870, Queensland Museum, Brisbane, the female on a tag; head on a slide. Also, a female from Cooktown, Queensland, in March.

10. ANASTATUS TRICOLOR new species.

Female:—Length, 3 mm., exclusive of ovipositor which is extruded for a length nearly equal to two thirds that of the abdomen.
AUSTRIALIAN HYMENOPTERA CHALCIDOIDA, VII.—GIRault.

With the same striking coloration as Parooderella flavithorax Girault and Dodd and the same as that species except that the wings are perfect, the ovipositor distinctly extruded, the scape swollen at base and dark metallic green along the proximal half, the rest of it, the pedicel and funicle 1 reddish yellow, funicles 2-5 silverly white; rest of antenna black; scape plainly obelavate. Also, the silvery white band around the base of abdomen occupies a third of the surface (a fourth in flavithorax; in both species within this band are two rather small eye-spots of metallic purple, one on each side of meson near base). A little over proximal third and the tip of ovipositor valves metallic purple, the long intervening part honey yellow. Pronotum cephalad with some purple. Funicle 1 a little longer than wide; 2 longest, somewhat over three longer than wide, 3 and 4 subequal, each slightly shorter than 2, each distinctly longer than the pedicel, 5 subequal to the pedicel, 6 a little longer than wide. Club distinctly much shorter than the scape. Hind coxa suffused with purple. Postmarginal vein slightly longer than the stigma. Immediate base of fore wing and a rather broad cross-stripe from a little over proximal third of marginal vein brownish; a broader cross-stripe from distal fourth of marginal and all of submarginal, sooty black; the rather narrow hyaline band between the two cross-stripes crescentic; the second, black cross-stripe bulges convexly proximal and lateral. Marginal vein much longer than the submarginal. Hind coxa suffused with purplish. Caudal margins of segments 2-5 of abdomen incised at meson. Abdomen transversely scaly; scutellum and axillae very finely longitudinally lined but at distal third the former transversely scaly; scutum glabrous except the cephalic triangular portion which is densely scaly reticulate (this triangular portion is minute in flavithorax). Vertex with a broad purple stripe along the meson. Sides of occiput finely lined; face and vertex polished, lower face mesad of genal suture with scattered thimble punctures. Otherwise as in flavithorax.

From one female taken by sweeping in jungle, March 1, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2871, Queensland Museum, Brisbane, the specimen on a tag.

11. ANASTATUS BENTHAMI new species.

Female:—Length, 2 mm., excluding ovipositor which is extruded for somewhat less than a third the length of the abdomen.

Like splendida except that the middle of the ovipositor (extruded portion) is yellowish white, black at base and tip, the apical black the longer of the two. Axillae moderately widely separated. Abdomen with a scaly sculpture, the lateral ocelli far from the eyes. Second abdominal segment incised at caudal meson. Distal two funicle joints quadrate. Scutum with the same pubescence. Not compared.

From two females labelled "Brisbane, 10.8-13. H. Hacker." and one female labelled "Brisbane, October, 1911. H. Hacker."

Habitat: Brisbane, Queensland.

Type: No. Hy 2872, Queensland Museum, Brisbane, the three females on tags (three pins).

Also one female on a slide caught on flowers of Barclay, April 22, 1913, H. Hacker.

12. ANASTATUS RACINEI new species.

Female:—Length, 2.75 mm.

Dark metallic green and agreeing with the description of blattidifurax but the scape rufous, the white apex of valves of ovipositor just extruded beyond tip of abdomen and the fore wing pattern differs in that the somewhat curved hyaline band from the marginal vein is distinctly (twice) broader, the apex much clearer, the apical subhyaline portion nearly as broad as the band from the marginal vein. The cephalic third of mesopleura is pubescent. Thorax densely finely scaly-punctate, the pronotum finely transversely lined, the propodeum and
abdomen scaly-reticulate, the caudal margin of the segments of abdomen practically entire, no distinct incision. Pubescence not conspicuous, sparse.

From one female caught by sweeping along a dry forest streamlet, April 15, 1913 (A. P. Dodd).

**Habitat**: Gordonvale (Cairns), Queensland.

Type: No. Hy 2873, Queensland Museum, Brisbane, the female on a tag.

A. ANASTATUS RACINEI PRECIPUUS new variety.

**Female**:—Exactly like the typical form but the scutellum abruptly declivous (gently sloped in the typical form) and funicle 2 is somewhat longer than 3.

Same locality, April 2, 1913 by sweeping in forest.

Type: No. Hy 2871, Queensland Museum, Brisbane, the female on tag with type of typical form.

13. ANASTATUS PASTEURI new species.

**Female**:—Length, 1.65 mm, exclusive of ovipositor which is extruded for a third the length of the abdomen.

Allied colorationally with *Eupelmus claudus*. Orange yellow marked with dark metallic green as follows: Center of vertex, embracing the ocelli; all of scutum except a rather large area latero-caudad (cephalad and a little laterad of the axilla) and a small one cephalo-laterad; all of middle portion of pronotum and mesonotum and all of propodeum. Abdomen metallic purplish, with the silvery white band out from base, the extruded valves of the ovipositor brown along somewhat over proximal third, black rather broadly at tip, the intervening portion soiled white. Antennae black, the scape pale; joints 3-6 of funicle silvery white. Legs dusky, the tibiae and tarsi white; middle tibiae with a black ring just below the knees. Fore wings lightly stained and with a distinct subfuscous cross-stripe at the bend of the submarginal vein and a large triangular spot whose apex is hung from the stigmatic vein, and whose base is a little beyond the midlongitudinal line of the wing; from base to the cross-stripe, the fore wing is hyaline except at immediate base. Hind tibial spur single. Axillae distinctly separated a short distance. Mandibles tridentate. Scape long, compressed; pedicel a little longer than funicle 4 which is longest, a little longer than wide, 1 somewhat wider than long, 2 barely shorter than 4, subequal to 3, twice the length of 1; funicle 8 slightly wider than long. Postmarginal vein somewhat longer than the stigmata. Thorax scaly.

From one female taken in forest, April 15, 1914 (A. P. Dodd).

**Habitat**: Cloncurry, Queensland.

Type: No. Hy 2876, Queensland Museum, Brisbane, the female on a tag; antennae and a leg and a fore wing on a slide with type of *Eupelmus lambi* Girault.

14. ANASTATUS BOUSSINGAULTI new species.

**Female**:—Length, 2 mm, excluding extruded part of ovipositor which is as long as a fourth of the abdomen or less.

Similar to *Eupelmus longicorpus* Girault but much smaller, the middle of the valves of ovipositor white, the small white portion equal to the distal and proximal concolorous portions.

From one female taken in forest, August 1, 1913.

**Habitat**: Gordonvale (Cairns), Queensland.

Type: No. Hy 2876, Queensland Museum, Brisbane, the female on a tag; antennae and a hind tibia on a slide.

15. ANASTATUS DARWINI new species.

**Female**:—Length, 0.50 mm, excluding extruded valves of ovipositor which are a third the length of abdomen, white centrally.

Similar to the preceding but the femora are all concolorous (except middle ones which are only so along upper and lower edges) and the cephalic and caudal tibiae are concolorous at
proximal half. Legs otherwise reddish brown. Scutum with distinct but not dense silvery pubescence. Distal black of ovipositor shorter than the white but longer than proximal black. Also the antennae differ from those of *bousinipalii* in that the pedicel is subelongate, longer than any of the funicle joints (pedicel much shorter than funicle 2 in the other) while the longest funicle joint (3 or 4) is not as long as with that species. The ovipositor is extruded more, the middle white much longer. Resembles *Engyptus grapi* Girault but somewhat more robust, *grapi* lacks most of the conspicuous pubescence on the thorax and has the middle femur concolorous, the hind tibia more broadly black and the fourth joint of maxillary palpus is longer.

From two females, October, 1911 (H. Hacker).

**Habitat:** Brisbane, Queensland.

**Type:** No. Hg 2877, Queensland Museum, Brisbane, two females on separate tags; antennae and hind legs on a slide with type of *bousinipalii*.

16. **ANASTATUS ARISTOTELEA** new species.

**Female:** Length, 2.30 mm.

Very similar to *racioci* but the scape is dark metallic like the rest of the antenna, the proximal margin of the second (distal) fusceous stripe is straight not forming a triangle as with the other species. Funicle 1 somewhat longer than 2 or 3 which are subequal and somewhat longer than the pedicel. Hind tibial spurs apparently as in *piancunii* Perkins, from which this species differs in having the cross-band of hyaline very nearly as broad as the first fusceous cross-stripe (plainly not so as figured for that species; less so for *racioci*), the stigmal vein is shorter, the pedicel is longer and the base of the wing infuscated; moreover, the apex of the fore wing is clear. Postmarginal vein somewhat over twice the length of the stigmal. Segments of abdomen not excised at meson of caudal margin. Hyaline band of fore wing with its distal margin just missing base of the stigmal vein. Sculpture about as in *racioci*. Ring-joint wider than long.

From one female caught by sweeping in forest, January 4, 1913.

**Habitat:** Capeville (Poutland), Queensland.

**Type:** No, Hg 2878, Queensland Museum, Brisbane, the female on a tag; antenna, fore wing and a hind tibia on a slide.

Several more females same place, September 22, 1914. A common species.

17. **ANASTATUS BOMBA** new species.

**Female:** Length, 3.75 mm., excluding ovipositor which is extruded for a little less than a third of the length of abdomen and is brown-black at tip.

Metallic purple, the propodeum green, the head brassy; fore wings hyaline but with one moderately broad complete cross-stripe and an incomplete one, the latter broader, two thirds complete from most of postmarginal vein; hyaline stripe between them as broad as the second half-stripe, broader than the first stripe. Coxae and hind legs concolorous, rest reddish brown, the tarsi whitish. Scape reddish brown, rest of antenna black. Segments 2-5 of abdomen incised at meson of caudal margin, 5 only slightly, others not deeply. Cephalic ocellus just tipping apex of the triangular scrobalicular cavity whose lateral margins are carinated. Body scaly, scutellum densely shagreened, center of scutum subglabrous. Cephalic femur wide. Venation narrow, the postmarginal vein twice the length of the normal stigmal. Middle tarsi with distinct black teeth ventrad. Hind tibial spur single. Funicle 1 wider than long, club obliquely truncate, funicle 2 nearly thrice longer than wide, somewhat longer than 3 which is subequal to the pedicel and next longest; funicles 7-8 subequal, somewhat wider than long. Scutellum declivous. Runs to *racioci* Girault but differs in lacking the silvery band of abdomen near base, in bearing the distinctly extruded ovipositor, the reddish cephalic legs, in having funicle
2 longer than 3, the second stripe of fore wing somewhat narrower and more faded caudad, the nonplose, subglabrous caudo-mesal part of scutum, the declivous scutellum, the much shorter cephalo-mesal triangular raised part of scutum, here scaly, in racineti densely shagreened like the scutellum. The head is shagreened, nearly as much as the scutellum. Axille shagreened, distinctly separated. Eyes nearly naked. In some specimens, the silvery band of abdomen is present, distinct.

The male has the first two pairs of legs (except coxae) bright reddish yellow, the wings hyaline (a very obscure ovate spot from apex of stigmatic vein), the postmarginal vein shorter, the scutum normal with faint complete parapsidal furrows, the head and thorax grass green, the pedicel and first four funicle joints reddish brown. Antennæ 11-jointed with one transverse, true ring-joint, the first funicle joint twice longer than wide, wider distad, longest, funicles 7-8 subquadrate, larger than the very short pedicel; club solid. Compared with type of racineti.

Described from fourteen males, twenty-eight females from an egg-case of a mantisid, April 22, 1914 (G. F. Hill).

Habitat: Port Darwin, Northern Territory.

Types: No. Hy 2873, Queensland Museum, Brisbane, three females on a tag and male and female antennæ and a female hind leg on a slide with type aristotleca.

18. ANASTATUS MAXIMUS new species.

Female:—Length, 4.40 mm. Similar to blattalisuax but more robust and the ovipositor is distinctly but shortly extruded and reddish brown. Funicle 1 a little longer than 2 or 3. Tarsi reddish brown. Infuscation of fore wing deep, that at base distinct. Segments 2-4 of abdomen slightly incised at meson of caudal margin. Much more robust than aristotleca. Scutellum more densely sculptured than rest of thorax.

Described from one female captured in the forest, September 22, 1914.

Habitat: Capeville (Pentland), Queensland.

Type: No. Hy 2880, Queensland Museum, Brisbane, the female in alcohol with type of Atoposoma ambiguus Girault.

DIAGNOSTIC TABLE OF THE AUSTRALIAN SPECIES OF ANASTATUS MOTSCHULSKY.

FEMALES.

The wings are perfect and of full length. Compare Eupelmus multicor.

1. Wings with two distinct fuscous cross-stripes; abdomen with a distinct silvery band near base (rarely the second wing stripe is incomplete caudad).

Body varicolored.

Fore wings with two complete cross-stripes. Scape obsolete.

Honey yellow, the head and abdomen metallic; scape dark metallic green at proximal half, the rest together with the pedicel and funicle 1 reddish yellow; funicles 2-5 silvery white; rest of antennæ black; an intervening part of ovipositor valves honey yellow; funicle 2 thrice or more longer than wide. See description ... ... ... ... tricolor Girault.

Fore wings with the second stripe incomplete caudad, the first narrower, one third length of hyaline between the two; scape normal.

Orange yellow; center of vertex, most of scutum, middle of pronotum and the mesonotum and propodeum metallic green; abdomen purple, with a silvery band near base; scape pale; antennæ otherwise black except joints 3-6 of funicle which are silvery white. Fore wing with one cross-stripe and a triangular fuscous area from stigmatic vein. See description ... ... ... ... pasteurii Girault.
Body dark metallic green or purple. Scape normal.

Scape nonmetallic, rufous.

Valves of ovipositor barely extruded, their tips white ... *racinei* Girault.
Valves of ovipositor shortly extruded, their tips brownish black ... *bombax* Girault.

Scape metallic, concolorous. Valves of ovipositor barely exerted.

Funicle 2 plainly longer than 3; tip of ovipositor not white. Hind tibia with two spurs; hyaline cross-band of fore wing plainly narrower than the first cross-stripe ... *pipunculi* Perkins.
Funicle 2 nearly the same, the tip of ovipositor white; hind tibial spurs double; hyaline cross-band of fore wing subequal in breadth to the first cross-stripe ... *aristoteles* Girault.
Funicle 2 subequal to 3. Tip of ovipositor white. Hind tibia with one spur; hyaline stripe of fore wing very narrow, plainly much shorter (over twice) than first fuscous stripe. Fore wings infuscated practically to tip ... *blattidifurax* Girault; compare *maximus* Girault.

II. Wings infuscated from bend of submarginal vein to apex of postmarginal, the infuscation with two oblique, opposite eye-spots.

Dark metallic purple, the scape rufous, the flagellum and legs concolorous; caudal margins of segments 2-5 of abdomen incised at meson; funicle 2 about two and a half times longer than wide. Tip of ovipositor whitish. Hind tibial spurs double. Caudal margin of segment 2 of abdomen silvery white. Front femur much swollen ... *pentatomidicora* Girault.

The same but only segment 2 of abdomen is incised at meson of caudal margin ... *nonecens* Girault.

III. Wings generally infuscated, without eye-spots or two distinct cross-bands.

Body dark metallic.

Fore wings stained from about base of marginal vein to apex.

Scape whitish.

Scape, tip of ovipositor, tips of tibiae and the tarsi whitish. Stigmatic and postmarginal veins subequal; funicle 2 subequal to pedicel. Valves of ovipositor slightly exerted ... *nigrpurpureus* Girault.

The same but valves of ovipositor extruded somewhat farther and all concolorous ... *pax* Girault.

Scape reddish brown. Robust.

Distal third of caudal tibia yellowish white; funicle 2 three or more longer than wide, 6 quadrate; valves of ovipositor extruded for a fourth the length of the abdomen, dusky at tip, black at proximal third, rest white. Most of middle tibia brownish. Wings sooty ... *federici* Girault.

Fore wings with a dusky subrectangular blotch appended from whole of marginal and postmarginal veins. Scape concolorous.

Tips of tibiae and tarsi whitish; valves of ovipositor extruded for about a third the length of the abdomen, whitish, black at distal third ... *splendidus* Girault.

The same but extruded part of valves of ovipositor black at base and tip, the rest whitish, the distal black longer than the proximal ... *benthami* Girault.
IV. Wings hyaline.

Legs, except coxae, yellow.

A middle third of the valves of the ovipositor white; funicle 2 thrice longer than wide, 3 and 4 each somewhat shorter than it, distinctly longer than the pedicel. ... ... ... ... ... ... ... ... ... ... ... boasingaulti Girault.

Femora concolorous.

Abdomen with a silvery band near base.

Valves of ovipositor extruded for a third the length of abdomen, black; pedicel and funicles 1 and 2 white; funicle 2 longest, a little longer than the pedicel; middle tibia, except a dusky band below knee and distal half of other tibiae, white ... ... ... ... ... ... ... ... ... ... ... insularis Girault.

Abdomen wholly concolorous.

Pedicel distinctly longer than any of the funicular joints.

Ovipositor not extruded.

Tarsi brownish; funicle 1 longer than wide, 3 and 4 longest; caudal tibiae with two spurs. Abdomen depressed ... ... ... ... ... ... ... ... ... ... ... coloroperae Girault.

Ovipositor extruded for a third the length of the abdomen.

Distal half of cephalic and caudal tibiae, middle femur except upper and lower edges, middle tibiae and the tarsi reddish brown; valves of ovipositor white centrally ... ... ... ... ... darwinii Girault.

**GENUS METAPELMA** Westwood.

**1. METAPELMA WESTWOODI** new species.

*Female*:—Length, 4.25 mm., excluding ovipositor which is black and extruded for a length equal to seven eighths that of abdomen.

Dark emerald green, the fore wings infuscated from near base of stigmal vein nearly to apex, with a brownish stripe across from distal third of submarginal vein, narrower centrally and a longitudinal brownish stripe connecting the two infuscations. Cephalic and middle femora and tibiae rich yellowish brown, also the cephalic tarsi; all coxae and the hind legs dark metallic but the proximal fourth of hind tibia silvery white; middle tarsi black except proximal three fourths of first joint which is silvery white; middle tibial spur white; hind femur near base yellowish brown. Eyes only sparsely hairy. Hind tibial spurs double, distinct, the hind tibia and first tarsal joint compressed, very flat but only moderately broad. Scapes metallic, dilated ventrad along distal half; pedicel subequal to funicle 1 which is distinctly longer than wide; funicles 2 and 3 elongate, twice the length of 1, subequal, each about five times longer than wide; 4 somewhat longer than 1, 5-8 shortening and widening, 7 quadrato, 8 wider than long; club oval, shorter than funicle 2. Middle tibiae and femora distinctly longer than those regions of the other legs. The three ridges of scutum acute; axillae rather narrowly meeting, with an oblique, bisecting ridge; whole body scaly. Postmarginal vein elongate, over thrice the length of the stigmal, a little longer than the marginal. Caudal wings with about twenty lines of discal cilia where widest. Proximal margin of distal infuscation of fore wing triangularly projected proximad at cephalic third. The triangular elevation of cephalic scutum narrow, much longer than wide. Pronotum and face hispid. Antennae 13-jointed.

From one female taken in jungle, May 2, 1914 (A. P. Dodd).

*Habitat*: Tweed Heads (Tweed River), New South Wales.

*Type*: No. Hy 2881, Queensland Museum, Brisbane, the female on a tag; head, a hind leg and pair of wings on a slide.
GENUS NEANASTATUS Girault.

Marginal and submarginal veins not differentiated, very long, the stigmal well developed, the postmarginal very long, thrice or more the length of the stigmal. A long oblique hairless line running cephalad-distad toward base of stigmal vein but not reaching it for some distance. Intermediate tibial spurs as long as the tarsi of these legs, stout, spinny, at apex ending in several stout spines. Scutellum with a broad base and a median groove. Antennae 10-jointed, with one ring-joint, the club 2-jointed. Head subtriangular, only as wide as the greatest width of the thorax, the frons broad, eyes not large, not convergent, the genal sulcus distinct; mandibles tridentate. Antennae inserted below the eyes. Ovipositor not exerted. Abdomen conic-ovate. Face convex.

1. NEANASTATUS CINCTIVENTRIS Girault. Female. Genotype.

Length, 2.75 to 3.50 mm.

Dark metallic green marked with bright lemon yellow as follows: Base of abdomen encircled with a band just out from base; scutum with a long rectangular area down its center; cephalic legs, intermediate legs except most of coxae and coxae of posterior legs; posterior femora and tibiae and the distal four tarsal joints bluish to black, the distal joints of other tarsi black. Fore wings with a deep smoky subrectangular area under the venation, its middle at the stigmal vein. Eyes with very sparse pubescence. First funicle joint longest, the others shortening, the distal two subequal to each other and to the pedicel. Distal club joint subequal to first funicle joint. Head with dense, rather small thimble punctures. Thorax and abdomen polygonally sculptured. Antenna brownish yellow.

The types were captured by sweeping foliage of jungle growth along the banks of the Mulgrave River, near Gordonvale, March 30, 1913.

Types: No. Hy 2882, Queensland Museum, Brisbane, two females on tags (two pins).

The male is about similar to the female; its funicle joints are all somewhat longer than wide, distinctly longer than the pedicel. A male from forest, type locality, March 21, 1913. A rather common species. Also a pair, same place, April.

2. NEANASTATUS DESERTENSIS new species

Female:—Length, 2.50 mm.

Very similar to aurivertex Girault but differing in the following particulars: The propodeus is contrasting deep orange yellow; the lateral margins of pronotum are not metallic green but the caudal margin is so yet very lightly, not distinctly; the distal third of caudal femur is not yellow except ventral but wholly metallic purple; the tip of middle tibia, distal part of middle tibial spur and the distal four tarsal joints of middle legs, are metallic purple; caudal knees and tibia wholly metallic purple, also caudal coxa at base; distal joint of caudal tarsus purple. Antennae very hispid.

From one female taken in forest, April 15, 1914 (A. P. Dodd).

Habitat: Cloncurry, Queensland.

Type: No. Hy 2883, Queensland Museum, Brisbane, the specimen on a tag.

3. NEANASTATUS AURIFASCIATUS new species.

Female:—Length, 2 mm.

Dark metallic green, the abdomen, propodeum, mesopleural and most of scutellum metallic purple, the abdomen with a rather broad golden orange band just out from base its caudal margin narrowly silvery white. Wings hyaline. Antenna and first two pairs of legs honey yellow, the middle coxa mostly concolorous, the cephalic one so at base. Caudal legs wholly purple except trochanters, a minute spot just ventral of knees and the tarsi which are white. Funicle 1 quadrate, slightly smaller than the pedicel; distal two or three funicle joints wider.
than long. The same as the other species otherwise. Tarsi white. Differs from *reynondi* in having clear wings, the orange abdominal band and wholly yellow middle femur. Differs from *punctaticeps* in lacking the cross-groove at base of scutellum and the color of the abdominal band.

From one female taken in forest, April 8, 1914 (A. P. Dodd).

*Habitat:* Concurry, Queensland.

*Type:* No. *Hy* 2884, Queensland Museum, Brisbane, the female on a tag.

4. **NEANASTATUS FLAVIPRONOTUM** new species.

*Female:*—Length, 2 mm.

Dark metallic green, the wings hyaline, the pronotum, tegulae, mouth and a little less than proximal fourth of abdomen dorsal, golden yellow; also the antenna and first two pairs of legs except intermediate coxae and intermediate femora slightly at base. Hind legs concolorous, their tarsi and the tibia just below knees silvery white. Caudal margin of pronotum concolorous. Scutum and pronotum pilose, scutellum much less so. Occiput finely, circularly striate. Head densely punctate.

From one female caught by sweeping in forest, March 3, 1912.

*Habitat:* Thursday Island, Torres Strait.

*Type:* No. *Hy* 2885, Queensland Museum, Brisbane, the female on a tag.

5. **NEANASTATUS PUNCTATICEPS** new species.

*Female:*—Length, 1.85 mm.

Metallic grass green, the scutellum, propodeum and abdomen dark purplish, the abdomen with a silvery white band around base. Wings hyaline. Cephalic and middle legs silvery white, the hind legs metallic purple, their tarsi white. Antennae yellow-brown, the distal three funicle joints wider than long, joints 1 and 2 subquadrate, shorter than the pedicle, the latter short; scape clavate; club conic-ovate. Head rather coarsely punctate, the scrobes absent but the scapes fit into an *Ω*-shaped facial impression which is obtuse. Thorax very finely scaly, subpilose. Middle tibial spur armed with black teeth toward apex. Geniculate characters present.*

From one female taken August 9, 1913 by sweeping in forest.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. *Hy* 2886, Queensland Museum, Brisbane, the specimen on a tag; legs and antenna on a slide.

This is the only species of the genus with a distinct cross-groove at base of scutellum.

6. **NEANASTATUS AURIVERTEX** new species.

*Female:*—Length, 2 mm.

Dark metallic purple, the vertex orange yellow, rest of head, pronotum except the lateral margins (lateral aspect), prepectus, propleura, pronotum, middle legs, coxae, fore legs, hind trochanters, hind femora distad, hind tibiae proximad and the tarsi, bright lemon yellow. Head uniformly, rather coarsely punctate. A narrow yellowish band just out from base of abdomen. Occiput purplish across the middle; antennae orange yellow; pedicel shorter than funicle 1 which is longest, somewhat longer than wide; funicle 5 subquadrate, 3 and 4 a little longer than wide. First club joint the shorter. Ring-joint distinct. Hind coxa purplish above at base. Thorax scaly, with sparse pubescence on the long scutum, the scutellum with the median groove. Structurally like the genotype. Middle tibiae not armed with black teeth beneath. One mandible bidentate, the other with an inner angulation which does not form a distinct third tooth.

* As always unless particularly mentioned.
From one female taken by sweeping jungle growth along a forest streamlet, June 29, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2887, Queensland Museum, Brisbane, the female on a tag; head on a slide.

7. NEANASTATUS PURPUREISCUTELLUM new species.

Female:—Length, 1.65 mm.

Golden yellow, the abdomen except a broad white band around base which occupies over proximal third, the scutellum, the propodeum, the mesopleuron (except cephalic margin), mesoventer and the hind legs except coxa and tibia, dark metallic purple. The proximal silvery white base of abdomen with a narrow band of metallic purple at about middle. (Meson of scutum broadly from about cephalic fifth to caudal margin obscurely purplish, the broad mesal band dilating considerably caudad on each side to the lateral margins; this marking may be due to fading.) Thorax rather well-clothed with blackish pubescence; abdomen finely scaly. Head punctate as in the other species. Abdomen at tip above silvery white, the caudal margins of the segments straight. Hind tibial spurs double, one very small, the other large, both purple. Mandibles tridentate. Funicle 1 somewhat longer than wide, longer than the pedicel, 5 subquadrate, subequal to the pedicel.

From one female taken by sweeping jungle along a road, February 23, 1912.

Habitat: Rossville (Coottown), Queensland.

Type: No. Hy 2888, Queensland Museum, Brisbane, the female on a tag; head and hind tibia on a slide.

8. NEANASTATUS FLAVIMESOPLEURUM new species.

Female:—Length, 2.75 mm.

Deep orange yellow, the fore wing a little stained under the marginal vein; scutellum except lateral and distal margins, abdomen except a broad yellowish white band around base, dorsal edge of caudal femora and all of caudal tibia except tip, dark metallic purple. Funicle 1 one and a half times longer than wide, nearly twice the length of the pedicel, longest of the flagellum. Otherwise as in purpureiscutellum.

From one female caught by sweeping in jungle, July 28, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2883, Queensland Museum, Brisbane, the female on a tag.

A second female from the same place, April 2, 1914.

9. NEANASTATUS INCONSPICUUS new species.

Female:—Length, 1.80 mm.

Differ from punctaticops in lacking the cross suture on scutellum and the first two pairs of coxae are concolorous, the cephalic femora concolorous at base, the silvery band of abdomen very narrow. The middle legs are pale brown. From reymondii in the color of the legs and in having the hind tibiae white at extreme base dorsal and the distal four tarsal joints of middle legs purple as in punctaticops. From aurifasciatus in the coloration of the first two pairs of legs. Funicle 1 a little longer than wide; scape and pedicel dark purple, rest of antennae dull yellow.

From one female caught in forest, May 15, 1914 (A. P. Dodd).

Habitat: Chindera (Tweed River), New South Wales.

Type: No. Hy 2890, Queensland Museum, Brisbane, the specimen on a tag with type punctaticops.
10. NEANASTATUS TRINOTATUS new species.

Female:—Length, 2.70 mm.

Deep orange yellow, the lower face lighter, the wings hyaline; a conspicuous beehive-shaped marking on over caudal third of the mesopleuron and a moderate sized cross-stripe on dorsal abdomen a short distance before tip, jet black; these markings conspicuously contrasting. Two minute black dots on hind coxa above at base and on base of abdomen a narrow black cross-stripe and at about middle two minute black dots at each margin (dorsal aspect) in an oblique line. Sculpture as in maximicorpus. Thorax with black pubescence which is moderate. Funicle 1 longest, a little longer than wide. This species resembles in its gross marking Leptomastix auraticorpus Girault.

From one female taken March 5, 1914, sweeping jungle (A. P. Dodd).
Habitat: Cooktown, Queensland.
Type: No. Hg 2381, Queensland Museum, Brisbane, the female on a tag.

11. NEANASTATUS REYMONDI new species.

Female:—Length, 2.20 mm.

Nearly similar to punctaticeps but very dark greenish green, the head greenish coppery; the middle femur is dark greenish proximad. Differing specifically as follows: Funicle 1 and the pedicel are a little longer than wide; the fore wing is uniformly stained and the discal cilia proximad of the oblique hairless line is somewhat cornered (about 11 lines in each), the venation is darker; there is a distinct carina between bases of antenna and no impressions for the scape while at base of scutellum there is no distinct cross-groove reaching from axilla to axilla as in punctaticeps.

Described from one female caught in forest, December 25, 1912.
Habitat: Capeville (Peninsula), Queensland.
Type: No. Hg 2392, Queensland Museum, Brisbane, the specimen on a tag; wings and an antenna on a slide with slide type of punctaticeps Girault.

Dedicated to Paul Dubois Reymond.
A common species on certain trees in the bed of Cape River (September).

12. NEANASTATUS MAXIMICORPUS new species.

Female: Length, 3 mm.

Very dark greenish blue, the wings hyaline; head except a metallic stripe across upper occiput, antennae, pronotum mesad broadly at cephalic half, propodeum, distal margin of scutellum, hind femur and hind tibia, orange yellow; propodeum just above cephalic coxe (the ventral border of propodeum rather broadly), first two pairs of legs and distal two thirds of hind coxa, bright lemon yellow; front femora and tibiae more or less orange; caudal margin of segment 2 of abdomen very narrowly silvery white, the broad whitish band around base of the abdomen thus absent. Thorax and abdomen finely polygonally scaly, the thorax dorsad pilose. Second segment of abdomen at meson of caudal margin very slightly excised, the other segments practically straight there. Head densely, finely punctate. Funicle 1 longest, somewhat longer than wide.

From one female, taken March 6, 1914 in jungle (A. P. Dodd).
Habitat: Cooktown, Queensland.
Type: No. Hg 2383, Queensland Museum, Brisbane, the female on a tag.
### TABLE TO THE SPECIES OF *NEANASTATUS* GIRault.

**Body, excluding appendages, wholly metallic green (but the abdomen with a silvery or yellowish band near base).**

<table>
<thead>
<tr>
<th>Description</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scutellum with a transverse groove at base. Band of abdomen silvery.</td>
<td>puncticipes Girault.</td>
</tr>
<tr>
<td>Wings hyaline; cephalic and middle legs silvery white; joints 1 2 of funicle subquadrate, shorter than the pedicle. Grass green</td>
<td></td>
</tr>
<tr>
<td>Scutellum without such a groove. Dark metallic green.</td>
<td></td>
</tr>
<tr>
<td>Wings uniformly, very lightly stained; band of abdomen silvery; middle femur concolorous at base</td>
<td>reymondi Girault.</td>
</tr>
<tr>
<td>Wings hyaline; band of abdomen golden orange. Middle femur all yellow</td>
<td>aurifasciatus Girault.</td>
</tr>
</tbody>
</table>

Compare *inconspicuus* Girault.

**Body excluding appendages, dark metallic green but marked with yellow. Abdomen with a silvery band more or less distinct.**

**Head concolorous.**

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Scutum with a long, rectangular yellow area down its center; cephalic and middle legs yellow except middle coxa; hind legs concolorous except tarsi. Fore wings with a rectangular smoky area against venation and with its middle at stigmal vein. Band of abdomen lemon yellow</td>
<td>ciacticentrus Girault.</td>
</tr>
<tr>
<td>Head more or less marked with yellow. Wings hyaline.</td>
<td></td>
</tr>
</tbody>
</table>

**Head nearly entirely yellow (excepting a stripe across upper or middle occiput).**

<table>
<thead>
<tr>
<th>Description</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pronotum mesad broadly at cephalic half, propodeum, distal margin of scutellum and hind femora and tibia orange yellow; part of propodeum and first two pairs of legs, lemon yellow. Caudal margin of segment 2 of abdomen very narrowly silvery white. Funicle 1 longer than wide</td>
<td>maximcorpus Girault.</td>
</tr>
<tr>
<td>Vertex orange yellow; rest of head, prepectus, pronotum except lateral margins, propodeum, proventer, coxae, middle legs, tarsi, fore legs, hind femur distal, hind tibia proximad, lemon yellow</td>
<td>aurivertex Girault.</td>
</tr>
<tr>
<td>The same but the pronotum with only the caudal margin narrowly metallic, the caudal femur all metallic and distal four joints of middle tarsal purple</td>
<td>desertensis Girault.</td>
</tr>
</tbody>
</table>

**Head nearly all green, the mouth alone yellow.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pronotum, tegulae and a little less than proximal fourth of abdomen dorsal, golden yellow; first two pairs of legs yellow except middle coxa and middle femur a little at base. Hind tibia just below knee white</td>
<td>flavipronotum Girault.</td>
</tr>
</tbody>
</table>

**Body, excluding appendages, yellow marked with black or metallic.**

**Abdomen metallic except the silvery band near base.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golden yellow; scutellum, propodeum, mesopleurum except cephalic margin, mesoventer and hind legs except coxa and distal third of femur ventrad, dark metallic purple. Wings hyaline</td>
<td>purpureiscutellum Girault.</td>
</tr>
<tr>
<td>Orange yellow; scutellum except lateral and distal margins, dorsal edge of caudal femur and all of caudal tibia except tip, purple. Funicle 1 nearly twice the length of the pedicle. Wings a little stained under the marginal vein</td>
<td>flavimesopleurum Girault.</td>
</tr>
</tbody>
</table>

**Abdomen mostly yellow.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep orange yellow, the wings hyaline; caudal third of mesopleurum and a stripe across dorsal abdomen a short distance before tip, jet black. Two dots on hind coxa dorsal at base and a pair of marginal dots on abdomen at about middle</td>
<td>trinotatus Girault.</td>
</tr>
</tbody>
</table>
MESEUSANDALUM new genus.

Female:—Form elongate, the abdomen long and conical, distinctly longer than the rest of the body, the ovipositor exerted distinctly but shortly. In Ashmead's (1904) table of the genera running to Eusandalum Ratzeburg (the middle tarsi are armed) but the antennae are 11-jointed with a ring-joint and a 2-jointed club, the flagellum filiform, the club not distinctly differentiated. Legs slender, the hind tibia with a single spur. Second abdominal segment very slightly incised at meson of caudal margin, others entire, segment 2 a little the longest, 3 distinctly the shortest, 7 nearly as long as 2. Scutum with two longitudinal impressions, incomplete from caudad. Axillae widely separated, their inner margins regularly curved, Stigmal vein subsessile, the postmarginal short but over twice the length of the stigmal, the marginal vein moderately short, distinctly shorter than the submarginal, much longer than the marginal vein. Face almost carinate as in the Dirhinini. Genal suture distinct. Strigil postmarginal. Eyes almost separated from the present. Lateral ocelli at extreme cephalo-lateral angles of vertex, barely separated from the eyes, the latter naked. See the third species.

1. MESEUSANDALUM CYANEIVENTRIS new species. Genotype.

Female:—Length, 4.20 mm., including the ovipositor.
Dark metallic green, the scutellum, axillae and abdomen coppery or bronze, the venter of abdomen blue. Wings hyaline. Legs and antennae concolorous except knees and proximal of tarsal joints which are white. Pedicle short, a little shorter than distal club joint, which is next shortest of the flagellum; ring-joint large; funicle 1 long and slender, 2 and 3 subequal, a little shorter than 1, somewhat over three longer than wide; others gradually shortening, the distal club joint ovate, not much longer than wide. First tarsal joint of middle legs not half the length of the same joint of hind legs, which is slender. Scrobes glabrous. Head and thorax densely, finely scaly, the scutellum more finely so, nearly longitudinally incised. Propodeum without carinae, delicately scaly. Pronotum with transverse incisions.

From one female taken January 7, 1914 in forest.

Habitat: Gordonvale (Cairns), Queensland.
Type: No. Hy 2894, Queensland Museum, Brisbane, the specimen on a tag.

2. MESEUSANDALUM STYLATUM new species.

Female:—Length, 6.75 mm., excluding the ovipositor which is extruded for a length equal to that of the abdomen or a little more.

Differs from the preceding in having the abdominal stylus nearly as long as the extruded portion of ovipositor, the hind tibia bears two spurs, segment 2 of abdomen has a slight incision at caudal meson and is as long as or a little longer than 3, the stigmal and postmarginal veins are a little longer, the color is purplish, the fore wings stained more especially longitudinally along the middle out to apex of venation, the tibiae are reddish brown except cephalic ones just below knees, the postmarginal vein is over twice the length of the stigmal, the tarsi brown; head and thorax densely finely punctate including a contrasting semicircular area at caudal meson of propodeum and which is more than half the length of that region at the meson; this area is deeply sutured from the transverse, subglabrous mesal portion of the propodeum and appears to belong to the abdomen. Spiracle large, round, with a curved sulcus just mesial of it; no carina on propodeum. Segments 2 and 3 of abdomen glabrous, the following transversely, finely wrinkled, the last (7) and the stylus punctate like the thorax, the stylus with a sharp median carina. Caudal margin of pronotum conically produced distad, subacute at apex. Funicle 1 as long as the scape, four times the length of the distal antennal joint which is much shorter than the joint preceding it.

From one female caught on a tree trunk, 2-9-13 (H. Hacker).

Habitat: Enoggera (Brisbane), Queensland.
Type: No. Hy 3295, Queensland Museum, Brisbane, one female minute mounted; middle and hind legs and an antenna on a slide.
3. MESEUSANDALUM COMPRESSIONSCAPUS new species.

Female:—Length, 3.10 mm. including ovipositor.

Differs from cyaneicentricus in being somewhat smaller, the ovipositor extruded somewhat less (the stylum as long as it in both species), the scape is distinctly compressed (uniformly expanded ventrad its entire length, the expansion straight, not convex); the ring-joint is wider, the flagellum more slender, the club less differentiated, the pedicel somewhat shorter; the post-marginal vein is somewhat longer, the venation very pale, the scutellum a little more finely lined longitudinally. Hind tibial spur single.

Described from one female.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2896, Queensland Museum, Brisbane, the specimen on a tag with type cyaneicentricus and an antenna and hind tibia on a slide with an antenna of a female cyaneicentricus.

This genus is perhaps Eusandalum but the exceptional antennae are not mentioned in the various descriptions of that genus and it is not the business of systematic biology to guess.

GENUS SOLINDINELLEUS Girault.

Head normal, from cephalic aspect rounded, the genal sulcus distinct, the eyes rounded and bearing short, scattered, inconspicuous hairs; the antennae inserted slightly below ventral ends of eyes, their scrobes short but distinct. Antenna 10-jointed, subclavate, one ring-joint, the scape short, the pedicel small, not half the size of the first funicle joint which is longest of the funicle; club 2-jointed, ovate. Lateral ocelli not touching the eye margins. Scutellum very short, triangular, simple but with a median sulcus, the axilla very small, very widely separated, obscure. Abdomen sessile, so much compressed as to be merely a line from dorsal aspect, as long as the thorax, the ovipositor not exserted. Scutum impressed, the furrows complete. Middle tibial spur long and stout, two thirds the length of the middle tarsus, the proximal joint of the latter ventrad with dense black teeth; these teeth are also on succeeding joints and around the base of the tibial spur but less dense. Cephalic femur lightly swollen, unarmed but with a line of solitary, stiff hairs. Hind legs normal, the spur single. Wings hyaline, the postmarginal vein long, subequal to the marginal and four or more times longer than the stigmatic which is well developed. Marginal fringes short. Body metallic, sculptured, varicolored. Corrected description.

Like Neanostatus excluding the shape of the abdomen.

1. SOLINDINELLEUS PULCHRICORPUS Girault. Female. Genotype.

Length, 2.79 mm. Dark metallic greenish, the long snout impression and the scutellum distad coppery. Marked with bright lemon yellow as follows: The head except center of vertex between the lateral ocelli and a broad stripe from side to side (eye to eye) of the occiput; the legs except proximal half of caudal coxae, proximal two thirds of caudal femora, all of caudal tibiae (except at each end), the dusky distal tarsal joint and the tip of the middle tibial spur; proximal third of tegulae; and a whitish band around most of the caudal margin of pronotum (dorsal aspect). An orange yellow, transverse-elliptical spot on propodeum, each side of meson, as seen from dorsal aspect just on each side of the apex of scutellum. The latter bears a thin clump of long white hairs on each side before apex. Antennae brownish, the scape yellow ventrad, the pedicel the same at tip. Head and scutum with irregular, more or less obscure punctures, the mesonotal densely shagreened or reticulated. Venation dusky. A more or less obscure yellowish stripe near base of abdomen, lateral aspect. The species resembles Neanostatus maximicorpus. There is also a rather large, triangular lemon yellow spot just cephalad of mesopleurum. Type re-examined.


Type: No. Hy 2897, Queensland Museum, Brisbane, a female on a tag.
NEOCALOSOTER new genus of Girault and A. P. Dodd.

**Female:**—Head not much excavated, the frons somewhat concavo-convex, the antennal scrobes distinct, the vertex rather thin. Eyes moderately large, bare; ocelli in an equilateral triangle, the lateral ones rather farther from the eye margins than from the median ocellus. Antennae inserted at the mouth border; 11-jointed, no ring joint, the club 3-jointed; similar to the male antennae of the genus *Scolio* Latreille; scape not distinctly swollen nor very long; pedicel a little longer than first funicle joint, which is distinctly longer than wide; funicles 2-6 shortening all somewhat wider than long, the sixth distinctly so. Mandibles 4-dentate, the teeth small. Legs all normal; middle tarsi without strong teeth ventral; posterior tibiae with two apical spurs. Pronotum longer than the scutum; parapsidal furrows deep and distinct. Axillo-alar widely separated. Propodeum with many irregular faint cross-ribs, also rather faint median and lateral carinae. Scutellum with a delicate cross-rib before apex. Abdomen barely as long as the thorax; conico-ovate, the ovipositor exerted for a length equal to two thirds that of the abdomen, second segment deeply incised at meson of caudal margin, occupying over one third of the surface; caudal margins of remaining segments straight; third scarcely one fourth as long as second; fourth and fifth subequal, together as long as second. Wings perfect; marginal vein not much shorter than submarginal; stigmal vein short and curved; post-marginal barely as long as the stigmatic.

1. **NEOCALOSOTER PULCHRIPENNIS** new species. Genotype.

**Female:**—Length, 3.25 mm., excluding the ovipositor.

Black; most of lower face, propodea and cephalic margin of pronotum, ventor of thorax more or less, basal two thirds of ovipositor and the antennae (except the scape), reddish brown; femora and tibiae somewhat suffused with brown; tarsi and antennal scape bright golden yellow; abdomen steel blue. Head (except lower portion of face), pronotum, scutum, scutellum (except apex) and second abdominal segment smooth and shining. Rest of abdomen, lower portion of face and apex of scutellum, very finely scaly. Fore wings hyaline, with an irregular smoky transverse band across wing at joining of marginal and submarginal veins and another at apex of marginal vein and involving the stigmal vein, the second band much the wider.

Described from one female caught by Mr. F. P. Dodd in December, 1913.

**Habitat:** Northern Queensland (Kuranda, near Cairns).

**Type:** No. Hy 3338, Queensland Museum, Brisbane, a female on a tag, the head and a hind leg on a slide.

**GENUS PAROORDERELLA** Girault.

**Synonym:** *Parascoliadiella* Girault.

The same as *Asastatus* but the wings more scales, absent or greatly reduced.

1. **PAROORDERELLA APTERA** Girault. Female. Genotype.

Length, 3.25 mm.

Very dark metallic green, nearly black; base of abdomen with a silvery white stripe across it above, narrower mesad, broader beneath; distal four antennal joints white; tarsi and knees yellowish; scape brownish. First funicle joint longest, longer than pedicel, funicles 2 and 3 nearly as long as 1, subequal. Mesoscutum punctate. Hind tibia with one spur. Front femur beneath emarginate near apex. Wingless.

**Habitat:** Cairns, Queensland.

**Type:** No. I. 1871, South Australian Museum, Adelaide.
2. PAROODERELLA HEMIPTERA (Girault). Female. Genotype of Parasolindenia Girault.

Length, 3.50 mm.

Head and abdomen dark metallic green, the thorax reddish, the legs concolorous with it; a white band across base of abdomen; proximal half of antenna yellowish white (cape, pedicel, ring-joint and first three funicle joints, 3 suffused with dusky), the rest black. Fore wings fuscous and hirsut from base of marginal vein to apex but interrupted more than half way to the apex by a central, triangular naked and hyaline spot, which extends nearly to margins from opposite sides. Funicle 1 longest but yet subequal to 3, the following shortening, the club shorter than scapes. Head with a scaly sculpture and also the thorax and abdomen but less rough. Posterior wings hyaline. Marginal vein long, rather broad, the stigmata very short, the postmarginal nearly absent. Fore wing densely hirsut except in places.

Habitat: Cairns, Queensland.

Type: No. I, 1275, South Australian Museum, Adelaide.

3. PAROODERELLA MANCA new species.

Female:—Length, 2.50 mm., exclusive of ovipositor which is extruded for a length equal to a fourth that of the abdomen.

Mahogany brown, wingless, the head and cephalic coxae dark metallic purple, the abdomen lustrous black, also the hind legs; legs otherwise brown (including caudal tarsi) washed with a little metallic purple. Scape brown; rest of antenna black. Valves of ovipositor brownish, darker at base. Thorax washed here and there with metallic purplish. A broad silvery bar around abdomen just out from base. Wings scale-like, not twice longer than wide, brownish, distad truncate, without marginal cilia and only with a submarginal vein which runs to apex; wings not reaching abdomen, their discal ciliation confined to apex. Funicle 1 like a ring-joint, 2 longest, nearly twice longer than wide, 3 somewhat shorter, a little longer than the pedicel; others shortening and broadening, 5 and 6 subquadrate, 8 distinctly wider than long. Hind tibial spur single. Mesonotal ridges acute. Eyes nearly bare. Scutum with a median carina. Head and thorax subglabrous, the scutellum longitudinally lineolated. Segments 2 and 3 of abdomen obtusely incised at meson caudad, the caudal margins of the other segments straight, caudad of segment 3, the surface scaly. Axilla distinctly separated a short distance, longest cephalo-caudad.

From one female taken May 10, 1914 by sweeping forest.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg 2909, Queensland Museum, Brisbane, the specimen on a tag; caudal leg, antenna and a wing on a slide.

4. PAROODERELLA SEMIPUTATA new species.

Similar in all respects to manca but the valves of the ovipositor are white, dark at extreme tip and base, the thorax and legs are wholly metallic purple, the band over base of abdomen is obscure or absent, the frons is broader (in manca moderately narrow), the pedicel is somewhat longer, subequal to funicle 2 which is subequal to 3 and 4, the scutum lacks the median carina (in both species the lateral ridges of scutum are sharp carinas), the head is plainly scaly, the mesopleurum more coarsely longitudinally lined. Wings apparently the same but hyaline. Caudal margins of abdominal segments not seen. Tarsi white. Abdomen scaly. Scape dusky at tip dorsad.

From one female taken by sweeping jungle along a forest streamlet, June 29, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg 2900, Queensland Museum, Brisbane, the female on a tag with type manca; portion of antenna on slide with type manca.
5. PARODERELLA SEMITECTA new species.

Female:—Of the same stature and so forth as semiputata but differing in having the scape concolorous, valves of ovipositor not extruded, brownish at tip, the silvery white band of the abdomen distinct, the very small wings longer, fuscous with a rather broad central hyaline cross-stripe as long as the proximal fuscous part, longer than the distal fuscous portion (in semiputata the minute wings are mostly uncolored, fuscous at base). Otherwise about the same; antennal segmentation the same.

From one female taken November 8, 1913 by sweeping forest.

Habitat: Stewart's Creek (Townsville), Queensland.

Type: No. Hy 2901, Queensland Museum, Brisbane, the female on a tag with type flavithorax.

A second female at Pentland, Queensland, forest in early September. The caudal margins of abdominal segments are not incised.

6. PARODERELLA FLAVITHORAX new species of Girault and A. P. Dodd.

Female:—Length, 3 mm.

Head dark metallic green, the thorax, legs, scape, pedicel, ring-joint and first three funicle joints, honey yellow; rest of antenna black; abdomen dark purple, with a broad, silvery white band around base. Wings vestigial but perfect, reaching to end of proximal third of the abdomen, with a rather broad band of fuscous across apical edge and another much broader one a short distance proximal from distal part of submarginal and proximal two thirds of marginal veins. Scutellum densely seely, the scutum polished, the axilla seely, the head less so. Caudal margin of abdominal segments slightly incised at meson, the abdomen reticulated, the third segment smoother. Eyes practically naked. Antennae 13-jointed, with one large ring-joint, the club long, 3-jointed; pedicel subequal to funicle 3 which is longest of the funicle, 1 slightly shorter, 2 a little shorter than 1 which is subequal to 4, the distal joint slightly longer than wide. Hind tibial spurs double, much unequal, the first tarsal joint long and slender.

Male:—Not known.

Described from one female captured by sweeping in jungle, November 15, 1913 (A.P.D.).

Habitat: Harvey's Creek (Cairns), Queensland.

Type: No. Hy 2902, Queensland Museum, Brisbane, the above specimen on a tag.

Genus CERAMBYCOBIUS Ashmead.

1. CERAMBYCOBIUS PAX Girault. Female.

Length, 4 mm., exclusive of the long ovipositor which is curved downward and is a little longer than the abdomen.

Metallic green, abdomen and scutellum purple, ovipositor brown, its sheaths black; antenna dark purple; tibiae brown except above, tarsi brown. Fore wings deeply infuscated, the stigmata divided through the middle by a clear line. Postmarginal vein nearly twice the length of the stigma. Posterior tibiae with one spur. Face deeply excavated above antennae, the excavation smooth and shining, the cephalic ocellus distant from it, the lateral ocelli closer to cephalic one than to eye margin; before the cephalic ocellus a subquadrate, smooth depression and a fovea behind each lateral ocellus; vertex rather concavely punctate; eyes with barely perceptible hairs, practically naked. Body with sculpture like that of Tetraastichus. Axille just touching inwardly. Scape extending far beyond the vertex, foliaceousely dilated or compressed but not conically, the foliation uniform and distinct; first funicle joint shorter than the pedicel, not much longer than wide, second and third joints longest, subequal, longer
than the pedicel, the other joints shortening but all longer than wide. Antennae 13-jointed, club 3-jointed, no ring joint. Antennae inserted near the middle of the face. Head wider than long. Valves of ovipositor densely, shortly featherly, straight. Incisions of abdominal segments small, inconspicuous, the abdomen cylindrical, a little longer than the thorax. Corrected description.

_Habitat:_ Kuranda, Queensland. Jungle, November 4, 1911.

_Type:_ No. Hg 2903, Queensland Museum, Brisbane, the above female on a tag, the legs and antennae on a slide.

**SUBFAMILY TANEOSTIGMINÆ.**

This subfamily is distinguished from the Apheleminiæ by usually bearing a postmarginal vein and usually the marginal vein is much reduced, the middle tibial spur stout, the parapsidal furrows variable, curved off lateral and sometimes meeting before apex. The mesopleurum is always entire and convex and this is the characteristic of the group.

**TANEOSTIGMOMYIA** _new genus._

Characterized by the 11-jointed antenna, the club solid and well defined, the scape short, slightly convexed beneath or slightly compressed, the funicle joints all transverse-linear, the first two like ring-joints, the third a little less like 1 being wider, the others wider and of equal width. Pedicel somewhat longer than wide at apex. Parapsidal furrows rather widely separated caudal, meeting scutellum just mesal of the mesal ends of the axilla. Mandibles tridentate. Hind tibial spur single. Axilla rather widely separated. Thorax clothed with scattered, short, stiff, black setae. Marginal vein of moderate length, not long, a little longer than or subequal to the slender stigmal and postmarginal veins.

1. **TANEOSTIGMOMYIA SPENCERI** _new species._ Female. Genotype.

Length, 0.82 mm.

Lemon yellow, the scutum and parapsides orange yellow, the appendages concolorous, the wings hyaline; three distinct (and a fourth and fifth less distinct, proximad and distad of them respectively) black stripes across the abdomen proximad of middle. Cephalic and caudal (centrally) margins of propodeum and dorsal thoracic sutures black. A fuscous, oblique spot across the cephalic margin of each axilla. Fore wings densely ciliate, the marginal fringes short. Valves of ovipositor slightly exerted, black. Club as long as the scape.

_Habitat:_ Kuranda, Queensland. Forest, September 12, 1913 (A. P. Dodd).

_Type:_ No. Hg 2904, Queensland Museum, Brisbane, the female on a tag; hind leg and the head on a slide.

**TANEOSTIGMOIDELLA** _new genus._

Somewhat like _Taneostigmodes_ Ashmead but the antennae 9-jointed with one very short ring-joint, the club 3-jointed, the three funicle joints much longer than wide, the first distinctly more than twice longer than wide. Scape greatly, foliaceously dilated ventrad. Mandibles bidentate, the second tooth broadly truncate at apex. Parapsidal furrows widely separated caudal. Axilla also well separated, well advanced into the parapsides, the latter very short, curved. Scutellum with a thin, transverse suture near its distal margin. Marginal vein as long as the submarginal, the stigmal very short but longer than the extremely short post-marginal. Abdomen flat above, conic-ovate, the ovipositor barely exerted.

1. **TANEOSTIGMOIDELLA NYMPHA** _new species._ Female. Genotype.

Length, 1.55 mm.

Pale honey yellow, the abdomen black but concolorous along the lateral aspect and with a narrow honey yellow stripe across out from base, this stripe interrupted at meson by the

*Convexly so.*
black. Axille deeper in color; legs pale straw yellow; transverse suture of scutellum, scape, pronotum and flagellum black. Wings hyaline. Scutum with dense, stiff black pubescence, the scutellum with six long black hairs. Thorax scaly, non-metallic. Funicles 2 and 3 subequal, distinctly longer than the pedicel; joints 1 and 2 of the club subequal, longer than wide. Scape silvery white at extreme tip.


Type: No. Hy 2905, Queensland Museum, Brisbane, the female on a tag, the head on a slide.

A second female was taken in jungle at Gordonvale, Queensland, June 4, 1913.

2. TANOSTIGMOIDElla MIXTA new species. Female.

Length, 0.80 mm. Like the genotype structurally. Orange yellow; abdomen black; propodeum, scape, except the black ventral margin of the foliation, pedicel, funicle 1 and the whole of one side of the other two funicle joints, the distal two thirds of the distal club joint and the legs, silvery white. Tip of abdomen rather broadly, two triangular or cuneate spots on the lateral margins (dorsal) of proximal half, a large round area with a black dot in its middle at distal third lateral, of abdomen, also silvery white. Antennae otherwise black. Fore wings obscurely infuscated centrally. Scape with an oblique black stripe across it from the black ventral margin. Joint 1 of funicle not much longer than its width, the other two each a little wider than long; antennae 9-jointed, one ring-joint.

Habitat: Townsville, Queensland. Associated with ornamental plants (rubber), July 11, 1912.

Type: No. Hy 2906, Queensland Museum, Brisbane, the female on a slide.

3. TANOSTIGMOIDElla ARGENTISCUTELLUM new species.

Female.—Length, 1.23 mm., excluding ovipositor.

Silvery white; face and meson of pronotum, thoracic sutures very narrowly, the selerite between scutellum and postscutellum, propodeal spiracle, thorax lateral of postscutellum dorsal, abdomen except lateral aspect and antennae except scape at base and at apex dorsal, jet black. Caudal tibie dusky just below knee. A broad stripe across middle occiput (broken centrally) and a blotch on each side above it around edge of cheeks, also black. Vertex, scutum, parapsides and axillae deep orange yellow. Wings hyaline. Scutum with dense black, stiff but inclinate pubescence. Thorax densely shagreened, the propodeum with a median ridge, delicately scaly, its caudal edge black. Scutellum with only about six black setae in pairs, the caudal pair largest, the selerite suffused with yellow. Parapsides narrow, boomerang-shaped. Valves of ovipositor slightly extruded, black. Mandibles bidentate, the second tooth broadly truncate. Funicles 2-3 subequal, somewhat longer than wide, each somewhat shorter than 1, slightly longer than the pedicel which is subequal to club 1. Scape greatly dilated. Ring-joint distinct. Caudal wings with about nine lines of discal cilia. Hind tibial spurs double. Abdomen purplish.

From one female caught in jungle, July 30, 1914 (A. P. Dold).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2909, Queensland Museum, Brisbane, the specimen on a tag; head and a hind leg with slide type of Zarthopalaoides axillaria.

EUTRICHOSOMELLA new genus.

Like Tanostigmodella Girault but the club solid, the face inflected, the eyes strongly convergent at dorsal edge of the face, the antennae inserted farther ventral being at the mouth border, the scape slender. Antennae 7-jointed with one short ring-joint. Mandibles with two minute teeth, the second tooth followed by a broad truncated piece. Parapsidal furrows
AUSTRALIAN HYMENOPTERA CHALCIDIOIDEA, VII.—GIRULT. 41
delicate. Scutellum finely longitudinally striated, without an apparent cross-stature near apex. Fore wings quite as in *Aphelius*; infuscated. Scutellum long. Like *Aphelius* but the eyes convergent, the face inflexed, the antennae with a ring-joint, the middle tibial spur stout.

1. **EUTRICHOSOMELLA ALBICLAVA** new species. Female. Genotype.

Length, 0.80 mm. Honey yellow, the scutellum and abdomen orange yellow; face of pronotum, mesopleura, a stripe across base of abdomen and another across at distal three fourths, dusky. Fore wings stained under the marginal vein, the stinj accentuated at apex of submarginal and stigmal veins. Thorax finely scaly. Discal cilia proximal of the oblique hairless line twice coarser than the main eliation, about from 7 to 8 lines. Scape, pedicel, funicle 1 and the legs orange yellow; club white, rest of antennae yellowish white. Funicle 1 shortest, a little wider than long; 2 and 3 subequal, each a little longer than wide. Pedicel long, two thirds the length of the funicle.

*Habitat:* Gordonvale (Cairns) and Cooktown, Queensland. Jungle, May 8, 1913 (A. P. Dodd) at Gordonvale (type).

*Type:* No. *Hy* 2907, Queensland Museum, Brisbane, the specimen on a tag, the head on a slide.

2. **EUTRICHOSOMELLA MULTIFASCIATA** new species.

*Female:*—Length, 1.10 mm.

Very similar to *albiclavla* Girault but differing in the following particulars: The pedicel is distinctly longer, subelongate; the funicle joints are longer, 3 a little longer than 2; the caudal pair of the four bristles on margin of scutum are minute, not large, coarse and equal to the cephalic pair as in the genotype; the cephalic pair of bristles on scutum are smaller; the disc of scutum is naked, not with a half dozen or so scattered setae; the bristle on each axilla and the four on scutellum are all smaller; the scutellum is densely polygonally reticulated; the axilae meet inwardly, not rather widely separated; the abdomen bears about five cross-stripes of black; the fore wings are more uniformly infuscated, the infuscation only accentuated proximal of the hairless line at base of marginal vein and there rather indefinitely; the cilia proximal of the hairless line are finer and there are about eleven lines (only about six in the genotype); and the middle tibiae are fusiform except at tips. The funicle is wholly white in both species, the hind tibiae fusiform below knees. The same otherwise.

General color pale yellow. Cross-stripes on abdomen commencing some distance out from base.

*From one female captured from a window, December 14, 1912.*

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. *Hy* 2908, Queensland Museum, Brisbane, the above specimen on a slide.

3. **EUTRICHOSOMELLA BLATTOPHAGA** new species.

*Female:*—Length, 1.15 mm.

Very similar to *albiclavla* Girault but not marked at all with black and the infuscation under the marginal vein of fore wing is very faint and uniform. Sides and ventre of thorax lemon yellow. Only the abdomen and vertex is orange yellow. Cephalic femur swollen. Abdomen squarely truncate at apex.

*From many specimens reared with Blattiicidae ashmeadi from native blattid eggs, February (A. P. Dodd). Jungle.*

*Habitat:* Balinda, Queensland.

*Type:* No. *Hy* 2910, Queensland Museum, Brisbane, five females on a slide with type *Blattiicidae ashmeadi* Girault.
MISCOGASTEROMORPHA new genus.

Head normal, the face inflexed, the scrobes well developed, the mandibles strong, tridentate, the antennae inserted ventral of the middle of the face, 13-jointed and as in Pteromalus except that the two ring-joints are not quite so large; funicle joints all somewhat longer than wide and all somewhat longer than the pedicel; club 3-jointed. Scape slender, long. Axillae barely separated, the delicate curved parapsidal furrows joining distinctly some distance before reaching the caudal margin of the scutum, the latter simple. Propodeum very short, laterad of the spiracle with two parallel carinae (nearly in the lateral aspect yet dorsad). Abdomen short and stout, ovate, produced beneath, the ovipositor not exerted, none of the segments greatly lengthened. Fore wings as in Pteromalus, the well-developed postmarginal vein two thirds the length of the marginal, longer than the stigmal. Pubescence not conspicuous. Hind tibia with but one spur.

1. MISCOGASTEROMORPHA AJAX new species. Female. Genotype.

Length, 1.65 mm. Shining black, the abdomen (except the flat dorsal surface nearly to extreme tip) and legs honey yellow, the legs rather lemon yellow; first and third coxa and base of second coxa black. Wings hyaline, scapes lemon yellow, the flagellum black. Immediate base of abdomen dorsad yellow. Mesopleurum glabrous, the pronotum and mesonotum densely scaly. Funicle joints more or less subequal. Fore wings moderately, densely ciliated, the marginal cilia short.

Habitat: Gordonvale (Cairns), Queensland. Jungle, June 16, 1913 (A. P. Dodd).

Type: No. Hg 2911, Queensland Museum, Brisbane, the above specimen on a tag, the head and a hind tibia on a slide.

Mr. A. P. Dodd has identified a second specimen of this species from the same place.

2. MISCOGASTEROMORPHA EUPELMIFORMIS new species.

Female:—Length, 1.60 mm.

Resembles in general Eupelmomorpha quadricolor Girault but the marginal stripe of abdomen extends only a little distad of middle; the conical scutum, head, axilae and scutellum are the metallic purple parts while the rest of the coloration is as in that species, except that the abdomen is orange yellow. The fore wings have a yellowish tinge. Scape except at tip above, pedicel and club white; funicle 6 suffused with whitish, quadrate; funicle 1 longest, a little longer than 6 which is shortest and subequal to pedicel; funicle joints thus all subquadrate but 1 a little longer than wide. Mandibles tridentate. Thorax sculptured about as in Eupelmomorpha but minute setigerous punctures are visible on the scutum. Disk of abdomen at proximal third washed with purplie. Segment 2 of abdomen longest, occupying about a little less than a fourth of the surface, the abdomen delicately scaly.

From one female captured August 15, 1913 by sweeping in forest.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg 2912, Queensland Museum, Brisbane, the above specimen on a tag; head on a slide between slide types of Eupelmomorpha quadricolor and Eupelmomorpha tricolor.

GENUS ATANEOSTIGMA Girault.

Head thin cephalo-caudad, the vertex very short, the antennae inserted below the middle of the face and the ventral ends of the eyes, the scape cylindrical, the flagellum filiform, 6-jointed including the pedicel, no ring-joint. Antennae 7-jointed, the club not differentiated. Postmarginal vein hardly developed, the stigmal very small, short, sessile, the marginal long and slender, as long as the submarginal, the venation as in Cocophaga. Intermediate tibial spur three fourths the length of the proximal joint of the middle tarsus, slender, legs normal. Axillae conspicuously advanced into the parapsides, widely separated, the scutum convex, the

1. **ATANEOSTIGMA PULCHRA** Girsalt. Genotype.

*Male:*—Length, 3 mm.

Black, marked with bright lemon yellow as follows: All of scutellum except cephalic margin and a broad, sagittate area along the median line; a conspicuous wedge-shaped area on each side of the abdomen at proximal third, its apex mesad; the lateral margins of the scutum conspicuously and all of each parapside; the antennae (honey yellow); all of head except most of the disc of vertex; and the legs, the distal tarsal joint dusky. Head and thorax polygonally reticulated. Wings hyaline. Types re-examined.

*Habitat:* Brisbane, Queensland.

*Types:* No. Hy 2913, Queensland Museum, Brisbane, two males on separate slides (remounted).

EUPELMOMORPHA new genus.

*Female:*—Antennae inserted below the middle of the face, 12-jointed with one very short but distinct transverse-linear ring-joint, the club 3-jointed; scrobes forming a triangle. Face not inflexed. Parapsidal furrows delicate, curved off laterally, converging distad and barely separated at the scutellum (at their extreme apex). Axillae barely separated. Marginal vein short, about a fourth the length of the submarginal, about four times longer than wide and somewhat shorter than the stigma which is rather short and curved; oblique hairless line present. Mandibles tridentate, the middle tooth longest. Hind tibial spur single. Post-marginal vein absent. The male antennae bear four long branches.

Differ from *Mesogasteromorpha* in lacking the postmarginal vein, the short marginal vein and the single ring-joint which is very short.

1. **EUPELMOMORPHA QUADRICOLOR** new species.

*Female:*—Length, 1.60 mm.

Reddish yellow, the propodeum, head, a rather large subtriangular spot in center of scutum at cephalic margin or leading from cephalic margin conically to scutellum, its apex subacute and a marginal stripe down the abdomen from base nearly to apex (lateral aspect) dark metallic purple. Abdomen sulphur yellow. Legs reddish yellow. Wings hyaline. Distal half of scape (excluding bulb) and of pedicel silvery white. Scape long, slender and curved; pedicel a little shorter than funicle 6, which is distinctly longer than wide and longer than any of the club joints. Funicles 2-3 subequal, nearly thrice longer than wide, 1 and 4 subequal, each slightly shorter than 2 and 3, 5 shorter and thicker, a little shorter than 6. Club shorter than the scape, somewhat wider than the funicle. Head finely scaly reticulate, the thorax similarly sculptured, the green area of scutum with fine whitish hairs; this long cuneate area is green instead of purple. *Normal* for the family and resembling a species of *Eupelmus* except that the ovipositor is not exerted and the abdomen is more depressed.

*Habitat:* Gordonvale (Cairns), Queensland.

*Types:* No. Hy 2014, Queensland Museum, Brisbane, the females on a tag, the heads on a slide.

2. **EUPELMOMORPHA TRICOLOR** new species.

*Female:*—Length, 1.60 mm.

The same as the preceding but the whole thorax and cephalic femora are dark metallic purple. Scutellum very finely longitudinally striate in both species. Only the distal third of scape white. Scutum green.

From one female captured January 1, 1913 by sweeping in forest (A. P. Dodd).
MEMOIRS OF THE QUEENSLAND MUSEUM.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2915, Queensland Museum, Brisbane, the above specimen with types of quadricolor.

A very similar and common species occurs in the grass of forests at Capeville (Munding), Queensland. It differs in having the marginal stripe of abdomen complete, thinner distal than proximal and the distal half of scape white. A minute dot against marginal stripe of abdomen at apex of proximal two thirds.*

3. EUPELMOMORPHA BICOLOR new species.

Female:—Length, 1.45 mm.

Similar to tricolor but smaller, the legs are all concolorous with each other and the terrestrial stripe of abdomen ends at distal fourth; that is, is somewhat shorter. Also the funicle joints are shorter, 2 longest, the others subequal or nearly and a little shorter than 2. From one female captured by sweeping in forest, January 2, 1913 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2916, Queensland Museum, Brisbane, the specimen with types of quadricolor.

GENUS TANEOSTIGMIDES Ashmead.

1. TANEOSTIGMIDES GLOBOSUS new species.

Female:—Length, 1.80 mm. Robust.

Black, the abdomen and legs (except coxae) intense lemon yellow, the dorsum of abdomen with four broad, regular dusky cross-stripes evenly distributed from base to apex. Antenna black, the pedicle and first ring joint whitish, the former dusky above at proximal half, the scape greatly foliaceous dilated; funicle 1 a little longer than wide, a little longer than the pedicle, 6 a little wider than long; antennal 13-jointed with one ring joint. Axilla just meeting, the scutellum acute caudad, longitudinally linedolate; scutum, axilla and parapods transversely linedolate. Parapsidal furrows meeting just a little before tip, complete. Stigmatic and postmarginal veins long, subequal, as in Eucomys, the marginal distinctly longer than either; wings hyaline, densely eliote discally (fore wings). Mandibles tridentate, the third tooth broadly truncate. Hind tibial spurs single. Face normal. Abdomen stout, as long as the rest of the body, the ovipositor not exerted.

From one female caught in forest, April 9, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3027, Queensland Museum, Brisbane, the female on a tag; head, middle and hind tibia on a slide.

A. TANEOSTIGMIDES GLOBOSUS NOVUS new variety.

The same but the pedicle wholly white, the abdomen with faint cross-stripes, the cephalic femur dusky dorsal and the sclerite just cephalal of the mesopleuron margined with golden yellow. Also the funicle joints are all a little longer.

From one female caught May 13, 1914 by sweeping forest on sand-ridges near coast (A. P. Dodd).

Habitat: Chinderah (Tweed River), New South Wales.†

Type: No. Hy 3028, Queensland Museum, Brisbane, the specimen on a tag with type globosus.

2. TANEOSTIGMIDES BIFASCIATIFRONS new species.

Female:—Similar to globosus but the following parts golden or pale yellow: Propodeum, tegulae, coxae (except middle coxae), mesopleuron (deep orange) and ventral half of face (but not the cheeks). Ventral half of face with a rather broad, longitudinal stripe down

† Also a female by sweeping in forest along the banks of the Hawkesbury River at Brooklyn, N.S.W., November 14, 1914.
each side about half its own width from the eyes. Tip of club and a longitudinal stripe up the expansion of the scape, pale. Pedicel wholly whitish, somewhat shorter than funicle 1 which is longest, distinctly longer than wide, the distal funicle joints wider than long. Wings hyaline.

From one female caught in forest, September 12, 1914.

Habitat: Capeville (Pentland), Queensland.

Type: No. Hg 2913, Queensland Museum, Brisbane, the female in alcohol with type of *Atoposaoma unguiculipes* Girault and other eulophids.

**Subfamily Aphelininæ.**

This group is related to the Taneostigminae. The postmarginal vein is always absent, the middle tibial spur is rarely stout though often elongate, the femoral furrow is frequently present, the thoracic phragma never absent, the marginal vein most frequently as long as the submarginal, never punctiform and the parapsidal furrows are always distinct and straight. Also, the species are rarely metallic and the antennal funicle is never 6-jointed.

**Tribe Aphelinini.**

**Genus Aphelinus** Dalman.

**Synonym:** Perissosterus Howard.

I have been unable to distinguish differences in the thorax of forms of either genus and one of the species described below connects the two as far as wing pattern is concerned.

In *Aphelinus* the club appears solid or 2-jointed according to the species. In the species with the first two funicle joints transverse (*e.g., fuscipeennis* Howard), the next joint seems to belong to the club but in those species with the funicle joints quadrates (more or less) the third joint from the pedicel seems a part of the funicle. The difference seems graduate.

1. **Aphelinus Haekelli** Girault.

A female, forest, Gordonvale, Queensland, April 15, 1914. The thorax is without a median sulcus, scaly. The general color may be greenish yellow and the abdomen on distal half bears obscure dusky cuneate marginal spots. The ovipositor is not shortly extruded as in *australiensis*. Caudal wings with about six lines of discal cilia, about four lines in *australiensis*. Type re-examined.

2. **Aphelinus Dies** Girault.

Length, 1.30 mm.

The type is on a slide and was captured by sweeping in March.

3. **Aphelinus Australiensis** Girault.

Length, 0.80 mm.

Thorax with a narrow median grooved line. Mandibles tridentate. Marginal cilia at apex of fore wing very short. Pedicel much longer than proximal club joint, the latter about a third the length of distal one. Hind wings near tip with five lines of discal cilia. The type is on a slide and was captured June 14, 1912.

4. **Aphelinus Fuscipeennis** Howard.

One female, October 30, 1911 at Mossman, Queensland from foliage of a roadside plant. Is this really *fuscipeennis* or a parallel or chance Australian species similar to that species?
5. APHELINUS PERISSOPTROIDES new species.

*Female*:—Length, 0.80 mm. Compared with types of *ruskinii*, *miltoni* and *grotiussi*.

In my table of Australian species, disregarding the wings, runs to *grotiussi* from which it differs in being flattened and robust, the first club joint widens distad and is somewhat wider than long while the discal ciliation of the fore wings is broken into naked areas forming a colorless pattern somewhat as in *Perissopterus* except that the ciliated spaces are not infuscated deeply and the hairless ones less numerous than usual. From *ruskinii* in the distal ciliation of the fore wing and general coloration. From *miltoni* much as from *grotiussi*. From *fuscipennis* in bearing but seven lines of cilia proximad of the hairless line, in having the pattern on the fore wing and somewhat different antennae. The ciliated areas on the fore wing are faintly dusky; the bare or half-bare spots are as follows: Apical margin narrowly; a rounded area just distad of venation; one in centre of blade opposite stigmal vein and one at caudal margin opposite the one distad of venation. When viewed with a lens, there appear to be four rounded faintly dusky spots arranged in a square in the centre of the wing. Mandibles bidentate. Legs white, immaculate. Postscutellum transverse. Scutum with a median groove.

*From one female captured in forest, April 17, 1914 (A. P. Dodd).*

*Habitat*: Cloncurry, Queensland.

*Type*: No. Hy 2920, Queensland Museum, Brisbane, the female on a slide.

This species has all the characters of *Perissopterus* except the small triangular postscutellum; the mesonotal selerites seem quite normal as do also those of my *Perissopterus inexPLICabilis*. The genus *Perissopterus* should be carefully scrutinized because its general resemblance to *Aphelelus* is most striking and we have just seen a species of the latter which has the fore wings which approach the peculiar type of wing pattern common to species of *Perissopterus*.

6. APHELINUS MILTONI new species.

*Female*:—Length, 0.67 mm.

In my table to the Australian species running to *grotiussi* Girault from which it differs as follows: The general coloration is deeper, being golden or orange yellow; the abdomen is somewhat more slender, the ovipositor somewhat extruded as in *australiensis*; the fore wings somewhat broader and bear shorter marginal fringes; club 1 is longer than wide (subquadrate in *grotiussi*); and in the fore wing, the oblique hairless line is barely differentiated and proximad of it there are about six lines of discal cilia (only three in *grotiussi*). Mandibles 3-dentato in both species.

*From one female taken in forest, January 4, 1912.*

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 2921, Queensland Museum, Brisbane, the specimen on a slide.

Dedicated to John Milton.

7. APHELINUS RUSKINII new species.

*Female*:—Length, 1.15 mm. Robust.

In my table of species runs to *grotiussi* from which it may be distinguished by having both funicle joints subanular as in *fuscipennis*, in having the first club joint cup-shaped, somewhat wider than long, in bearing about seven lines of discal cilia proximad of the hairless line, in being more robust and in bearing a distinct median groove on the thorax. General color dull honey yellow tinged with reddish. Fore wings with about thirty lines of very fine discal cilia where widest. Form as in *fuscipennis*. Differs from *miltoni* in being much more robust, duller and darker in color, in having the oblique hairless line very distinct, the cilia proximad of it distinctly much coarser than those of the main ciliation. Also the first club
and the funiculate joints are shorter. Wings hyaline. Hind wings short and broad but acute at apex, where broadest with about 8 lines of discal cilia. Third tooth of mandible subobsolete.

From one female taken by sweeping in forest, January 4, 1912.

Habitat: Capeville (Pentland), Queensland.

Type: No. Hy 2922, Queensland Museum, Brisbane, the female on a slide.

8. APHELINUS LITERATUS new species.

A living female of this species reared from a Chionaspis on cockatoo apple, November 10, 1913 and immersed in balsam showed to perfection its indescribable beauty and odd markings. Along each side of the abdomen are eight large globular to quadrate silvery spots and what appear to be the spiracles showing centrally within these as black dots; an ovate spot of same on base of abdomen on each side of meson; on propodeum a triangle filling the meson with a transverse cuneate dash on each side; on postscutellum a square centrally distad and a larger triangle on each side; on scutellum an inverted tau of the lower case filling meson and on each side of it a lower case gamma followed laterad by a round dot (on axilla). The scutum bears an Upsilon capital with its arms extended and reaching to base, the arms extending around caudal and lateral margins. The vertex has a pattern. The gammas on the scutellum are unsymmetrical being unlike. A row of black dots beneath the row of spots, lateral aspect of abdomen. Figure 8 on fore wing not complete.

Differs from ineptiventris Girault in having the thoracic and vertex markings (the vertex bears a peculiar pattern) and in the fore wings, the figure 8 being incomplete, the caudal circle not completed by the caudal line whose apex is drawn out thinly around the caudo-distal wing margin. Otherwise, the same. The pattern of silvery on vertex includes three straight lines running caudad which separate the lateral ocelli from each other and from the respective eye margins.

From three females reared as indicated above.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2923, Queensland Museum, Brisbane, one of the females on a slide.

9. APHELINUS NOX Girault.

"Two females, sweeping miscellaneous vegetation in an open field near town, Mackay, Queensland, October 19, 1911 (A.A.G.). The two funiculate joints are short, transverse, each much shorter than the first club joint " (A. P. Dodd).

In the table of species, antea, p. 183, all the types were seen except that of funiculiferus; line 25 (one line before huckeli), larger read longer.

GENUS COCCOPHAGUS Westwood.

Synonym: Prospaltilla Ashmead.

The species of Prospaltilla intergrade and it is impossible to distinguish the genera in the case of many species; even the stigmal vein is not constant. For extreme Prospaltilla forms compare abnormicorneus and allies. These form a distinct genus but there may be inter-variations. The species may or may not have a ring-joint.

1. COCCOPHAGUS ANTIOPA (Girault).

Prospaltilla antiopa Girault.

General color golden yellow, the abdomen, propodeum, pronotum and cephalic two-thirds of scutum dusky. Funiculate joints elongate, 1 over twice the length of the pedicel, shortest, 2 two and a half times longer than wide, longest, subequal to club 1. Type re-examined.
2. COCCOPHAGUS AURANTI Howard.

"Female.—Length, 0.7 mm.; expanse, 1.16 mm.; greatest width of fore wing, 0.18 mm. Joint 1 of funicle shorter and narrower than pedicel and than joint 2, which is subequal to pedicel in length and width, joint 3 shorter than joint 2. Surface of thorax smooth. General color light brownish yellow; occipital line, margin of pronotum and a median stripe on mesonotum, scapula, outer edge of metanotum, abdomen, especially lateral margin, darker; antennae and legs light fuscous; eyes black, ocelli red; wings hyaline, veins slightly dusky. Fore wings with disk densely, finely and uniformly ciliate, costal margin with very short marginal cilia beginning at stigma, growing gradually longer at tip of wing and on lower outer margin becoming half the width of wing; broadest portion of wing beyond stigma; hind-wings as with preceding species.

Described from two female specimens reared May 9, 1887, by D. W. Coquillett from Aspidiotus auranti, var. citrinus, from San Gabriel, Cal."

3. COCCOPHAGUS ALBISCEULLUM Girault.

A. COCCOPHAGUS ALBISCEULLUM SCHILLERI new variety.

Female:—Length, 0.65 mm.

Extremely like the typical form but the caudal femora are not dusky as in that form, the fore wings are only obscurely dusky under the marginal vein and are somewhat narrower, the incisions of the abdomen appear as so many white cross-striipes and the proximal tarsal joints are shorter. No type.

From one female taken in forest, December 9, 1913.

Habitat: Gordonvale (Cairns), Queensland.

A second one same place, June 17, 1914. In this specimen, the head was orange yellow.

A female of the typical form, Gordonvale (Cairns), Queensland, jungle, May 24. The scutellum is more yellowish. The antennae a little slenderer, the fore wings less distinctly infuscated. Compared with type. The North Queensland specimen bore a distinct, narrow median groove on the scutellum and this is distinctly indicated on the type specimen now in balsam. The fore wing is infuscated under the marginal vein only. The ovipositor is as in Ablerus. Stigmatic vein directed cephalad. Hind wing acute, with about five lines of discal cilia.

4. COCCOPHAGUS FILIUS new species.

Female:—Length, 0.75 mm.

Very similar to boscelli Girault but the club is wholly black, the scutellum contrasts being brilliant lemon yellow, the axillae and mesopleurum are black, also upper ocelli and the funicle joints are all somewhat shorter. The ovipositor valves just tip the abdomen. Otherwise alike in every detail. The ovipositor is inserted farther distad, a little distad of the middle.

From one female taken by sweeping in forest, April 28, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. H&Y 2924, Queensland Museum, Brisbane, the specimen on a tag with type of Aphelinus ruskinii.

5. COCCOPHAGUS TRIGUTTATUS new species.

Female:—Length, 1 mm.

Differs from the generic diagnosis in bearing a very short ring-joint and the hind tibial spurs are double.

Intense golden yellow (greenish yellow), the wings hyaline, the antennae and legs concolorous. On the distal half of abdomen, three conspicuous round black spots from dorsal
aspect arranged in a triangle, the apical one at tip, the basal two at lateral margin, one on each side just beyond proximal half (sometimes, if the segments are stretched, split transversely into two more or less rectangular spots); a small triangular spot at apex (cephalad) of each axilla, also jet black, as well as the cephalic margin of scutellum between the parapсидal furrow ends. Base of fore wing very slightly dusky and a curved, narrow black line down propodeum on each side near margin. Head and thorax finely reticulate. Mandibles tridentate. First funicle joint twice longer than wide; 2 and 3 distinctly shorter, not much longer than wide, 2 a little the longer; 3 subequal to pedicel; club distinct, ovate, without a terminal nipple, its joints wider than long. Funicle and club with closely applied, rather coarse hairs which arise at the base of each joint and extend its length (except first funicle joint where they arise farther distad).

Described from five females reared in connection with a cecidomyiid gall on the stem of a young *Eucalyptus corymbosa* (bloodwood) but which was infested with unarmored coccids, November 13, 1913 (A. P. Dodd).

**Habitat:** Northern Queensland (Gordonvale near Cairns).

**Types:** No. *Hy 2925*, Queensland Museum, Brisbane, two females on a tag, one female and a head on a slide.

6. COCCOPHAGUS SOPHIA new species of Girault and A. P. Dodd.

**Female:**—Length, 0.55 mm.

Golden yellow, the wings hyaline and closely allied with *aureola* Girault but the first funicle joint is not globular and distinctly shorter than the second but all three joints of the funicle are distinctly longer than wide and subequal, the pedicel slightly shorter than each. Also, the club is more slender and the abdomen is not dusky. The hind wings are very narrow, distinctly not as wide as the caudal marginal fringes of those wings (in *aureola*, nearly as wide at widest part as these fringes).

Described from two females reared from an aleyroid, November 9, 1911 (A. A. Girault).

**Habitat:** Northern Queensland (Cairns).

**Types:** No. *Hy 2926*, Queensland Museum, Brisbane, the above specimens on a slide.

7. COCCOPHAGUS AURICAPUT new species.

**Female:**—Length, 0.68 mm.

Orange yellow, the abdomen black, the legs lemon yellow except the dusky hind coxa. Antennae lemon yellow, the funicle joints increasing in length distad, 3 longest, nearly twice as long as wide, 1 subequal to the pedicel, distinctly longer than wide; club joints longer than wide, about subequal to funicle 2. Fore wings densely, finely ciliate, the stigma vein short, sessile. Hind wings scutely pointed, with about eight lines of fine discal cilia where widest. Middle tibial spur long and slender. Mandibles bidentate, the second tooth broadly truncate. Wings hyaline.

From one female taken in forest, January 4, 1912.

**Habitat:** Capeville (Pentland), Queensland.

**Type:** No. *Hy 2927*, Queensland Museum, Brisbane, the specimen on a slide with that of *Parascanioidea dickensi*.

8. COCCOPHAGUS BOSWELLI new species.

**Female:**—Length, 0.80 mm.

Deep orange yellow, the scutellum lemon yellow, the abdomen and club jet black, the fore wing with a black crossstripe from a little over the proximal half of the marginal vein, its distal margin oblique. Club whitish at extreme base and extreme tip; funicle 3 white. Valves of ovipositor shortly extruded. Funicle 3 a little the shortest, all nearly equal and
about twice longer than wide, a little longer than the pedicel. Club enlarged, somewhat over twice wider than the funicle in one aspect. Legs silvery white. One short ring joint present. Hind coxa black, the middle dusky. Hind wings short, narrow, with four rows of discal cilia. Proximal tarsal joint much longer than the others. Middle tibial spur small, truncate. The stigmal vein nearly parallel with cephalic margin.

From one female taken in jungle, March 6, 1914 (A. P. Dodd).

Habitat: Cooktown, Queensland.

Type: No. Hy 2928, Queensland Museum, Brisbane, the female on a slide with type Scoioenecyrtus tricolor Girault.


Female.—Length, 0.75 mm.

Sooty black, the scutellum and propodeum contrasting bright golden yellow, also ventral third of head, the antennae and legs pale yellow but the distal two joints of the club a little dusky. Parapsidal furrows yellowish brown; fore wings dusky margin to margin under all of marginal vein. Differs from Escarsia aurithorax in general coloration; funicule 1 is distinctly longer and the stigmal vein somewhat shorter and parallel with cephalic wing margin; also in aurithorax the hind coxa and femur is distinctly infuscated. Differs from abiscatellum subtileri in having the propodeum golden yellow, the funicule joints much longer and so on. From antipsia in its much darker color, having the entire scutum black except lateral margins very narrowly, the propodeum light yellow and the hind wings decidedly broader and the greater size. Parapside yellowish cephalad. Funicule 1 thrice longer than wide, 2 and 3 subequal, two and a half times longer than wide; club joints 1.2 subequal, each somewhat shorter than funicule 3; club 3 still shorter but longer than the pedicel. Antenna subelliptic. Thorax finely, densely, longitudinally lined. Hind wings with six lines of faint discal cilia. Ovipositor inserted distal of middle. Compared with types of named species except the variety of abiscatellum.

From one female taken in forest, June 10, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2929, Queensland Museum, Brisbane, the female on a slide.

Dedicated to Jonathan Swift.


Female.—Length, 0.75 mm.

Exactly similar to nigricentrus except that funicule 1 is barely shorter than 2 and the scutum cephalad is dusky. Also, the club is more definite and the sides of the thorax are black. Compared with types of nigricentrus, antipsia and perculittus. The funicule joints are distinctly shorter than in the latter and the antennal coloration different. In antipsia the flagellar joints are all longer and the general coloration different.

From one female taken in forest on sand-ridges near coast, May 13, 1914 (A. P. Dodd).

Habitat: Chinderah (Tweed River), New South Wales.

Type: No. Hs 2930, Queensland Museum, Brisbane, the specimen on a slide.

Dedicated to William H. Ashmead for his important studies on the major groupings of the Hymenoptera.

11. CoccoPhagus Thoreauini new species.

Female.—Length, 0.70 mm.

Orange yellow, the wings hyaline, the abdomen, legs and antennae lemon yellow; a short, wedge-shaped spot on cephalic scutum each side of meson, a faint round dot cephalic aspect
of each axilla, a transverse spot on abdomen at base and a rather large round spot in center of abdomen, black or dusky black. Differs from Encarsia justitia in having the black markings and shorter marginal fringes on the fore wings which here are not more than a sixth of the greatest wing width. From aureola in having funicule 1 somewhat longer than wide, the concolurus abdomen and the black markings. From biguttatus in the somewhat narrower, more coarsely ciliated fore wings, the longer stigmal vein and the markings. Closely allied with aureola. Caudal marginal fringes of hind wings a little longer than the greatest width of those wings, funicule 1 a little shorter than the others; a minute ring-joint. Club joints longer than wide. Discal cilia of fore wing uniform, five lines of it on caudal wings where widest.

From one female taken along the Tweed River, May 3, 1914 (A. P. Dodd).

Habitat: Tweed Heads, New South Wales.

Type: No. Hy 2931, Queensland Museum, Brisbane, the specimen on a slide.

This species is dedicated to Henry David Thoreau.

12. COCCOPHAGUS CLARISCUTELLUM new species.

Female:—Length, 0.75 mm.

Reminds one of albiscutellum, the scutellum brilliant, contrasting silvery white but the ovipositor is not as in Acerbus, the scutum is honey yellow, blackish at cephalic third, the hind coxa and femur black, rest of legs white; face silvery and with a black cross-stripe at the elyseus, the vertex and rest of head orange yellow; fore wings with a dusky cross-stripe across whole of marginal vein. Antennae and the small parapside orange; club joint 3 black. Funicule 1 subglobular, smaller than the small pedicel, not quite half the length of funicule 2 which is distinctly longer than wide, longer than the pedicel, subequal to 3; club joints subequal to distal funicule joint or a little shorter, the club not well defined; a minute ring-joint. Distal part of club 2 dusky. Fore wings uniformly but not densely ciliate, their marginal cilia short, not a fourth the greatest wing width, shorter than the longest marginal cilia of hind wings, the latter with about four rows of distal cilia proximad, their caudal marginal cilia a little longer than their greatest width. Thorax without a median sulcus.

From one female taken by sweeping jungle along the Mulgrave River, April 12, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2933, Queensland Museum, Brisbane, the specimen on a slide.

13. COCCOPHAGUS BIGUTTATUS new species.

Female:—Length, 0.72 mm.

Pale honey yellow, the wings hyaline; pronotum at middle rather widely and a diamond-shaped spot on each side of thorax in the vicinity of the axilla black. Stigmal vein very short, nearly sessile, the fore wing very densely, finely ciliate distally. Funicule joints not long, 3 quadrate, the other two a little longer than wide, subequal to pedicel, the club well-defined. Ovipositor and valves distinctly extruded for a length equal to nearly a fourth that of the abdomen, the valves dusky blackish. Scutum simple, scaly. Middle tibial spur long and slender. Abdomen distal with faintly indicated, narrow cross-strips (just before apex). Marginal fringes of fore wing short. The two spots seem to be on cephalic two thirds of each axilla.

From two specimens taken by sweeping lantana, October 20, 1911.

Habitat: Mackay, Queensland.

Type: No. Hy 2933, Queensland Museum, Brisbane, one female on a slide.
MEMOIRS OF THE QUEENSLAND MUSEUM.

14. COCCOPHAGUS PICITHORAX new species.

*Female:*—Length, 0.60 mm.

Exactly similar to the following (*laetus*) but differing in having each lateral margin of abdomen black from base to apex of proximal three fourths. Differs from *Encarsia cybele* in having much narrower fore wings, the marginal stripe of abdomen less conspicuous and the antennal joints all shorter.

From one female taken on grass in forest, April 4, 1914.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. Hy 2984, Queensland Museum, Brisbane, the female on a slide with type *laetus*.

15. COCCOPHAGUS LAUTUS new species.

*Female:*—Length, 0.65 mm.

Jet black, the abdomen brilliant golden yellow, the antennae and legs a little paler than the abdomen; propodeum suffused with yellowish; lateral margin of parapsides and mesal margins of eyes yellowish. Wings hyaline, the stigmal vein sessile, directed cephalad. Posterior wings not long nor broad, with a line of discal cilia along each margin and a scattered central line. Fore wings with about twenty lines of fine discal cilia where broadest. Funicle joints cylindrical, subequal, each about one and two third times longer than wide. 1 a little shorter than the others which are subequal to the distal two club joints, the proximal club joint a little shorter than the others. Club barely wider than the funicle, the flagellum filiform or nearly. Middle tibial spur slender, not especially long. Marginal fringes of hind wing (caudal margin) somewhat longer than the greatest width of the blade, longer than any of the fringes of the fore wing. Pedicel subequal to funicle 1.

From one female taken by sweeping grass in forest, April 1, 1914.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. Hy 2935, Queensland Museum, Brisbane, the specimen on a slide with type of *Lathromerella longiciliata* Girault.

16. COCCOPHAGUS ARGENTEUS new species.

*Female:*—Length, 0.65 mm.

Silvery white, the wings with a more or less obscure dusky long-oval spot in center of blade projecting a little distad of venation, the following parts honey yellow—center of vertex, scutum, parapsides and scutellum. The following parts jet black—dorsum of abdomen excepting for three round spots in a triangle, one at apex, the other two opposite, at the lateral margin at distal two thirds; center of occiput; and the club except distal half or more of distal joint. Lateral halves of each funicle joint and the axillae dusky. Funicle joints subquadrate, smaller than the club joints, subequal to the pedicel. Ocelli in a triangle, the lateral ones away from the eyes. Scutum and scutellum with scattered setae. Hind wings with about six lines of fine but not dense discal cilia, all disappearing at apex, the caudal marginal fringes short. Fore wings with a more or less obscure sooty longitudinal area centrally but caudal of middle, extending from proximal third of marginal vein some distance distad of venation and cotenious with the discal cilia, the wing naked broadly from apex to venation (excepting from the central extension in the sooty area). There is also a more or less naked area just beneath the end of the marginal vein. Stigmal vein sessile. Antennae 9-jointed, with one very short ring joint.

From one female taken on a window, January 16, 1914.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. Hy 2936, Queensland Museum, Brisbane, the female on a slide.
17. COCCOPHAGUS PERPULCHELLUS new species.

*Female:* — Length, 0.80 mm.

Brilliant lemon or greenish yellow, the fore wings with a jet black stripe across them under all of marginal vein and smoky under proximal two thirds of submarginal vein; legs silvery white, the antennae silvery tinged with yellow, the first two club joints jet black. Abdomen, metapleurae, propodeum except broadly at meson and pronotum, jet black, the incisures of abdomen showing a little as white. Immediate tip of abdomen and the tip of the valves of the ovipositor, white. Antennae filiform but the club distinct, shorter than the funicle whose three joints are three or more longer than wide, 1 a little the shortest. Pedicel subglobular, much shorter than funicle 1. Club joints a little wider, distinctly longer than wide. Scentellum apparently with a thin median grooved line. Hind wings acute. Ovipositor inserted at distal third. One ring-joint.

From one female caught in forest, April 28, 1911.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. Hy 2957, Queensland Museum, Brisbane, the female on a slide.

18. COCCOPHAGUS ABNORMICORNIS new species.

*Female:* — Length, 0.70 mm.

Purplish black; head (except much of occiput), scutum (except cephalad rather broadly along meson at cephalic half), parapsides and scutellum (except a large round spot on each side at caudal margin) honey yellow; centrally, scutum orange yellow. Knees, tibiae except just below knees, tarsi and propodeum laterally, also honey yellow. Antennae brownish, the flagellum tapering; pedicel subequal to funicle 2; funicle 1 abruptly short, wider than long, 2 over twice its length, 3 longest, subequal to 1 and 2 of the club, each of these three joints twice (or more) longer than wide, club 2 narrower; distal club joint narrow, subequal to funicle 2; club not differentiated. Marginal vein distinctly shorter than the submarginal, the stigmal short but with a distinct neck; marginal fringes of fore wing a little longer than usual; a more or less obscure brownish cross-stripe from the whole of the marginal vein. Hind femur compressed. Mandibles bidentate, the second tooth followed by a truncation (or broadly truncate, its lateral apical angle acute). Mesopleurum entire, small. Thorax finely scaly. Abdomen truncate behind.

From one female caught in forest, August 22, 1912.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. Hy 2938, Queensland Museum, Brisbane, the female on a tag; head, fore wing and hind leg on a slide.

19. COCCOPHAGUS SINGULARIS new species.

*Female:* — Exactly similar to the preceding but the legs are all silvery white, the occiput bears only a faint, narrow cross-stripe centrally, the two caudal spots on scutellum are longer and closer together (the yellow space between them is narrow, this median line distinctly much less than half the width of one of the spots; in *abnormicornis*, the two spots more round and the mesal space between them is distinctly more than half the width of one of the spots). Marginal vein black, rest of venation pale.

From one female caught in forest, March 31, 1914.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. Hy 2939, Queensland Museum, Brisbane, the specimen on a slide.

20. COCCOPHAGUS AUREOLA (Girault).

Funicle 1 in the male is longer than in the female. *Antea*, p. 189, line 5 of the description, *funicle read club.*
21. COCCOPHAGUS REGULUS new species.

_Female:_—Length, 0.95 mm., excluding ovipositor.

Similar to _anormoricorns_ and _singularis_ but at once distinguished from either in having funicle 1 longer than wide, the pedicel elongate (somewhat over twice longer than wide at apex: only slightly longer than wide at apex in _anormoricorns_ and _singularis_), the black on the scutum acutely prolonged conically to scutellum (more or less obscurely so in the other species), the marginal vein longer, somewhat over half the length of the submarginal, the fore wing dusky from base to apex of venation, the head black except vertex. Valves of ovipositor extruded distinctly a short distance. Legs black, the knees whitish, also the tibia, the caudal femur compressed, large. Antennae about as in _singularis_ but slenderer, the pedicel elongate as noted.

From one female caught by sweeping forest, May 4, 1914 (A. P. Doold).

_Habitat:_ Murwillumbah (Tweed River), New South Wales.

_Type:_ No. Hg 2540, Queensland Museum, Brisbane, the specimen on a slide.

22. COCCOPHAGUS UNFASCIATA new species.

_Female:_—Length, 0.75 mm.

Deep golden yellow, the abdomen with a black stripe across its middle dorsoad and another across base, the axille, propodeum and pronotum also black. Fore wings dusky from margin to margin under all of marginal vein, the marginal fringes long, the longest about two thirds the greatest wing width and about as long as the caudal fringes of the hind wing.

Fore wing with about eleven, the hind wing with about three, lines of discal cilia where widest. Club acuminate, the conical distal joint longer than either of the other two which are subequal, each somewhat longer than wide, longer than any of the funicle joints. Funicle 1 somewhat wider than long. 2 and 3 subequal, each a little longer than wide, a little longer than the pedicel, distinctly longer than 1. Thorax shagreened, without a median groove. Legs white; antennae yellowish white. Differs notably from _antitops_ in the somewhat longer marginal fringes of the fore wing, the different color, the short first funicle joint and the differentiated club which narrows distad.

From one female caught by sweeping forest, May 18, 1914.

_Habitat:_ Gordonvale (Cairns), Queensland.

_Type:_ No. Hg 2911, Queensland Museum, Brisbane, the specimen on a slide.

23. COCCOPHAGUS ARGENTIFASCIA new species.

_Female:_—Length, 0.70 mm. Ovipositor inserted distad of proximal half as in _argentatus._

Orange yellow; lower face, pronotum, propodeum and immediate base of abdomen dusky. Abdomen black with a broad silvery white band across just out from base (occupying a little over a third of the surface). Legs except proximal half of coxae, silvery white. Antennae lemon yellow, distal club joint dusky. Fore wings with a light brownish stripe across them beginning a little distad of proximal third of marginal vein and ending a little distance distad of venation. Flagellum cylindrical, the club a little wider than the funicle; pedicel shorter than funicle 1 which is a little shorter than 3, 2 longest, a little over twice longer than wide, a third longer than 1. Club joints longer than wide. Stigmatic vein with a short but distinct neck. Fore wings rather slender. Scutum with scattered setae.

From one female taken from a window, February 24, 1914.

_Habitat:_ Gordonvale (Cairns), Queensland.

_Type:_ No. Hg 2942, Queensland Museum, Brisbane, the female on a slide.
DIAGNOSIS OF THE AUSTRALIAN SPECIES OF COCCOPHAGUS WESTWOOD.

(Compiled from types except auranti.)

Submarginal vein of fore wing distinctly longer than the marginal (more or less a half longer); flagellum tapering from base, funicle 1 abruptly shortened. Species purplish black marked with yellow.

Head, scutum except cephalic margin and rather broadly along meson at cephalic half, parapsides and scutellum (except a large round spot on each side at caudal margin), honey yellow; knees, tibiae except just below knee, tarsi and propodeum lateral, also honey yellow. Funicle 1 wider than long, 2 subequal to the pedicel. An obscure brownish cross-stripe from marginal vein ... abnormicornis Girault.

The same but the legs all white (see description) ... ... singularis Girault.

The same as abnormicornis but funicle 1 plainly longer than wide, the pedicel elongate, subequal to funicle 3, the fore wings distinctly infuscated from base to apex of venation, the marginal vein over a half the length of the submarginal. Black on meson of scutum extending further distad ... ... ... regulus Girault.

Submarginal vein of fore wing obviously more or less subequal to the marginal; flagellum subglabrous or regularly clubbed.

Stigmal vein round, sessile or sub sessile, nearly at right angles to apex of marginal (appearing casually like a drop of water on the under surface of a plane surface); neck of stigmal vein if present, a constriction, the knob globular and forming the principal part of the vein.

Golden or orange yellow species.

Bright golden yellow, the abdomen with a triangle of three large round black spots on distal half, the apical spot at apex of abdomen; wings hyaline, broad; distal two funicle joints quadrate, each shorter than 1, the club distinct; short; stigmal vein sessile ... ... trivittatus Girault.

Pale honey yellow, the valves of ovipositor distinctly extruded. Thorax with two black spots, one on each axilla. Wings hyaline, moderately broad, the stigmal vein with a short neck, oblique. Club well defined. Funicle joints short; meson of pronotum broadly dusky ... biguttatus Girault.

Yellow and black species, often marked with silvery white.

Orange yellow, the abdomen and caudal coxa black; funicle joints increasing in length distad, 3 nearly twice longer than wide, 1 subequal to pedicel, longer than wide. Fore wings hyaline, densely ciliate, the stigmal vein sessile. Mandibles bidentate, the second tooth broadly truncate. Club defined ... ... ... ... ... auriceput Girault.

Orange yellow; lower face, pronotum, propodeum and immediate base of abdomen, dusky; abdomen black with a broad band of silvery white across it near base. Legs white. Fore wings with a light brownish cross-stripe; stigmal vein with a short neck. Funicle 2 longest, club defined. Ovipositor inserted distad of middle ... ... ... ... ... argenteus fascia Girault.

Silvery white; center of vertex, scutum, parapsides and scutellum, honey yellow; dorsum of abdomen (except three large, round spots in a triangle, one at apex, others at distal two thirds at margin), center of occiput and club (except distal half of joint 3) black. Lateral half of each funicle joint and the axille dusky. Funicle joints subquadrate. Fore wings with an isolated infuscated area, naked distad. Stigmal vein sub sessile. Club distinct. Ovipositor inserted distad of middle ... argenteus Girault.

Golden yellow, the cephalic two thirds of axille, propodeum, a broad stripe across abdomen near middle and pronotum black, the wings hyaline. See description. Male ... ... ... ... ... ... ... poci Girault.*

* A scarce species, the description lost. The specimen is in the Queensland Museum on a slide and is from Northern Queensland (Gordonvale).
Black species.

Legs and antennae lemon yellow except caudal coxae and femora; wings hyaline, the stigmal vein sessile, the postmarginal vein as long as it; funicle joints distinctly longer than the pedicel, 1 nearly twice longer than wide, all with an apparent cross-division into halves; club distinct. Caudal coxa and femur with a distinct longitudinal lineolation. Marginal vein somewhat longer than the submarginal. Caudal wings very broad, with about sixteen lines of discal cilia, rather slender... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... 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Similar to aurantii but the fore wings infuscated across from whole of marginal vein, the propodeum, cephalic two thirds of scutum and most of each parapside, are also dusky while the funicule joints are elongate, 3 two and a half times longer than wide; longest marginal cilia of fore wings somewhat over a third the greatest width; pedicel sub-globular. Club not differentiated ... ... antiopa Girault.

Marginal cilia of fore wing shorter.

Funicle 1 abruptly shortened, quadrate, shorter than the pedicel. Black; scutellum silvery white; legs white except hind coxae and femora; face silvery and with a black cross-stripe at the clypeus; vertex, parapside and caudal two thirds of scutum yellow; antennae yellow, club 3 black. Fore wing with a dusky stripe from whole of marginal vein; funicule joints 2 and 3 somewhat longer than wide, subequal ... ... ... clariscutellum Girault.

Funicle 1 not abruptly shortened and longer than wide.

Ovipositor distinctly extruded.

Black, the scutellum silvery white; antennae pale yellow, the funicule joints subequal, a little longer than wide; legs whitish except caudal femur which is dusky; fore wings dusky under all of marginal vein ... ... ... albiscutellum Girault.

Ovipositor not extruded.

Abdomen all black. Fore wings with a distinct cross-stripe under all of marginal vein.

Scutum all black except lateral margins very narrowly.

Black; scutellum, propodeum and ventral third of head, lemon yellow; wing with a cross-stripe; funicule 1 thrice longer than wide; antennae and legs pale yellow; club 2 and 3 dusky ... ... ... scifiti Girault.

Scutum yellow except rather narrowly cephalad; legs white, the pronotum dusky.

Distal club joint black; hind femur black. Lemon yellow, the sides of thorax black. Funicle 3 twice longer than wide seminigrdatis Girault.

Proximal two club joints black. Legs all white. Lemon yellow, the metapleuron and propodeum mostly black. Funicle 3 thrice longer than wide ... purpletellus Girault.

Abdomen entirely yellow except lateral margins in one case.

Black; abdomen brilliant golden, the legs and antennae paler than it; propodeum suffused with yellow; lateral margin of parapsides yellow; wings hyaline; funicule joints all nearly twice longer than wide, 1 shorter ... ... ... tanitas Girault.

The same but margin of abdomen narrowly black from base to apex of proximal three fourths ... ... ... picithorax Girault.

Intense orange yellow, the wings hyaline; a short wedge-shaped spot on cephalic scutum, each side of meson, a faint round dot cephalic aspect of axilla, a transverse spot at base of abdomen and a round spot centrally on abdomen, black. Funicle 1 somewhat longer than wide, shorter than the others by a little ... ... ... thorcatusti Girault.
COCCOPHAGOIDES new genus.

Type: Coccophagus abnormalis Girault.  
Coccophagus singularis and C. regulus belong here.

The genus differs from Coccophagus in having a markedly tapering flagellum, the first funicle joint abruptly shortened and the marginal vein distinctly shorter than the submarginal.

GENUS PHYSCUS Howard.

1. PHYSCUS NIGRICLAVUS new species of Girault and A. P. Dodd.

Female:—Length, 1.15 mm.

Like nigriclava Girault but only the hind coxa black and the club and funicle 1; the fore wings are slenderer and longer; the abdomen also appears slenderer and the hind femora are much slenderer. Funicle joints subequal, longer than the short pedicel, each about twice longer than wide. Distal club joint longer. There is a black dot on pronotum caudo-lateral.

From one female taken by sweeping in forest, January 2, 1913 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2913, Queensland Museum, Brisbane, the specimen on a slide.

A second female, same place, June 10, 1914 (A.A.G.). The base of the abdomen on each margin was fuscous in this specimen.

2. PHYSCUS FLAVICEPS new species of Girault and A. P. Dodd.

Female:—Length, 1.10 mm.

Like nigriclava but only the distal funicle joint is white and the body is unmarked; funicle joints subequal, pedicel blackish above. Otherwise identical or nearly.

From one female caught by sweeping foliage, edge of jungle, November 1, 1913 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2944, Queensland Museum, Brisbane, the specimen on a slide.

3. PHYSCUS DECEMguttatus new species of Girault and A. P. Dodd.

Female:—Length, 1.25 mm.

Exactly similar to nigriclava but the distal cross-band of abdomen is absent, that across base fainter and from the base along each side there is a longitudinal row of five quadrato, black spots, the line not reaching the anal spiracles. Pedicel white.

From one female taken in jungle, November 15, 1913 (A. P. Dodd).

Habitat: Harveys Creek (Cairns), Queensland.

Type: No. Hy 2945, Queensland Museum, Brisbane, the specimen on a slide.

4. PHYSCUS SUPERBUS new species of A. P. Dodd and A. A. Girault.

Female:—Length, 1.60 mm.

Reddish brown, the scutum somewhat darker; the face lighter, the dorsum of abdomen intense lemon yellow, margined with dusky and with an obscure dusky cross-stripe beyond the middle; sides of thorax more or less yellow; trochanters, apices of tibiae and the tarsi white, also the apical half of antennal scape, apical half of pedicel and the second funicle joint, the rest of antennae dusky black. Eyes greenish; fore wings hyaline, broad, very densely ciliate.
Middle tibial spur long and stout, the middle tarsi short and thickened. Pedicel somewhat shorter than funicle 1, which is distinctly shorter than 2, 3 a little shorter than 2; the first club joint as long as preceding joint, the second longer.

From one female caught by sweeping in forest, August 5, 1913 (A. P. Dodd).

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 2946, Queensland Museum, Brisbane, the specimen on a slide.

## 5. Physcus Multicolor new species.

**Female:**—Length, 1 mm.

Black, the wings hyaline, the abdomen and legs golden yellow (coxae not distinctly seen); antenna snow white except funicle 1, club 1 and proximal third of second club joint, which are black. Thorax densely longitudinally shagreened. Funicle joints lengthening a little distad in succession, each somewhat less than twice longer than wide, each somewhat longer than the pedicel, distinctly shorter than club 2. Scape dusky. Proximal club joint a little shorter than any of the funicle joints. Ring-joint present.

From one female taken in jungle, March 6, 1914 (A. P. Dodd).

**Habitat:** Cooktown, Queensland.

**Type:** No. Hy 2947, Queensland Museum, Brisbane, the above specimen on a slide.

## 6. Physcus Addisoni new species.

**Female:**—Length, 0.75 mm.

Dark metallic purple and very finely, densely scaly, the fore wings slightly infuscated throughout. Legs and abdomen intense golden yellow, the abdomen dorsal at meson a short distance before tip with a short, thick, slightly curved conspicuous black cross-marking. Distal fifth of the slender scape, pedicel, ring-joint and funicules 2 and 3 pure white; club suffused with whitish distad; funicle 1 a little longer than 2 which is subequal to 3, the first funicle joint distinctly longer than wide, distinctly longer than the pedicel; club 1 distinctly longer than 2. Caudal wings short, broad, with about six lines of scattered discal cells, their caudal marginal cell not long but distinctly longer than that of the fore wing. The latter densely, uniformly, finely ciliate discally. Staining obscurely deeper under whole of the marginal vein. Caudal legs dusky. Middle tibial spur short, rather stout. Axillae very widely separated. Antennae with a short ring-joint.

From one female caught in forest, May 2, 1914 (A. P. Dodd).

**Habitat:** Tweed Heads, New South Wales.

**Type:** No. Hy 2948, Queensland Museum, Brisbane, the specimen on a slide.

Dedicated to Joseph Addison.

## 7. Physcus Popei new species.

**Female:**—Length, 0.90 mm.

Deep orange yellow, the wings hyaline; funicle 1 and the club jet. Funicle joints subequal, each somewhat longer than wide, barely longer than the pedicel, somewhat shorter than either club joint. Valves of ovipositor extruded a little. Mandibles bidentate. One ring-joint. Legs pulvillate white, all tibiae dusky at base and most of hind femur, all lightly so. Fore wings densely, finely ciliate, the marginal cell short. Venation pulvillate. Hind coxa dusky at base. Propodeum dusky laterad.

From one female caught in forest on sand-ridges near coast, May 9, 1914 (A. P. Dodd).

**Habitat:** Chinderah, New South Wales.

**Type:** No. Hy 2940, Queensland Museum, Brisbane, the specimen on a slide.

The fore wings are somewhat wider and more densely ciliate than those of nigriclavus and the funicle joints are distinctly shorter. The types compared. The species nigriclavus also bears the ring-joint.

The species is dedicated to Alexander Pope.
GENUS ENCARSIINA Foerster.

1. ENCARSIINA CYBELE Girault.

\textit{Antea}, p. 186, line 7 of description, plainly read obscurely.

2. ENCARSIINA WHITTIERI new species.

\textit{Female:—Length, 0.70 mm.}

Golden yellow, the head, pronotum and cephalic scutum obscurely, dusky; meso- and metapleurum, propodeum except at meson and somewhat less than proximal half of abdomen, black, the distal margin of the black abdomen prolonged at meson in the shape of a round spot. Legs white, antennae pale yellow, filiform. Fore wings broad, uniformly, densely ciliate discally (about 25 lines), the marginal cilia short; dusky across triangularly from the base of the marginal vein. Proximal tarsal joint elongate. Funicle 3 longest of the flagellum, three longer than wide, 1, 2 and 3 subequal, each a little longer than the pedicel; both club joints longer than wide, a little shorter than funicle 3. Mandibles weakly tridentate.

From one female taken May 2, 1914, by sweeping in jungle (A. P. Dodd).

\textit{Habitat:—Tweed Heads (Tweed River), New South Wales.}

\textit{Type:—No. Hy 2650, Queensland Museum, Brisbane, the specimen on a slide with the type of Cocophagus thoracini Girault.}

GENUS ASPIDIOTIPHAGUS Howard.

1. ASPIDIOTIPHAGUS CITRINUS (Craw.).

One female from a window, Ingham, Queensland, February 17.

\textit{**Female.—Length, 0.58 mm.; expance, 1.16 mm.; greatest width of fore wing, 0.09 mm. Antennae light yellow brown; eyes black, ocelli bright red; head yellow; occiput dark brown; pronotum dark brown; mesonotum yellow; metanotum yellow brown; abdomen brown; legs uniformly dusky yellow; wings with marginal vein dark fuscous, and a broad fuscous band extending directly across wing from marginal veia as a base. Spiracular hairs on preanal abdominal joint very long. Thorax somewhat wider than head or abdomen, these being subequal in width.**}

2. ASPIDIOTIPHAGUS AUSTRALIENSIS Girault.

Length, 0.60 mm. The type is on a slide and was captured at 1,500 feet, May 29, 1913.

GENUS ABLERUS Howard.

1. ABLERUS SPECIOSUS Girault.*

Length, 0.60 mm., excluding ovipositor. The type locality is Gordonvale. The parapalides are probably white, rapidly fading after death. Funicle 1 subequal to pedicel which is dusky at base. Ovipositor extruded for about a fifth the length of the abdomen. A patch of about four short lines of coarser cilia under end of marginal vein. Funicles 2 and 4 each a little longer than 1. The type was reared from lecanium scales on a forest bush, December 4, 1912. A second female was obtained on the 17th following from cockatoo apple infested with a \textit{Chionaspis}, Gordonvale. Also, a female from Port Darwin, Northern Territory, November 19, 1913, forest (G. P. Hill).

A male reared with two females from the coecid on cockatoo apple in November, 1913 at Gordonvale, bore slenderer antennae than in the female, the club longer, apparently 2-jointed but no articulation is present. The antennal segments are as in the female but there are two minute ring-joints; funicle 3 is smaller and black while the others are longer.

* The head is white with a silvery band across just under the eyes followed by a narrow metallic greenish stripe.
2. ABLENSUS PAN Girault.

A female, forest, Capeville (Pentland), Queensland, January, 1913. The mandibles are tridentate. The third tooth obtuse and shorter. Type re-examined.

3. ABLENSUS SEMIFUScipennis (Girault).

Length, 0.75 mm., excluding ovipositor which is extruded for a third the length of the abdomen. Pedicel black at base above, the scape dorsad; mandibles tridentate; longest marginal cilia of fore wing a little shorter than those of hind wing. Distal margin of wing fumation straight. The type is on a slide and was taken February 17, 1913.

4. ABLENSUS SPECIOSISSimus (Girault).

Length, 1 mm., exclusive of ovipositor which is extruded for one fourth the length of abdomen. Mandibles and antenna as in semifusipennis. The type was taken in forest, January 27, 1913 and is on a slide.

5. ABLENSUS VENUSTULUS new species.

Female:—Length, 0.85 mm.

Running to speciosus but differing in having a distinct black stripe across fore wing from all (or nearly) of the marginal vein and the femora are black except at each end (cephalic femora all white in speciosus, the cephalic tibia and other femora and tibia with a distinct black band around them, rather broad, near knee); the tibia in this new species are white excepting just below knees. Also close to pieipes but the broad wing stripe in that species is faint, its first funicle joint is short yet longer than the second and the tibia are black except at each end. Here, the first joint of funicle is longer yet somewhat shorter than the second which is longest; longest marginal fringes of fore wing somewhat over a fourth the greatest wing width. Mandibles 4-dentate, the inner tooth formed by an emargination of the apical margin of the third tooth. Valves of ovipositor concolorous.

Described from one specimen captured by sweeping in the forest, November 1, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy2951, Queensland Museum, Brisbane, the above specimen on a slide with a female of the following species.

6. ABLENSUS UNNOTIPENNIS new species.

Female:—Length, 1.20 mm.

Like speciosissimus but on the fore wing there is only a rather long wedge-shaped spot somewhat caudad of apex of marginal vein and extending a little beyond the midlongitudinal line. Head white, metallic green below antennas (face).

From one specimen captured with venustulus.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy2952, Queensland Museum, Brisbane, a female on a slide with venustulus.

7. ABLENSUS PICEIPES Girault.

Female:—Length, 0.50 mm.

Very similar to poincariei Girault but differing in the following particulars: The marginal fringes of the fore wing are longer (nearly two thirds the greatest width of the wing, a poincariei plainly not much over a third), the fore wing is lightly dusky under all of the marginal vein, margin to margin, no oblique cross-stripe indicated; the first funicle joint is not much longer than wide though plainly longer than wide; the pedicel is shorter and also the ovipositor.
Described from one female captured from the foliage of gum in October, 1913 (A. P. Dodd).

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hg 2953, Queensland Museum, Brisbane, the above specimen on a slide (with two females of *Brachycorythochorella dubia* Girault).

8. **ABLERUS BÆUSOIDES** new species.

**Female:**—Length, 0.50 mm. Very short and compact.

Wholly dark blue-black except first four tarsal joints and joints 2 and 4 of the funicle. Fore wings deeply embonneted as in *nympha* but the faction is very convex distal extending nearly to apex, leaving apical margin and the portion of cephalic margin around top of stigma vein, subhyaline. Hind wings more lightly stained and not as far distal. Discal cella of fore wings very fine, barely visible, the marginal cella short, longest around apex, very much as in *cislocampe* Ashmead (both wings). Body finely lined, the mesopleurum coarser. Mandibles tridentate. Extruded portion of ovipositor valves short, white, black at tips. Antennae much as 1 figured for *cislocampe* but funicle 4 is a little shorter than 2. Evidently closely allied with the North American *cislocampe* but the tips of tibial not silvery white, the club is uniformly dark, the extruded valves of the ovipositor are white except at tips and the wings are infuscated somewhat farther distal. The very short form (from dorsal aspect almost round without the head) is also characteristic. Of the Australian species closest to *nympha* from which it may be easily distinguished.

From one female taken by sweeping in forest, September 2, 1913.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hg 2954, Queensland Museum, Brisbane, the specimen on a slide.

9. **ABLERUS SORBUS** new species.

**Female:**—Length, 0.58 mm.

In my table of species runs to *hyalinus* but much smaller, the funicle is wholly white (joints 1 and 3 in *hyalinus* dusky), funicle 4 is somewhat shorter, only slightly longer than wide; funicle 1 a little longer than 2 (a little shorter in *hyalinus*); the mandibles are smaller and the marginal fringes somewhat longer (in *hyalinus* somewhat less than a third the greatest wing width). Otherwise the same except that the head is wholly white except lower margin of face and margins of ocelli and the stripe across antennae. There is a distinct narrow silvery cross-stripe just caudal of scutellum. Fringes of fore wing moderate, somewhat over a third the greatest wing width. Wings hyaline and apparently different from those of *hyalinus* in that there are not several lines of coarse cilia just proximad of stigma vein.

From two females taken in forest, April 16, 1914 (A. P. Dodd).

**Habitat:** Cloncurry, Queensland.

**Type:** No. Hg 2955, Queensland Museum, Brisbane, a specimen on a slide with type *Archenous albifemur* Girault.

10. **ABLERUS HOWARDII** new species.

**Female:**—Length, 0.60 mm.

In my table of species runs to *peirci* from which it differs in having the fore wings hyaline. Differs from *picipes* in the clear wings and the shorter marginal fringes of the fore wing. Valves of ovipositor black at tip. Club somewhat stouter than usual. Vertex white. Funicle 1 a little longer than wide, shorter and narrower than the pedicel, 2 subquadrate, also 4 but the latter distinctly wider than the others. Longest marginal fringe of fore wing about a fourth the greatest wing width.
From one female caught by sweeping in forest, April 16, 1914 (A. P. Dodd).

**Habitat:** Cloncurry, Queensland.

**Type:** No. Hy 2956, Queensland Museum, Brisbane, the female on slide with type *Coccophagus perpuscillus* Girault.

Dedicated to Leland Ossian Howard.

**GENUS PLASTOCHELLA Girault.**

_Antea_, p. 195, line 3 of the description, the second with read without.

1. **PLASTOCHELLA FUSCIPENNIS** Girault.

Length, 1.05 mm. Infusionation of fore wing deeper under the marginal vein. The type was taken, February 10, 1913 from a window and is on a slide.

2. **PLASTOCHELLA INCONSPICUA** new species.

**Female:**—Length, 0.50 mm.

Brownish black, the wings lightly stained from base of marginal vein to apex, naked proximad from the same point. Pedicel elongate, longer than the funicule, the three joints of the latter subquadrate but 1 a little longer than the other two which are slightly wider than long. Club longer than the rather short scape which is only somewhat longer than the pedicel. Median groove on thorax not seen. Submarginal vein distinctly longer than the marginal. Legs dusky black.

Much smaller than *fusciennis* and uniform in color, the marginal vein shorter (somewhat longer than the submarginal in the genotype), nearly the proximal half of fore wing is naked and clear, the club is distinctly longer than the funicule and the pedicel is long. The marginal fringes of fore wing are twice longer than is the case with the genotype where they are very short. In *fusciennis* the pedicel is plainly shorter than the funicule.

From one female caught by sweeping in forest, January 16, 1913.

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

**Type:** No. Hy 2957, Queensland Museum, Brisbane, the specimen on a slide with type appendages of *Anastatus insularis* Girault.

3. **PLASTOCHELLA MAXIMA** new species.

**Female:**—Length, 1.85 mm., excluding the shortly exserted ovipositor.

Jet black, tip of abdomen, the legs except hind coxae and a broad band around the base of the abdomen, silvery white; lower part of face (suffused), caudal half of sternum, much of paraspides and the narrow median groove of thorax, dull yellow. Wings infused with as in *fusciennis*. Mandibles tridentate. Funicle 3 distinctly the longest, 2 shortest, a little longer than wide, 1 distinctly longer than wide but not much longer than 2 yet wider; club longer than the funicule. Thorax very finely lined. Strigils distinct, tarst as in the Elasmida; middle tibial spur not especially stout; hind tibial spurs double. Abdomen slender, conico-ovate, longer than rest of the body. Antenna inserted down near the mouth, the scape long and slender. Venation much as in *Coccophagus*, the stigmal vein minute. Pure wings distinctly broader than with *fusciennis*; in both species, they are subhyaline proximad of the marginal vein. Mesopleurum rather flat, divided by a suture transversely as usual in Chalcids.

This is an enormous member of the subfamily.

From one female caught in jungle, December 27, 1913 (A. P. Dodd).

**Habitat:** Harvey's Creek (Cairns), Queensland.

**Type:** No. Hy 2958, Queensland Museum, Brisbane, the specimen on a tag; head on a slide.

In *fusciennis*, the club is subequal in length to the funicule.
MEMOIRS OF THE QUEENSLAND MUSEUM.

MYOCNEMELLA new genus.

For description, see ante, p. 195.

GENUS MYOCNEMA Ashmead.

1. MYOCNEMA MARMORATIVENTRIS new species.

Female:—Length, 0.80 mm. With the habitus of Aphelinus.

Pale golden yellow, the abdomen dark brown except along the sides and marked with pale golden yellow as follows: A narrow stripe across base with a nipple-like prolongation at meson distad, three round marginal spots, the distal one smallest (a dot) and at apex of proximal two thirds, a very narrow cross-stripe at apex of proximal three fourths and two more distinct cross-stripes following the one at base, both broadly interrupted at the meson or subinterrupted; these two stripes join the first and second marginal spots. Propodeum dark brown from lateral margin half way to meson, the spiracle appearing like a minute yellow dot. Thorax scaly reticulate; without a median suture. Club somewhat longer than the funicle, subequal to the scape, the pedicel over half the length of the funicle; funicle 1 ring-like, 2 twice the length of 1, 3 a little wider than 2, 4 largest, somewhat wider than long and about a fourth the length of the club. Fore wings as in Aphelinus but without a hairless line, the discal ciliation fine, dense, disappearing proximad of the origin of the marginal vein; a line of long stout bristles along submarginal vein and two shorter lines of similar bristles just caudal of the submarginal vein. Marginal cilia of fore wings short. Caudal wing short and broad. Club 1 subquadrate, 2 conical and somewhat longer. Scape a little compressed. Mandibles bidentate, the second tooth truncate. Hind tibia dorsal, armed with long stiff bristles. Legs normal; middle femur with a long bristle ventro-lateral just before knee. Fore wings hyaline, the venation transparent, the marginal vein only a little over half the length of the submarginal. Hind femora compressed, the tibial spur single; middle tibial spur long and slender. Antennae shaped like those of Aphelinus.

In one antenna the club is solid.

Habitat: Gordonvale (Cairns), Queensland, forest, December 9, 1913.

Type: No. 419295, Queensland Museum, Brisbane, the specimen on a slide.

GENUS ANERISTUS Howard.

This genus differs from Coccocephagus Westwood in having the scape short, the flagellum strongly flattened, the hind tibia flattened and with a row of short bristles dorsal.

1. ANERISTUS FUMOSIPENNIS new species of Girault and A. P. Dodd.

Female:—Length, 0.80 mm.

Differs from the generic diagnosis in bearing a short ring-joint; the club is not very well differentiated from the funicle. Like Coccocephagus Westwood, except the antennal differences (the flagellum compressed somewhat, presence of ring-joint) and the flattened apex of hind tibia.

Wholly dark metallic purple, the legs and antennae concolorous, excepting most of cephalic tibia, distal half of intermediate tibia and the tarsi, which are yellowish white. Fore wings with a conspicuous smoky-black blotch under the marginal vein, the area large, projecting convexly beyond the venation, its proximal margin obliquely truncate from about proximal third or more of the marginal vein. Intermediate tibial spur stout, as long as proximal joint of intermediate tarsi. Mandibles bidentate, the broad inner tooth emarginate, so that a total of three teeth are nearly formed. First funicle joint longest, distinctly longer than
wide; 3 subquadrate, subequal to the pedicel; distal club joint with a nipple-like end due to termination of the vestiture before tip. Body finely reticulated. Hind wings broad, with about a dozen lines of fine, uniform discal cilia.

Male.—The same but the wings hyaline, the pedicel globular, the joints of the flagellum longer.

Described from two males, seven females, received from Mr. G. P. Hill, Government Entomologist, Northern Territory, and labelled "No. 15. Bred from unidentified coccid. 18-viii-13."

Habitat: Northern Territory (Port Darwin).
Types: No. Hy 2960, Queensland Museum, Brisbane, two males, one female on a slide with miscellaneous fragments and five females together on a tag.
Several females, type locality, October 10, 1913 and two males, three females reared from coccids on custard apple, Stapleton, N.T., February 4, 1913 (G. F. Hill). A common species.

2. ANERISTUS DIABOLICUS new species.

Of the same appearance and stature as fumosipennis but differing in the spot on the fore wing which is shorter, its proximal margin straight (not oblique as in the other species), its conical projection distad shorter, a flat convexity rather than a truncated cone and the spot is therefore a little wider than long rather than somewhat wider than long. Also the scape and cephalic knees and tibiae are white and all of middle tibiae except slightly just distad of knee (in fumosipennis, the proximal half of middle tibia is black). Finally, funicle 1 is barely longer than wide, 2 and 3 somewhat wider than long. Compared with types of fumosipennis.

From one female caught by sweeping at Halifax, April, 1914 (A. P. Dodd).
Habitat: Halifax (Ingham), Queensland.
Type: No. Hy 2961, Queensland Museum, Brisbane, the female on a slide.

THERE PTEROPTRICINI.

APTEROPTRIX new genus.

Differents from Archenomus Howard in that the club is 3-jointed, the first and second funicle joints are not ring-like and the marginal cilia of the fore wing are long.

1. APTEROPTRIX ALBIFEMUR new species. Female. Genotype.

Differents from the second species in that the legs are white except the coxae and the hind femur above at middle, there is no hairless line back from the venation, the wing is less distinctly infuscated caudad of the venation and the mandibles are bidentate. Funicle 1 and 2 subequal, somewhat longer than wide, 3 slightly longer and subequal to the pedicel, Club well defined. Club joints each longer than the pedicel. A naked space distad of venation in both species.

Described from one female captured by sweeping in forest.
Habitat: Gordonvale (Cairns), Queensland.
Type: No. Hy 2962, Queensland Museum, Brisbane, the female on a slide.

2. APTEROPTRIX NIGRA (Girault).

Costa nigra Girault. Anteia, p. 198, line 2 following the description the words the male of Casca agrees with the female of Archenomus should be omitted. The female antennae were erroneously described, there being three funicle joints of which 2 is intermediate between 1 and 3, the latter longest, a little longer than wide. The club is distinctly 3-jointed. Type re-examined.
MEMOIRS OF THE QUEENSLAND MUSEUM.

GENUS ARCHENOMUS Howard.

Antennae 8-jointed, the club apparently 2-jointed; funicle joints 1 and 2 very short, 3 and 4 each longer than 1 and 2 together. The following species is, more or less, doubtfully included.

1. ARCHENOMUS BIGUTTATUS new species.

Female:—Length, 0.77 mm.
Black, the scutum and scutellum silvery white, the former with a large, wider than long black area from cephalic margin across meson of more than cephalic third; axilae black, forming a lateral pair of roundish spots on middle of thorax. Scutellum (apparently) with a narrow lateral groove. Cephalic femora, cephalic and intermediate tibiae and the tarsi whitish; tips of caudal tibiae whitish; antennae pale yellow, the scape and pedicel black. Fore wings with a distinct dusky stripe across from the marginal vein, the stripe accentuated just caudad of apex of vein, the latter rather thick, distinctly shorter than the submarginal and practically truncate at apex, the stigmal vein obsolete. A naked area on fore wing just disto-caudad of apex of venation. Marginal fringes of fore wing tolerably short, not more than a fifth the greatest wing width, shorter than the caudal fringes of the hind wing; the latter with a pair of lines of discal cilia which fade distad, the base of the blade infuscated. Vertex yellowish. Eyes bulging, coarse, round. Flagellum filiform, no distinct club, the second funicle joint like a thick ring-joint, not half the length of the small pedicel, the other flagellar joints long, subequal, each somewhat over twice longer than wide and longitudinally striate. Mandibles broadly truncate but with a median sinus. Scape only slightly longer than funicle 1. Antennae 9-jointed, with the ring-joint.

From one female caught in forest, May 15, 1914 (A. P. Dodd).
Habitat: Chinderah (Tweed River), New South Wales.
Type: No. Hy 2963, Queensland Museum, Brisbane, the female on a slide.

NEOCASCA new genus.

Female:—Diffs from Bardisia Howard in bearing a ring-joint in the antenna and in having the fore wings normal, that is, not long and curved and without long marginal cilia. Marginal vein distinctly much shorter than the submarginal. No hairless line. Middle tibial spur small. Ovipositor inserted a little proximad of middle of abdomen. Scutellum distinctly wider than long. Marginal vein nearly thrice the length of the short stigmal. A short phragma present.

1. NEOCASCA MULTIGUTTATA new species.

Female:—Length, 0.68 mm.
Golden yellow, the abdomen pale yellow, the wings hyaline, the legs concolorous, the antennae a little dusky. Hind femur at proximal half and the coxae washed with dusky. A flat triangle on pronotum at meson, the axilae (or at least a large elliptical spot apparently upon them or covering them) and most of mesopleurum, jet black. Abdomen broadly dusky down the meson and with five marginal spots from base to apex, dusky black. Legs pallid, also the venation. Fore wings with about 22 lines of minute, rather dense discal cilia. Proximal joint of middle tarsi distinctly longer than the others. Antennae inserted not far from the mouth, 8-jointed, the funicle 2-jointed, the club distinct, longer than the funicle whose joints are a little longer than wide (joint 1) and somewhat wider than long (2); pedicel a little longer than funicle joint 1. Scape moderate. Mandibles bidentate, the second tooth obliquely truncate, broad.

From one female caught in forest, April 16, 1914 (A. P. Dodd).
Habitat: Cloneurry, Queensland.
Type: No. Hy 2964, Queensland Museum, Brisbane, the specimen on a slide.
AUSTRIAN HYMENOPTERA CHALCIDOIDEA, VII.—GIRAUT.

I have frequently mistaken members of this group for true encyrtids. Several genera in the Taneostigmus resemble genera in this group very much and there are seemingly intergrading forms. In the cases of species of Aphelinus, Cocophagus and Phyllocus I have been puzzled in regard to which group they should be classed. The Aphelinae frequently have the mesopleurum entire, the antennae are inserted below the middle of the face, the middle tibial spur is frequently elongate (but usually slender), the mandibles are 2- or 3-dentate, the form short and compact and the tarsi usually 5-jointed. Four-jointed tarsi are not exceptional in the Encyrtidae. The wings here are frequently with an oblique hairless line, ring-joints are usually absent, jumping is usual and the hosts are coccids. Moreover, the variety of form and markings is great.

These characters certainly approach very closely those of the Encyrtidae.

A minute, wingless male of the Aphelinini, with antennae about as in Eremocerus, is native to the jungle of North Queensland.

**Subfamily SIGNIPHORINÆ.**

**Genus SIGNIPHORA Ashmead.**

1. **SIGNIPHORA AUSTRALIENSIS** Ashmead. Female; male.

I give the recent review of this species in my A Systematic Monograph of the Chalcidoid Hymenoptera of the Subfamily Signiphorinae (Girault, 1913).

*Signiphora australiensis Ashmead, 1900, pp. 409, 410.

The original description of this species is exactly as follows:

**Female.**—Length, 0.00 mm. Æneous black, the mesonotum with a bronzv tinge, the surstylum with a slight bluish tinge; legs black, a spot on knees and tarsi white or yellowish white, the anterior tibia yellowish beneath; wings fuscesc with a hyaline band across the disk from apex of the marginal vein.

**Type.**—Cat. No. 4771, U.S.N.M.

**Habitat.**—Australia (Albert Koebele, collector).

**Host.**—Rhynch.; Sp. not identified.

By studying the types I am enabled to offer the following additional descriptive details:

Like *nigra* but differing coloritionally in that the head and thorax are metallic to some extent, the vertex and mesonotum distinctly metallic green (but not in balsam mounts), the latter finely transversely lined; body finely polygonally sculptured, including the abdomen (the sculpturing not distinct in balsam mounts); the fore wings differ as described—they are embrowned throughout, but somewhat distal of the middle there is a broad clear band, subescent in shape and touching the costal margin at the apex of the stigmatal vein. This area is broader at the caudal margin than at the cephalic one, barely reaching the latter; the stigmatal vein differs in that it is like a short conical prolongation bending off slightly from the marginal; thus it is short and much broader at its point of origin than is the case with that of *nigra*. Like *nigra*, there is also a clear area proximal, but this is somewhat more prominent with this species. (See beyond.) The male is like the female.

The species has not been mentioned again in the literature; it is variable as will be shown later.

I have studied the following specimens: The tag-mounted types now remounted in xylool-balsam; these were and are labeled *Signiphora australiensis* Ashmead, female. Type No. 4771, U.S.N.M., Australia. Koebele, 12.’ The type consists of three females. Also a slide from the collections of the United States Department of Agriculture, Washington, District of Columbia, bearing 2 males and 12 females and labeled '1849. Acanthocephoid on Eucalyptus, Gosford, N.S.W., Nov. 1899. A. Koebele.' These specimens varied considerably in the fumation of the fore wing and in the length of the marginal fringes. In all of them the latter were distinctly shorter than in the type specimens, while the majority of the specimens
showed the clear, subhyaline band at the middle very indistinctly, not clear cut as in the
type specimen excepting with several of them. Casually, in most of these specimens, the fore
wings appeared to be fumated throughout, the cloudiness gradually fading out distal. I have
since captured a female specimen of this species on a window of a barn at Roma, Queensland,
October 6, 1911.

*Habitat.*—Australia—New South Wales (Gosford); Queensland (Roma).

*Host.*—Acanthocoeid on Eucalyptus.

*Types.*—The three females as indicated in foregoing.

A female was taken from a window, November 2, 1912 at Proserpine, Queensland. The
propodeum is delicately polygonally reticulated.

**A. SIGNIPHORA AUSTRALIENSIS ORBICULATA** new variety. Male.

Differs from the typical form in that the distal fumation of fore wing consists of a
large circular spot centrally, the surrounding portions hyaline.

*Habitat.*—Gordonvale (Cairns), Queensland.

*Type.*—No. By 2965, Queensland Museum, Brisbane, the specimen on a slide.

**2. SIGNIPHORA ASPIDIOTI** Ashmead.

The recent treatment of this species is also quoted from Giraude (1913).


On the same page that *cogilletti* was described, Ashmead described a new species under
the name of *aspidioti* in the manner quoted below. This species is identical with *cogilletti*
structurally, but differs in that the distal half of the antennal club is dusky, a phenomenon not
observed in the series of specimens of *cogilletti* examined by me but which would be expected
to occur in a number of specimens if it was merely an incidental variation. I cannot do
otherwise than consider *aspidioti* valid. Its original description was in this manner:

*Female.*—Length, about 0.50 mm. Lemon or golden-yellow, head faintly dusky above;
apical half of antennal club, anterior half of mesonotum, and a broad transverse band at
base of abdomen, including nearly half its length, dark brown; wings with a broad fuscous
band, as in previous species.

*Type.*—Cat. No. 4859, U.S.N.M.

*Habitat.*—Mexico: San Luis.

*Host.*—Rhyech: *Aspidiotus serici* Bouché (＝ *hederæ* Vail.). Bred November, 1894 by
Tyler Townsend.

Besides the type specimen, I found another female specimen of it in the collections of
the United States National Museum labeled '47032. Bred from *Aspidiotus serici* (＝ *hederæ*
Vail.), San Luis, Mex., November, '94.' This specimen is evidently an original one. I have
labeled it as a homotype. The antennal club in *aspidioti* is more clavate and longer than that
of *cogilletti* apparently. The single type female is labeled as the specimen just noted,
and, additionally, '4859,' the type number.'

Two females were taken from windows, Gordonvale (Cairns), Queensland, August 3 and
October 9, 1912. This is the first Australian record. Later, a female was captured from a
window of an empty dwelling at Ingham, Queensland, in February, 1913.

**3. SIGNIPHORA RETICULATA** Giraude. Female.

The original description of this species is quoted.

'4 Length 0.80 mm. Moderate in size for the genus.

Black, the head and thorax dark metallic green, the wings perfectly hyaline, with no
proximal fumation. Venation, legs and antennæ brownish black. Proximal three tarsal joints
and much of the cephalic tibia, yellow. Mesonotum and vertex, finely, transversely lined.
Abdomen, the rectangular (wider than long) scutellum, the transverse mesopostscutellum and
the triangular propodeum all similarly distinctly polygonally reticulated. Discal bristle absent. Stigmal vein conical. Marginal fringes of the fore wing very short, those of the posterior wings slightly longer, the latter wings very broad, where widest full three-fourths the width of the fore wings. Antennal club conic-ovate and moderate in length."

Described from a single female specimen captured in forest, November 6, 1912.

_Habitat_: Ayr, Queensland. Also, Gordonvale, forest, January.

_Type_: No. Hy 1281, Queensland Museum, Brisbane, the specimen on a slide.

"Belongs to the nigra group and to that section of it where the marginal fringes are very short. Closely allied with the Australian species _corvina_ Girault from which it differs in bearing hyaline wings, narrower fore wings and in being much less robust. The species _fusceralis_ has decidedly longer marginal fringes and its wings are deeply fumated throughout."

A second female was captured in the forest at Gordonvale in January.

4. **SIGNIPHORA FUNERALIS** Girault. Female.

This species was recently described in the following words (Girault, 1913).

"Length, 0.55 mm.; moderately small for the genus. General color uniformly black, slightly suffused with brownish and distinctly metallic on head and mesoscutum, the metallic coloration being bluish green; antennae and legs nearly concolorous, sooty black, the tarsi pallid yellow. Eyes dark red. Fore wings distinctly fumated throughout, but the sootiness gradually deepens proximad; there at the caudal wing margin caudal of the distal portions of the submarginal vein is a longitudinal clear area, subrectangular in shape.

Belongs to the nigra group and to that section of it including those species bearing short marginal fringes at the apex of the fore wing, namely, _nigra_ Ashmead, _australiensis_ Ashmead and _dectylophi_ Ashmead, and more closely allied with the first. However, it differs from it as follows: The fore wings are fumated continuously throughout, the body bears metallic coloration, the marginal fringes of the fore wing at apex are somewhat shorter. With the two other species it need not be confused. As concerns the other species of the nigra group, namely _necchi_ Ashmead, _maxima_ Girault, _pulchra_ Girault and _nigrella_ Girault, _fusceralis_ should not be confused, since all of these species bear much longer marginal ciliation on the fore wings; specifically, in general coloration it differs from all of these species excepting _pulchra_ because the fore wings are nearly uniformly fumated throughout; from _pulchra_ it may be distinguished also by means of the pallid tarsi, the broader wings, the absence of the discal bristle and so on.

Antennal club not unusually long, conic-ovate and about four times longer than its greatest width; fore wings moderately broad, their longest marginal cilia somewhat less than half their greatest width; discal bristle absent. Posterior wings moderate in width, not as wide as their longest marginal cilia. Oblique hair-line crease of fore wing slightly indicated, present but faint."

_Habitat_: Herberton, Queensland. December 28, 1911.

_Type_: No. Hy 771, Queensland Museum, Brisbane, the single female on a slide (with several trichogrammatids and an _Anagrus_).

5. **SIGNIPHORA CORVINA** Girault. Female.

I quote from Girault (1913).

"Length, 1.10 mm.; large, robust.

General color deep black, tinged on the head and thorax with metallic bluish green, the whole of the mesonotum thus colored; legs, antennae and venation brownish black, but the tarsi and cephalic tibiae interiorly yellow brown. Fore wings hyaline excepting along about the proximal half, or out not quite to the end of the venation. The stained proximal area of the wing is peculiar; thus its distal margin is obliquely (caudo-proximad) truncate, the caudal
midlongitudinal (nearly) half being more clear. Hence, somewhat as in melanchoicer, the
venation is under the venation extending caudal somewhat beyond the midlongitudinal line of
the blade. It is longer, however, than the clouded area of the species named. Distal tarsal
joints only slightly darker.

Belongs to the nigra group and to that portion of it including funerals, australis, nigra, and
dactyloptai but is more closely related to the last named two. It differs from
nigra in that the fore wings are fumated somewhat farther distal (nearly to the apex of the
stigmatic vein), the body is metallic on the head and thorax, finely, transversely lined at the
mesonotum and more robust. From dactyloptai it differs as much as it does from nigra;
however, the fumation of the fore wing does not form a band across the wing from the
marginal vein but is quite different and distinct.

The fore wings are broad, their marginal cilia very short, subequal in length to the
stigmatic vein, somewhat shorter at the apex; oblique crease slightly indicated; disesi bristle
absent; stigmatic vein straight, a conical prolongation of the marginal vein. Posterior wings
very broad, two-thirds the width of the broad fore wing, which is only twice longer than
broad.

Marginal fringes of posterior wings subequal in length to those of the fore wing.

Mandibles bidentate. Proximal joint of cephalic tarsus only half the length of the same
joint of the caudal tarsus. Antennal club stout, conic-ovate, bearing a number of short longi-
tudinal sulci, which are arranged in three circular groups along the joint, giving the appearance
(usually) of three joints; the club only about two and a half times longer than wide (its
greatest width at apex of proximal third)."'s

Habitat: Roma, Queensland. October 6, 1911.

Type: No. Hy 772, Queensland Museum, Brisbane, the single female on a slide.

6. SIGNEDPHORA AUSTRALICA Girault. Male.

The following summarizes all that is known of this species (Girault, 1913), except two
locality records added later.

"Length, 0.54 mm.; moderately small for the genus.

General color black, the vertex and mesonotum metallic bluish green, the antennae,
venation and caudal femur sooty black, the tarsi and remainder of legs pallid yellowish, the
distal tarsal joint not much darker if at all; fore wings fumated throughout, the proximal
fumation (out nearly to the end of the marginal vein) deeper, the whole divided somewhat
distal of the middle of the wing by a moderately broad subhyaline band which is nearly
regular in width and joining the costal wing margin at the end of the stigmatic vein; the
fore wing is also clear directly beneath the submarginal vein for nearly its whole length.

Belongs to the nigra group and that section of it containing those species bearing
marginal cilia at the apex of the fore wing which are subequal to or longer than a third of
the wing's greatest width, hence allied with maxima Girault, pulchra Girault, soaei Ashmead,
and nigrella Girault. However, resembling australis Ashmead and at first mistaken for that
species; the transverse clear band is somewhat farther distal (on the costal margin half or
more of it extending beyond the apex of the stigmatic vein), more uniform and not coming to a
point at the stigmatic vein; the longer marginal cilia of the fore wing in australis, the narrower
fore wings, the pallid legs and other characters easily distinguish the two species. Of the four
species with which it is allied, it resembles, perhaps, pulchra more than the others because of
its moderately narrow fore wings, but the discal bristle is absent and the oblique hair-line-like
crease but slightly indicated; the legs are much lighter in color. The species need hardly be
confused with any other species of the genus, even its closest allies.

Fore wings with the marginal cilia moderately long, those at apex only about slightly
over a third of the greatest width and slightly longer than the apical marginal cilia of the
posterior wings; stigmal vein forming a regular conave curve with the inner edge of the marginal vein at its apex, but the curve is not as deep as usual. Posterior wings moderately broad, subequal in greatest width to their longest marginal cilia or slightly more or less than subequal. Antennal club long and moderately stout, spindle-shaped, slightly over four times longer than its greatest width which is near its middle, with no regularly grouped or prominent longitudinal sulci."

*Habitat*: Gordonvale (Cairns), Queensland. Two males, December 4 and 21, 1911.

*Type*: No. Hg773, Queensland Museum, Brisbane, one male on a slide.

A female at Mackay, Queensland, October 19, 1911, and one at Gordonvale (Cairns), January, 1912. In the latter all the femora were dark.

7. **SIGNIPHORA RECTRIX** new species. Female.

Length, 0.54 mm. Like *aspidioti* Ashmead but the antennal club wholly dusky, the cephalic two thirds of scutum dusky while the abdomen at proximal half is only obscurely dusky, hardly noticeably so, not conspicuously as in *aspidioti*. Also, the fore wings are somewhat narrower, the longest marginal cilia slightly longer than the wing where widest. Legs conceolous. Discal bristle absent.

*Habitat*: Kuranda, Queensland. Forest.

*Type*: No. Hg2966, Queensland Museum, Brisbane, the female on a slide.

8. **SIGNIPHORA PERPAUCA** new species. Female.

Length, 0.69 mm.

Differs from *fascella* Girault in having the pedicel long and slender, about four times longer than wide at tip and from *flava* Girault in having only the abdomen suffused with orange or pinkish, the club pallid, distinctly capped with dusky; and from both in having the cephalic fourth of the scutum dusky black, the fore wings only light brown and solely so under the marginal vein. Discal bristle absent.

*Habitat*: Seymour (Ingham), Queensland. Forest, February 20.

*Type*: No. Hg2967, Queensland Museum, Brisbane, the female on a slide.

9. **SIGNIPHORA THUSANOIDES** new species. Female.

Length, 0.95 mm.

Like *dactyloprii* Ashmead but the fusous stripe across the fore wing is farther distad, nearly half way between apex of venation and apex of blade but a little proximad of half way. Marginal cilia around apex of fore wing a little shorter than the stigmal vein. Proximal joint of hind tarsus a little shorter than the same joint of intermediate tarsus (the two equal in *dactyloprii*). Cephalic tibiae pale yellowish. Mesonotum finely transversely lined. The stripe across the fore wing is rather broad, its lateral margins broken. Discal bristle absent. Hind wings very broad, over half the width of the fore wings. Mandibles bidentate. *Four ring-joints*. Club thrice longer than broad.

*Habitat*: Gordonvale (Cairns), Queensland. Forest, December 2, 1913.

*Type*: No. Hg2968, Queensland Museum, Brisbane, one female on a slide.

10. **SIGNIPHORA BEETHOVENI** new species.

*Female*:—Length, 1.10 mm. Rather robust.

Dark metallic green, the four proximal tarsal joints pale yellow. In my table of the earth’s species (Girault, 1913) runs to *maxima* Girault from which it differs in that the fore wing bears a distinct smoky cross-stripe from whole of the marginal and stigmal veins, otherwise hyaline. The distal margin of this cross-stripe is more or less obscurely but deeply incised at middle and at the proximal margin at caudal half a hyaline indentation of rectangular shape (longer than wide cephalo-caudal). Marginal cilia at apex of fore wing not quite twice
the length of the stigmal vein, about a third of the greatest wing width. Discal bristle absent. Thorax transversely, finely lined. Caudal wings somewhat wider than their longest marginal cilia, about two thirds the width of the fore wing. Three ring joints. Mandibles bidentate.

From one female taken by sweeping forest on sand ridges near coast, May 9, 1914 (A. P. Dodd).

**Habitat:** Chinderra, New South Wales.

**Type:** No. 12399, Queensland Museum, Brisbane, the specimen on a slide.

Dedicated to Ludwig von Beethoven.

In this genus I have met with a striking case of parallelism but unfortunately the record was lost. However, a species captured in virgin jungle at Gordonvale, Queensland agreed in every detail with the description of a West Indian or South American species and it is hardly likely that the two can be the same species but rather similar forms developed from the same parent stem. Cases of this kind in other genera of this and other families are not extremely rare. For example, *Aphelius fusciennis* Howard, an extremely common species in the cultivated orchards of North America, is duplicated by specimens reared from native cocoons in the forests or bush of North Queensland. It is not likely that the Queensland specimens are really correctly identified as fusciennis. There may be differences not yet seen but these differences do not seem really a necessity. The species may have been introduced into North America, not improbable in this particular case. Parallel development of species groups in genera is still more marked and cases of this are common.

**SUBFAMILY EGYNTINÆ.**

**THERE AMIRINI.**

**Male and Female:**—Mandibles absent; postmarginal vein absent, the marginal vein punctiform, the stigmal well developed; posterior tibiae with two spurs. Otherwise like the Mirini. Costal cell wide, its margin convex.

**GENUS AMIRA** Girault.

**Female:**—Head from cephalic aspect rounded, the frons narrow, the antennae inserted near the elytra, the scrobes separate, converging above, the head punctured, the punctures minute. Lateral ocelli nearly touching the eyes, the latter convergent. Thorax punctured like the head. Abdomen flat, short, from above triangular, no longer than the thorax; the hypopygium small, the ovipositor not exerted. Wings hyaline, the venation not quite attaining the costa, the long submarginal vein approaching the costa gradually, then turning off to form the stigmal. Axillae meeting inwardly. Second abdominal segment short, barely longer than the following three segments. Antennae 12-jointed, capitulate, the scape somewhat convexed beneath, the pedicel long, nearly half the length of the funicule, about three longer than wide at apex, the distal funicule joints much wider than long, the first joint of the funicule subquadrate; one very short ring-joint, the club 3-jointed. Fore wings with a short hairless line from middle of stigmal vein; the same not much obliterated. Frons arched or convex, the scrobes not very long.

**Male:** About the same but totally different in color and the pedicel much longer, as long as the funicule.

1. **AMIRA FABREI** Girault. **Female**; male. Genotype.

**Female:**—Length, 2 mm. Robust.

Shining black, the wings hyaline, the intermediate tibia toward tip and tarsi brown. Head and thorax besides the pin-punctures, densely finely scaly, the abdomen also densely scaly. Discal ciliation of fore wing dense. Scutellum densely longitudinally lineolated or nearly.

**Male:**—Length, 1.80 mm.

Like the female but all the sides and venter of thorax and the legs, the head and antennae, the scutellum except a spot along the meson at apex, the axillae and the sides of
sextum centrally (invasion from the pleurum), lemon yellow; tarsi brown. Antennal pedicel elongate, longer than the scape which is more convexed than in the female, the latter with all the joints distinctly wider than long and more or less equal. Antennal club darker. Lateral ocelli somewhat farther from the eye than in the female.

Habitat: Gordonvale (Cairns), Queensland. Forest. Reared from a spider’s egg-sac.

Types: No. Hy 2570, Queensland Museum, Brisbane, two pairs on separate tags (four pins) and a slide with female fore wing and heads.

Tribe ARRHENOPHAGINI.

ARRHENOPHAGOIDEA new genus.

1. ARRHENOPHAGOIDEA COLORIPES new species. Female. Genotype.

Length, 0.85 mm. Differs from the genotypel of Arrhenophagus Aurivillus in bearing 5-jointed tarsi. The antennae are 5-jointed, quite as in Arrhenophagus—scape, pedicel and 3-jointed club, the proximal two joints of the latter transverse-linear, the third joint four times their united length. Differs from Rhopoidas Howard in the shorter form, the lack of an oblique hairless line on the fore wing and in the short, thick antennae. The species is similar in every respect to Arrhenophagus chionaspis Aurivillus excepting that the legs are all concolorous except the knees, tips of tibiae, tarsi, the intermediate legs and the cephalic tibiae which are yellowish. Also the middle tibial spur is stouter. No yellow on body.

Habitat: Ingham, Queensland. February 17, 1913.

Type: No. Hy 2571, Queensland Museum, Brisbane, the single female on a slide.

The frons is broad, no substinal spot but a marginal vein is indicated by a slight knot or swelling, which gives off a short, acute subgenual vein. The venation does not reach the costal wing margin. Middle tibial spur distinctly swollen or thick as normal. Hairless line of fore wing apparently absent. Type re-examined.

A second species has been seen either from southern or western Queensland but unfortunately it was mislaid and I could not describe it from the parts mounted on a slide. The hind tibiae were white, the fore wing with a more or less obscure hairless line and substinal spot.

Genus ARRHENOPHAGUS Aurivillus.

1. ARRHENOPHAGUS CHIONASPIS Aurivillus.

According to Schmiidtneck (1909) Ashmead records this widely distributed species from Australia. I give its principal characteristics.

Tarsi 4-jointed; antennae as in Arrhenophagoidea; fore wings without an oblique hairless line, the marginal, postmarginal and subgenual veins absent; marginal vein represented by a circular fumated spot. Shining black, the disk of abdomen with some yellowish dorsad. Antennae honey yellow, also the legs but dorsal aspect of caudal legs blackish and most of cephalic femur. A small yellow area just cephalad of tegula; a moderately broad, yellow fascia on upper face (on or near caudal margin of vertex). Mesothorax scaly but the scutellum finely, delicately longitudinally striate. Wings hyaline. Mandibles acute. Tibial spurs all small. Widely distributed—Europe, Asia, North America and Australia. I have seen specimens from Java and Porto Rico (West Indies). Parasite upon various coecid of commercial importance.

Tribe ENCYRTINI.

It is unfortunate but it is to be feared that this tribe will break down and fuse with the Ectromini. Species of the genus Eniasella Girault sometimes have bidentate mandibles. Crustairiithorax Girault is exactly similar to Chelioneurus Westwood yet in different tribes. Two Australian genera are described with 4-dentate mandibles. Careful comparison of the genera of the two will show still other marked parallelisms. In the great majority of cases no doubt has been experienced as to the dentation but doubt exists as to the meaning of the
latter. Either parallel evolution has been at work or there is no basic reason for separation or else the characteristics of the two groups have been overlooked. The number of tibial spurs on the caudal legs seems to be without significance. I have used the tribal separations for the present. My own table is not a good one and is used here for descriptive reasons only. It was compiled before I was able to use Ashmead’s table and also because some group characters used in that table seem to me very trivial, e.g., sculpture. Some of the old genera are very indefinite and hardly valid.

**Genus Echthrobaccha** Perkins.

With the labialis of the extromine *Echthrobryginus* Perkins but the head is rather more mentisciform, the front between the eyes is much wider, the system of large punctures on the head is much more distinct, the punctures larger, not dense, sparser toward the facial impression. The maxillary pulpae are longer, the fourth joint much more elongate. The ocelli form more of an equilateral triangle, the caudal ones well separated (but not much) from the eye margins. The marginal vein is rather longer. Mandibles tridentate, the inner tooth broadly truncate. Antennae usual. Oblique hairless line wedge-shaped, not reaching the marginal vein. Post-marginal vein short.

1. **Echthrobaccha Injursosa** Perkins. Female. Genotype.

Length, 1.25 mm.

Head black, faintly metallic, with evident large, shallow punctures scattered over the front, most numerous about the ocelli; funicule joints increasing slightly and gradually in width from 2 to 6. Mesonotum shining, finely distinctly punctated and clothed with short dark hairs and black with metallic greenish tints. Scutellum dark at base, finely punctured, clothed with short hairs and with a few scattered, long and erect ones. Mesopleura black with a purplish lustre. Wings hyaline, uniformly ciliate. Abdomen triangular, with a purplish lustre. Antennae sordid yellow, the club generally entirely dark. Tibiae and tarsi yellow, the front and hind femora usually blackish for the most part.

*Habitat*: Cairns, Queensland. Parasitic upon *Baccha*.

*Type*: Query.

**Genus Ectopiognatha** Perkins.

Head moderate, lower face much inflexed, frontal space between the eyes moderately wide; eyes with short, pale hairs. Fronto with a dense microscopic sculpture and more or less evident traces of faint, sparse punctures. Ocelli apparently in an equilateral triangle, the caudal ones separated slightly from the eyes. Mandibles broad, with three distinct teeth and an inner angulation resembling a more minute fourth one. Maxillary pulpae very short, 4-jointed. Antennae 11-jointed, the club ovate, 3-jointed, the scape much dilated ventrad, the pedicel long; funicules 2 and 3 smallest, a little wider than long; club about two thirds the length of the funicule. Mesonotum with very fine surface sculpture and scattered feeble punctures which are setigerous. Axilae separated at meson. Wings with short marginal cilia, evenly ciliate, the hairless line present. Marginal vein a little longer than wide, dilated, the postmarginal indicated, the stigmatic distinct, somewhat shorter than the marginal. Abdona short, sub-triangular, depressed dorsad, with a fovea on each side toward the base and which bears very long setae, often so closely oppressed as to be visible only on careful examination. Ovipositor barely extruded.

1. **Ectopiognatha Minor** Perkins. Female. Genotype.

Length, 0.75 mm.

Head metallic green, the scape black, rest of antenna pale yellow except the dark distal half of club; mesoscutum brilliant metallic ances, pilose, shining, the scutellum usually darker,
more coppery; mesopleura shining purplish. Legs almost wholly whitish. Abdomen yellowish, bordered with dark. Wings hyaline.

Habitat: Cairns and Townsville, Queensland. Parasitic upon eggs of Siphantha.

Types: Query.

2. ECTOPHIognatha MAJOR Perkins. Female.

Length, 0.75 mm.

Head in front coppery, more brassy above, dull, with dense minute sculpture, the scape black, rest of antenna pale, the distal part of club subinsectate. Mesonotum slightly shining, very faintly sculptured, blue-black; scutellum hardly metallic except at tip, where in some views it is shining coppery. Legs whitish. Abdomen yellowish with a dark border.

Habitat: Cairns, Queensland. Parasitic on eggs of Platymbrochys or an allied genus. And see below.

This is a synonym of the first species.

Many females, several males which were all dark metallic purple in coloration were reared together with an Apelinus from pentatomid eggs on Coreya australis at Gordonvale, April 7, 1913 (A. P. Dodd). The fore wings are very finely ciliate discally; the males are like the females except that the scape is pale, thick but not dilated, the club solid, a ring-joint present; funicule joints longer than wide, 3 longest, 1 and 6 subequal, somewhat longer than wide. Funicule joints clothed with scraggly, rather long hairs. The pedicel is scarcely longer than wide. The female antenna also bear the very short ring-joint.

Also many specimens from leafhopper eggs on Eucalyptus platypylla, Gordonvale, January, 1913 (A. P. Dodd) and from similar eggs on banyan, Townsville, Queensland, October, 1911 (A.A.G.). And several specimens from Mr. F. P. Dodd labelled "Fulgorid ova and parasites." One female, Cooktown, Queensland, February, 1912, window. One female from forest, Gordonvale, January 5, 1914 and August 3, 1914. Also three females, four males, from foliage of a wild citrus plant, October 30, 1911 and on egg-masses of a white jassid on same tree." One female, February 26, 1913, sweeping along Herbert River, Halifax.

GENUS ECHTHROGNATOPUS Perkins.

Head shaped much as in Echthrognatus Perkins, the face inflexed, the eyes large, the least space between them much less than the width of an eye; between the eyes the face with very minute surface sculpture; lateral ocelli near the eyes, the latter sparsely hairy, the hairs inconspicuous. Antennae inserted far below the middle of the face, the crosbes elongate, the scape simple, elongate, the club large, about as long as the funicule, the joints of the latter wide and short; antennae 11-jointed, the club 3-jointed. Pedicel over a third the length of the funicule. Mandibles with three strong acute teeth. Maxillary palpi 4-jointed, moderately long, the distal joint longest; labial palpi 3-jointed, about half as long as the maxillary. Axilla approximate. Mesoscutum with short, white, decumbent hairs, the scutellum with a very dense sculpture, very dull, contrasting with the metallic and finely punctured scutum. Oblique hairless line present on fore wing, the stigmatic vein short, the marginal subequal, the postmarginal slightly developed; marginal cilia short.

The eyes are much smaller in the male, the space between them wider than one of them; the male face is metallic like the scutum, the antennae much more elongate, the funicule joints elongate, the first subequal to the pedicel, the club subequal to the distal two funicule joints and solid.

* Babinda, Queensland.
1. **ECHTHROGONATOPUS EXITIOSUS** Perkins. Female; male. Genotype.

Length, 0.87 mm.

Head with greenish or other metallic lustre, the front microscopically sculptured, rougher about the ocelli and with traces of larger, shallow punctures. Antenna black, the club wide, flattened, subequal to the funicle. Scutum somewhat shining smooth in some aspects, finely punctate. Scutellum black, dull but the extreme apex conspicuously metallic; mesopleura purplish black. Abdomen shining brassy, coppery or purplish metallic at the base, black distad. Legs pale yellowish. Funicle 0 largest, wider than long, 1 a little longer than wide, 2 and 3 subquadrate, 4-6 enlarging.

Male scape pale; funicle 6 longest, 4 and 5 subequal, slightly shorter than 6, distinctly longer than 1. Funicle bearing long hairs directed cephalad.

Habitat: Brisbane, Bundaberg and Cairns, Queensland. Parasitic on *Gonatopus* and allied genera.

Type: Query.

**GENUS CHALCERINYS** Perkins.

Diffs from *Echthrogramatopus* Perkins in the metallic scutellum which is sculptured nearly like the scutum. Marginal vein somewhat longer than wide, the stigmal a little longer than it, the postmarginal hardly developed. The front between the eyes is wider than is the case with the genus named. Diffs principally from *Echthrogramatopus* in the relative lengths of the marginal and stigmal veins. Axillas slightly separated, the eyes sparsely hairy. The male has the first funicle joint longest, much longer than the pedicle, joint 6 next longest to 1; the club solid. Also, the eyes are very widely separated.

1. **CHALCERINYS EXIMIA** Perkins. Female; male. Genotype.

Length, 0.75-1 mm.

Metallic green, in places yellowish-brassy, the mesopleura and abdomen black, at most slightly metallic, the antenna testaceous, more or less sordid, the legs yellow except tips of tarsi. Head densely and minutely sculptured and with evident traces of larger, very feeble punctures. Caudal ocelli nearer to the eye margins than to one another. Thorax with very dense, minute sculpture, the scutum and scutellum with similar and inconspicuous pale pubescence, the scutellum smoother and more shining apically. Abdomen subtriangular, depressed.

The male is the same but the antennae are long, the scape and funicle 1 distinctly marked with black, the club slender and elongate, dark or largely so.

Habitat: New South Wales—Sydney; Queensland—Childers and Bundaberg. Parasitic upon *Gonatopus* or an ally.

Type: Query.

**GENUS SARANOTUM** Perkins.

Rather slender and elongate; head (cephalic aspect) subelongate, the eyes moderate in size and diverging apically, the front with dense, microscopical sculpture and sometimes also with very fain punctures. Ocelli in an isosceles triangle, the caudal ones near the eyes and nearer to each other than to the cephalic one. Antenna gradually clavate, the scape simple, elongate, the proximal joints of funicle much narrower than the distal ones, the club small, the pedicel shorter than funicle 1. Maxillary palpi with a very long distal joint which is subequal to the other three united. Labial palpi short, the middle joint extremely short. Scutum with appressed, white pubescence, the scutellum with an erect tuft of bristles. Wings infused at distal half or more, the submarginal vein much decurved before reaching the marginal, the latter long, the stigmal rather short, the postmarginal little developed. Proximal third of fore wing nearly naked; oblique hairless line present. Caudal legs long, slender. Abdomen rather elongate, depressed, the ovipositor barely extruded.

The male is not known.

Apparently allied with *Cheiloscurus* Westwood differing in the longer head, the elongate form and the solid club. Compare *Eusemicrinella*.
1. SARANOTUM AUSTRALIAE Perkins. Female. Genotype.

Length, 1.75 mm.

Head dull, submetallic, the face below the antennae and the scape testaceous or ferruginous; scutellum somewhat shining, anecous; scutellum yellow, the parapsides brown; propodeum very smooth and shining, brassy; mesopleura purple, metapleura with white hairs. Legs brownish yellow or testaceous, the intermediate or caudal tibia and the caudal femora piceous for the most part. Abdomen brassy at base, otherwise brown. Fore wing with a small proximal cloud and another over more than the distal half but the extreme tip and two minute, obscure spots (one at tip of marginal vein, the other nearly opposite) more or less hyaline.

Habitat: Bundaberg, Queensland. Parasitic upon Pseudogonatopus.
Type: Query.

METALLONELLA new genus.

1. METALLONELLA AUSTRALIENSIS new species. Genotype.

Female:—Length, 0.80 mm.

Wings fully developed, hyaline, the marginal vein punctiform, the stigmatic short but distinct, the postmarginal absent; first tooth of mandible much shorter than the other two; antennae inserted at the mouth border, much as figured for Psylllophagophora tasidixus Crawford but the club is 3-jointed, the antennae 10-jointed, no ring-joint. Copper coloured, the scutellum deep blue. Thorax and abdomen densely scaly reticulated. Axilla just meeting inwardly. Abdomen short, triangular; tarsi yellow. Antennae dark fuscous, the tip of the scape, fifth or last funicule joint and much of club yellowish; pedicle longer than funicles 1-3 united, long oboconical, slender.

Habitat: Brisbane, Queensland. Forest, April 26, 1913 (H. Hacker).
Type: No. Hy 2972, Queensland Museum, Brisbane, the female on a tag, the head on a slide.

2. METALLONELLA LONGFELLOWI new species.

Female:—Length, 0.50 mm.

Dark metallic green, the wings hyaline, the antennae and legs (except hind coxae) pale yellow. Thorax densely shagreened. Valves of ovipositor distinctly extruded for a sixth the length of the abdomen, the latter more or less brownish. Pedicel dark above, stout, as long as the next three joints combined, the first four funicule joints subequal, small, wider than long, like large ring-joints, but 5 is abruptly larger, subquadrate. Club a little longer than the funicle. Differs from australiensis in coloration, in having the ovipositor extruded, the mandibular teeth even, the pedicle not elongate, longer than wide but stout and the club a little longer than the funicle. The teeth of the mandibles are small in both species and both bear an oblique hairless line on the fore wing in the usual position. The head is wider in australiensis; the abdomen of the latter is a little longer than the thorax and acute at apex; also the scutellum bears many short black hairs from very minute punctures; the stigmatic vein is longer also, than in this new species, well developed and the fore wings larger. Compared with type of australiensis.

Described from one female captured January 4, 1913 in the forest.
Habitat: Cuperville (Pentland), Queensland.
Type: No. Hy 2973, Queensland Museum, Brisbane, the specimen on a slide.
Dedicated to Henry W. Longfellow.

The frens is moderately narrow in both species and this character together with the fully developed wings and stronger body separates the genus from Metalon. Also, the body is not very flat or depressed.
EUSEMIONELLA new genus.

See table of genera. Scutellum with a tuft of black hairs at apex; the head is longer than wide, the eyes convergent above, face not noticeably inflexed, the scrobes short, incomplete; head without large punctures. Marginal vein long, over a third the length of the submarginal, over twice the length of the moderate stigmal which is nearly twice the length of the short postmarginal. Oblique hairless line present. Mandibles with three short, subequal teeth. One hind tibial spur. Antennae 11-jointed, slender, the distal funicle joints a little wider than long; funicle partly white.

1. EUSEMIONELLA CRISTATA new species. Female. Genotype.

Length, 1 mm.
Orange yellow, the legs pallid, the hind legs yellowish; scape dusky yellowish, the pedicel and first four funicle joints white, fifth funicle joint whitish at base, rest of antenna black. Abdomen silvery white at proximal third, the rest purplish, conic-ovate, short. Thorax densely shagreened, the scutum subhispid and with obscure thimble punctures. Fore wings with a distinct black spot at the base of the marginal vein, the ciliation denser and coarser over the spot; also with a large, suboval, brownish black area filling center of blade nearly to each margin and about midway between apex of blade and apex of venation.

Habitat: Gordonvale (Cairns), Queensland. Jungle, June 5, 1913.
Type: No. Hy 2274, Queensland Museum, Brisbane, the specimen on a slide.

GENUS OENCYRTUS Ashmead.

1. OENCYRTUS METALLICUS Girault. Female.

Length, 1.10 mm.
Short, compact. Metallic purple with greenish tinges, the scutellum with conspicuous thimble punctures and very finely densely polygonally scaly, the scutellum and face similarly sculptured; vertex and head densely reticulated, the former without thimble punctures. Pronotum very short but wide. Lateral ocelli not quite touching the eyes. Eyes at vertex margined obscurely with ochreous. Venation smoky brown, the fore wings subhyaline but near the middle with a large subhemiispherical chocolate brown cloud extending from margin to margin from the marginal vein, its apex much distal of the end of the stigmal vein and caudad before reaching the caudal margin interrupted by a clear line projected into it; its proximal margin is nearly confluent with the oblique hairless line. Marginal vein punctiform, the postmarginal developed, half the length of the stigmal. Marginal cilia of fore wing extremely short, the discal very dense and fine. Sides of thorax sometimes yellowish. Axillae meeting in an acute point, the scutellum diamond-shaped, caudal with two of the sides forming a hemisphere. Legs yellowish, washed with dusky. Abdomen very short, subtriangular, wider than long. Antennae yellowish white with the distal funicle joints blackish and the scape and pedicel washed with the same color; club not enlarged, the flagellum slightly enlarging distad, the pedicel as long as the combined lengths of the first two funicle joints, the distal two joints longest and widest of funicle, not much longer than wide. Antennae 11-jointed, no ring joint.

Habitat: Roma, Queensland. Eggs of Tara tophros, October 6, 1911.
Type: No. Hy 2375, Queensland Museum, Brisbane, three females on a slide.
A single specimen to a host.

2. OENCYRTUS BICOLOR new species.

Female:—Length, 0.50 mm. Small; valves of ovipositor a little extruded.
Dark metallic blue, the abdomen coppery; sides and center of thorax and abdomen orange yellow; legs pale, washed with dusky; the antennae whitish, the scape a little dusky, the pedicel and funicle 6 blackish. Head orange yellow, the face golden yellow. Fore wings
hyaline but with a dusky blotch across from the distal third or more of the submarginal and whole of stigmatic veins; the cephalic part of this stripe is rectangular, oblique caudo-distad, wider than long (normal position) and is separated from the other much longer than wide, caudal portion (on caudal margin) by an oblique hyaline line; the caudal portion is parallel with the caudal margin and proximal of the axis of the first. About eight lines of distal cilia proximal of the hairless line. Marginal vein punctiform, the postmarginal very short, distinct, the stigmatic moderate, distinct, a little over twice the length of the marginal. Hind tibial spur single, minute. Mandibles with three weak teeth. Axillae narrow, barely separated. Thorax and head scaly reticulate. Scape a little compressed; club shorter than the scape, acutely conic-ovate, about three fourths the length of the funicle or a little more; pedicel distinctly longer than any of the funicle joints which are all a little wider than long but 1 is quadrate; funicle joints gradually widening distad. Frons moderately narrow; head rounded, face inflexed, cheeks a little over half the length of the eyes. Scutellum large. Ring-joint minute.

From one female caught in forest, April 16, 1914 (A. P. Dodd).

Habitat: Conncurry, Queensland.

Type: No. Hy 2976, Queensland Museum, Brisbane, the specimen on a tag, a hind tibia and a fore wing on a slide.

Genus Isodromoides Girault.

Somewhat similar to Isodromus Howard but the marginal vein not punctiform, the stigmatic nearly twice longer than it but not especially long, the pleura of propodeum without dense white pubescence and the antennae bear a ring-joint, the club solid, the antennae 10-jointed. Head (cephalic aspect) slightly wider than long, the scrobes rather short, forming a triangle, distant from the cephalic ocellus, the antennae inserted near the clypeus, the club obliquely, acuminate truncate along one side, not half the length of the funicle where the first joint is cylindrical and as long as the pedicel, the distal joints wider than long but narrower than the club. Scape slender, pedicel long, the ring-joint very short. Eyes somewhat convergent dorsad, the lateral ocelli not quite touching their margins. Axille cuneate, meeting at the meson. Scutellum simple. Abdomen short, triangular, flat above, the ovipositor not exerted. Marginal vein about twice longer than broad, the postmarginal subvestigial, scarcely perceptible; fore wings fumated and with an oblique hairless line. Intermediate tarsi armed beneath with black teeth as in many eupelmine genera but here not quite so densely. Hind tibia with one spur. The two lateral mandibular teeth acute, subequal, the mesal shorter and truncate. Somewhat similar to Meniscocephalus Perkins of the Ectromini.

1. Isodromoides Triangularis Girault. Female. Genotype.

Length, 1.75 mm.

Black, scarcely metallic but the distal margins of the scutellum verdigris green; tips of tibiae and all of each tarsus whitish yellow. Antennae suffused slightly with brownish. Fore wings entirely embrowned except proximal out as far as the end of the submarginal vein, the fumation accented under the marginal and stigmatic veins. Venation brown. Head and thorax densely, finely punctate, the punctures formed by reticulation. Axille smoother.


Types: No. Hy 2977, Queensland Museum, Brisbane, three females on a card; hind legs, antenna, a head and fore wing on a slide.

Mr. A. P. Dodd kindly identified the host, a tined parasitic upon Pulgoridae and whose peculiar habits are described in Novitates Zoologicae, XIII, 1906, pp. 162-189. In the second paragraph of p. 366, it is stated ' The ichneumons all issue from the one hole, and the earlier ones to emerge are finely powdered.'
GENUS ÆNASIELLA Girault.

Head (cephalic aspect) rounded, the facial impression broad but not acutely margined, the scrobes forming a triangle; frons reticulated, without punctures; antennae inserted below the middle of the face, nearly on a line with the ventral ends of the eyes, the cheeks short. Eyes slightly convergent above; lateral ocelli their own diameter distant from the eyes. Vertex and mesonotum with similar sculpture, the mesonotum, however, with sparse thimble punctures; scutum longer than the scutellum. Axillae meeting in an acute point; pronotum short. Abdomen short, pointed-triangular, the dorsum flat, without dense pubescence, the hypopygium extending slightly beyond the tip. Strigiles present; hind tibial spur single. Inner two teeth of mandible subequal, the lateral one a little longer, acute. Fore wing broad, the discal cellation dense, the marginal short; marginal vein punctiform, slightly wider than long, the stigma moderately long, the postmarginal well developed, about two thirds the length of the stigma; oblique hairless line not conspicuous. Antennae 12-jointed with one very short ring-joint, the club 3-jointed; scape clavate, compressed, there being a regular foliaceous dilation toward apex but this is not enormous and fan-shaped as in some genera yet distinct and foliaceous; flagellum clavate, the funicle joints noticeably widening distad, the club thick and oval, wider than but only half the length of the funicle, the latter with 1 and 2 somewhat longer than wide, each somewhat shorter than the pedicel. Pubescence of antenna bristly. Mesonotum densely reticulate in polygons. Eyes longer than the malar space. Frons moderate.

The genus resembles Anagyrus but the club is truncate at apex.

1. ÆNASIELLA BRACHYSCELIDIS Girault. Female. Genotype.

Length, 2.10 mm.

Short, moderately robust. Metallic green, the scutellum aneous, the propodeum and abdomen purplish black. Scape and pedicel black, the club and venation smoky brown, the funicle lemon yellow to brownish but the first joint more or less dusky. Legs ferrigenous except proximal half (or nearly) of cephalic femora, all of the concolorous exum, the dark distal tarsal joint and most of hind legs which are concolorous except at the end of each tibia and the tarsi. An elongate purplish black spot on cephalic tibia lateral. Fore wings with a small, rounded cloud at the base of the stigma vein. Frons imperial purple. Vertex and thorax finely, densely reticulated, the polygonal areas sunk slightly below the surface but not like punctures. Funicle 1 longest, 2 and 3 subequal, quadrate, slightly shorter than 1, 6 twice wider than 1, subequal in width to the widest part of the scape.

Habitat: Brisbane, Queensland. Associated with the gall of a Brachyscelis. October 23, 1911.

Types: No. Hg 2978, Queensland Museum, Brisbane, many females on a card.

2. ÆNASIELLA APIOMORPHÆ new species.

Female:—Length, 1.50 mm.

Same as brachyscelidus Girault but smaller, the antennae, intermediate femora and tibiae and proximal half of cephalic tibiae concolorous, the marginal vein a little longer than wide. Otherwise identical. Scape a little expanded ventrad in both species. Second tooth of mandible broadly truncate.

Male:—The same but the antennae thick, cylindrical, 10-jointed with a ring-joint, the club solid and not greatly longer than the funicle joints which are clothed with not long hairs and longer than the small pedicel; antennae dark brown. Scape slightly compressed. Funicle joints stout.


Habitat: Dandenong, Victoria.

Types: In the National Museum, Melbourne, the above series of specimens on a card. Also 12 females labelled “16. Nat. Mus. Victoria” on a card and 1.14.1900.”
3. ZENASIELLA AMPLIS new species.

**Female:**—Length, 1.35 mm., exclusive of ovipositor which is extruded for a third the length of the abdomen.

Same as *apionomorpha* but somewhat smaller, the ovipositor is distinctly but not longly extruded, the general coloration is dark metallic purple, the knees, tips of tibia and tarsi brownish; also funicle 1 is distinctly wider than long not a little longer than wide as in *apionomorpha*. The obscure thimble punctures are not evident on the face. All the funicle joints here are wider than long, 1 shorter than 2, whereas in *apionomorpha* joints 5-6 only are wider than long, 1-3 subequal, 4 a little longer than 3. Face less distinctly carinate between the antennae.

The male antennae are black and less densely clothed, the hairs thinner and curled; funicle 1 smaller than the others, not as large as the pedicel which is as large as the other funicle joints and subglobular. Compared with types of *apionomorpha*.

In this species the mandibles are more distinctly tridentate.


**Habitat:** North Melbourne, Victoria.

**Types:** In the National Museum, Melbourne, the specimens on a card.

4. ZENASIELLA PALLIDIPES new species.

**Female:**—Length, 1.38 mm., the ovipositor just tipping the abdomen.

Differ from the other species in having the legs pale yellow except coxae, a metallic spot just below knees on middle tibiae dorsad and one at same place on hind tibiae, a longer one on hind tibia before tip (dorsad) and dorsal part of hind femur at distal half or more. Second tooth of mandible broadly truncate. Marginal vein punctiform. General color very dark green, blackish nearly, the antenna concolorous. Epistoma without a carina. Scattered thimble punctures less evident due probably to the back round. Head dark metallic green. Funicle suffused with yellowish, only joint 6 being wider than long, the others quadrate or a little longer than wide.


M. Chapman." Reared from leaf-hoppers.

**Habitat:** Lilydale, Victoria.

**Types:** In the National Museum, Melbourne, the above specimens on a card.

**Genus PSEUDENCYRTELLA** Girault.

1. PSEUDENCYRTELLA FASCIATA Girault. Female. Genotype.

**Length:** 2 mm.

Dark metallic purplish, the legs concolorous, the tarsi yellowish; fore wings with a fuscous stripe across them from the stigma vein; antennae concolorous. Mesoscutum with fine scaly sculpture and dense pin punctures; the scutellum finer, with longitudinal lining, the axillae meeting inwardly. Antennae inserted near the elytral suture, differing from the scape very long, extending far above the elytral suture and more than half the length of the long slender flagellum, whose joints are all more than twice their width; pedicel about two and three quarter times longer than wide at apex, shorter than the first funicle joint; club not enlarged, 2-jointed, the funicle 7-jointed, no ring-joint. Head (cephalic aspect) narrow, longer than wide. Marginal vein scarcely longer than wide, the postmarginal shorter than the stigma. Mandibles with the three teeth about equal.

**Habitat:** Scottsdale, Tasmania.

**Type:** 1.1475, South Australian Museum, one female on a tag; hind leg and antenna on a slide.

The genus differs from *Pseudencyrtus* Ashmead in having the elongate scape, the narrow head, the 2-jointed club and the punctate scutum.
PHÆNODISCOIDES new genus.

1. PHÆNODISCOIDES AUSTRALIENSIS new species. Genotype.

Female.—Length, 1.60 mm.
Bluish black, the legs yellowish brown, the coxae pale, the hind femora pale proximad, washed with bluish along distal two thirds; axillae meeting inwardly, reddish brown. Wings sooty, with a dirty appearance, clear as far out as the bend of the submarginal vein. Antenna 12 jointed with a very short ring joint, the 3 jointed club and the distal funicle joint white, the rest black except the yellow-brown scape; first two funicle joints longest, subequal, each a little longer than the pedicel, cylindrical. Teeth of mandibles subequal, strong but not very long. Postmarginal and stigmal veins equal, each about a third shorter than the marginal. An obscure, oblique hairless line from the base of the stigmal vein. Propodeum with a median carina, opaque, not sculptured, the thorax finely reticulated but the scutellum smoother distad. Head impunctate or nearly, with an obtuse ridge between the antennae. Frons moderate. Palpi white. Funicle 1 nearly thrice longer than wide.

Habitat: Gordonvale (Cairns), Queensland. Forest, April 27, 1913.

Type: No. Hy 2797, Queensland Museum, Brisbane, the above specimen on a tag, the head on a slide.

CERCHYSIEILLA new genus.

Seemingly closely allied with Cerchysius Westwood, the mandibles long and slender, the two outer (lateral) teeth long and subequal, each over twice the size of the third but the postmarginal vein is hardly developed, very much shorter than either the marginal or stigmal veins which are not very unequal, the marginal vein about thrice longer than wide, the stigmal a little longer than it. Also, the mesonotum is densely coriaceous, the scutellum glabrous, the axillae shining but finely reticulated, meeting inwardly. Funicle joints distal of 1 a little wider than long, the club wider than the funicle and about half its length. Head rounded, the frons moderately broad, the face infixed, the cheeks two thirds the length of the eyes. Hind tibia with two spurs. Fore wings with an oblique hairless line. Valves of the ovipositor slightly exserted. Antenna 12 jointed, one very short ring joint.

1. CERCHYSIEILLA NIGRA new species. Female. Genotype

Length: 1.60 mm.
Black, lustrous, the wings hyaline; distal half of tibiae and the tarsi reddish brown on the intermediate legs, the tarsi and tips of tibiae in other legs pale yellowish. Pedicel a half longer than thick at apex, longer than the first funicle joint which is a little longer than wide. Funicle 6 wider than long the joints widening a little distad. Third mandibular tooth acute, not truncate as in nigrella.


Type: No. Hy 2980, Queensland Museum, Brisbane.

2. CERCHYSIEILLA NIGRELLA Girault. Female.

Length, 1.60 mm.
The same as nigra but the mandibles are somewhat stouter and the third tooth not so well developed being in fact very short and truncate against the side of the middle tooth; the first funicle joint is distinctly longer than wide, three-fourths the length of the pedicel (in nigra funicle 1 is nearly quadruple and not more than half the length of the pedicel). The funicle joints are all stouter. Hind tibia with two spurs. The two outer teeth of mandibles are longer and stouter than in the genotype. Apex of distal club joint white.

Habitat: Halifax (Ingham) Queensland. February 25, 1913.

Type: No. Hy 2981, Queensland Museum, Brisbane.
3. CERCHYSIELLA UMBILICATA new species.

Female: Length, 2 mm.

Dark metallic green, the abdomen purple except at extreme base; legs and antennae reddish brown except club, coxae and proximal half of femora; pedicle a little dusky. Wings very slightly stained. Mandibles long, slender, with two strong, acute outer teeth and a third much shorter inner one. Axilae a little separated. Head and thorax densely scaly, the vertex with scattered umbilicate punctures and a row of same along the eyes; scutum and scutellum umbilicately punctate, the punctures moderately coarse, not confluent, absent along the meson of scutellum. Abdomen very finely scaly, as long as the rest of the body, the ovipositor a little extruded. Propodeum subglabrous, with three narrow carinæ at the meson, the three well separated. Hind tibial spurs double, unequal. Scæpe distinctly compressed, (excluding bulla) stouter than the funicule; pedicel not much longer than wide at apex, longer than funicule 1 which is longest yet barely longer than wide; following joints gradually shortening and widening; club no more than half the length of the funicule whose distal three joints are subpetiolate. Thorax clothed with short black hairs. Cheeks nearly half the length of the eyes. Pronons moderately broad. Scrobes deep, forming a semicircle. Hind wings curved. Marginal vein about twice longer than wide, the stigmata long, curved, a half longer than the marginal; postmarginal vein not half the length of the marginal. Pronotum transverse. Costal cell of hind wings extending to the hooklets.

From one female taken in jungle, May 8, 1913 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hx 2982, Queensland Museum, Brisbane, the specimen on a tag; a fore wing, head and hind tibia on a slide.

Genus CERCHYSIUS Westwood.

1. CERCHYSIUS AUSTRALIENSIS Ashmead. Female.

Length, 2.6 mm.

Anceous-black, the head blue-black, the face ventral of scrobes metallic bluish green, the mesopleura, scutellum and abdomen decidedly metallic greenish; antennæ black; legs except coxae, distal half of hind femora and proximal two thirds of hind tibiae, brownish yellow. Wings fulvous, the proximal one third hyaline. Venation brown. Stigmata and postmarginal veins longer than the marginal. Ovipositor about the length of the first joint of hind tarsi, their valves broad.

Habitat: Australia.

Type: Cat. No. 4395, United States National Museum, Washington, D.C., U.S.A.

2. CERCHYSIUS HISPIDISCIUTUM new species.

Female: Length, 2 mm., excluding ovipositor.

Similar to Rhopalencyrtus claricepsis but at once distinguished specifically by the distinct whitish pubescence on the scutum (present in that species but not conspicuous), the whitish knees and tarsi, the wholly inconspicuous middle tibiae, the dark anæous green colour, the legs and abdomen (except at base) very dark purple, by the shorter marginal vein which is punctiform or nearly, slightly longer than wide, the somewhat shorter postmarginal (in relation to the stigmata), by the slender scæpe, the slender pedicel and the longer first two joints of the funicule which are longest, subequal, each a little over twice longer than wide and somewhat longer than the pedicel which is subequal to funicule 4. The ovipositor is extruded for a distinctly greater length (about two thirds the length of abdomen). Sculpture similar in both, or nearly but in the fore wing the discal ciliated is absent proximad until near the tip of the
submarginal vein. In this second species there is a silvery crescent on thoracic pleurum just cephalad of the mesopleurum, the latter very finely polygonally reticulated.

From one female caught September 28, 1913 (H. Hacker).

Habitat: Caloundra (Brisbane), Queensland.

Type: No. Hg2084, Queensland Museum, Brisbane, the specimen on a tag; head and fore wing on a slide.

3. CERCHYSIUS ROBUSTUS new species.

Female:—Length, 2.50 mm., excluding ovipositor which is extruded for a length equal to two thirds that of the abdomen.

Differs from the genotype of Coccidozoon in that the frons is moderate, not prominent, the scrobes deep, forming a semicircle or nearly; the postmarginal vein is somewhat shorter than the stigmal and the axillae are a little separated.

Metallic blue-green, the abdomen except across the base, very deep blue nearly black. Valves of ovipositor and antennae black; knees, tips of tibiae (more broadly in intermediate legs being nearly distal half) and the tarsi reddish yellow. Head and thorax very finely scaly and with many scattered, small setigerous punctures; scaliness of seutellum distad with a longitudinal direction or flow. Wings hyaline, the venation dark. Postmarginal vein only about half the length of the stigmal, somewhat longer than the marginal. Mandibles with the two outer acute teeth longer than the inner. Oblique hairless line of fore wing with about four short lines of discal cilia proximad of it. Hind tibia spurs double. Head with short, stiff white hairs scattered over the surface and which contrast. Pedicel subequal to funicle 2, funicle 1 longest, somewhat over twice longer than wide; other funicle joints each shortening a little, 6 being subquadrate; club short, not more than somewhat over a third the length of the funicle. Funicle densely clothed. Valves of ovipositor a little compressed. Seutum a little longer than seutellum. Propodeum and abdomen scaly, the former with an intermediate glabrous portion on each side of meson. Pubescence of seutum similar to that of the head but not as conspicuous.

From one female caught in forest, November 5, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg2084, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and hind tibiae on a slide.

4. CERCHYSIUS BELLULUS new species.

Female:—Length, 1.65 mm. Ovipositor extruded a very short distance.

Dark metallic purple, the wings uniformly lightly stained and with a small darker stain along the stigmal vein. Legs concolorous but the tarsi and tips of tibiae pale. Stigmal and postmarginal veins subequal, the latter a little longer; hind tibiae with one spur. Antennae 12-jointed, the ring joint exceedingly short, hidden, the whole blackish; club 3-jointed. Eyes convergent above. Thorax very finely shagreened and the seutum and seutellum with numerous setigerous thimble punctures which are conspicuous but not confluent by far. Axillae barely separated. Abdomen scaly. Pedicel longer than all the funicle joints (separately) of which 1-3 are subequal each slightly longer than wide. Frons rather narrow. Cheeks somewhat shorter than the eyes. Mandibles usual. Venation fuscous.


Type: No. Hg2085, Queensland Museum, Brisbane, one female on a tag; a hind leg and the head on a slide.

5. CERCHYSIUS AUSTRALIS new species.

Female:—Length, 2.10 mm., excluding the ovipositor which is three fourths the length of the abdomen; their valves compressed a little, a little broader than usual.

Dark metallic green, the abdomen blackish, the legs black; valves of the ovipositor black. Fore wings with a distinct brownish band across them from the marginal and stigmal veins,
otherwise hyaline, the venation black, the hind large, the postmarginal vein a fourth shorter than the stigmal the latter somewhat longer than the marginal. Third tooth of mandible shorter than the outer two which are equal and not long. Marginal vein a little longer than wide; from the stigmal an oblique hairless line which is incomplete and bounded proximad by five short lines of cilia. Knees and tarsi yellowish brown. Axillae meeting inwardly, with a carina between them. Thorax densely scaly. Tegulae large, reddish brown. Antennae black, 12-jointed, joints 1 and 2 of funicle subequal, each about twice longer than wide, longer than the pedicel, the distal or sixth funicle joint a little wider than long; one very short ring-joint. Pronotum transverse. Scutum downy from numerous obscure setigerous punctures. Forens moderate. Cheeks a little over half the length of the eyes. Abdomen about as long as the rest of body, conical-ovate.

From one female taken by sweeping miscellaneous vegetation, left bank of Pioneer River, October 19, 1911.

**Habitat:** Mackay, Queensland.

**Type:** No. Hy 2986, Queensland Museum, Brisbane, the specimen on a tag; head, a fore wing and a hind leg on a slide.

The club is not half the length of the funicle. Scape rather stout. Hind tibial spurs double. Mandibles broad.

6. **CERCHYSIS OVIDUCTUS** new species.

**Female:**—Length, 0.75 mm., excluding the ovipositor which is extruded for two thirds the length of the abdomen.

Metallie purple, the wings hyaline. Knees, tips of tibiae, tarsi and distal third of middle tibiae yellowish. Scutum and scutellum densely, finely polygonally scaly and with scattered, obscure, small setigerous punctures. Axillae distinctly separated for some distance. Scutellum metallic green at apex, a little shorter than the scutum. Valves of ovipositor black. Marginal vein a little longer than wide, the stigmal twice longer than it, the postmarginal subequal to the stigmal. Oblique hairless line present, with three or four scattered, short lines of cilia proximad of it, these cilia distinctly coarser than the very fine ciliation of the main part of the blade. Marginal cilia of fore wing very short. Abdomen flat, triangular, not as long as the thorax. Two outer teeth of mandibles a little longer than the inner, all acute, not long. Cheeks subequal in length to the eyes, the forens moderate. Head (cephalic aspect) rounded, the forens (lateral aspect) not prominent. Antenna inserted at the elytrum, quite as figured for *Chalceraea* Perkins but the club is somewhat over half the length of the funicle, the first joint of the latter quadruple, the second a little longer than wide, the next four subequal in length but each very slightly broader in succession and somewhat longer than wide. Pedicel a little longer than funicles 1 and 2 combined.

**Note:**—The same but the antenna 9-jointed, 9-jointed, the club solid and distinctly longer than any of the preceding joints except the scape; pedicel short, barely longer than wide; funicle joints all distinctly longer than wide, 2 and 3 longest, each nearly twice longer than wide. Flagellum clothed with moderately long, soft hairs.

Described from a pair captured by sweeping in the forest, December 24, 1911.

**Habitat:** Double Island (Cairns), Queensland.

**Types:** No. Hy 2987, Queensland Museum, Brisbane, the pair on a tag, the heads on a slide.

In *hispiscutum* and *australis*, the axillae are rather broadly joined and with a carina between them. The species *australis* differs from *hispiscutum* mainly in having a fusaceous band on the fore wing, that wing in the latter species hyaline; but also the marginal vein is a little longer in *australis*. The hairless line in both species is guarded proximad by short lines of discal cilia, five in *australis*, three in *hispiscutum* and the line is longer in the former.
The fore wings of *robustus* are about as in *hispidiscutum* but in *australiensis* there is a stain against the stigmal vein, the latter is a little shorter than the postmarginal, the marginal is a little longer than wide and the hairless line is nearly complete, proximal of it about eight long lines of discal cilia. Also, in *australiensis*, funicle joints 1 and 2 are only a little longer than wide and the axilae are a little separated.

**NEASTYMACHUS** new genus.

**1. NEASTYMACHUS AURATICORPUS** new species.

*Female:*—Length, 1.70 mm.

Golden yellow, the wings hyaline but a little yellowish along under the venation. A blackish stripe across middle of occiput, face of pronotum, disk of dorsal abdomen and a spot near margin on each side of base, metallic purplish. Axilae with a short carina between them. Thorax densely, minutely scaly and with numerous minute pin punctures which bear short white hairs. Mandibles with three equal teeth. Scopa slender, curved, the pedicel a little over twice longer than wide, somewhat longer than funicle 1 which is subequal to 2, 3 and 4 subequal, a little shorter than 2, 5 a little longer than wide; funicle 1 twice longer than wide. Club barely wider than the funicle, the flagellum filiform. Cheeks two thirds the length of the eyes. Frons moderate. Scrobes forming an elongate triangle. Funicle hirsut. Abdomen as long as the rest of the body, pointed triangular. Marginal vein somewhat over twice longer than wide, the stigmal about its length, the postmarginal somewhat over half the length of stigmal. Ten or more lines of coarse discal cilia proximal of the hairless line. Club somewhat over a third the length of funicle. Lateral ocelli a little separated from the eyes. Hind tibiae spurs distinct, double. Club dusky. Head a little longer than wide. Agrees otherwise with the generic description.

From one female caught in forest, April 24, 1914.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. Hy 25585, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide.

A second female, March 28, 1914, same place. The wings were hyaline.

**HABROLEPOPTERYGIS** new genus.

Somewhat like *Pseudanasa* Girault of the Ectromini, the head short and indexed, the vertex subquadrato but the stigmal and marginal veins are moderately long and subequal, each a little over twice longer than wide, the postmarginal vein a third shorter. The antennae are of the same general form yet the club is obliquely truncate and somewhat longer than the funicle, the six joints of the latter lanceolate, i.e., each lateral end narrowed and curved distad and the pedicel is also acutely prolonged from one distal angle. Hind tibiae not seen. Mandibles small, weak, with three short subequal teeth. Frons rather narrow, the vertex flat.

**1. HABROLEPOPTERYGIS FELIX** new species. Female. Genotype.

Length, 1.10 mm.

Orange yellow, finely densely shagreened, the proximal half of the abdomen washed with metallic greenish, the propodeum and distal half of abdomen pale yellowish. Legs deep lemon yellow, the antennae nearly the same, the club paler yellow. Fore wings deeply embrowned from a little proximal of the head to the submarginal vein distad nearly to apex, leaving the apical margin rather broadly hyaline. Caudal wings uniformly embrowned, broad (about 16 lines of fine discal cilia). The distal margin of the infumation on the fore wing is darker forming a rather broad two-thirds circle. The fore wings in this species are uniformly fumated but a broad stripe under distal part of submarginal and all of marginal vein, distinctly darker.
AUSTRALIAN HYMENOPTERA CHALCIDIOIDEA, VII.—GIRKAULT.

Head pale or ivory white, the face ventral of the eyes crossed by a wavy dark stripe which passes through the base of the antennae. Scapa ventrad edged with black. Axillea meeting inwardly. Hairless line of fore wing with about five lines proximad of it.

Habitat: Gordonvale (Cairns), Queensland. Jungle, June 5, 1913, a female.

Type: No. Hy 8989, Queensland Museum, Brisbane, the above female on a slide.

One female, Kuranda, jungle, September 16, 1913 (A. P. Dodd) and December 3, 1913.

GENUS CHELONEURUS Westwood.

1. CHELONEURUS GONATOPODIS Perkins. Female.

Length, 1 mm.

Ferruginous or yellow, the club of the antennae and usually the basal part of the hind tibiae, blackish or infuscate. Ocelli on a submetallic area and forming a triangle with a narrow base but the triangle hardly twice as high as wide at base. Eyes with a very few short, indistinct hairs. Scapa very slender, cylindrical. Scutum with a caudal cross-band of blue with a silvery lustre due to the pubescence; propodeum dark at the sides. Wings infuscate on more than the basal half except that at the tips and round the margins they are nearly hyaline; a darker transverse mark bearing long black setae, near the base of the marginal vein. Abdomen dark at tip and on each side at extreme base; distal of the dark at base on each side there are some very long setae. Scutum with silvery pubescence.

Habitat: Cairns, Kuranda, Bundaberg and Childers, Queensland.

Parasitic on Pseudogonatopus, Echthrodiphax and so forth.

Type: Query.

2. CHELONEURUS CHLORODYINI Perkins. Female.

Length, 1.50 mm.

Very like the preceding species and the North American suczesi in habitus but differs from the former in lacking the caudal metallic cross-band on the scutum, which however has the same silvery pubescence. Scapa well rounded on the ventral side and distinctly dilated. From cephalic aspect, eyes strongly convergent cephalad, the least space between them excessively narrow, not very much wider than an ocellus. The ocelli are placed in the form of an excessively elongate triangle, the anterior one being extraordinarily remote from the caudal ones. Hairs on the eyes excessively short but numerous. Scapa yellowish, its ventral margin dark; pedicel and funicle white, the club black. Wings as in gonatopodis.

Habitat: Kuranda, Queensland. In cocoons of Chlorodyus.

Type: Query.

3. CHELONEURUS PURPUREIVENTRIS new species.

Female:—Length, 1 mm.

Orange yellow, the abdomen and caudal third of scutum metallic purple (the latter green); also the antennal club is black. Tuft of hairs at apex of scutellum black. Fore wings deeply embrowned from the apical half of the bend of the submarginal vein distal nearly to tip; the latter and a small spot just distad of marginal vein hyaline. The three lines of distal elia proximad of the oblique hairless line rather long and coarser, very much longer than the elia of the blade generally. Mandibles with three small, acute teeth. Scapa distinctly dilated ventral but not very greatly expanded; pedicel not especially long, longer than any of the funicle joints of which all are wider than long, 1-4 subequal, 5 and 6 distinctly longer than these. Thorax very finely longitudinally lineolate-reticulated. Axillea barely separated. Metallic green caudal third of scutum hirsut with silvery white hairs. Vertex very narrow, nearly flat, the face greatly indented, the frons subprominent, overhanging the face, narrow. Legs pale yellow. Vertex with a line of faint punctures along each eye margin, the surface coriaceous.
Pubescence on scutum sparse, the scutellum naked. Tip of valves of ovipositor slightly extruded, white. Marginal vein twice the length of the stigmal the latter subequal to the postmarginal. Infumation of fore wing deeper under the marginal vein. Antennae 12-jointed, one ring joint, club three fourths the length of the funicle. Pedicel metallic purple above. Ventral border of scape black.

**Male:** Not known.

Described from two females captured by sweeping miscellaneous vegetation on the Herbert River, February 26, 1913.

**Habitat:** Halifax, Queensland.

**Type:** No. Hz 2900, Queensland Museum, Brisbane, the above specimens on a tag; a head and a third antenna on a slide with type seminigriceps.

**4. CHEILONEURUS SEMINIGRICLAVUS** new species.

**Female:**—Length, 1 mm.

Differs from *purpuricentris* in having the scutum wholly concordorous, the pedicel purple above, distal two joints only of club black. Stigmal vein a little longer than the postmarginal. Caudal third of scutum without the silvery hispidescence. The scape is a little more expanded, considerably convexly dilated in both species. Middle tibia darkened just below knee.

From one female captured with the preceding.

**Habitat:** Halifax, Queensland.

**Type:** No. Hz 2901, Queensland Museum, Brisbane, the specimen on a slide with type head of preceding.

**5. CHEILONEURUS PERPULCHER** new species.

**Female:**—Length, 1.30 mm. Postmarginal vein absent. Mandibles with three rather long, acute teeth.

Lemon yellow; meson of pronotum rather broadly, scutum and scutellum metallic grass green; propodeum, abdomen, distal half of caudal femur, caudal tibia except at each end, the infumation of fore wing, metallic purple. Thorax densely polygonally scaly, the scutum with silvery pubescence. The lemma yellow axilike a little separated at meson. Scape slender; pedicel longer than any of funicular joints, a little longer than wide at apex. Funicle joints widening distal, 1 as long as 6 but distinctly narrower. Club enlarged, nearly as long as the funicle. Frons moderate. Hind tibial spurs double, the smaller spur no longer than the apical fringes. Apex of fore wing rather broadly and apical and caudal margin distal of venation narrowly (broadly at first from proximad) clear, the infumation from the curve of the submarginal vein. Marginal vein black, truncate; hairless line with about 4-5 lines of cilia proximad of it. Caudal wings with about sixteen lines of uniformly fine discal cilia.

From one female caught by sweeping forest uplands, May 29, 1914 (A. P. Dodd).

**Habitat:** Mareeba (Clarence River), New South Wales.

**Type:** No. Hz 2902, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and hind tibiae with slide type of *Cristatithorax pastori* Girault.

**6. CHEILONEURUS DUBIUS** new species.

I captured on March 1, 1914 in a jungle pocket, Gordonvale, a female specimen agreeing in every particular with *chlorodryas* Perkins except that the space between the eyes was about three times the diameter of an ocellus, thus not excessively narrow and the cephalic ocellus could not be called excessively remote from the other since the three were in a triangle not much more than twice higher than broad at base. The ocelli were not in a metallic area.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** None designated.
ACHRYSTOPOPHAGUS new genus.

1. ACHRYSTOPOPHAGUS OVIDUCTUS new species. Genotype.

Female:—Length, 1.25 mm., excluding the ovipositor which is extruded for a little over half the length of the abdomen.

Orange yellow; face of pronotum centrally, scutum, propodeum, proximal margin of abdomen and its lateral margin along proximal half, metallic green. Tarsi, fore legs and distal half of middle tibia, white, rest of legs blackish. Scape yellow, next three joints dusky, joints 3-6 of funicle silvery white, the club black. Face between the scrobes lemon yellow. Fore wing hyaline, deeply scoty from the straight proximal border of discal ciliation (about half the length of the marginal vein distant proximad of that vein) distad to over half the distance to apex from the apex of venation, the apical margin of the infuscation highly, regularly convex. Oblique hairless line with about six rather dense lines of discal cilia proximad of it. Marginal vein thrice the length of the short stigmal, the postmarginal vein half the length of the stigmatic. Distal margin of infuscation of fore wing with a hyaline, naked path bordering it; from thence distad, the wing slightly infuscated. Ovipositor valves black at distal third, soiled white elsewhere. Thorax very finely scaly, the scutum with silvery white pubescence. Axillae broadly separated mesad, no carina between them. Tuft of bristles on scutellum between center and apex, distinct but scanty, divided into two small tufts. Mandibles with three equal, acute teeth. Scrobes well developed, the face strongly inflexed ventrad. Head narrowed ventrad, distinctly longer than wide, the face convex, the frons rather narrow, a little over thrice the diameter of the cephalic ocellus. Scape long and slender; pedicel somewhat less than twice longer than wide at apex, much longer than any of the funicle joints which are short, 1 subquadrate, 5 shortest, 3-6 somewhat wider than long; club large, 3-jointed, a little longer than the funicle. Hind tibial spur single.

From two females caught by sweeping in forest, April 16, 1914 (A. P. Dodd).

Habitat: Cononarry, Queensland.

Type: No. Hg 2798, Queensland Museum, Brisbane, two females on a tag; head, fore wing and a hind leg on a slide.

In the second female, the tuft on scutellum was quite normal. The antennal club is distinctly compressed or flattened from the sides. Discally, on dorsal abdomen within proximal half, there is much metallic coppery narrowing proximad and joining the metallic green across base.

2. ACHRYSTOPOPHAGUS CLAVATUS new species.

Female:—Length, 1 mm., excluding ovipositor which is extruded for half the length of the abdomen.

Differs from the genotype in being somewhat smaller, in having the valves of the ovipositor wholly white, the scutum distinctly shorter, the pronotum metallic green mesad, the propodeum wholly yellow, the proximal half of the abdomen dorsad dark metallic green, the coxa and femora except distal end of hind femur silvery white, the axillae joined and with a carina between them, the head wholly yellow, also the face of pronotum. Legs orange yellow. Face in oviductus metallic just above the infuscation. All funicle joints and apex of scape silvery white, pedicel and scape orange yellow, the former blackish above at base. Club black. Joints 2-4 of funicle shortest. The fore wings are a little narrower than in the genotype, the short, silvery pubescence less conspicuous on scutum, more so on scutellum. Hind femur with a black stripe down it laterad from middle to apex and central (also in the genotype). Compared with type of oviductus.

From one female caught in forest, June 10, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg 2794, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide.
Marginal vein a little longer than in the genotype, eight or more times longer than wide in both species. In this species, the postmarginal vein is at least two thirds the length of the short stigmatic, the latter less than a fourth the length of the marginal. In the single specimen, the tuft on scutellum was very sparse, represented by four or five long black hairs. In the genotype, the metallic stripe across base of abdomen is rather broad.

CHRYSOPOPHAGOIDES new genus.

Female:—Differs from Achrysoophagus in having the third tooth of mandible truncate, moderately broad, the funicle joints all longer than wide, the club long but shorter than the funicle, not enlarged and not with very oblique divisions as in that genus; the cheeks are a little longer than the eyes. The funicle joints are longer, the club slenderer and not as long as the funicle.

1. CHRYSOPOPHAGOIDES WESTWOODI new species.

Female:—Length, 2.75 mm., excluding extruded part of ovipositor which is as long as the abdomen.

Postmarginal vein very slightly developed, much shorter than the stigmatic which is not quite half the length of the marginal, the latter a little less than half the length of the long submarginal. Dark metallic purple, the fore wings deeply embrowned from the proximal end of marginal vein to apex, but on opposite sides at the edges there are two small hyaline spots, the cephalic at the end of the postmarginal vein, the caudal spot larger. Face ventral of eyes (which are convergent), scape, face of pronotum, thoracic pleura, propodeum (except lateral) and axilla, orange yellow. Funicle and pedicel suffused with orange. Legs and extruded portion of ovipositor yellowish white, the intermediate femora at tip, the tibiae just below knees purplish, the hind tibiae purplish on each end. Scutum with very fine, dense silvery hairs which form distinct pilosity, the thorax densely, finely scaled, the scutellum densely punctulate, the propodeum smoother, with some (but not much) silvery pubescence laterad. Fore wings densely ciliate. Scutellum with the usual tuft of black hairs. Scape curved, thick; pedicel long-obovoid, longer than any of the funicle joints of which 2 and 4 are a little the longest, 1 and 3 subequal, 4 subequal to 2, 5 to 1, 6 shortest, a little longer than wide, 2 not quite a half longer than wide; club barely wider than the filiform funicle. Face between the antennae with numerous minute pin punctures; also some of the latter on the cheeks and on the face along ventral border of the convergent eyes. Frons narrow. Axilla very slightly separated. Antennae 12-jointed with one ring joint. Face inflexed. Stereobas semicircular.

From one female, mixed forest and jungle, May, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 2095, Queensland Museum, Brisbane, one female on a tag; head on a slide.

GENUS ENCYRTUS Latreille.

1. ENCYRTUS GILBERTI new species.

Female:—Length, 1.28 mm.

Orange yellow, the abdomen dorsal purplish black. Legs honey yellow; club black; antennae honey yellow; pedicel washed with purplish, funicles 5 and 6 silvery white. Pedicel longer than any of the funicle joints of which 1 is longest, somewhat longer than wide, 2 and 3 subequal, a little shorter than 1, 4 quadruple, 5 and 6 a little wider, a little wider than long. Club rather large. Fore wing with a broad brown band across it from somewhat less than distal half of submarginal vein to apex of stigmatic; also brown along distal fourth from apex, the proximal margin triangular, converging from either side and then obtusely prolonged centrally over half way proximad to the first brown stripe; just opposite this apical prolongation an oblique brown streak enters the wing from either margin, oblique cando-distad (the cephalic one), cephalo-distad (the caudal one) and approaches either side toward its apex. At the
bend of the submarginal vein is a straight deeper brown streak beset with stiff bristles and a narrow, curved hyaline line at caudal three fourths divides the first cross-stripe longitudinally. The distal stripe and streaks are blackish. Marginal vein black, about three longer than wide, subequal to the stigmatic, the postmarginal colorless, shorter. Axilla separated by a short carina. Thorax finely scaled and with scattered, minute setigerous punctures. Pubescence not conspicuous. Face inflected, the frons narrow, about two and a half times as wide as the diameter of an ocellus. Mandibles with three subequal teeth.

From one female caught by sweeping in forest, December 19, 1911.
**Habitat:** Gordonvale (Cairns), Queensland.
**Type:** No. Hg 2296, Queensland Museum, Brisbane, the specimen on a tag; head and an injured fore wing on a slide.

2. **ENCYRTUS NEWCOMBI** new species.

**Female:**—Length, 1.50 mm.

Exactly similar to *gilberti* but the abdomen concolorous, the first four funicle joints blackish, also the pedicel. Hind tibial spurs double (not seen in the other species).

From one female caught February 16, 1913 on a window (H. Hacker).
**Habitat:** Brisbane, Queensland.
**Type:** No. Hg 2297, Queensland Museum, Brisbane, the specimen on a slide.

Dedicated to Simon Newcomb, astronomer.

3. **ENCYRTUS SPINOSAI** new species.

**Female:**—Length, 1.15 mm.

Dull honey yellow, immaculate; funicles 1, 4 and 5 silvery white; club black. Pedicel distinctly longer than any of the funicle joints of which the first is somewhat longer than wide, the following joints subquadrate. Club wider than the funicle. Fore wings marked as in the preceding species but the apical infusation is distinctly not connected with the M-shaped streaks proximal of it, its proximal margin practically straight; moreover, the middle piece of the M-shaped marking is isolated nearly. The infusation under the venation is uniform, not accented. Postmarginal vein barely longer than wide. Frons a little narrower than in *gilberti*. Thorax finely sheened. Axilla barely separated.

From one female caught sweeping in jungle, April 2, 1913.
**Habitat:** Mulgrave River (Gordonvale near Cairns), Queensland.
**Type:** No. Hg 2298, Queensland Museum, Brisbane, the female on a tag; head and fore wings on a slide.

4. **ENCYRTUS ARISTOTELEA** new species.

**Female:**—Length, 1.20 mm.

Very similar to *newcombii* but somewhat less robust, the first four antennal joints are pale yellow, the postmarginal vein is somewhat less than half the length of the stigmatic (fully two thirds in *newcombii*). Antennae as in *gilberti*. Otherwise the same as *newcombii*. Axilla broadly joined, with a carina between them. Similar to *gilberti* but the abdomen wholly concolorous. Hind tibial spur single.

From one female caught by sweeping edges of jungle, January 3, 1914 (A. P. Dodd).
**Habitat:** Gordonvale (Cairns), Queensland.
**Type:** No. Hg 2299, Queensland Museum, Brisbane, the specimen on a tag; head, hind tibia and fore wing on a slide with type *gilberti*.

6. **ENCYRTUS TRIGUTTATUS** new species.

**Female:**—Length, 1.50 mm.

Similar to *gilberti* but the abdomen bears at apex above a distinct round purple spot and two fainter purple spots one on each lateral margin just out from base. Also, the body is somewhat more robust and the scutum bears more conspicuous blackish pubescence. Differs
MEMOIRS OF THE QUEENSLAND MUSEUM.

from *meiomecis* in the coloration of the abdomen; from *spinacai* in the distinctly darker, deeper yellow coloration of the body, the purplish markings, the more conspicuous pubescence and the wing pattern. From *aristotelica* differs in being deeper orange yellow and in having the abdominal markings. Hind tibial spur apparently single. Axilla with a carina between them.

From one female caught by sweeping in a mangrove swamp, Tweed River, May 14, 1914
(A. P. Dodd).

Habitat: Chinderah, New South Wales.

Type: No. Hy 3000, Queensland Museum, Brisbane, the specimen on a tag with type *spinacai*.

7. ENCYRTUS WUNDTI new species.

Female.—Length, 1.20 mm.
Orange yellow, the abdomen metallic purple, the scutellum washed with purple and less distinctly so, the scutum; abdomen suffused with yellowish. Legs concolorous. Antennae concolorous except funicle 6 and the club which are black. Scape moderately dilated, pedicel subequal to funicle 1 which is somewhat longer than wide and longest; funicles 5 and 6 distinctly wider than long; club somewhat less than half the length of the funicle. Lateral ocelli not touching the eyes, the vertex moderately broad, the cheeks somewhat less than half the length of the eyes. Mandibular teeth short, subequal. Head lenticular. Axilla distinctly separated for a short distance. Hind tibial spurs double. Vertex with thin pale punctures caudad of the cephalic ocellus and with a row of punctures along the eyes. Thorax finely scaly but with numerous setigerous punctures. Scutellum somewhat longer than the scutum. Marginal and stigmal veins subequal, the former a little over twice longer than wide, the stigmal curved, the postmarginal vein no longer than wide. Fore wings deeply embrowned from base not quite to apex, the margins of the latter rather broadly hyaline. Proximal of oblique hairless line, discal cilia numerous but distinctly coarser than the main ciliation. Distal joint of maxillary palpus black. Pronot broader than usual and face convex.

From one female taken in forest, December 31, 1912 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3001, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide.

Dedicated to Wilhem Wundt.

A second female, same place, July 10, 1914. Probably not a member of this genus but of the next one.

8. ENCYRTUS PURPUREIVENTRIS new species.

Female.—Length, 1.25 mm. Resembles *Neomyropoecus ungulatus* in general appearance.

Very deep orange yellow, the abdomen wholly imperial purple, also scutellum at distal third lightly. Legs paler and the antennae the club black; funicle 5 and 6 white, pedicel purple above at base, first four funicle joints dusky. Axilla slightly separated yet with a carina between them. Thorax finely scaly, the scutum and scutellum with sparse, minute setigerous punctures, the former very slightly washed with metallic. Fore wing sooty from a little distad of middle of submarginal vein to apex, the infuscation fading somewhat at apex, accentuated cephalic half of its proximal margin, under the marginal vein and under the apex of stigmal vein and divided by a hyaline stripe of moderate narrowness whose proximal margin intersects apex of stigmal vein; this naked, hyaline cross-stripe is narrowed abruptly at center by a proximal projection of the proximal margin of the distal half (or somewhat more) of the infuscation which is accentuated rectangularly at its cephalo-proximal corner, some distance distad of the marginal vein. Marginal vein black; postmarginal vein a little less than half the length of the stigmal. Hairless line of fore wing with about seven lines of cilia proximal of it. Dilation of scape moderate. Pedicel somewhat longer than funicle 1 which is subequal to 3 and
somewhat longer than wide, 2 subequal to 4 and 5, subquadrate, 6 a little wider than long, frons narrow; cheeks nearly as long as the eyes. A line of fine sets along the facial margin of each eye. Hind tibial spur single.

From three females caught by sweeping orange trees in a neglected garden, August 15, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3003, Queensland Museum, Brisbane, two females on a tag; head, forewing and a hind tibia on a slide.

9. ENCYRTUS PARUS new species.

Similar to wunditi but the face inflexed, the scutellum the same as purple as the scutellum, the pedicel and first three funicle joints purplish, the pedicel somewhat longer than funicle 1 which is subquadrate; the axilae joined, with a short carina between them.

Described from one female captured by sweeping in the dry bed of Cape River, forest, September 20, 1914.

Habitat: Capeville (Pentland), Queensland.

Type: No. Hy 3004, Queensland Museum, Brisbane, the specimen in alcohol (head severed) with type of Atopoaoma unguattatapis.

PARAPHÆNODISCUS new genus.

1. PARAPHÆNODISCUS VERUS new species. Genotype.

Female:—Length, 1.25 mm. Robust. Differs from Phenodiscus in that the scape is foliaceous dilated.

Reddish yellow, the abdomen pale honey yellow, also the head, legs and antenna except the club which is black (but whitish at extreme apex). Fore wings stained brownish from base to end of venation, from thence distal less so. Head lenticular, the frons moderately broad, the cheeks over half the length of the eyes. Mandibles with three equal teeth. Funicle joints 1 and 2 subquadrate, the others shortening each a little, the distal one dusky on one side. Last joint of maxillary palpi black. Hind tibial spur single. Marginal vein somewhat over twice longer than wide, slightly shorter than the stigmatic, the postmarginal not quite half the length of the marginal. Hairless line on fore wing with about 10 lines of much coarser cilia proximad of it. Costal cell rather broad, its cephalic margin convex. Scape distinctly but only moderately dilated; pedicel subquadrate in length to funicle 1; club about half the length of the funicle. Body flattened, very finely scaly, the thorax with many scattered, minute setigerous punctures. Axilae separated a little. Abdomen subglobular. Scutellum with a thin plate around the distal edges (plate-like rim).

From one female caught in forest, April 9, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3002, Queensland Museum, Brisbane, the specimen on a tag; head, hind tibia and part of fore wing on a slide.

2. PARAPHÆNODISCUS WUNDTI Girault. See Encyrtus.

ÆNASOMYIELLA new genus.

1. ÆNASOMYIELLA COLEBRIDGEI new species. Genotype.

Female:—Length, 1.25 mm. Frons over six times the diameter of cephalic ocellus, moderate, about twice wider than with Encyrtus giberti and aristoteles. Dilation of scape very convex. Marginal vein a little longer than wide. Club conic.

Honey yellow, immaculate except that the scape has a conspicuous, longer than wide black area from ventral margin between base and middle; wings proximad lightly stained yellowish; venation pale. Frons moderate. Mandibles with three acute teeth. Scape dusky along ventral-
margin just before tip. Pedicle small, hardly longer than wide, yet somewhat longer than any of the funicle joints which are all distinctly wider than long, 2 and 3 a little the longest, 6 widest, all hirsut; ring-joint present. Hind tibial spurs double. Stigma vein long, curved, over twice the length of the marginal, the postmarginal longer than the marginal. Many lines of discal cilia (over a dozen) proximal of hairless line. Whole body with a frosted appearance, subglabrous, extraordinarily finely scaly reticulate. Cheeks somewhat over half the length of the eyes. Scutellum reaching base of abdomen, the axillae distinctly separated by a short triangular projection at apex of scutum but they are not very wide apart. Thorax with scattered, short white pubescence. Vertex sloping; face inflexed. Wings hyaline.

From one female caught by sweeping forest.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg 3065, Queensland Museum, Brisbane, the specimen on a tag; fore wings, hind tibia and head on a slide.

**Copidosomopsis** new genus.

**Female:**—Form small, the thorax very convex, globular, the abdomen rather distinctly narrower than it and somewhat longer, narrow triangular. Agrees otherwise with the description of *Copidosomysia* but the frons is broad, the cheeks longer than the eyes, the scrobes long. Also the marginal vein is punctiform, the postmarginal absent, the stigmata twice longer than the marginal. Mandibles rather long, with three acute, small teeth, of which the middle is the longest. Axillae distinctly separated for a short distance. Marginal vein thickened, almost circular.

**1. Copidosomopsis perminutus** new species.

**Female:**—Length, 0.70 mm.

Dark metallic purple, the wings hyaline; scape, middle legs (except coxae), tarsi and tips of hind tibiae broadly (cephalic tibiae not seen), yellow. Funicle I distinctly longer than wide, subequal to the pedicle, the following joints quadrate, the distal three a little wider than long. Head and thorax finely scaly. Club no thicker than the funicle and shorter. Very few setae proximal of hairless line of fore wing, the line not very definitely bounded by a single line of cilia.

From one female, all remaining out of 2,120 reared from a "pyral larva," April 23, 1914 (F. P. Dodd).

Habitat: Kuranda, Queensland.

Type: No. Hg 3066, Queensland Museum, Brisbane, the specimen on a tag; fore wing, head and fragments of antenna on a slide.

**Blatticida** new genus.


**Female:**—Length, 1.25 mm.

Very dark metallic blue, the wings hyaline, the scutellum contrasting metallic green, the legs and antennae rich yellowish brown but the much enlarged club black. Head and thorax delicately scaly with obscure serigerous punctures (in rows on the vertex), the scutellum pilose; scutellum densely punctate. Mandibles with three small teeth, the inner tooth shorter. Funicle joints annular. Axillae slightly separated. Scape distinctly dilated for its entire length, not long; the pedicle a little longer than wide yet much longer than any of the funicle joints which do not differ much in length (4 and 5 shortest) but 6 is twice wider than 1. Club as long as the funicle and pedicle united, obliquely truncate, over twice the width of funicle 6, the flagellum strongly capitulate. Face strongly inflexed, the vertex and frons moderately narrow but over three the diameter of the cephalic ocellus, the lateral ocelli oblique and against the eyes. Metepisterna bare, the body pubescence not conspicuous. Marginal vein somewhat over twice longer than wide, the stigmatic shorter than it by a fourth or more, the postmarginal vein
not longer than wide; oblique hairless line present, the marginal fringes very short, the discal ciliation fine and dense. Propodeum transverse at meson, widening laterad. Antennae 12-jointed, a very short ring-joint being present. Cheeks not much more than half the length of the eyes. Hind tibial spur single. Abdomen a little shorter than the thorax, depressed, triangular, the ovipositor just tipping it.

**Male:**—The same but the frons is broad, the lateral ocelli a little separated from the eyes while the antennae are filiform, wholly colored like the legs and the club is solid. Scape not as distinctly swollen; funicular joints subglobular and much longer than the pedicel excepting funicle 1 which is much longer than wide. Funicle joints bristly, the bristles not very long.

From one male, five females reared from eggcases of a native cockroach from the jungle and in company with *Eutrichosomella blattophaga* Girault, February, 1914 (A. P. Dodd).

**Habitat:** Babinda, Queensland.

**Types:** No. Hb 3067, Queensland Museum, Brisbane, one male, five females on a tag, one female, one male and female head on a slide with type of *Eutrichosomella blattophaga*.

Of the above eggcases, two were parasitized, the parasites issuing from both ends by way of two perfectly circular holes, one at each end and on opposite sides of the dorsal ridge of the eggcase. The eggcases are rather small, of a greyish color, the bottom and bottom sides and a longitudinal stripe somewhat below the dorsal edge abbreviated at each end and interrupted once beyond or before the middle, dark reddish brown.

Subsequently a female was found in a bottle labelled "Gordonvale, sweeping grass, forest, April 10, 1912." In this specimen the cephalic knees were dusky.

**NEOCOPIDOSOMYIA** new genus.

**Female:**—Differs from *Copidosomyia* Girault in that the head (cephalic aspect) is rounded and a little wider than long, not ovate and plainly longer than wide. Also, the frons is twice broader and the scrobes normal, forming a deep triangle, the face inflexed. The antenna has a short ring-joint. Axillae slightly separated. Abdomen as long as the thorax, the ovipositor not exerted. Second segment of abdomen occupying only a fourth of the surface. Outer two teeth of mandibles distinctly longer than the inner. Otherwise as described for *Copidosomyia*.

1. **NEOCOPIDOSOMYIA VIRIDISCUTELLUM** new species. Genotype.

**Female:**—Length, 1.90 mm. Robust.

Purplish black, the scutellum dark metallic green, the fore wing lightly embrowned from the head of the submarginal vein to apex or nearly so; distal half of tibiae and the tarsi yellowish brown. Antenna concolorous, scape a little compressed, excised ventrad at tip; pedicel one and a fourth times longer than wide at apex, subequal to funicle 1 which is distinctly longer than wide, the longest, 2 a little longer than wide, 5 and 6 distinctly wider than long. Club obliquely truncate, not more than half the length of the funicle. Cephalic ocellus about twice its diameter from either eye. Head densely finely scaly, the vertex with obscure, small punctures. Scutum sculptured like the vertex but the scutellum densely punctulate. Abdomen scaly like the scutum but without the punctures. Pubescence inconspicuous. A darker spot against the marginal and proximal two thirds of stigmatic veins. Marginal vein somewhat less than twice longer than wide. Oblique hairless line narrow. Mesopleurae finely, longitudinally scaly and lined. Hind tibial spur single.

From four females on a card labelled "Apr. 24, 1903. F. P. Dodd."

**Habitat:** Townsville, Queensland.

**Types:** No. Hb 3068, Queensland Museum, Brisbane, four females on a card; head, portion of fore wing and a hind tibia on a slide.

Later, another card with seven females, one male was found bearing the same data and a flower-like case of what appeared to be a fulgorid, the host. The male was broken but as far as could be seen resembled the female except that the frons was broader and the funicle more hairy.
NEBLATTICIDA new genus.

Female:—Head (cephalic aspect) rounded, the face inflexed, the eyes convergent cephalad, the frons narrowing cephalad, rather narrow, caudad where broadest, four times the diameter of the cephalic ocellus; cheeks as long as the eyes. Antennae 12-jointed, capitate, the scape greatly dilated, the funiculus a little longer than the large, obliquely truncate club, the six joints widening distad, all much wider than long but not annular. Mandibles with three equal, short, acute teeth. Marginal vein about four times longer than wide, a little over twice the length of the short stigmatic, the postmarginal present but wider than long; hairless line on fore wing distinct. Hind tibial spur single. Legs simple. Abdomen pointed conic-ovate, as long as the thorax, depressed above. Scutellum broad, as long as the scutum, the pronotum transverse. Axillae separated a short distance. Scutellum large, broadly rounded.

1. NEBLATTICIDA FASCIATIPES new species. Genotype.

Female:—Length, 1.12 mm.
Dark coppery, the thorax with contrasting silvery white pubescence which is abundant but not dense, the setae not crowded. Legs black, the tarsi, cephalic knees, tips of all tibiae, a narrow band around caudal legs proximal and distal of knees, the first oblique, most of middle femora except a narrow, oblique stripe across some distance before the knee and a rather large diffuse spot dorsal somewhat proximal of middle, middle knees, a white oblique stripe across middle tibie just ventral of knees (separated from them by an oblique black band), a spot dorsal a little proximal of middle of intermediate tibia and distal fourth of the latter and funicule joint 6, silvery white. Funicule 5 suffused with whitish along one lateral half and funicule 4 along lateral third or less. Frons where narrowest not quite twice the diameter of the cephalic ocellus. Fore wings smoky from somewhat distal of middle of submarginal vein to within a rather short distance of apex, the distal margin of the infuscation broken centrally into two lobes which are farthest distad; a narrow longitudinal clear stripe not far from caudal margin runs through the body of the infuscation but does not completely divide it, diffusing disto-caudad, proximal terminating in the oblique hairless line caudad; oblique hairless line with about 9 lines of elain immediately proximal of it and a dense cluster of elain are farther proximal of these lines; a short, transverse hyaline line runs in front of the venation. Pedicel small, a little longer than wide, longer than any of the funicule joints of which 6 is largest, 1 and 2 smallest; funicule 1 twice longer than wide, 5 a little more than that and longer. Club joints wider than long. Scape with a scaly sculpture, longer than the funicule. Thorax very densely, minutely shagreened.

From one female caught in forest, April 16, 1914 (A. P. Dodd).
Habitat: Clooneeey, Queensland.

Type: No. H'3008, Queensland Museum, Brisbane, the female on a tag; head, middle and hind legs and a fore wing on a slide.

CHEILONEUROIDES new genus.

Female:—With the habitus of Cheiloneurus. Vertex flat; frons very prominent, narrow, the face inclined ventro-caudad. Cheeks somewhat longer than the eyes. Runs to Cheiloneurus Westwood but the scutum also has a tuft of hairs like that of the scutellum, this tuft a little cephalad of center; the scape is broadly dilated ventrad for its entire length and the postmarginal and stigmatic veins are longer, the stigmatic as long as the marginal, a little longer than the postmarginal. Hind tibial spur single. Mandibles with three subequal, obtuse, short teeth. Antennae capitate, much as in the flagellum of the Mymarid genus Polynema.

1. CHEILONEUROIDES BICRISTATUS new species. Genotype.

Female:—Length, 1.30 mm.
Orange yellow, the abdomen brown; antennae pale yellow except ventral edge of scape along proximal two thirds and distal two club joints all of which are blackish. Legs brownish,
silvery white toward tips of tibiae and proximad on femora and the knees and tarsi; intermediate legs with a narrow black band above and below knees. Mesopleura caudal washed with purple. Caudal fourth of scutum metallic bluish and there clothed with dense silvery white pubescence. Scutum and scutellum very finely, densely, longitudinally linedolate but metallic part of scutum transversely so. Axilla barely separated. Distal two-thirds or more of first joint of hind tarsus black. Fore wings embrowned from the first bend of the submarginal vein to apex, deeper under the marginal vein and quite as in species of Cheiloneurus except that the white spot just distad of venation includes the whole area subtended by the postmarginal and stigmal veins. Opaque hairless line broad, not well delimitated by setae. Marginal vein about two and a third times longer than wide. Pedicel much longer than any of the funicle joints, nearly twice longer than wide at apex; funicle slender proximad, widening a little distad, the joints all subquadrate but 5 and 6 wider than the others. Distal part of submarginal vein as usual curving but the curve is rather long and concave.

From two females caught on the foliage of Acalypha growing in gardens in the town, October 23, 1911.

Habitat: Townsville, Queensland.

Type: No. Hy 3016, Queensland Museum, Brisbane, one female on a tag; head, wing and hind tibia on a slide.

PARAPHYCUS new genus.

1. PARAPHYCUS ABNORMISCAPUS new species. Genotype.

Female.—Length, 1.25 mm., excluding ovipositor which is distinctly but shortly extruded.

Deep orange yellow, the head except vertex, the pronotum except lateral margin, propleura, mesopleurum, legs, metapleurum and abdomen very pale yellow, contrasting; face of pronotum, cephalic margin of scutum and dorsum of abdomen except along each margin where there are pale yellowish marginal spots, black. A large obscure rounded area in center of scutum on each side of the meson and a distinct, large, arrow-shaped spot in center of the scutellum (covering most of it, the apex blunt and at base of scutellum, the spot leaving the distal margin yellow) purple. A spot below knee and one across tip of middle tibia and a spot centrally on lateral caudal femur, one just below knee and one a little distad of middle on caudal tibia, dusky black. Wings hyaline. Upper half of occiput black. Antennae colored like the legs. Extruded valves of ovipositor dusky, whitish at extreme base and apex. Marginal vein punctiform, the postmarginal distinct, somewhat longer than the marginal, the stigmal long, curved, about three times the length of the postmarginal. Mandibles with three equal, small, acute teeth. Axilla separated by a short carina. Frons broad, face inflexed, the cheeks somewhat shorter than the eyes. Pedicel and scape dusky the latter stout, obconic, the pedicel globular, the funicle joints subequal, each a little longer than wide, a little over half the length of the scape (excluding the bulla). Club slender, nearly half the length of the funicle, longer than the scape (even if the bulla is included). Marginal fringes of fore wing very short, the hairless line guarded by a line of cilia proximad and three or four inconspicuous lines of cilia under, and parallel with, the submarginal vein. Main discal ciliation of the fore wing fine, dense. Thorax densely, very finely scaly. Propodeum with several transverse black spots on each side. Distal margin of scutellum pale yellow. Antennae with a very thin ring joint, the flagellum longitudinally striate. Hind tibial spurs double, very unequal. Scape-shaped like an ordinary pedicel.

From one female caught in forest, April 15, 1914 (A. P. Dodd).

Habitat: Cloncurry, Queensland.

Type: No. Hy 3011, Queensland Museum, Brisbane, the specimen on a tag.
NEOCLEADELLA new genus.

Female:—Form elongate, the abdomen conic-ovate, a little produced at apex, longer than the rest of the body, the ovipositor valves stout, prominent, extruded a little. Frons rather broad; mandibles with three short obtuse teeth but the third is wider, obliquely truncate but not very broad. Fourth joint of maxillary palpi nearly as long as the others combined, stoutest also. Marginal vein barely longer than wide, thick, as long as the stigma and more so than the postmarginal which is barely developed. Hind legs flattened (except the tarsi), broad, the tibial spur short, double. Antenna inserted below the middle of the inflexed face, the scape very short, broadly dilated for its entire length, somewhat longer than wide; pedicel flat, a little longer than wide; funicule with the joints wider than long, the first much the shortest, combined somewhat longer than the club which is ovate, wider than the funicule, 3-jointed, the ring-joint absent. Axille distinctly a little separated.

1. NEOCLEADELLA COMPRESSIPES new species. Genotype.

Female:—Length, 1.85 mm.
Dark metallic blue, the scutellum and abdomen purple, the wings hyaline; tarsi white. Thorax densely, finely, polygonally scaly, the axilla finely, transversely so. Pedicel longer than any of the funicule joints of which 2 to 6 are subequal, distinctly wider than long, 1 much wider than long, only about a third the length of the others. Club much longer than the scape, the latter distinctly longer than the pedicel. Hairless line of fore wing with two lines of coarser discal cilia along its proximal border and with two shorter lines of cilia somewhat farther proximal of these, the four lines more or less joined caudad. Discal cilia of fore wing fine, dense, distinct, the marginal fringe very short.

From one female caught in forest, April 14, 1913 (A. P. Dodd).
Habitat: Cloncurry, Queensland.
Type: No. Hy 3012, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a caudal leg on a slide.

ACHALERICINYS new genus.

1. ACHALERICINYS TRICLAVATA new species. Genotype.

Female:—Length, 0.85 mm.
Agrees with the description of the genotype of Chalercins except that the distal two thirds of abdomen is brownish yellow in all that part distal of the spiracles, the legs and antennae pale yellow. The abdomen is somewhat longer than the rest of the body, conic-ovate. The marginal vein is linear and a little over twice longer than wide, the stigma slightly shorter than it, the postmarginal absent. The fore wings are more regular in shape, slenderer, with parallel margins, shaped in Aphetianys, their discal ciliation fine and dense, the hairless line complete. The antennae differ in that funicule 6 is plainly the longest joint of the funicule, being a little longer than wide, twice the length of the preceding joint; funicule 1 small, subglobular, 2 and 3 subequal, smallest, wider than long; 4 a little longer than 3, 5 distinctly longer than 4, a little wider than long. Funicule gradually widening, the club still wider, three fourths the length of the funicule or more. Pedicel a little longer than funicule 6. Antenna inserted somewhat below the middle of the face. Axille distinctly separated but not much so. Frons moderate. Cheeks distinctly longer than the eyes. Mandibular teeth equal, acute. The marginal vein is ulinarily longer than wide.

From one female caught April 18, 1912 in the forest.
Habitat: Gordonvale (Cairns), Queensland.
Type: No. Hy 3012, Queensland Museum, Brisbane, the specimen on a tag.
COPIDOSOMYIA new genus.

_Female_:—Head (cephalic aspect) long-ovate, distinctly longer than wide, narrower ventrad, the cheeks two-thirds the length of the eyes, the frons narrow, the antennæ inserted at the mouth border, the scrobes forming a rather shallow very short triangle, the face convex, with scattered thimble punctures. Antennæ 9-jointed, the scape long and slender, the pedicel moderately long (one and three fourths times longer than wide at apex), much longer than any of the funiculjoints of which 1 is longest, somewhat longer than wide and subequal to 2; 3 and 4 slightly longer than wide, 5 and 6 a little wider than long; club solid, long conico-ovate, a little over half the length of the funicle; no ring-joint. Axillæ rather broadly joined at meson. Hind tibial spur single; legs slender. Abdomen shorter than the thorax, flat above, compressed beneath, the ovipositor very shortly extruded. Marginal vein twice as long as wide, the postmarginal vein a third longer than it, the stigmatic long, still longer than the postmarginal; oblique hairless line short, distinct, the fore wing with a rather broad, distinct sooty stripe across it from the proximal end of the bend of the submarginal vein to a little beyond the apex of the stigma, the discal ciliation proximal coterminous with the proximal margin of this stripe. Marginal cilia of fore wing very short. Second segment of abdomen occupying half of surface, obtuse, short. Mandibles with three acute, subequal teeth. Head shaped like that of an ant. Genal suture subobsolete.

1. **COPIDOSOMYIA CINCTIVENTRIS** new species. Genotype.

_Female_:—Length, 1.60 mm.

Black-blue, the antennæ and legs concolorous; club, a band around base of abdomen, one around hind tibiae just below knees and distal third of cephalic femur, yellowish white. Pronotum and scutum finely scaly; head, scutellum and axillæ more coarsely so. Metapleuræ with some silvery pubescence. Pronotum and scutum with some sparse whitish pubescence. Propodeum noncarinate, together with the abdomen practically smooth. Base of extruded portion of valves of ovipositor suffused with whitish.

From one female caught in jungle, December 3, 1913 (A. P. Dodd).

_Habitat_: Kuranda, Queensland.

_Type_: No. Hy 3014, Queensland Museum, Brisbane, the specimen on a tag; antennæ, fore wing and a hind tibia on a slide.

This genus seems related to _Copidosoma_ and allies but the mandibles appear to disagree with those of that genus and the club is solid.

ZARHOPALOIDES new genus.

1. **ZARHOPALOIDES AXILLARIS** new species. Genotype.

_Female_:—Length, 0.80 mm.

Dark metallic green, the wings hyaline; legs, head (except upper occiput), axillæ, the transverse pronotum, extreme apex of scutellum and a rather broad band across caudal scutum (a little over caudal third of scutum) lemon yellow; abdomen black-purple. Vertex orange yellow. Antennæ dusky yellow, the scape and pedicel lemon yellow, the pedicel metallic above. Scape of moderate length, shorter than the funiculus whose joints are wider than long, enlarging distad, 1 and 2 nearly like ring-joints, smallest; pedicel a little longer than funiculus 6; club subequal to the scape, wider than the funiculus; funiculus 6 somewhat wider than 1, third longer. Mandibles with three short, acute, unequal teeth, the second longest, the first shortest. Cheeks nearly as long as the eyes, the face indented, the frons not prominent, broad. Ocelli nearly in a straight line, the lateral ones nearly their own diameter from the eye margins. Marginal vein a little wider than long, postmarginal distinct, somewhat over half the length of the stigmatic which is twice the length of the marginal. Cilia proximal of hairless line sparse, two lines guarding the path distinct. Discal cilia of fore wing very fine, dense, the fore wing pyriform. Hind tibiae with two spurs, the first very short. Axillæ separated for some little
distance. Thorax densely scaly, the scutum with short, scattered pubescence. Abdomen finely scuptured, rounded triangular, depressed, about as long as the thorax. Scutellum large, triangular.

From one female taken, May 19, 1914 by sweeping forest.

_Habitat:_ Gordonvale (Cairns), Queensland.

_Type:_ No. _Hy_ 5015, Queensland Museum, Brisbane, the female on a tag; head, fore wing and hind leg on a slide.

2. **ZARHOPALOIDES LONGIFASCIATIPENNIS** new species.

_Female:_—Length, 1.35 mm. Abdomen longer than the thorax.

Dark metallic green, the scutellum dark blue, the abdomen coppery. Fore wings hyaline but with a distinct, moderately broad, midlongitudinal dusky stripe down them from apex nearly to a point opposite apex of venation. Trochanters, knees, tibiae and tarsi yellowish white, also the antenna; intermediate tibia dusky just below knee. Pedicel longer than any of the funicel joints of which 1-3 are subequal, each a little wider than long, smallest; funicel 1 a little smaller than 2 or 3, largest, a little wider than long, twice the size of 4 which is somewhat smaller than 3; club wider than the funicel and somewhat over half its length; scape slender. Scrobes moderate, the antennae inserted on a level with the ventral ends of the eyes, the cheeks less than half the length of the eyes. Frons moderate, the lateral ocellus a little separated from the eye. Mandibular teeth not long, the inner somewhat shorter than the other two. Marginal vein slightly longer than wide, the stigmal vein somewhat longer than it, the postmarginal subequal to the marginal, the venation pale yellow. Oblique hairless line present and with about three lines of coarse discal cilia proximad of it; other discal ciliation very dense and fine; marginal fringes short. Fore wings moderately slender. Head and thorax densely scaly, the thorax rather sparsely pilose and with obscure scattered punctures, also present sparsely on the head. Axillae slightly separated. Hind tibia spurs small, double, unequal.

Described from one female captured by sweeping forest streamlet edged with jungle.

December 2, 1912 (A. P. Dodd).

_Habitat:_ Gordonvale (Cairns), Queensland.

_Type:_ No. _Hy_ 5016, Queensland Museum, Brisbane, a female on a tag, the head on a slide.

3. **ZARHOPALOIDES GRACILIS** new species.

_Female:_—Length, 1.10 mm. Slender, the ovipositor a little extruded, the abdomen conic longer than the rest of the body. Differ from the preceding mainly in coloration of the legs and the length first funicel joint.

Dark metallic blue, the scutellum dark green, the legs and antennae straw white. Fore wings hyaline, with a midlongitudinal dusky, rather broad stripe from apex (where it is a little broader) to opposite the apex of the dusky venation. Pedicel distinctly longer than any of the funicel joints of which 1-3 are subequal, each a little longer than wide and narrower than any of the three distal joints which widen slightly in succession and each of which is a little longer than wide, a little longer than either of the three proximal joints. Cheeks somewhat less than half the length of the eyes. Club somewhat wider than and somewhat more than half the length of the funicel. Third tooth of mandible shorter than the outer two which are subequal. Frons moderately broad. Face indexed. Discal cilia under venation abruptly faint but the oblique hairless line is outlined but with no cilia proximad of it. Venation as in preceding. Hind tibia spurs double. First tarsal joint of hind legs much longer than the others taken separately. Thorax scaly, the scutum with sparse, short pubescence, apparently absent on the scutellum. Axillae distinctly separated for a rather short distance.

From one female taken by sweeping along a forest streamlet, June 29, 1913.

_Habitat:_ Gordonvale (Cairns), Queensland.

_Type:_ No. _Hy_ 5017, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide.
RHOPALENCYRTIDEA new genus.

*Female:*—Runs (in my table) to *Encyrtus* but differs in having the ovipositor distinctly extruded for some length, the postmarginal vein somewhat longer than the stigmal, the latter somewhat longer than the marginal. Also, the frons is a little broader. Pronotum transverselinear. Dilatation of scape not great but distinct and foliaceous. Mandibular teeth short, acute, equal. Differs from *Eenuelata* in having the eyes no longer than the malar space, the longer marginal vein and so forth.

1. RHOPALENCYRTIDEA PURPUREICORPUS new species. Genotype.

*Female:*—Length, 0.83 mm., excluding ovipositor which is extruded for a length equal to four fifths that of the abdomen.

Dark metallic purple, the wings hyaline, the venation black; middle knees and tibia; yellowish white (except the dusky distal joint of tarsi). Head and thorax densely scaly, the axillae with a carinum between them, narrow. Scutellum extending to base of abdomen, the latter triangular, not quite as long as the thorax, finely scaly. Pedicel a little longer than any of the funicle joints which are all short, quadrate but gradually enlarging distad. Club somewhat over half the length of the funicle and distinctly wider. Cheeks long, as long as the eyes or a little longer, the face inefixed. Hind tibial spur single, the middle spur large and stout, a little longer than joint 1 of middle tarsus which is the longest of all tarsal joints. Frons nearly of moderate width. Cephalic femur compressed. Hairless line of fore wing with about six lines of coarser cilia proximad of it. Marginal vein not quite twice longer than wide (one and a half times longer than wide). Club conic-ovate. Fore wings with fine dense discal cilia.

From one female specimen caught June 28, 1914 (A. P. Dodd).

*Habitat:* Childers, South Queensland.

*Type:* N. Hys 5013, Queensland Museum, Brisbane, the specimen on a tag; head, a fore wing and a middle and hind tibia on a slide.

2. RHOPALENCYRTIDEA CLARIPENNIS new species.

*Female:*—Length, 2.30 mm., excluding ovipositor.

Black-purple, the scutum green, the wings hyaline, the extruded valves of ovipositor concolorus; venation and antennae black, also the legs except trochanters, knees, tips of tibiae (sometimes distal half of middle tibiae) and the tarsi which are reddish brown. Head and thorax very finely minutely densely, scaly and with numerous obscure pin-punctures over the surfaces. Axillae separated a short distance, transversely scaly. Pubescence not conspicuous. Mandibles with the two outer teeth subequal and longer than the inner. Scape distinctly dilated ventrad toward apex but not greatly so; pedicel short, a little longer than wide and barely longer than funicle 1 which is barely longer than wide; funicle joints alike but the distal three shortening a little, 6 a little wider than long. Club a little wider, hardly as long as the three preceding joints united. Wings long, extending nearly to tip of ovipositor valves; marginal vein a little over twice longer than wide, the postmarginal a little longer than it, the stigmal a little longer than the postmarginal. Oblique hairless line narrow, incomplete; discal cilia dense and fine; a little staining between stigmal and postmarginal veins; marginal fringes exceedingly short. Hind tibiae a little dilated at apex, the spur as long as the basal joint of the tarsus which bears yellowish comblike teeth as in many eupelmines. Hind femur compressed. Abdomen conic-ovate; acute, flat above, keeled beneath, a little longer than the thorax (excluding ovipositor) the valves of ovipositor distinctly exerted for a length equal to somewhat over a third of the abdomen's length. Abdomen glossy, sculptured like the thorax but even finer and the punctures are absent. Vertex tolerably wide between the eyes, the ocelli in an equilateral triangle, the lateral ones just separated from the eyes. Head sculptured like the scutum, the face inefixed.
but the frons barely visible from lateral aspect. Antennae inserted rather near the clypeus, the scape converging above, tolerably long. Mesopleuron finely polygonally lined or reticulated. Epistoma carinated between the antennae. Cheeks about as long as the eyes.

**Male:**—The same as the female but the antennae 11-jointed, one short ring-joint, the club 2-jointed. Funicle 1 much longer than wide, the following shorter. Funicle joints with numerous rather long hairs.

From many female specimens and several males labelled "From Gall No. 20, H. Hacker."

**Habitat:** Brisbane, Queensland.

**Types:** No. Hy 3019, Queensland Museum, Brisbane, four females and two heads on a slide, 5 females on a tag and one male head on the slide.

### 3. RHOPALENYCROIDEA DUBIA new species.

**Female:**—Length, 1.32 mm., excluding ovipositor, the latter extruded for a length nearly equal to that of the abdomen.

Diffrs from the genotype in being more robust, the axillae are distinctly separated for some little distance, the head slightly longer than wide, eyes somewhat longer than the cheeks and the marginal vein is twice longer than wide yet somewhat shorter than the stigmal, the latter slightly shorter than the postmarginal. Very dark metallic purplish, nearly black, the base of abdomen blue, wings hyaline. Apex of scutellum greenish. Venation dark. First two pairs of tarsi and distal half or nearly of middle tibia reddish yellow. Scutum projected between the axillae. Scutum and scutellum densely polygonally scaly and with very many scattered setigerous pin-punctures, the pubescence soft not conspicuous. Frons moderate. Funicle 1 subquadrate, 3 and 4 longest, a little longer than wide, the other joints slightly shorter. Pedicel subequal to funicule 3 or a little longer. Club a little over half the length of the funicule and plainly wider. Hairless line of fore wing with about six scattered lines of cilia proximal of it. Hind tibial spur single. Body slightly flattened. Scutellum at base at meson with a short carina (yet the axillae plainly separated!)* Abdomen scaly. Scutellum extending to base of abdomen. Fore wings broad.

Diffrs from *Cerophylus australiensis* in general coloration, the axillae are separated and so on. From *Cerophylus cladopus* differs in not having the middle knees broadly reddish yellow (i.e., knee, proximal end of tibia, distal end of femur) nor the middle femur broadly so colored at base, in having the carina at meson of base of scutellum, the axillae a little more separated, the body distinctly shorter not slender, the axillae polygonally scaly, not very finely transversely lined and so on.

Described from one female caught in a maugrove swamp along the Tweed River, May 14, 1914 (A. L. Dodds).

**Habitat:** Chinabura, New South Wales.

**Types:** No. Hy 3020, Queensland Museum, Brisbane, the specimen on a tag; head, forewing and a hind tibia with slide type of *Ceraphylius robustus* Girault.

### GENUS CERAPHTROCERUS Westwood.

#### 1. CERAPHTROCERUS EMERSONI new species.

**Female:**—Length 1.75 mm. Form slender, the abdomen pointed conic-ovate, longer than the thorax.

Metameric blue-green, the abdomen darker; first two pairs of legs pale yellowish; caudal coxae concolorous at proximal half, caudal legs reddish brown. Face ventral of antennae ivory yellow. Tips of hind tibia and the tarsi whitish. Fore wings sooty and with the following normal pattern: A narrow longitudinal clear streak from base to some distance distal of apex of venation and caudal of middle; this stripe is broken just opposite origin of marginal

*In all other cases where the carina is present, the axillae are joined to it, i.e. meeting inwardly.*
vein and is more distinct distad; the region surrounding apex of submarginal vein; a space just distad of venation and irregularly joined to this farther distad a large, oblique hyaline spot on margin; similar spot on cephalic margin before apex; a small, inconspicuous clear space at middle of apex; and two marginal spots caudad, opposite to the cephalic two but smaller; the proximal of these two is round. Body finely transversely scaly-reticulate; a short line of delicate punctures in the middle of the flat vertex caudad; thorax with numerous scattered setigerous pin-punctures. Axille a little separated. Head triangular from lateral aspect, the vertex long, the frons prominent; a line of minute punctures along lateral and cephalic margin of vertex. Frons moderate (about 8 times the diameter of the small cephalic ocellus). Mandibles with three short, equal teeth. Fore wing narrow, the marginal fringes somewhat longer than usual, the marginal vein about six times longer than wide, somewhat over twice the length of the stigmal and rather thick, the postmarginal absent. Hairless line not well defined. Scape greatly flattened; pedicel very small, flat; funicle joints all much wider than long, the first three shortest, one end curved and pointed; club 3-jointed, no wider than the funicle and a little shorter. Hind tibiae with one distinct tibial spur. Legs slender. Pronotum transverse-quadrate; a third the length of the scutum.

From one female taken in forest, April 24, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3021, Queensland Museum, Brisbane, the specimen on a tag; head, hind tibia and a fore wing on a slide.

This species most probably belongs here but the descriptions of the genus are lacking in numerous particulars.

Dedicated to Ralph Waldo Emerson.

Genus Chrysopophagus Ashmead.

1. Chrysopophagus mazzinini new species.

Female:—Length, 1.65 mm.

Dark metallic purple, the scutellum at cephalic two thirds lemon yellow, rest brown yellow; mesopleuron, venter and sides of abdomen, cephalic and middle femora, head, scape, venter of thorax, cephalo-lateral angle of pronotum and face of the latter yellowish brown. Frons washed with purplish; dorsum of abdomen except across base, suffused with brownish. Fore wing at extreme base and from origin of marginal vein not quite to extreme apex, deeply embrowned. About four lines of black elia proximad of hairless line, these twice coarser than the main eliation. Marginal vein elongate, four or more times the length of the short stigmal, the postmarginal a little over half the length of the stigmal; a small, clearer spot at apex of venation, a longer one nearly opposite at caudal margin. Fore wings narrow. Hind tibiae with one spur. Mandibles slender, with three equal acute teeth of which the middle is a little the longest. Scape long, curved, very slender; pedicel subequal to funicle 4 which is somewhat longer than wide; funicle 1 longest, somewhat over twice longer than wide, cylindrical; flagellum after funicle 2 compressed, funicle 6 a little wider than long; club distinctly less than half the length of the funicle. Frons moderately broad; lateral ocellus over its own diameter from the eye margins. Cheeks half the length of the eyes. Scutellum with a tuft of black bristles. Ring-joint present. Head sublenticular. Frons punctulate. A short carina between the confluent axille, the latter yellowish brown laterad. Thorax densely, finely scaly. Scutum with short, contrasting silvery white hairs. Pronotum large, not much shorter than the scutum. Legs slender.

From one female on a tag; head, fore wing and hind tibia on a slide.

Habitat: Gordonvale (Cairns), Queensland. Forest, August 4, 1913.

Type: No. Hy 3022, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide.

Dedicated to Joseph Mazzini.
2. CHRYSOPHAGUS PURPUREICINCTUS new species.

**Female:**—Length, 2 mm. Ovipositor slightly extruded, silvery white.

Orange yellow, the scutum with a tolerably broad (over distal half) purple band across its caudal margin. Abdomen purplish across base and at apex dorsal and lateral and half way down lateral margins from base. Coxae, knees, tarsi and tips of hind tibia silvery white. Caudal tibia, funicule and club purple. One side of apex of joints 1-5 of funicule pale yellowish.

Pedicel longer than any of the funicule joints of which 1, 3 and 4 are longest, 4 wider than 1 and 3, compressed; 5 and 6 still wider, barely longer than wide; 7 a half longer than wide. Caudal tibial spurs double. Fore wings about as in mazzinii but more darkly infuscated, the pair of hyaline areas at apex of venation larger, the base of the wings more broadly infuscated, the distinct concave curve of the submarginal vein distad is more pronounced and the infuscation is accentuated over the discal cilia proximad of the hairless line. Also, the stigmal vein is twice longer, the postmarginal only slightly shorter than it. Besides coloration, differs from mazzinii in having the antennae less compressed, the ocelli in a flat triangle (isosceles in the other species, or nearly), the mandibles stouter. Axillae with a carina between them. Purple band of scutellum with silvery pubescence. Disk of scutellum lemon yellow. Thorax scaly. Scutum wider than long, shorter than scutellum.

From one female caught in forest, July 27, 1914.

**Habitat:**—Gordonvale (Cairns), Queensland.

**Type:**—No. Hy 3025, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and hind tibiae with slide type of *Theogetas bicolor* Girault.

GENUS COCCIDENCYRTUS Ashmead.

1. COCCIDENCYRTUS BICOLORICORNIS new species.

**Female:**—Length, 0.75 mm.

Purplish black, the wings hyaline: distal half of middle tibiae, tips of other tibiae, knees and tarsi yellowish white; tip of scape and first four funicule joints white.

Antennae inserted at the mouth border, the scape long, the head rounded, the cheeks longer than the eyes, the frons moderate; antennae capitate, the club large and appearing somewhat tophaceous, thick, oval, three fourths as long as the funicule, the joints of the latter gradually enlarging distad, all wider than long, 1 shortest, the pedicel twice its length yet only a little longer than wide. Club truncate at apex. Mandibles rather long, with three rather small, subequal, acute teeth at apex, the middle tooth longest. Scape long, subcompressed. Marginal vein punctiform, the postmarginal as long as the marginal, the stigmal of moderate length, about two and a half times longer than the marginal, thus not long. Scutellum densely, longitudinally striate but at tip abruptly scaly and metallic green. Scutum and head obscurely punctate. Abdomen short, depressed, triangular, the ovipositor not exserted, the surface shining, feebly sculptured. Axillae feebly sculptured, slightly separated.

**Male:**—The same but the funicule and club honey yellow, the antennae 10-jointed, the club solid, longer than the funicule joints which are subquadrate, rather stout, bevelled off a little at one proximal corner and enclosed with short, stiff hairs which are not shored and not very long. Lateral ocellus about its own width from the eye margins.

From one female, six males labelled "No. 29. 25-10-13 on *Eugenia* fruit and flowers."

**Habitat:**—Port Darwin, Northern Territory.

**Types:**—No. Hy 3024, Queensland Museum, Brisbane, four males on a card, one female head and three males on a slide.

Also, one female, forest, Burnett Heads, Queensland, June, 1914 (A. P. Dodd).
PARASYRPHOPHAGUS new genus.

Female:—In my table of genera runs to Hemeroplanes Perkins but differs in having the marginal, postmarginal, and stigmal veins subequal, the marginal vein about two and a half times longer than wide. Also, the scape is stout and not long, the club only slightly wider than the funicle and only about half its length, the funicle joints widening a little distad, all a little wider than long and somewhat shorter than the pedicel. Valves of ovipositor extruded a very short distance. Frons subprominent, the vertex a little flattened. Face much indented. Head rounded. Axillae with a weak carina between them. Frons moderate in width. Pronotum transverse-linear. Hairless line of fore wing well defined, the blade ciliate to base from it.

1. PARASYRPHOPHAGUS FUNERALIS new species. Genotype.

Female:—Length, 0.95.

Dark metallic purple, the legs reddish yellowish except caudal coxa and caudal femora, the latter dusky, rather stout. Body delicately, polygonally scaly, the scutum with scattered pubescence. Scape pale yellow, rest of antenna black. Club ovate. Funicle joints with rather conspicuous, rather dense, tolerably long pubescence, less dense on the pedicel, the scape with numerous scattered, rather long hairs and apparently dilated from lateral aspect but no true ciliation. Caudal wings with about a dozen lines of uniform discal ciliation where widest. Venation fuscos; a rounded, dusky spot against marginal vein and under the venation, the blade is irregularly very lightly smoky. Hind tibial spur single, small. Mandibular teeth acute, the outer a little the shortest. Costal cell of caudal wings not extending to the hooklets by far. Axillae not especially narrow, rather broad; meson of scutellum and the apex rather broadly glabrous. Cheeks two thirds the lengths of the eyes. Abdomen conic-triangular, depressed, about as long as the thorax.

From one female captured in jungle, Tweed River, May 4, 1914 (A. P. Dodd).

Habitat: Tweed Heads, New South Wales.

Type: No. Hy3025, Queensland Museum, Brisbane, the specimen on a tag; hind, pair of wings and hind tibiae with the slide type of Hezencyrtus fumosipennis Girault.

2. PARASYRPHOPHAGUS SEMIARGENTIPES new species.

Female:—Length, 1.10 mm.

Differs from the genotype in having the abdomen distinctly longer, somewhat longer than the rest of the body, the coxa and proximal two thirds of femora silvery white, rest of legs yellowish tinged with slight reddish; also the wings are slightly dusky but there is no distinct spot against the marginal vein, the hairless line has only about six lines of cilia proximal of it, the venation is yellow and the funicle joints all a little longer than wide and slightly wider distad, 1 and 2 a little the shortest. Pedicel slightly longer than funicle 6. Scape yellow, dusky at tip above, cylindrical. The frons is somewhat broader, the cheeks a little longer than in the genotype. Bulls dusky black. Hind tibial spurs double. Otherwise like the genotype.

From one female captured in jungle, May 3, 1914 (A. P. Dodd).

Habitat: Tweed Heads (Tweed River), New South Wales.

Type: No. Hy3026, Queensland Museum, Brisbane, the specimen on a tag with type of genotype; head, fore wing, a middle tibia and caudal tibiae with slide type of Hezencyrtus fumosipennis Girault.

HEZENCYRTUS new genus.

1. HEZENCYRTUS ALBICLAVA new species. Genotype.

Female:—Length, 1.60 mm, excluding the normal, shortly extruded portion of ovipositor. Orange yellowish; scutum except along the median line, the scutellum except lateral and caudal margins, cephalic margin of propodeum and lateral, the dorsum of abdomen except
at base and the caudal margin and neck of pronotum, metallic purple. Face washed with metallic purple. Fore wings uniformly embrowned from about the middle of the submarginal vein distal to apex. Funicle purplish; funicle 6 at tip and the club silvery white. Extruded valves of ovipositor which are no longer than a fourth the length of abdomen, purple. Abdomen ventrad at distal fourth purple. Mesopleura purple.

Head lanceolate, the antenna inserted in the middle or only a little below, the scrobes absent or nearly, the frons moderately broad, the ocelli in a straight line, not near the eyes, the latter long, over twice the length of the cheeks. Mandibles with two lateral teeth acute, subequal, the inner distinctly shorter, truncate but not very broad. Marginal vein about twice longer than wide, the stigmal and postmarginal veins subequal, each somewhat shorter. Oblique hairless line present, narrow, rather obscure. Funicle joints elongate, 1 and 2 subequal, about five times longer than wide, each over twice the length of the pedicel, 6 a little longer than the pedicel, a little over twice longer than wide. Club joints not very distinct. Scare stout, long. Metapleura purple. Head and thorax feebly reticulated and with short black pubescence from minute setigerous punctures. Propodeum with three sharp ridges at meson, all separate. Fore wing densely ciliated discaally, the marginal fringes short. Axillae just not meeting acutely. Propodeal spiracle small, round, cephalad, a long lateral carina (near lateral margin) leading straight from the latero-caudal corner. Club of antenna rather long, somewhat wider than the funicule. Hind tibial spur single, distinct. Scutum somewhat longer than the scutellum. Hairless line of fore wing with very many lines of cilia proximad of it.

From one female caught in jungle, June 10, 1913 (A. P. Dodd).

**Habitat:** Upper Mulgrave River (Gordonvale), Queensland.

**Type:** No. Hy 3027, Queensland Museum, Brisbane, the female on a tag; head, hind tibia and fore wing on a slide.

This genus runs to *Hexacladia* Ashmead but differs in the venation.

The club is not as long as the preceding three joints taken together. Scare not extending beyond the vertex. Antennae inserted much above the ventral ends of the eyes.

### 2. HEXENCYRTUS FUMOSIPENNIS new species.

**Female:**—Length, 1.90 mm.

Agrees with *Hexacladia* Ashmead but the scape is compressed yet long but not extending any distance beyond the ocelli; also the marginal vein is distinctly somewhat longer than the other two veins and about thrice longer than wide; postmarginal vein a little shorter than the stigmal. Mandibles with the two outer teeth acute, the second longer, the third tooth shortest and concavely truncate and rather broad. Funicle joints elongate, the pedicel only one and a half times longer than wide at apex. Frons broad, convex; cheeks less than a third the length of the long eyes. Axillae separated by a short carina. Valves of ovipositor exerted for a fifth the length of the abdomen. Hind tibial spur single, stout. Club 3-jointed.

Dark metallic blue, the neck of pronotum, propleura, axillae and base of abdomen narrowly, orange yellow. Legs and scape yellowish brown; flagellum black except club and distal third of funicle 6 which are silvery white. Fore wings deeply fuscous from base to apex, the hind wings dusky. Scape and flagellum hirsut (excluding club). Funicles 1 and 2 subequal, twice the length of the pedicel, about five times longer than wide, 3 and 4 subequal, 6 twice longer than wide; club only a little wider, about a third the length of the funicule. Oblique hairless line with many fine lines of cilia proximad of it. Head and thorax feebly reticulated, the thorax with numerous minute setigerous punctures. Propodeum with three well separated median carina and a narrow carina just laterad of the minute spiracle and which curves around it to run along (mesad) the cephalic margin; just mesad of this carina and infolded by its two arms (the lateral and cephalic) the propodeum bears fine longitudinal striae; between these and meson, glabrous. Hairless line of fore wing closed caudad.

From one female caught by sweeping in jungle, March 1, 1914.

**Habitat:** Gordonvale (Cairns), Queensland.
Type: No. Hy 3058, Queensland Museum, Brisbane, the specimen on a tag; head, a hind tibia and a fore wing on a slide.

This species differs from the genotype mainly in coloration but also the ocelli are in a slightly curved line and are somewhat larger. Compared with type of albicollar. Also, in the latter, the axillae are separated and without a carina between them. Both species bear scattered pubescence from pin punctures on scutum and scutellum.

ZAOENCYRTUS new genus.

1. ZAOENCYRTUS LEPIDOPTEROPHAGUS new species. Genotype.

Female:—Length, 0.69 mm.

Dark metallic purple, the wings hyaline but with a little stain at the marginal vein; base of abdomen across orange yellow. Legs yellow, washed in places with metallic. Antennae strongly capitulate, the club as long as the funicle, large, obliquely truncate from one side. Pedicel stout, longer than any of the funicle joints yet not much longer than wide; funicle joints enlarging distad, 6 widest and longest, somewhat wider than long, 1 and 2 subequal, much smaller than 6; antennae 10-jointed, no visible ring-joint, the club only 2-jointed, the distal joint much the longest, the proximal joint much wider than long; club obtusely pointed. Marginal vein slightly longer than wide, the postmarginal somewhat shorter, half the length of the stigmal. Wings broad, with the usual hairless line. Mandibles as in Coccidencyrus bicoloricornis as is also the body and head, the cheeks as long as the eyes, the head (cephalic aspect) somewhat longer than wide. Abdomen shaped as in the species named. Scape long, slender. Head scaly reticulate. Lateral ocelli their own diameter from the eye margins. Scapea forming a long, rounded triangle. Frons rather broad. Scutum sculptured like the head but with additional minute, scattered setigerous punctures. Axillae extraordinarily finely, transversely lined. Scutellum finely, longitudinally lineolated, scaly at apex. Axillae a little separated. Abdomen scaly. Metapleurum bare. Segment 3 of abdomen long, occupying half or more of the surface. Mandibles slender.

Very similar in form and most structures to Coccidencyrus bicoloricornis.

From many females labelled ‘‘Nat. Mus. Victoria. Reared from supposed moth pupa on Eucalyptus tree near base, May, 95.''

Habitat: Melbourne, Victoria.

Types: In the National Museum, Melbourne, two females on a tag, two heads on a slide.

ZOOENCYRTUS new species.

1. ZOOENCYRTUS ACUTIVENTRIS new species. Genotype.

Female:—1.30 mm.

Dark metallic green, the scutellum and abdomen except at base, purplish, the legs straw yellow. Tip of scape white. The distal half of that part of the blade of the fore wing distad of apex of the stigmal vein, distinctly dusky, the dusky area covering the apex of the wing and conically projected a little past apex of stigmal vein, the projection a little obliqued caudad. Mandibles not especially long, with three subequal acute teeth. Scape dilated but not greatly, not extending beyond the center—the antennae inserted a little above the ventral ends of the eyes yet a little below the middle of the face, the pedicel somewhat over twice longer than wide, a little longer than funicle 1 which is a little the longest of the funicle; funicle 6 somewhat longer than wide. Club somewhat over a third the length of the funicle; ring-joint present. Marginal vein about four times longer than wide, the stigmal three-fourths the length of the marginal, the postmarginal a little shorter than the stigmal; marginal fringes and the oblique hairless line present. Axilla just meeting inwardly, the head and thorax finely, densely scaly, the abdomen a little less distinctly so, pointed conic-ovate, somewhat longer than the thorax, the ovipositor not exerted. Scutellum densely scaly punctate. Frons moderately broad; cheeks as long as or a
little longer than the eyes; scrobes rather short, not meeting above, the cavity divided by a
median ridge. Frons not prominent. Face rather strongly inflexed. Scutellum a little shorter
than the scutum, the latter with scattered hindspiculose from minute, very obscure punctures.
Fore wing with uniform discal cilia. Head rounded.

From two females captured in jungle, March 5, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Types: No. Hg 53929, Queensland Museum, Brisbane, the two females on a tag; head
and fore wing on a slide.

Hairless line of fore wing with about five lines of cilia proximal of it. Fore wings
rather slender.

Diffs from Eupecus in being wholly metallic, in having the frons broad, the longer
marginal vein which is somewhat longer than the stigmal.

EPIENCYRTOIDES new genus.

1. EPIENCYRTOIDES QUADRIDENTATUS new species. Genotype.

Female:—Length, 0.83 mm. Depressed. Valves of ovipositor slightly extruded.

Rather light metallic green, the abdomen coppery except at base; legs white except
intermediate and hind one; hind femur, hind knee and a band around hind tibia just below
and not at knees. Antennae white except proximal two joints of club, scape at sides of tip
and proximal part of pedicel. Fore wing dusky at distal third, the proximal margin of
the infuscation none at center, concaved on each side from this; also a dusky area along
and against the marginal vein and obscurely opposite that vein at caudal margin. Scutellum
densely punctulate. Body delicately sculptured. Scape a little compressed; pedicel somewhat
longer than either of the distal two funicle joints which are nearly subequal, largest, somewhat
wider than long, the preceding four joints subequal, much wider than long, each not half
the length of joint 5; ring-joint very short; club subequal to the funicle and wider. Marginal
vein two and a quarter times longer than wide, the stigmal a fourth shorter than it, the
postmarginal a little shorter than the stigmal; oblique hairless line present. Fore wing very
lightly stained under all of venation. Mandibles with four distinct, small teeth, the outer
a little the longer and more acute. Frons moderately broad. Cheeks subequal to the eyes.
Face rather strongly inflexed. Axilie narrow, joined, a short curva between them. Head
(cephalic aspect) rounded. Scutellum triangular, the apex obtuse. Hind tibial spur small.
Infuscation of fore wing generally eferminous with the discal ciliation.

From one female caught June 27, 1913 by sweeping in forest.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg 53830, Queensland Museum, Brisbane, the female on a tag; head, a fore
wing and hind tibia on a slide.

Later, two females, Kuranda, open jungle, January, 1913 (A. P. Dodd) and one at
Burnett Heads, Southern Queensland, forest, June, 1914 (A. P. Dodd). Also one in forest,
May 15, 1914, Chinderah (Tweed River), New South Wales.

Club conic-ovate, not obliquely truncate. Funicle joints enlarging distal.

2. EPIENCYRTOIDES AXILLARIS new species.

Female:—Length, 0.78 mm. Differs notably from the genotype in having the axilie
distinctly separated for some distance.

Similar in form to the genotype. Dark metallic green, the scutum blue, the wings hyaline
excepting just under or along the marginal vein. Abdomen darker except at base. Legs about
as in the genotype but the hind tibiae are all black except at each end rather broadly and the
middle tibias have a dusky spot ventrad below knee. Sculpture about as in the genotype;
also the venation but the discal ciliation of the fore wing is uniform nearly to the hairless line,
the latter with about five lines of cilia proximal of it. The stigmal vein is shorter, subcissile. Antennae as in the genotype except that the pedicel is somewhat shorter. The frons is a little broader. Otherwise like the genotype.

From one female caught in forest, December 23, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3031, Queensland Museum, Brisbane, the specimen on a tag with type of quadricuspidatus; head, fore wing and hind legs with slide type of Achrysoaphagus westwoodi Girault.

NEZARHOPALUS new genus.

1. NEZARHOPALUS CAUDATUS new species. Genotype.

Like Zarkopaus Ashmead but the funicle joints not annular.

Female:—Length, 0.60 mm., excluding ovipositor which is extruded for three fourths the length of the abdomen. Slender.

Dark metallic green, the wings hyaline; legs, antennae and ovipositor concolorous; knees, tips of tibiae and tarsi palpid. Scapes a little compressed, tapering toward tip; funicle 6 largest, much wider than long (not annular), over twice the width of 1, distinctly shorter than the usual pedicel; club enlarged, subequal to funicle in length; funicle widening rather rapidly distad; scape more or less equal to the funicle. Mandibles with three acute teeth. Frons rather narrow, prominent, the cheeks over half the length of the eyes. Venation pallid. Hind femur compressed. Thorax with a short phragma. Axillae slightly separated. Scutum a little longer than the scutellum. Abdomen conic-ovate, nearly as long as the thorax. Cephalic legs paler. Hind tibial spur minute. Fore wings densely, finely ciliate, the hairless line present, proximal of it, the discal cilia arranged only in two conspicuous lines. Venation as described for Zarkopaus Ashmead. Marginal vein punctiform, the stigmatic and postmarginal very long, subequal.

From one female captured July 28, 1913 in jungle (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3032, Queensland Museum, Brisbane, the female on a slide.

NEASTEROPAEUS new genus.

Female:—Rum to Asteropaus Howard but the funicle is a little longer than the club, the frons is subprominent only, the postmarginal vein a little shorter than the marginal which is about twice longer than wide. The axillae are distinctly a little separated and the ovipositor extruded for a length equal to a fifth that of the abdomen.

1. NEASTEROPAEUS CAUDATUS new species. Genotype.

Female:—Length, 0.85 mm., excluding the ovipositor.

Dark metallic purple, the scutellum green, the first two pairs of legs (except coxae), the caudal knees and tarsi and distal half (or a little more) of caudal tibiae, whitish. Funicle and club brownish yellow. Wings hyaline but with a dusky spot against whole of the side of the stigmal vein. Venation black. Hairless line of fore wing with about a half dozen lines of cilia proximal of it. Pedicel slightly longer than wide, longer than funicle 6 which is largest and a half wider than long; funicles 1-2 subequal, ring like; funicle joints enlarging distad. Frons moderate. Cheeks as long as the eyes, the head rounded. Mandibles with two short outer teeth and a third broad one, the latter truncate, the mandibles small. Scape subequal to the club. Hind tibial spur weak. Fore wings broad, very finely ciliate. Body scaly. Scutellum reaching base of abdomen. Pubescence soft, weak. Abdomen pointed, conic-ovate, as long as the thorax. Axillae narrow. Pronotum transverse-linear.

From one female caught by sweeping on Tweed River, May 10, 1914 (A. P. Dodd).

Habitat: Murwillumbah, New South Wales.

Type: No. Hy 3033, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia with slide type of Tuncostigma deala nympha Girault.
2. NEASTEROPÆUS CINCTIPES new species.

*Female:* Length, 0.80 mm., excluding the ovipositor.

Dark metallic coppery, the scutum dark blue; knees, tips of tibiae and tarsi pale yellowish; middle tibiae white with a black band just below knee. Thorax scaly. Funicle yellowish, rest of antennae black. Differs from the genotype in coloration and as follows: The wings are wholly hyaline, the venation paler, the hairless line is bounded by but a single line of cilia proximad (excluding several cilia in a second line); the third tooth of mandible is obtuse not truncate; and the club is broader. Also, funicles 1-3 are longer, each only a little wider than long, 3 shortest of them. Otherwise about the same.

Described from one female caught at 2,000 feet, June 3, 1913 in forest (A. P. Dodd).

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. Hg 3034, Queensland Museum, Brisbane, head, fore wing and hind tibiae on a slide with slide type of *Hexacyrtus albicauda* Girault. Body of type accidentally destroyed.

PARÆNASOMYIA new genus.

1. PARÆNASOMYIA ORRO new species.

Differ from *Kuanella* in having the club conic-ovate, the ovipositor extruded and the axillae separated.

*Female:*—Length, 1.30 mm., excluding the ovipositor which is extruded for a fourth the length of the abdomen.

Dark metallic purple, the apex of scutellum and abdomen metallic green, the wings hyaline; venation yellowish brown. Apex of valves of ovipositor, tips of tibiae (more broadly in middle legs), knees and tarsi white. Funicle suffused with yellowish. Scutum and axillae very finely, densely, polygonally scaly, the latter distinctly separated for some little distance. Scutellum scaly, the scaliness with a distinct longitudinal trend. Scutellum reaching base of abdomen, the latter scaly. Scutum with scattered obscure setaceous punctures, the pubescence moderate, soft normal. Abdomen conic-ovate, inclined upward at apex, as long as the thorax. Scape with a slight but distinct foliaceous expansion toward apex; a little longer than the club, the latter somewhat wider than the funicule and a little over half its length. Funicles 1-3 subequal to each other and to the pedicle but 3 wider, 1 a little over twice longer than wide; funicle 4 a little shorter than 3, 5 still shorter and wider, 6 barely longer than wide. Ring-joint present. Marginal vein punctiform, the postmarginal subequal to it, the stigma normal, three the length of the marginal. Hairless line of fore wing with only one distinct line of cilia proximad of it. Fore wings broad. Hind tibial spurs double. Mandibles with the two inner teeth shorter than the outer, not long. Frons moderately narrow. Face deeply incised, the frons not prominent.

From one female caught in forest, January 7, 1913.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. Hg 3035, Queensland Museum, Brisbane, the female on a tag; head, fore wing and hind tibiae with slide type of *Ceracystella nigrella* Girault.

Many specimens were found later which had been reared from ovip eciodonid galls on *Melaleuca*., Gordonvale, April, 1913 (A. P. Dodd). A few males were present. In this sex the frons is somewhat broader, the antennae yellow except scape and pedicle, the club solid, the funicle and club clothed with long scraggly hairs which are not in distinct whorls. Also, the scape is shorter and more dilated, the funicle joints longer than wide but shortening distad, the pedicle globular, wider than long. The face is metallic green in the male. In one female specimen, there was a distinct carina at meson of base of scutellum but the axillae were distinctly separated as in the other specimens!
PARENTEROMYIA new genus.

1. PARENTEROMYIA NIVEICLAVA new species. Genotype.

*Female:*—Length, 1.90 mm. Robust.

Deep orange yellow, the pronotum, except caudo-mesal, head, propodeum, dorsum of abdomen except at distal fourth and at base mesal and the mesopleurum, deep metallic purple; scutellar cavity, scapae and legs yellow; antennae purple, the club white. Head and thorax finely scaly, a row of small punctures along the eyes on vertex; thorax with numerous, obscure setigerous punctures. Axilae a little separated. Abdomen a little shorter than the thorax, acutely triangular, depressed; ovipositor a little extruded. Mandibles with three short, subequal teeth, the outer one acute, the mandibles rather short and stout. Fore wings distinctly infuscated at distal fourth or more (but apex clearer), the infuscation acuminately prolonged proximad to the oblique hairless line; lightly stained under submarginal vein. Marginal vein two and a third times longer than wide, subequal to the postmarginal, the stigma a little longer. Half a dozen lines of coarser cilia proximad of the hairless line. Head (cephalic aspect) longer than wide, the frons moderate (about 5 times the diameter of the large cephalic ocellus), the cheeks over half the length of the eyes. Inner tooth of mandibles blunt. Hind tibial spur stout. Scapae long and slender, the pedicel subelongate, not quite thrice longer than wide, somewhat shorter than funicle 1 which is longest and about four and a half times longer than wide; 2 and 3 each a little shorter in succession; funicle 6 a little longer than wide. Club not half the length of the flagellum. Face indexed, the frons not especially prominent. Scutellum shorter than the scutum. Club joints not very distinct.

From one female caught by sweeping flowers in a garden, February 18, 1913.

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

*Type:* No. H 3036, Queensland Museum, Brisbane, the specimen on a tag; head, hind tibiae and a fore wing on a slide.

Genus SCHEDIUS Howard.

1. SCHEDIUS UNICINSECOND new species.

*Female:*—Length, 1.15 mm. Differs from the genotype in having the frons broader, the club obliquely truncate, the funicle joints wider than long, the mandibles rather long and with three acute teeth of which the mesal is longest. Also, the scutellum extends to base of abdomen.

Brilliant metallic green, the abdomen darker, the wings hyaline; legs (except all coxae and a broad inconspicuous band on hind tibia) a short distance distad of knee and extending to middle) and antennae (except pedicel above at proximal two thirds) silvery white. Head and thorax densely punctulate, the axillae smoother, reticulated. Abdomen scaly. Frons moderately broad. Cheeks very short, about a fourth the length of the eyes or a little less. Frons subprominent, the vertex nearly flat. Ring-joint present. Pedicel as long as funicles 1 and 2 united, barely longer than wide; funicle 5 widest and longest, nearly twice wider than long, 5 a little longer than it, longest, 2 and 3 subequal, a little wider than 1. Club a little over half the length of the funicle and distinctly wider.

Lateral ocelli nearly their own diameter from the eyes. Hind femur compressed, the hind tibial spurs single. Tarsal joints of caudal legs all longer than wide, 1 and 5 subequal, 1 a little longer, over twice longer than wide. Venation pallid. Marginal vein slightly longer than wide; other veins about as in the genotype. Hairless line of fore wing with only about three lines of discal cilia proximad of it. Pronotum transverse-linear. Scutellum long. Abdomen as figured for the genotype. Fore wings with about 40 lines of very fine discal cilia where widest.

Described from one female, forest, July 9, 1914.

*Habitat:* Meewarina (Birrane), Queensland.

*Type:* No. H 3037, Queensland Museum, Brisbane, the female on a tag; head, fore wings and hind tibiae with slide type of Extremodes paraparacinellum Girault.
MEMOIRS OF THE QUEENSLAND MUSEUM.

GENUS COPIDOSOMA Ratzeburg.

1. COPIDOSOMA COMPRESSIVENTRIS new species.*

_Female._—Length, 1.35 mm., excluding ovipositor which is extruded for a length nearly equal to that of the abdomen.

Dark metallic coppery green, the wings hyaline; tarsi pale. Body polygonally scaly. Venation dusky the marginal vein punctiform, the postmarginal a little longer, the stigmata of normal length, three the length of the postmarginal. Cilia proximal of hairless line arranged in about seven lines. Mandibles brownish, rather slender, with equal acute teeth. Scala long, tapering distad, nearly as long as the funicle; pedicel a half longer than wide at apex, longer than any of the funicle joints which are subequal and somewhat longer than wide (but 6 a little shorter and wider than 1). Club long, a little wider than the funicle and about nearly two thirds its length, the third joint longest; obtuse at apex. Head triangular, longer than wide, the scrobes long and rather deep, the frons moderate in width, not prominent, the cheeks about as long as the eyes. Tarsal joints not long; hind tibial spur single, slender, not especially long. Abdomen curved upward toward apex and compressed strongly distad, the hypopygium prominent. Club 1 longer than funicle 6. Last two pairs of knees pale. Axilla rather narrow, distinctly a little separated. Scutum with inclined, scattered pubescence. Pronotum not visible from dorsal aspect. Fore wings with fine discal ciliation, about 40 lines where broadest (proximal of mid-distance between apex of blade and apex of venation).

From one female caught in forest, March, 1914 (A. P. Dodd).

_Habitat:_ Cooktown, Queensland.

_Type:_ No. Hy 3038, Queensland Museum, Brisbane, a female on a tag; head, fore legs, caudal tibia and a fore wing with slide type of Cerchysella umbilicata Girault.

GENUS AYPHYCUS Mayr.

1. AYPHYCUS SANGUINITHORAX new species. Differs from the genotype in the venation.

_Female._—Length, 0.60 mm.

Blood red, the legs, mesopleuron, ventral third of scape, distal third of pedicel, proximal half of mandibles, funicle and proximal third of abdomen, silvery white; club black; abdomen otherwise brown; scape and pedicel otherwise dusky; first three funicle joints tinged with dusky. Head pinkish suffused with yellow. Fore wing with a sooty stripe across them from the marginal and stigmata veins and beyond them for a distance equal to those veins, this stripe abruptly cut off distad of venation, thus not reaching the cephalic margin. Marginal vein one and three fourths times longer than wide, subequal to the stigmatic, the postmarginal present but very short. Discal cilia of fore wing very fine and dense, the hairless line narrow. Pedicel distinctly longer than any of the short funicle joints of which 1-4 are globular or moniliform. 5 wider than long, 6 still wider, longest; club distinctly wider and nearly as long as the funicle. Mandibles small, with three minute teeth at apex. Frons moderately narrow, face inital, the cheeks not as long as the eyes. Thorax with distinct, short, silvery pubescence against the red background, densely scaly, the axillae joined or nearly, the surface densely, finely scaly.

From one female taken by sweeping grass in forest, April 6, 1914.

_Habitat:_ Gordonvale (Cairns), Queensland.

_Type:_ No. Hy 3039, Queensland Museum, Brisbane, the specimen on a tag; head and part of fore wing on a slide.

A second female, same place, June 8, 1914.

* A species similar to this (at least in form: not critically examined) was very common in the grass of parks, meadows and so on in late October at Muswellbrook, New South Wales.
NESYRPHOGRUS new genus.

1. NESYRPHOGRUS FLAVITHORAX new species. Genotype.

Female:—Length, 0.95 mm. Rather stout. With the habits of Eurytus.
Orange yellow, the wings hyaline, the antennae white, legs pale yellow; head and abdomen dark purplish; club and dorsal peduncle dusky. Scutum slender; pedicel somewhat less than twice longer than wide at apex, a little longer than funicel 1 which is longest and slightly longer than wide; funicel 2 and 3 subquadrate; remaining funicel joints somewhat wider than long. Club about a half the length of the funicel or a little more. Vertex moderate in width; cheeks subequal to the eyes in length. Marginal vein twice longer than broad, a little longer than the stigmal, the postmarginal and somewhat longer than wide, the venation pale; oblique hairless line distinct, with about four rows of coarser discal cilia proximal of it. Axillae joined but separated by a short, distinct carina. Thorax finely scaly, with numerous, small setigerous punctures. Propodeum naked. Pubescence not conspicuous but quite evident on scutum and scutellum. Mandibles with three short teeth. Ring-joint present. Abdomen short, triangular, depressed. Hind tibial spur single. Scutellum purplish mesadjust before tip. Frons moderate.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3040, Queensland Museum, Brisbane, the specimen on a tag; head, a fore wing and a hind tibia on a slide.

Later, two females, same place.
The cheeks are nearly as long as the eyes.

2. NESYRPHOGRUS UNGUTTATUS new species.

Female:—Length, 1.10 mm.
Very similar indeed to the preceding but differing in that the axillae are not separated merely by a carina but are distinctly apart for some distance, rather widely separated. The purple spot on scutellum before apex is more distinct. Also, the head is metallic aneuous. The marginal vein is a little shorter, the postmarginal longer, somewhat over half the length of the stigmal. Vertex with small thimble punctures, a row of them along the eye. Also funicel 1 is distinctly longer than wide.

Habitat: Kuranda, Queensland.

Type: No. Hy 3041, Queensland Museum, Brisbane, the specimen on a tag; head, antenna and a fore wing on a slide.

Differ from Syrphus Ashmead in having the scape long and slender, the funicel joints short and the club about half the length of the funicel.

ECHTHROBACCELLA new genus.

1. ECHTHROBACCELLA ARGENTINOTATA new species. Genotype.

Female:—Length, 1.50 mm., excluding ovipositor which is extruded distinctly a short distance. Frons prominent. Varicolored.
Black. The following parts silvery white: Head except center of occiput and two stripes across cheeks beneath the eyes, the ventral one near ventral margin of head, both running to the black of the occiput and barely visible from cephalic aspect; apex of pedicel, scape (except dorsal edge broadly from base nearly to tip and ventral narrowly all along), pronotum except its entire face, pro- and mesopleurum, prepectus, legs (except ventral edge centrally of cephalic femur, a minute dusky spot dorsal just below knee on cephalic tibia, middle knee and a dot just below it laterad and same on hind legs but the spot below
knee a distinct black band and there is a spot before knee on ventral edge of hind femur; also a minute dot on hind tibiae dorsad two thirds way to apex and the apex of middle tibia narrowly, brown); base of abdomen ventrad and proximal three fourths of margins latero-ventrad (showing dorsad as a marginal spot at proximal third and proximal two thirds), tegulae and extruded valves of ovipositor at distal half. Scutum and scutellum dark metallic green, the axilae, lateral margins of scutum rather broadly, lateral and apical margins of scutellum narrowly, orange yellow. Fore wings infuscated from proximal fourth to apex, the infuscation broken by the hyaline hairless line and by a long V-shaped hyaline line whose cephalic arm originates between the stigmal and postmarginal veins. Venation blackish, the marginal vein two and a third times longer than wide, subequal to the stigmal which is about twice the length of the postmarginal. Axilae just meeting inwardly. Pronotum with short black pubescence, the scutum and scutellum with short silvery pubescence, the surface extremely finely sheened. Abdomen densely scaly, conic-ovate, about as long as the rest of the body. Scutellum large, triangular, the propodeum transverse but visible from above. Mandibles with three equal teeth. Frons subprominent, the vertex flat, rather narrow, the cheeks as long as the eyes. Scape slender, with bulla about as long as the funicle, the flagellum subcylindrical, the club barely wider than the funicle and not quite half as long. Pedicel subequal to funicle 6 which is longest, a little longer than wide, wider than 1 which is subequal to 2 and quadrate. Hind tibial spurs double, the shorter spur no longer than the apical setae but distinctly stouter. Hairless line of fore wing with many lines of cilia proximal of it.

From one female caught, May 17, 1914 sweeping at 1,000 feet in forest (A. P. Dodd).

Habitat: Upper Tweed River, New South Wales.

Type: No. Hg 3042, Queensland Museum, Brisbane, the female on a tag; head, a hind leg and fore wing on a slide.

LEUROCEROIDES new genus.

Female.—Head rounded, the face inflexed, the frons not prominent, moderate in width, the cheeks somewhat shorter than the eyes. Mandibles rather small, slender, with three small acute teeth at apex. Antennae inserted below the middle of the face but not especially near the mouth border, 10-jointed with one minute ring-joint, the club solid, the scape short, dilated ventrad but not greatly, the funicle joints wider than long, enlarging distad, the first two subequal and smallest. Pedicel a little longer than wide, longer than any of the funicle joints. Funicle 3 distinctly longer than 2 but not much smaller than the following joints. Marginal vein nearly twice longer than wide, slightly longer than the stigmal, subequal to the postmarginal. Hind tibial spur small. Thorax convex, a little longer than the usual abdomen. Axilae with a carina between them (hence are joined). Scutellum reaching base of abdomen. Legs normal. Pronotum transverse-linear. Middle tibial spur large.

1. LEUROCEROIDES NIGER new species. Genotype.

Female.—Length, 0.75 mm.

Jet, the wings hyaline; funicle and club suffused with brown. Knees, tips of tibiae and tarsi reddish brown (middle legs), white elsewhere. Venation brown. Whole body extraordinarily finely longitudinally lineolated giving a velvety effect. Mandibles dusky, reddish at tip. Hairless line of fore wing with five lines of cilia proximal of it. Caudal tibiae clavate.

From one female caught by sweeping in forest, April 20, 1913 (H. Hacker). Queensland Museum Collection.

Habitat: Brisbane, Queensland.

Type: No. Hg 3043, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and hind tibia on a slide.
MIRRENCYRTUS new genus.

Female:—Differ from Encyrtus in having the mandibular teeth rather long and acute, the third tooth much shorter than the other two, less than a third of their length but acute. Hind tibial spurs double. Frons moderate. Habitus of Encyrtus.

1. MIRRENCYRTUS GLABRISCUTELLUM new species. Genotype.

Female:—Length, 1.10 mm.

Dark coppery, the wings hyaline, the legs concolorous except all tarsi, cephalic knees and tibiae, proximal half of middle femora, middle knees, middle tibiae except just below knees and caudal knees and tip of caudal tibia which are rich reddish brown. Venation blackish, the marginal vein twice longer than wide, slightly shorter than the stigmal, the postmarginal acuminated, about a third the length of the marginal. Hairless line of fore wing not distinct, there being two more or less complete, rather widely separated lines of coarser cilia proximad of the main discal ciliation but not outlining a hairless line. Funicle 1 suffused with yellow; apex of scape white. Funicle joints widening distad and lengthening a little, all distinctly wider than long and a half shorter than the pedicel. Club wider than funicle and slightly over half its length. Dilation of scape rather wide. Cheeks about the length of the eyes. Head corneous, with four rows of pin-punctures along the vertex, one row of each side along the eyes. Scutum densely, finely scaly and with many obscure, minute, setigerous punctures. Axiline distinctly reticulated, separated by a short carina. Scutellum smooth and shining but with rather long, black setae scattered over the surface. Pubescence of scutum short. Scutellum not quite reaching base of abdomen. Fore wings broad.

Habitat: Tweed Heads (Tweed River), New South Wales.

Type: No. Hy 3044, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia with slide type of Nezara punctatius coudatus.

NEASTYMACHUS new genus.

1. NEASTYMACHUS AURATICORPUS new species. Genotype.

Female:—Length, 1.70 mm.

Golden yellow, the wings hyaline but a little yellowish along under the venation. A blackish stripe across middle of occiput; face of pronotum, disk of dorsal abdomen and a spot near margin on each side of base, metallic purplish. Axiline with a short carina between them. Thorax densely minutely scaly and with numerous minute pin-punctures which bear short white hairs. Mandibles with three equal teeth. Scape slender, curved, the pedicel a little over twice longer than wide, somewhat longer than funicle 1 which is subequal to 2, 3 and 4 subequal, a little shorter than 2, 6 a little longer than wide; funicle 1 twice longer than wide. Club barely wider than the funicle, the flagellum filiform. Cheeks two thirds the length of the eyes. Frons moderate. Scrobes forming an elongate triangle. Funicle hirsut. Abdomen as long as the rest of the body, pointed triangular. Marginal vein somewhat over twice longer than wide, the stigmal about its length, the postmarginal somewhat over half the length of the stigmal. Ten or more lines of coarser discal cilia proximad of the hairless line. Club somewhat over one third the length of the funicle. Lateral ocelli a little separated from the eyes. Hind tibial spurs distinct, double. Club dusky. Head a little longer than wide. Agrees otherwise with generic description of Echthrobaccus.

From one female captured in forest, April 24, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3045, Queensland Museum, Brisbane, the specimen on a tag; the head, fore wing and a hind tibia on a slide.

A second female, March 28, 1914 same place. The wings were hyaline.
PTEROMALENGYRTUS new genus.

Female:—Characterized remarkably as follows: Mandibles with four distinct, short teeth which are smaller mesial; antennae with one large ring-joint as in some Pteromalidae, the funicle 5-jointed, the scape much dilated foliaceous and only somewhat longer than wide, the club conical, 3-jointed and not as long as the funicle and only a little wider, the joints of the funicle short; hind femur and tibia distinctly compressed and rather broad. Marginal vein thickened, subquadrate, a very little longer than wide, the stigmal somewhat longer than it, the postmarginal somewhat shorter than the marginal. Hind tibial spur single. Axilis joined, with a slight carina between them. Abdomen narrower and longer than the thorax, conical, the ovipositor distinctly extruded a short distance. Pronotum transverse. Face inflexed. Frons moderately narrow, narrowing cephalo-ventrad. Cheeks as long as the eyes or a little longer. Middle legs slender, the spur large. Fore wings broad.

1. PTEROMALENGYRTUS QUADRIDENTATUS new species. Gcnotype.

Female:—Length, 1.39 mm. including ovipositor.

Metallic purple, the wings hyaline the venation brown; tarsi white. Thorax densely polygonally scaled, the axillae less distinctly so. Scutum with rather sparse pubescence, the scutellum inclined ventro-caudad, nearly reaching base of abdomen, subequal in length to the scutum. Funicle joints subequal, each somewhat wider than long, each distinctly shorter than the pedicel which is stout, a little longer than wide. Club somewhat over half the length of the funicle, longer than the body of the scape. Hairless line of fore wing with three lines of cilia proximal of it. Marginal and discal cilia of fore wing fine.

From one female caught in forest, November 2, 1912.

Habitat: Ayr, Queensland.

Type: No. Hy 3046, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing, hind tibiae and middle leg with slide type of Ennsomyella coloridiceps Girault.

PARACÆNOCERCUS new genus.

Female: Runs to Beccytus Howard but the frons is moderate, the marginal vein thickened, quadrate, the postmarginal absent, the stigmal a little longer than the marginal. The axillae are distinctly separated for some little distance. Club a little shorter than the funicle, not enlarged, long. Mandibles rather slender, with three acute teeth at apex. Mandibles not elongate. Hind tibial spur double. Abdomen triangular, as long as the thorax. Pronotum transverse. Legs slender.

1. PARACÆNOCERCUS PERSEVERANS new species.

Female:—Length, 0.85 mm.

Dark aeneus, the scutellum purple, the abdomen dark coppery, the wings hyaline, tips of tibiae, tarsi and middle knees white, also trochanters; venation black, the stigmatic vein colorless. Hairless line of fore wing with only three and a half lines of discal cilia proximal of it. Scape slender, as long as the funicle, the pedicel somewhat longer than wide at apex, longer than any of the funicle joints, the first of the latter distinctly shortest, somewhat wider than long, 2 quadrato, the following joints each slightly longer than the one preceding it. Club joints distinctly longer and larger than the funicle joints, the middle joint a little the longest of the three, longer than wide, wider than the funicle. Fore wings very broad. Cheeks nearly as long as the eyes. Scutellum longitudinally striate, the scutum densely polygonally scaly, the axillae less distinctly so, the scutellum so at apex. Scutellum extending to base of abdomen, not quite as long as the scutum.

From one female taken in jungle, June 27, 1914 (A. P. Dodd).

Habitat: Childers, Southern Queensland.

Type: No. Hy 3947, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and hind tibia with slide type of Neocopidosomyia viridiscutellum Girault.
EPIBLATTICIDAE new genus.

Female:—Rusts to Neooblatticidae Girault but differs in not having the club much enlarged, stout and conic-ovate, nearly as long as the funicule; in having the third tooth of mandibles broadly truncate, the scape much less dilated, the funicule joints still longer, the frons moderate, the ovipositor distinctly extruded, the marginal vein shorter, only somewhat longer than the stigmal, very slightly longer than the postmarginal. Cheeks nearly as long as the eyes. Face much inflexed. Hind tibial spur single. Axillae distinctly separated for some little distance. Habitus of Ancyrap. Ring-joint present.

1. EPIBLATTICIDAE LAMBI new species. Genotype.

Female:—Length, 1:30 mm., excluding the ovipositor which is black and extruded for a length equal to nearly half that of the abdomen.

Metallic purple, the scutellum dark green, the wings hyaline, the venation black. Legs bright yellowish white except middle and caudal coxae, caudal femur except at each end and a minute dusky dot on caudal tibiae dorsal a little below knees. Scape pale at each end. Body polygonally scaly, the vertex thickly pin-punctate, the scutum and scutellum clothed with rather dense, short yellowish pubescence from very minute punctures. Abdomen annulose at base, about as long as the thorax, rather acute, the hypopygium prominent distad. Pronotum transverse. Scutellum triangular, subequal in length to the scutum, the two rather plane. Pedicel a little longer than wide, distinctly longer than any of the funicule joints, the latter all distinctly wider than long, 1 and 2 subequal, distinctly narrower than the others which very slightly widen to apex. Hairless line of fore wing with more than six lines of cilia proximal of it.

From one female taken by sweeping the forest on sand ridges near coast, May 13, 1913 (A. P. Dodd).

Habitat: Chinderah (Tweed River), New South Wales.

Type: No. Hy 5038, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and hind legs with slide type of Dinocoris fuscentris.

PARABLATTICIDAE new genus.

Female:—Length to Epiblatticidae Girault but differs in having the club larger, the scape more dilated, the teeth of the mandibles all rather long and acute, the middle tooth distinctly longest, the ovipositor barely extruded. Club only two thirds the length of the funicule. Abdomen short, triangular, depressed dorsal. Axillae separated by a short carina.

1. PARABLATTICIDAE PACHYSCAPA new species. Genotype.

Female:—Length, 1.05 mm.

Velvety black, the legs concolorous except tips of tibia, tarsi, middle femora and tibiae which are reddish yellow; funicule 1 pallid dusky. Fore wings with a lightly infumated stripe across from the marginal vein and accentuated against that vein, the cross-stripe suffused. Venation dusky black. Sternal vein nearly as long as the marginal, the postmarginal distinctly shorter than the stigmal. Hairless line of fore wing with eight or more lines of discal cilia proximal of it. Thorax finely scaly, the scales small like those on the wings of butterflies.* Fore wings moderately broad. Scape much dilated, the pedicel a little longer than wide at apex, longer than any funicule joint; joints 1-3 of funicule shortest, subequal in width and shortening distad, 3 twice wider than long; joints 4-6 distinctly larger, 4 about twice the size of 1 but smaller than 6 which is distinctly wider than long. Club obliquely truncate. Cheeks

* But not real scales but their appearance.
nearly as long as the eyes. Frons moderate. Eyes hairy. Caudal wings with about 15 lines of discal cilia. Hind tibial spurs double. Scutum with scattered, minute setigerous punctures. Middle femur suffused with dusky. From two females captured in jungle, July 30, 1914 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3049, Queensland Museum, Brisbane, one specimen on a tag; head, pair of wings and hind tibiae with slide type of Nemanostus purpureiscutellum Girault.

A third female same place August 20.

PRONOMITOIDES new genus.

Female:—Rans in my table to Prionomitus but differs in having the head (cephalic aspect) distinctly longer than wide, the scape slender, the stigmal and postmarginal veins rather long and subequal. Mandibles with three acute teeth, of which the middle one is distinctly longer than the other two. Frons moderately broad. cheeks about half as long as the eyes. Hind tibial spur single, the middle one very large. Axillae with a carina between them. Valves of ovipositor shortly extended, the abdomen pointed triangular. Cephalic cone compressed, large, the femur obелarate. Pronotum transverse-linear. Scutellum extending to base of abdomen.

1. PRONOMITOIDES VIRIDISCUTELLUM new species. Genotype.

Female:—Length, 1.10 mm.

Metallic purple, the scutellum metallic green, the wings hyaline, the venation dusky. Knees, tibiae, distal half of middle femur and tarsi pale golden yellow. Apex of scape pale. Club wider than and half as long as the funicle; joint 1 of the latter, a little shorter than the pedicel, somewhat longer than wide, subequal to 2 and 3, 4 and 5 subequal, a little longer than wide, 6 quadrate. Ring joint present. Hairless line of fore wing with four lines of discal cilia proximad of it, the fore wings broad. Mandibles with acute teeth, the first and third subequal, small, the middle over twice longer than either. Scutellum longitudinally lined, the scutum polygonally sealy, with slight pubescence. Axillae polygonally sealy, also the abdomen.

From one female caught in jungle, May 4, 1914 (A. P. Dodd).

Habitat: Tweed Heads (Tweed River), New South Wales.

Type: No. Hy 3060, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing, middle and hind tibiae on a slide.

GENUS NEOLIOCLADIA Perkins.

Head transverse, menisciform, infixed, bearing coarse shallow punctures, the space between the eyes wide, the ocelli in a triangle much widest at base, the posterior ones being rather near to eye margins, only about half as far from these as from the anterior ocellus. Maxillary palpi long, 4-jointed, the first and third subequal, the second much longer than either of these, the fourth curved and very elongate, much longer than second and clothed with long hairs. Mandibles broad and apparently simply pointed in one aspect but in others seem to have three microscopic teeth at apex. Antennae in front view of head inserted well below the middle; those of the female simple, the scape long and slender, the pedicel rather shorter than the first of the six funicle joints, which when seen at their widest gradually decrease in length and increase in width to the sixth, which is transverse, the club oval, rather longer than the two preceding joints; the scrobes short and rather indefinite. Propodeum widely rounded in front; mesonotum about as long as the axillae (which meet inwardly) and the scutellum, the latter much deflected apically. Wings with a pattern in the female (but uniformly clear in the male), stigmal vein long, marginal very short, postmarginal longish in the female and rather longer still in the male. Middle tibiae armed at the apex with denticles as also are the
inner margins of the tarsi; posterior femora on lower side, posterior tibiae and basal joint of tarsi on upper side foliaceous dilated, the tibiae with two distinct apices. Abdomen small and generally distorted after drying, the ovipositor when exerted short and recurved like that of a *Pimpla* fly. The male differs chiefly in its clear wings, much less dilated hind legs and the six long branches of the antennae, which are inserted higher up on the head.

1. **Neocladia Howardii** Perkins

Black with various metallic reflections, the antennae with the scape ferruginous, the rest more or less obscure, becoming black or dark fuscous towards the tip, as are the branches in the male. Front and middle legs more or less yellowish-brown in the female, the middle tibiae darker, the base of their tarsi being pale, the tips blackish. Posterior legs dark, apex of femora white. In the male the legs darker but both sexes vary in this respect. Wings in female with apical half fuscous, paler near the tip and containing two white spots, opposite one another, the upper placed just beyond the stigmatal vein, while there is a narrow transverse fuscous band before middle of wing and a more or less evident longitudinal one, extending from near base along lower margin of wing. Head dull, green or purplish and with large shallow punctures, the lower parts of the face often more shining, mouth-parts pale. Thorax somewhat shining, distinctly but not brightly metallic, clothed with short black hairs, with indefinite surface sculpture and excessively fine punctation; scutellum above very dull, densely sculptured the decurved apex smooth and shining. Abdomen black, purplish at base. Length, 2.5 mm.

**Habitat:** Bundaberg, Queensland. An internal parasite of a common jassid.

**Type:** Query.

**Paracludeoneurus** new subgenus.

Differs from *Cheloneurus* in lacking the postmarginal vein. The genotype is *Cheloneurus permutifer* Gvrlaut.

**Genus Psyllaeophagus** Ashmead.

1. **Psyllaeophagus Metallicus** (Gvrlaut).

_Aratus metallicus_ Gvrlaut.

**Female:**—Length, 1.20 mm. Small for the tribe. Metallic green, the abdomen darker, the scutellum more or less coppery, the wings hyaline. Antennae brown, the scape and pedicel black. Legs black, the knees white (femora and coxae metallic), the tarsi brownish. Body densely, moderately roughly reticulated, the head and mesosomas with scattered, small, thimble punctures; axilla a little separated. Mandibles with three teeth about equal; postmarginal vein about four fifths the length of the stigmatal, the marginal punctiform. Funicle joints only slightly longer than wide, the distal ones subquadrate, the first smallest, not half the size of the pedicel. Club 3-jointed, two thirds the length of the funicle and wider. Ovipositor prominent, as in _Aratus_.

Lateral ocelli their own width from the eye margin. Face inflexed. Fronts not especially narrow. Scutellum smoother than scutum and head. Type re-examined.

**Male:**—The same but with metallic bluish on the head and thorax; the antennae light brown and with whorls of rather long hairs, the funicle joints more or less excised.

Described from six males and three females in the collections of the Queensland Museum at Brisbane, mounted on cards labelled 'Bred out of Eucalyptus, 3.8.11, Brisbane. R. Hacker' and 'Gail No. 15.'

**Habitat:** Brisbane, Queensland.

**Types:** No. Hy 3651, Queensland Museum, Brisbane, one male one female on a single card.
TABLE TO THE EARTH’S ENCYRTINE GENERA OF ENCYRTIDAE.*

FEMALES.

Winged.

Antennæ inserted near the middle of the face.

Scape very long; funicle 1 elongate; postmarginal vein much longer than marginal and stigmal, the marginal thick. Club solid. Male antennæ with rami . . . . .

Hexacladia Ashmead, Hexencyrtus Girault.

Scape normal. Marginal, postmarginal and stigmal veins long, subequal . . . . .

Tanoeurea Howard.

Antennæ inserted distinctly ventrad of middle of face, at the elypeus or nearly.

Antennæ 6-jointed, the funicle 3-jointed.

Marginal vein punctiform, the postmarginal absent, the stigmal very minute . . . .

Coccobius Ashmead.

Antennæ 9-jointed.

Funicle 4-jointed; club 3-jointed.

Marginal vein quadrate, the stigmal twice its length. Abdomen compressed, elongate

Cercobius Walker.

Marginal vein short but longer than the short stigmal, the postmarginal absent.

Vertex flat, the frons prominent.

Scutellum with a sparse tuft of bristles at apex. Abdomen as long as thorax,

the ovipositor somewhat extruded . . . . . . Homalotiga Howard.

The same (?) but postmarginal vein distinct, short . . . . . . Plagiomerus Crawford.

Funicle 6-jointed, the club solid (see Hexacladia Ashmead, above).

Caudal tibiae greatly, foliaceously flattened.

Postmarginal and stigmal veins elongate, the former the longer, the marginal barely

longer than wide; scape slender. Male antennæ with branches . . . . .

Neocladia Perkins.

Caudal tibiae normal.

Scutellum with a tuft of hairs at apex.

Marginal vein long, thrice or more the length of the short stigmal, the post-
marginal subobsolete; antennæ cylindrico-clavate, the scape long and slender

Saranotum Perkins.

Scutellum without an apical tuft of bristles.

Scape foliaceously dilated ventrad.

Marginal vein punctiform, the stigmal long, the postmarginal somewhat over

half its length; flagellum greatly flattened, the funicle joints very much

wider than long, 6 much wider than 1, the pedicel very small. Frons

prominent. Dilatation of scape great . . . . . . Leurocerus Crawford.

Marginal vein nearly twice longer than wide, subequal to the postmarginal,

the stigmal a little shorter. Funicle cylindrical, the club barely wider,

the joints short . . . . . . . . . . . . . . Leuroceroides Girault.

Scape slender or merely compressed or slightly enlarged distad, the flagellum

normal.

Head normal, that is, not noticeably longer than wide; face inflected.

Postmarginal vein subobsolete, the marginal twice longer than wide, the

stigmal still longer . . . . . . . . . . . . Isodromoides Girault.

Postmarginal vein a third longer than the marginal which is nearly twice

longer than wide. Stigmatic vein slightly longer than the postmarginal . .

Neocladobosomyia Girault.

* Based mainly on Ashmead and Meys. The rinth joint is not counted with one exception.
AUSTRALIAN HYMENOPTERA CHALCIDIOIDEA, VII.—GIRAULT. 121

Head (cephalic aspect) plainly longer than wide.

Face not inflexed, convex, the scrobes very short. Frons narrow; axille rather broadly joined at meson; marginal vein twice longer than wide, the postmarginal vein a third longer than it, the stigmal still longer. Genal suture obsolete ... ... ... Copidosomia Girault.

Face inflexed, the scrobes long; axille distinctly separated for a short distance; marginal vein punctiform, the postmarginal absent; thorax very convex, globular ... ... ... Copidosomopsis Girault.

Antennae 8-jointed.

Funicle 5-jointed, the club solid. (Compare Rhopus, below.)

Marginal vein punctiform, the stigmal twice or more the length of it, the postmarginal absent. Pedicel nearly as large as the club which is over two thirds the length of the funicle; abdomen flat. Axille connate. Face inflexed. No ring-joint. Frons moderately broad. Metallic ... ... ... Psyleptus Girault.

Wings developed, the marginal cilia of fore wing rather long.

Body weak, nonmetallic, polished. Marginal and postmarginal veins very short, the stigmal longer. The club "zeigt keine Spur einer Gliederung (selbst bei starker mikroskopischer Vergrößerung)" ... ... ... Rhopus Foerster.

The marginal cilia of fore wing short.

Body not especially weak. Postmarginal vein longer than the stigmal, the marginal shortest. Body flat. The funes wide ... ... ... ... ... Holothorax Mayr, Metallonella Girault.

Wings vestigial, the body flat, the funes wide ... ... ... Metallon Walker.

Club 2-jointed, the funicle 6-jointed.

Marginal vein somewhat longer than wide, the stigmal longer than it; antennae capitate, the club obliquely truncate; mandibles slender, the teeth small. Scape slender. Frons rather broad ... ... ... Zaimenyctus Girault.

Antennae 11-jointed. Winged.

Funicle 7-jointed, the club 2-jointed.

Scape very long, extending far above the elyptus, the following joints also long. Marginal vein scarcely longer than wide ... ... Pseudencyrtella Girault.

Funicle 5-jointed, the club 3-jointed.

Ring-joint large, distinct, counted here; scape foliaceous dilated; marginal vein subquadrate; mandibles quadridente ... ... ... Pteromalencyrtus Girault.

Funicle 6-jointed, the club 3-jointed.

Fore wings without marginal cilia.

Antennae very long and slender, the flagellar joints very long and slender, funicle 6 shortest but four or more times longer than wide. Scape reaching to the ocelli. Cheeks somewhat longer than the eyes; marginal vein punctiform ... Philopygus Mayr.

Fore wings with marginal cilia.

Cheeks very short, the eyes occupying nearly the whole side of the head. Frons very narrow.

Flagellum short, clavate, the funicle joints annular, the club very large, longer than the funicle, the pedicel three longer than thick at apex; postmarginal vein obsolete ... ... ... ... Archinus Howard.

About the same. Postmarginal and stigmal veins long Euryriopus Howard.
check normal, variable, not especially short, the frons variable.
Abdomen globose, much shorter than the thorax, compressed. Frons broad.
Postmarginal and stigmal veins long. CHESTOMORPHA Ashmead.
Abdomen depressed, triangular.
Scutellum with one distinct tuft of hairs from the surface near apex.
Scutum with a tuft of hairs from the surface near center.
Frons prominent. The vertex flat. Scape broadly dilated ventrad. Marginal vein twice or more longer than wide, subequal to stigmal; 
antenna capitate. CHLIOXEBODES Girault.
Scutum naked.
Frons prominent, the vertex flat!  
Antennae not compressed.
Scape more or less dilated ventrad or toward apex but often cylindrical, sometimes foliaceously dilated; marginal vein twice or more longer than wide, much longer than the stigmal or postmarginal. 
Punciule joints more or less subquadrate, the club as long or nearly as the funicle, usually variecolored. Frons narrow. CHEILONIKURS Westwood.
Scape broadly dilated; stigmal and postmarginal veins very long; 
facial impression carinate. CHRYSOPHAGUS Ashmead.
Frons not prominent. Head longer than wide.
Flagellum compressed.
Stigmal and postmarginal veins short. Marginal vein fully twice longer than wide, twice the length of the stigmal. CHRYSOPHAGUS Ashmead.
Punciule cylindrical; head longer than wide.
Face strongly inflexed, ovipositor not extruded.
Club enlarged. ACHRYSOPHAGUS Girault.
Club not enlarged, shorter than the funicle. CHRYSOPHAGUS Girault.
Face not inflexed, the acrobes short. Ovipositor not extruded. EUSEMONELLA Girault.
Seutellum armed at apex “mit lamellartigen Schuppen” (lamella-like scales).
Axille united. “Nacken mit lamellartigen Schuppen” HABROLETIS Fuerster.
Seutellum unarmed at apex.
Scape more or less foliaceously expanded ventrad for its entire length, the expansion usually greatly convexed.
Abdomen globose, compressed.
Punciule foliaceousy compressed. Pronotum longer than the seutum. MIRA Schellenberg.
Abdomen normal, triangularly depressed.
Punciule very strongly compressed.
Head oblong, the frons prominent. Marginal vein longer than the stigmal. CERAPROXERUS Westwood, EUSEMION Dahborn.
Punciule not compressed.
Club as long as or longer than the funicle, usually enlarged, always two thirds the length of the funicle.
Head lenticular, the seroses very short. Marginal vein barely
wider than long ... ... ... ... \textit{Ænasius} Walker.

Head not lenticular, the face inflexed.
Marginal vein distinctly longer than the stigmal.
Funicle joints annular. Club as long as rest of the flagellum.
Frons moderately narrow. Marginal vein a fourth longer
than the stigmal ... ... ... \textit{Blatticida} Girault.
Funicle joints not annular but wider than long. Club a little
shorter than the funicle. Marginal vein four times longer
than wide, twice the length of the stigmal. Frons narrow
\textit{Nesblatticida} Girault.

The same but marginal vein not twice the length of the stigmal.
Ovipositor extruded; frons moderate; club not very much
enlarged. Tooth 3 of mandible truncate ... ... ... ... ... \textit{Epblatticida} Girault.
Ovipositor not extruded; club enlarged; tooth 3 of mandible
acute ... ... ... ... ... \textit{Parablatticida} Girault.
Marginal vein distinctly shorter than the stigmal. Face inflexed.
Funicle joints much wider than long but not annular; post-
marginal vein longer than the marginal about half the
length of stigmal ... ... ... \textit{Tyndarichus} Howard.
Marginal vein subequal to the stigmal. Frons prominent.
Funicle joints annular ... ... ... \textit{Habrolepopterygis} Girault.
Club distinctly shorter than the funicle and not especially enlarged.

Pedicle flattened.
Form elongate. Caudal femora and tibia flattened, the spurs of
the tibiae double. Axille a little separated. Marginal vein
no shorter than the short stigmal. Scape very short ... ... ... ... ... \textit{Neolepida} Girault.

\textbf{Pedicle normal.}

Thorax clothed with a scaly pubescence.
Stigmal vein longer than the marginal ... \textit{Blastothrix} Mayr.
Thorax not so clothed.
Head inflexed.
Marginal vein no longer than wide, the stigmal as long as
it. Postmarginal vein subobsolete.
Dilation of scape convex ... \textit{Ectopogonathia} Perkins.
The same but stigmal vein much longer than the marginal,
the postmarginal distinct.
Dilation of scape linear, broadening toward apex. Club
truncate at apex ... ... ... \textit{Ænasieilla} Girault.
Club conic ovate ... ... ... \textit{ParaÆnasomya} Girault.
Dilation of scape very convex ... \textit{Ànasomyella} Girault.
Marginal vein plainly longer than wide, the postmarginal
distinct, the stigmal longer than it, subequal to the
marginal.
Ovipositor not extruded ... ... ... ... ... ... ... ... \textit{Encyrtus = Microtermys; Zooencyrtus} Girault.
Ovipositor extruded ... ... ... \textit{Rhopalencyrtoida} Girault.
Head lenticular ... ... ... ... \textit{Paraphænobiscus} Girault.
MEMOIRS OF THE QUEENSLAND MUSEUM.

Scape normal, cylindrical, compressed, o'bconic or clavate not foliaceously dilated.

Antennas very long and slender, all funicle joints much longer than wide.

Club not enlarged.

Ovipositor much extruded.

Cheeks not quite half the length of the eyes; head longer than wide. Mandibles long, their teeth acute...


Ovipositor not extruded.

Pedicel thrice longer than wide at apex... Latorax Mayr.

Club enlarged (icate Ashmead).

Frons prominent. Wings with leopard-like spots...

Calliptera Motschulsky.

Antennae not especially long, normal.

Marginal vein punctiform or very little longer than wide.

Head convex-lens-shaped, the scrobes short. Usually coarsely punctate.

Frons broad.

Scutum only half the length of the scutellum; club as long as the funicle; postmarginal vein as long as the stigmal; coarsely punctate...

Chalcaspis Howard.

Scutum as long as or longer than the scutellum; club shorter than the funicle; postmarginal vein usually much shorter than the stigmal. Coarsely punctate...

Bothrothorax Ratzburg, Aratus Howard, Hemenasius Ashmead.

The same; postmarginal and stigmal veins short, subequal...

Pentelicus Howard.

The same; club longer than rest of flagellum, very large; postmarginal and stigmal veins very long, unequal...

Bletyrus Howard.

Frons moderate...

Hemenasius Ashmead.

Head not lentiform, the scrobes long, the face inflexed.

Postmarginal vein absent or very short, much shorter than the stigmal. Frons not prominent. Stigmal vein normal.

Metallie.

Club as long as or longer than the funicle. Postmarginal vein present.

Funicle joints short, distad wider than long; frons of moderate width. Pedicel barely longer than wide...

Coccidencyrtus Ashmead.

Compare Paracnemocerius Giraudii.

Club distinctly shorter than the funicle, the pedicel longer than wide.

Head (cephalic aspect) distinctly longer than wide.

Abdomen long, compressed, the ovipositor extruded.

Funicle long...

Cepidosoma Ratzburg.

Abdomen rotund-oval, the ovipositor long, slender...

Cenocercus Thomson.
Abdomen normal, the ovipositor not extruded.

Frons rather narrow; club much enlarged, obliquely truncate
\( (\text{teste Ashmead}) \). *Litomastix* Thomson.
Frons broad .. .. .. *Berecyntus* Howard.

Head (cephalic aspect) no longer than wide.

Axillae connate or barely separated.

Stigmal vein long and curved.

Club large, obliquely truncate .. *Isorhombus* Howard.
Stigmal vein not especially long.

Pedicel longer than funicle 1; frons rather narrow ..

*Okenyctus* Ashmead, *Psyllaphagus* Ashmead.
Frons rather broad .. .. .. *Chalceminys* Perkins.

Axillae distinctly separated.

Hind tibiae with one spur.

Mandibles short; frons rather narrow. Funicle joints longer than wide .. .. .. *Schedius* Howard.
Hind tibial spurs double.

Frons broad; funicle joints wider than long, enlarging distad .. .. .. *Zarhopalus* Girault.

Nonmetallic.

Postmarginal vein present.

Scapae normal.

Funicle joints all short, wider than long or not much longer than wide .. .. .. .. *Aphycus* Mayr.

Funicle 1 much longer than the pedicel, cylindrical, the others gradually shortening .. .. .. .. *Heterarthrellus* Howard.

Scapae short, obovate .. .. .. *Paraphycus* Girault.

Postmarginal vein as long as or longer than the stigmal.

Frons prominent.

Stigmal vein as long as the postmarginal. Antennae short, the scapae somewhat broadly dilated toward apex, the flagellum strongly incrassated, the joints of the funicle annular; club as long as the funicle .. .. .. .. \( (\text{teste Ashmead}) \). *Zarhopalus* Ashmead.

The same but funicle joints not annular. Ovipositor extruded .. .. .. *Nezarhopalus* Girault.

Stigmal vein shorter than the postmarginal. Antennae normal. Ovipositor strongly extruded .. .. .. .. *Coccidoctonus* Crawford.

Frons not prominent.

Head normal .. .. .. .. (Male) *Prionomitus* Mayr.

Postmarginal vein only somewhat shorter than the stigmal. Ovipositor usually strongly extruded. Funicle joints longer than wide .. .. .. .. .. \( (\text{partim}) \) *Cerchysius* Westwood.

Head longer than wide .. .. .. *Prionomitorides* Girault.
Marginal vein not punctiform, plainly longer than wide.  
Metallic.  
Club usually very large, as long as or longer than the funicle; always subequal to the funicle.  
Eyes large, rounded, strongly convergent above, the frons linear, very narrow.  
Antennae very short; club enormous; funicle joints transverse; face indexed. 
   Zaomma Ashmead.  
Eyes normal, the vertex not linear.  
Head convex-lens shaped, the scrobes short.  
   Funicle joints wider than long; abdomen short; marginal vein about twice longer than thick. Mandibles with small subequal teeth. 
   Coccophtotonus Ashmead.  
Head not lenticular.  
Stigmal vein shorter than the marginal.  
Frons not prominent.  
   Postmarginal vein shorter than the stigmal; club as long as the funicle, the joints of the latter short. 
   Abdomen ovate.  
   Mandibles 3-dentate. 
   Epicercus Ashmead.  
   Euchthogonatopus Perkins.  
   Mandibles 4-dentate. 
   Epicercoides Girault.  
Frons prominent.  
   Stigmal and postmarginal veins short. Club longer than the funicle. 
   Anicerus Howard.  
Stigmal vein as long as or longer than the marginal.  
Marginal and postmarginal veins subequal; funicle not longer than the first joint of the club. Frons prominent. 
   Asterocephus Howard.  
Marginal vein longer than the postmarginal; funicle subequal to the funicle. Joints of funicle enlarging distad. 
   Neasteropeus Girault.  
Club of normal size.  
Flagellum long, the funicle joints all longer than thick.  
Head lenticular.  
Marginal vein about twice longer than wide, not as long as the stigmal, the latter shorter than the long postmarginal; two lateral teeth of mandibles more acute and longer than the third tooth. 
   Hemicycrtus Ashmead.  
Head not lenticular.  
Stigmal vein much longer than the marginal or postmarginal veins.  
Axillae separated. 
   Pseudocycrtus Ashmead.  
Stigmal vein shorter than the postmarginal. Mandibles long, with acute teeth. Pedicle about three as long as thick. 
   Parencycrtus Ashmead.
Stigmatic vein a little longer than the postmarginal. Mandibles short. Head longer than wide

*Parenctomyia* Girault.

Flagellum shorter, the funicule joints not all longer than wide.

Head lenticular.

Pedicle elongate.

Marginal vein longer than the stigmal

*Rhytidithorax* Ashmead.

Pedicle not especially long.

Marginal and stigmatic veins subequal. Funicle usually ringed with white

*Phenodiscus* Förster.

Marginal vein somewhat longer than the stigmatic which is subequal to the postmarginal. Funicle joints longer than wide

*Phenodiscoides* Girault.

Head not lenticular.

Ovipositor distinctly extruded (except *Cerchysius australensis*).

Axilae connate or a little separated.

Ovipositor valves compressed, broad; abdomen rather long, conic-ovate; stigmatic vein longer than the marginal

*Cerchysius* Westwood.

Ovipositor not extruded.

Postmarginal vein distinctly much longer than the marginal

(see Ashmead). *Homalotyulus* Mayr.

† Marginal vein punctiform; head lenticular.

Scutellum with a delicate grooved line at proximal half

*Holcencytus* Ashmead.

Without status? *Ageniaspis* Dahlbom.

Postmarginal vein not much longer than the marginal, sometimes much shorter.

Mandibles elongate. Frons broad. Hind tibiae with two spurs. Scape more or less compressed

*Cerchysellia* Girault.

Mandibles normal.

Marginal vein subequal to the stigmatic.

Postmarginal vein absent. *Achalcerinys* Girault.

Postmarginal vein evident, much shorter than the marginal. Hind tibial spurs single. Club wider than the funicule. Funicle joints longer than wide

*Helzoonatopus* Perkins.

Hind tibial spurs double. Club no wider than the funicule. Funicle joints barely longer than wide

*Ectythroacella* Girault.

Postmarginal vein as long as the stigmatic. Club about half the length of the funicule

*Parastriophorus* Girault.

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* Is this the carina between the axilae?
Marginal vein distinctly longer than the stigmal.

Frons not prominent.

Postmarginal vein a little longer than the marginal. Stigmal vein very short. Axille a little separated ... APHIDENCYRTUS Ashmead.

Postmarginal vein shorter than the stigmal. Funicle joints much longer than wide. Scapa short ... SYRPHOMAGUS Ashmead.

Stigmal vein distinctly longer than the postmarginal. Marginal vein very much longer than the postmarginal.

Frons rather broad. Funicle joints barely wider than long. Inner tooth of mandible broadly truncate. Marginal vein over twice the length of the stigmal ... ECHTHBORACCA Perkins.

Frons prominent ... ATROATES Howard.

Nonmetallic.

Postmarginal vein absent.

Funicle joints increasing in length distad, wider than long. Frons not prominent ... ASYMACHUS Howard.

Postmarginal vein distinct.

Funicle joints all longer than wide. Frons moderately broad. Hind tibial spurs double ... NEEASTYMACUS Girault.

TRIBE EUCOMINI.

GENUS EUCOMYS Foerster.

This genus resembles closely Enasmion in nearly everything except venation and the mandibles.

1. EUCOMYS HIBISCUS new species.

Female:—Length, 1.33 mm.

Deep orange yellow, the abdomen dark metallic purple; legs and scape paler yellow; rest of antennae concolorous or nearly. Pronotum and vertex washed with purple. Fore wing embrowned to apex from a little out from base but clear disto-caudal, in a transverse, slit-like spot just distad of postmarginal vein, in a distinct not very narrow transverse band from the distal fourth or less of submarginal vein and along the caudal margin proximad of this cross-band. A clump of coarse black setae at the proximal margin of the cross-band of fore wing, cephalic half, followed proximad by over a half dozen lines of normal discal cilia. Postmarginal and stigmal veins rather long, subequal, the stigmal curved, the marginal distinctly shorter, about twice longer than wide, not half the length of the stigmal vein. Oblique hairless line obscure, of necessity short because of the hyaline, naked cross-band. Head lenticular, the serebes short, the surface finely transversely sheened, the frons and vertex with thimble punctures; lateral ocellus over their own diameter from the eyes. Scutum very finely longitudinally lined, hispid. Axille meeting. Apical tuft of hairs on scutellum black. Hind legs more or less black. Flagellum clavate, compressed distad, the club short, truncate; scape slender, purple at tip above; pedicel rather long, a little longer than funicle 1, which is subequal.
to 2 and longest; 1 or 2 about one and a half times longer than wide, 3 a little longer than wide, 4 a little wider than long, 6 distinctly wider than long. Frons broad; cheeks as long as the eyes. Fringeum hirsutum. Metapleurum not noticeably pubescent. Hind tibial spurs distinctly unequal but distinct; hind tarsi white, proximal portion of first tarsal joint of hind legs purple. Ring-joint absent.

From two females captured while crawling over the stems of an Hibiscus in a garden, October 30, 1911.

_Habitat:_ Mossman, Queensland.

_Types:_ No. Hy 3052, Queensland Museum, Brisbane, two females on a tag; head, a fore wing and a hind tibia on a slide.

The Hibiscus plant mentioned was badly infested with a lecaniiid and ants were also constantly running to and fro in large numbers. The encyrtid resembled the latter somewhat, walking very rapidly and unequally and jumping strongly when disturbed.

Another female of this species was taken by miscellaneous sweeping (including Hibiscus and other ornamentals in neglected gardens) along the Herbert River at Halifax, February 28, 1913. In this specimen, the hind legs were colored like the others.

2. _EUOMYS ARGENTICOX,_ new species.

_Female:_—Length, 1.80 mm. Robust.

Like the preceding but the antennae are black, the scape silvery white, black along dorsal edge; pronotum metallic purple except laterad; scutum metallic purple at distal half, the purple advanced a little at meson and with dense whitish pubescence; thorax on each side of scutellum (dorsal aspect), purple. Middle coxae purple, the others silvery; tarsi, knees and most of middle tibiae pale, other tibiae purple, other femora white, purple along dorsal edge. Disk of occiput purple. Checks with conspicuous long bristles along ventral half (present in _hibisci_). Lateral ocelli distinctly separated from the eyes. Antennal segmentation differs in that the joints are all a little longer, funicle 1 being subequal to the pedicel; the pedicel is subcompressed in both species. Mandibles shorter. Antennae inserted on a level with the ventral ends of the eyes in both species. The fore wings differ, being blackish rather than brownish. Propodeum shagreened, purple at the spiracle. Rest of thorax finely longitudinally lined. Hind tibial spurs and hind tarsi the same.

From one female caught in jungle, March 1, 1914.

_Habitat:_ Gordonvale (type) and Ingham, Queensland.

_Type:_ No. Hy 3054, Queensland Museum, Brisbane, the specimen on a tag; head, fore wings and a hind tibia on a slide.

Also one female, Ingham, March 30, 1914 (A. P. Dodd).

3. _EUOMYS AURANTIFASCIATA_ new species.

_Female:_—Length, 1.65 mm.

Similar to _argenticox_ but the cephalic margin of scutum is purple followed by a rather narrow transverse stripe of orange yellow, the rest purple, the cross-stripe of orange straight and thus the caudal purple on scutum has a straight cephalic margin. Also, the propodeum is wholly purple. Otherwise very similar. Cephalic margin of scutum narrowly black and also of the scutellum. Cephalic femur purple dorsally only at distal third (about distal half in _argenticox_).

From one female caught on a window, January 11, 1912.

_Habitat:_ Innisfail, Northern Queensland.

_Type:_ No. Hy 3054, Queensland Museum, Brisbane, the specimen on a tag.
4. EUCOMYS ARGENTISCAPUS new species.

Female:—Length, 1.80 mm.

Similar to aurantifasciata but differs in that the caudal margin of scutum is narrowly orange yellow and the narrow stripe across cephalic scutum is a little narrower. Also the axillae are purple except laterad and the immediate base of scutellum at meson. First and last pairs of coxae, cephalic femora except along dorsal and ventral edges rather broadly and distal three fourths of lateral aspects of middle femora, silvery white; also a spot ventrad at tip of caudal femur; rest of legs purple except tips of middle tibia and middle tarsi which are reddish brown and other tarsi which are silvery white (joints 2-4). Occiput with a central purple V and a purple semicircle ventrad of it. Caudal edges of cheeks from mouth, purple. Head with scattered punctures. Antennae differ from those of argentea in that the pedicel is distinctly not twice longer than broad at apex; the caudal tarsus in that the distal joint is purple not white; and the fore wing not greatly.

From one female caught June 3, 1914, in jungle (A. P. Dodd).

Habitat: Grafton, New South Wales.

Type: No. Hy 3055, Queensland Museum, Brisbane, the female on a tag with tag type of aurantifasciata; head, a fore wing and a hind tarsus with slide type of Eucyrus spinosae Girault.

5. EUCOMYS PROSERPINENSIS new species.

Female:—Length, 1.75 mm.

Similar to argentea Girault but the pronotum is orange except narrowly along caudal margins and the scutum bears a conico-triangular purple marking from cephalic margin to apex, at base this marking as wide as the scutum but narrowing to a point at apex. The propodeum is washed with purple and also the distal part of the mesepimeron. Cephalic legs mostly all pale. Otherwise the same or nearly, but the pedicel is purple only at proximal three fourths dorsad, the scape pale yellow except above at immediate tip and the setae on the ventral cheeks much shorter and less conspicuous. The fore wings are brown not black.

From two females caught by sweeping in forest near a cultivated area, November 3, 1912.

Habitat: Proserpine, Queensland.

Types: No. Hy 3056, Queensland Museum, Brisbane, the two specimens on a tag; head, a fore wing, hind and cephalic tibia on slide with type Eucyrus newcombii.

6. EUCOMYS HORTENSIS new species.

Female:—Length, 1.55 mm.

Orange yellow, the following parts metallic purple: Occiput, frons, Clypeus, cheeks beneath the eyes, last two (from mesal aspect) funiculi joints and the club; a large peltate area center of scutum from cephalic margin nearly to apex (whose lateral margins are C-shaped and whose caudal margins oblique to meson) and a little longer than wide, widest at cephalic margin of scutum, next to just before the markings caudal end; caudal margin of each axilla centrally, base of scutenum between the axilla, abdomen, propodeum; middle legs dorsad on each side of knee, middle coxe, hind femora, dorsad, hind tibia except ventrad, mesepimeron except cephalic end, thoracic venter mostly, hind knees and hind tarsus at immediate base. The following parts silvery white—first and last pairs of coxa, cephalic femora except above at tip, all of middle femora except at each end, caudal tarsi. Differs from proserpinensis notably in the different shape of the marking on the scutum which in that species is conical with regularly curved lateral margins and extending the whole length of the scutum. Both species
bear numerous pin-punctures on the frons, the caudal margin of pronotum is very narrowly purplish and the axillae are slightly separated, fringed with lashes along caudal margin. Funicle 1 barely shorter than the pedicel. Infusion of wings dark. Head lenticular. Scapes above at tip and the pedicel purple.

From one female caught in a garden, August 1, 1914 (A. P. Dodd).

Habitat: Harvey’s Creek (Cairns), Queensland.

Type: No. Hy 3057, Queensland Museum, Brisbane, the specimen on a tag.

ENCYRTOMYIA new genus.

Female:—Resembles Omphalenegetrus of the Ectromini. Form small, rather slender. The head (cephalic aspect) rounded, the frons moderately broad, the antenna inserted distinctly below the middle, 10-jointed, the club 3-jointed, large and ovate, the divisions faint, the region longer than the funicle whose joints, except the first, are transverse; one short ring-joint. Pedicel normal, but much longer than any of the funicle joints. Scapes moderately dilated, rather short. Scutellum simple; axillae meeting or nearly, transverse-cuneate. Middle tibial spur slender, long. Hind tibial spurs single, small. Abdomen as long as the thorax, the ovipositor short, inserted at distal third, not exerted. Metapleurum bare. Legs slender. Marginal vein short, twice longer than wide, the stigmatic somewhat shorter, the postmarginal half the length of the marginal. Oblique hairless line narrow. Mandibles truncate. Cheeks somewhat shorter than the eyes. Wings with short marginal fringes.

1. ENCYRTOMYIA ALBIFLAGELLUM new species. Genotype.

Female:—Length, 0.50 mm.

Dark metallic green, the wings hyaline. Funicle, club, knees, tibiae (except proximal half of cephalic tibia and middle tibiae at base) and tarsi pure white, rest of legs and antenna concolorous; tip of pedicel and scape pale. Scutum scaly but with scattered minute setigerous punctures; scutellum apparently very finely longitudinally lineolated. Head very finely sculptured. Funicle 4 wider than long, twice the length of 3 which is subequal to 2, 1 a little longer than wide, shorter than the pedicel, the ring-joint very minute. Discal ciliation proximal of hairless line sparse (four short lines) and coarser than the main ciliation; hind wings densely ciliate discaley.

From one female taken in jungle, June 7, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3058, Queensland Museum, Brisbane, the specimen on a slide.

2. ENCYRTOMYIA SECUNDUS new species.

Female:—Length, 0.75 mm.

Differs from Omphalenegetrus wallacei Girault in being black, or nearly and the intermediate femora are concolorous centrally, the cephalic legs like the hind legs. Also the antenna differs in that funicle 1 is subquadrate and the following joints all transverse and subequal, ring-like. The scape is metallic except at tip, the pedicel wholly metallic; rest of antenna white. Mandibles truncate, unarmed. Oblique hairless line present.

From three females caught sweeping miscellaneous trees (some ornamental, some jungle) along a tramway and along the banks of the Herbert River, February 20, 1913.

Habitat: Halifax (Ingham), Queensland.

Types: No. Hy 3059, Queensland Museum, Brisbane, two specimens on a tag, one in fragments on a slide.
3. ENCYRTOMYIA ALBITARSIUS new species.

*Female:*—Length, 0.75 mm.

Dark metallic green, the wings hyaline; funicle and club yellowish white; tarsi, tips of first two pairs of femora, knees, cephalic tibia except centrally, middle tibia except a rather wide band some distance below knee (midway between knees and the middle point of those tibia) and hind tibia, white. Scutellum longitudinally, finely lined; scutum densely scaly. About four rows of coarser cilia proximad of the oblique hairless line. Funicle joints all much wider than long, much shorter than the pedicel, widening distad but the first funicle joint is a little longer than wide; a minute ring-joint present. Agreeing with the description of Omphalocyrtus. scape distinctly dilated for its entire length, the mandibles truncate. Frons a little narrowed (over six times the diameter of an ocellus). Stigmatic vein very short, the postmarginal subobsolete.

From one female caught July 14, 1912, on forest-downs.

*Habitat:* Hughenden, Queensland.

*Type:* No. Hg 3069, Queensland Museum, Brisbane, the specimen on a tag.

Very similar indeed to Albiflagellum but the pedicel is paler and the frons distinctly narrower.

4. ENCYRTOMYIA AUSTRALIS new species.

*Female:*—Length, 1.05 mm.

Dark metallic green and scaly, the wings hyaline, and with an oblique hairless line. Agreeing with Plagiomerus disaspis Crawford but the pedicel at proximal half dusky, the first funicle joint is longer than wide, the second transverse, shortest, the third a little longer than it while the fourth is the next longest of the four yet wider than long; pedicel over half the length of the funicle; the three club joints subequal in length. Marginal vein rather thick, longer than wide. Mandibles short, truncate, one edentate, the other with a small outer tooth, the inner broadly truncate. Antennae 10-jointed. Club long.

From one female captured by sweeping the foliage of lantana, October 20, 1911. The mandibles in this species are anomalous.

*Habitat:* Mackay, Queensland.

*Type:* No. Hg 3061, Queensland Museum, Brisbane, the head of above specimen on a slide with Symphysomorphellus attacci Girault.

5. ENCYRTOMYIA VIRIDISCUTELLUM new species.

*Length,* 0.95 mm.

Very dark metallic blue-black, the scutellum contrasting, rather bright metallic green; knees, tips of tibiae (all of intermediate tibia except below knee) and tarsi straw yellow, also the funicle and club; the scape and pedicel black, the former white at distal third, the latter around apex. Antennae with a very thin ring-joint. Teeth of mandibles not developed; scape slender, the pedicel elongate and slender. Thorax with a dense, minute scaly sculpture. Funicle as figured for the genotype of Pseudeortus, the club appearing solid.

*Habitat:* Gordonvale (Cairns), Queensland. Jungle, November 1, 1913.

*Type:* No. Hg 3062, Queensland Museum, Brisbane, a female on a tag, the head on a slide. A second female caught by sweeping mangroves, bank of Tweed River, Chindera, New South Wales, May 14, 1914 (A. P. Dodd).

**TRIBE ECTROMINII.**

The table of genera given at the end of this tribe has been followed. It was compiled from original sources as much as possible, mainly from Foerster, Mayr and Ashmead. The latter in his table of genera, makes the principal division on too variable a character—the
carina between the antennae—and I have also ignored such of his characters as pubescent eyes, wing pattern and sculpture. For remarks on the validity of the tribe see elsewhere. The width of the frons seems variable but for the present I have used it for a generic character. The position of the ocelli is not considered stable enough to be of use.

GENUS ANAGYRUS Howard.

1. ANAGYRUS PURPUREUS new species.

Female:—Length, 1.00 mm., excluding ovipositor. Metallic purple, the abdomen green, the legs brownish yellow, the coxae concolorous; wings hyaline. Scape and pedicel concolorous, the first three funicule joints dusky, the rest yellowish except the distal two club joints which are dusky. Head and thorax with a dense scaly sculpture, the axilla finer, the scutellum longitudinally lised. Abdomen densely finely scaly. Valves of ovipositor black, distinctly but shortly exerted (for about a fifth the length of the abdomen). Lateral ocelli not especially near the eyes, the marginal vein punctiform, the moderately long stigmal a half longer than the postmarginal. Funicule joints more or less subquadrate, the first shorter than the next two which are longest, a little longer than wide, the sixth or distal joint wider than long. Body flattened. Oblique hairless line on fore wing rather obscure, very narrow. Club rather large. Segments of abdomen more or less equal. Second tooth of mandible broadly truncate. Scape broadly dilated. Frons moderately narrow.

Described from one female captured by sweeping miscellaneous vegetation. November 1, 1912.

Habitat: Bowen, Queensland.

Type: No. Hy.3063, Queensland Museum, Brisbane, the specimen on a tag, the head and a hind leg on a slide.

2. ANAGYRUS MAZZININI new species.

Female:—Length, 3.25 mm., excluding ovipositor which is extruded for one third the length of abdomen.

Similar to Coccolaesina worcestari Girault with which I have compared it but very much more robust, the ovipositor is distinctly extruded, the scape distinctly dilated, with a foliaceous expansion ventrad which, however, is not great but distinct and prominent; funicule 2 barely shorter than the pedicel and distinctly longer than wide, 1 and 3 each only a little shorter than it, funicule 6 a little wider than long. Club fuscous. The fine down on the scutum is a little denser in this species, not conspicuous in either. Eyes convergent above in both species, the frons narrower in this species, moderately broad in worcestari.

Described from one female caught in forest. December 24, 1912.

Habitat: Capeville (Penland), Queensland.

Type: No. Hy.3084, Queensland Museum, Brisbane, the female on a tag with type of C. worcestari; the head on a slide with head of worcestari.

3. ANAGYRUS AURICORPUS new species.

Female:—Length, 1.20 mm. Short, stout, depressed, broad.

Pale golden yellow, the eyes pale green, the wings hyaline. Frons densely scaly punctate, also the scutum and scutellum, the axilae and the wide, linear pronotal scaly. Axilla apparently joined by a piece between them, the mesal ends separated by this piece. Scutellum large, flat. Scape dilated distinctly but not greatly. Club two thirds the length of the funicule, short, stout; funicule joints wider than long, widening distad, 1 smallest, all a little shorter than the short pedicel. Second tooth of mandible broadly truncate. Cheeks about as long as the eyes; frons rather broad, face inflexed. Marginal vein triangular, the stigmal
rather long, a third longer than the postmarginal. Hairless line with 5-6 lines of cilia proximad of it, the first ones long. Second spur of hind tibiae very short. Lateral ocelli their own diameter from the eye.

From one female taken April 13, 1914 (A. P. Dodd). Forest.

Habitat: Cloncurry, Queensland.

Type: No. Hg 3065, Queensland Museum, Brisbane, the female on a tag; head, fore wing and hind leg on a slide.

4. **ANAGYRUS HOWARDII** new species.

*Female:*—Length, 2.30 mm.

Similar to *mazzinii* but the ovipositor not at all extruded, the fore wings are slightly stained along and under the submarginal vein, the scape is foliaceously dilated somewhat wider than in the named species, the scutum is more distinctly punctate. The funicle and club are brown in both species. In this new species, the frons is a little wider than with *mazzinii*. Scape metallic. Both species bear a dull golden yellow lunula before the tegula (lateral aspect). The legs are dull golden yellow in both, the caudal two pairs of coxae metallic. Postmarginal vein three fourths the length of the stigmata. Caudal tibial spurs single, long and stout. Compared with type of *mazzinii*.

From one female caught April 16, 1914, sweeping forest (A. P. Dodd).

Habitat: Cloncurry, Queensland.

Type: No. Hg 3066, Queensland Museum, Brisbane, the female on a tag.

Dedicated to Leland Ossian Howard.

5. **ANAGYRUS CELLININI** new species.

*Female:*—Length, 2.60 mm.

Metallic green. the abdomen dark purple, the fore wings sooty dusky at distal fourth, the legs yellowish brown except the concolorous caudal coxae. Is similar to *howardii* but the whole antenna is black except the white tip of scape, the different staining of the fore wing, the longer funicle joints (1/3 being subequal, long, over twice longer than wide, distinctly longer than the pedicel; funicle 6 somewhat longer than wide); caudal tibial spurs not seen; the abdomen not green at base; the axillae are not separated so widely as in *howardii*. Funicle 6 subequal to the pedicel. Lateral apex of the truncate second tooth of mandible acute. Compared with type body of *howardii*. Frons moderate.

From one female taken May 2, 1914, sweeping jungle (A. P. Dodd).

Habitat: Tweed Heads (Tweed River), New South Wales.

Type: No. Hg 3067, Queensland Museum, Brisbane, the specimen on a tag; head and a fore wing on a slide.

Dedicated to Benvenuto Cellini.

6. **ANAGYRUS GUTTATIPES** new species.

*Female:*—Length, 1.20 mm.

Dark roseaeous green, the abdomen honey yellow, slightly embrowned across base, the tegulae, legs, distal end of both scape and pedicel and funicle 6, pure white. Each cephalic and caudal femur with a narrow encircling band of blackish a short distance proximad of knees (an encircling band on caudal femur, a spot dorsad on cephalic femur); each tibia with two black dorsal spots, one just before tip, one just distad of knee. Scape and club black; first five funicle joints dusky. Fore wings lightly dusky and with four obscure radiating hyaline rays, of which the cephalic two form a curved, transverse hyaline marking from apex of postmarginal vein, all central and a little distad of venation. Scape distinctly compressed for its entire length. Pedicel slightly shorter than funicle 1 which is one and two thirds times longer than wide and subequal to 2 and 3; funicle 6 a little longer than wide; club somewhat wider, somewhat over half the length of the funicle, not quite as long as the scape.
The broad, second tooth of mandibles with a concave apical margin. Hind tibial spur single.

Face infeclate, the frons narrow, somewhat over twice the diameter of the cephalic ocellus.

Hairless pale yellow, the marginal vein punctiform, the postmarginal about half the length of the slender stigmatic. Fore wing broadly pyriform, densely ciliate. Head, scutum and scutellum densely shagreened, the scutum with an obscure median impression. Axilus steel blue, smoother, acute mesal and there broadly separated. Scutum broad, scutellum large, peltate. Pubescence distinct but not conspicuous. Abdomen conico-ovate, no longer than the thorax. Scape compressed distinctly, not dilated so much as usual.

From one female caught in forest, January 4, 1914 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3963, Queensland Museum, Brisbane, the specimen on a tag; hind legs, fore wing and head on a slide.

7. ANAGYRUS GROTHI new species.

**Female:**—Length, 1.35 mm. Scape as in *guttatipes*.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 3969, Queensland Museum, Brisbane, the specimen on a tag, head and fore wing on a slide.

Later, a female same place caught November 5, 1913.

Dedicated to Hugo Grothius.

8. ANAGYRUS ALBICLAVA new species.

**Female:**—Length, 1.60 mm.

Metalllic grass green, the abdomen dark purple, the coxae concolorous, the legs pale yellow except hind femur and a spot dorsal on hind tibia just below the knees. Wings hyaline, the marginal vein punctiform, the postmarginal vein not quite half the length of the stigmatic which is long and clavate. Antennae concolorous the club yellowish white; scape greatly dilated ventrad, pedicel somewhat longer than funiculum 1 which is subequal to 2, 3 and 4, all of which are somewhat longer than wide; funiculum 5 and 6 subquadrate; club ovate, not long. Second tooth of mandible broadly truncate. Frons moderately broad. Head and thorax very densely scaly punctate, the frons with scattered obscure punctures, the scutum also. Axilus finely delicately scaly, separated by a short carina. Abdomen densely scaly, the ovipositor just tipping it. Hind tibial spur single. Closely allied with *purpureus* but the antennae are differently colored, the frons a little wider, the hind legs half metallic and the funiculus joints all longer, 1 not shortest, subquadrate as in *purpureus*. Also, the ovipositor is not distinctly but shortly everted and the axilus are not a little separated. Also the thorax convex and the general coloration quite different. Scape broadly dilated in *purpureus*.

From one female caught by sweeping forest on Mount Pyramid (3,000 feet) August 17, 1912.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 3970, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide.


9. ANAGYRUS NOVIPURPUREUS new species.

Female:—Exactly similar to purpureus with which I have compared it (types) but the funicle and club all white except the dusky funicle 1 and the axilla are distinctly joined and with a short earina between them. Also funicle 2 is slightly wider than long not slightly longer than wide. Hind tibial spur single. The extruded portion of the ovipositor is somewhat shorter than with purpureus.

From one female taken by sweeping forest, January 8, 1915.

Habitat: Capeville (Ponland), Queensland.

Type: No. Hy 3071, Queensland Museum, Brisbane, the specimen on a tag; the head, a fore wing and a hind tibia on a slide.

10. ANAGYRUS HEGELI new species.

Female:—Length, 0.90 mm. Ovipositor not exerted. Scape but slightly dilated. Color pattern similar to albicicara but the fore wings have a distinct, oblique, dusky stripe across from the stigmal, marginal and distal part of submarginal veins and the funicle and club are yellowish white. More closely allied with spangilus which it resembles very much differing only in that the fore wing bears the dusky stripe. Otherwise as in spangilus with which I have compared it (types). Face much inflexed. Frons moderately broad. Hind tibial spur single. Thorax polygonally scaly.

From one female caught in forest, May 2, 1914 (A. P. Dodd).

Habitat: Tweed Heads (Tweed River), New South Wales.

Type: No. Hy 3072, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and hind tibia with slide type of Ceraptyerus emersoni Girault.

Dedicated to G. W. F. Hegel.

11. ANAGYRUS SEMIFULVUS new species.

Female:—Length, 1 mm. Scape only slightly dilated, appearing merely compressed. Marginal vein somewhat longer than wide. Yellowish brown, the wings hyaline; the knees (except those of middle legs), tips of tibia and the tarsi dark metallic green. Middle of middle tibia white and also on these a white ring a short distance out from knee (thus middle tibia white with two rather broad yellow-brown encircling bands and a narrower one at base). Axillae slightly separated. Vertex blackish. Scutum and scutellum very finely densely scaly and with a short silvery pubescence. Pedicel somewhat longer than any of the funicle joints, the first of the latter rather abruptly shorter than the following, distinctly wider than long, joints 2-6 subequal, a little wider than long, a half longer than 1. Face much inflexed, the frons sloping, moderately narrow. Postmarginal vein barely shorter than the stigmal which is distinctly longer than the marginal. Cheeks nearly as long as the eyes. Hind knees broadly white.

From one female caught by sweeping foliage of bantana in fields near town, October 20, 1911.

Habitat: Mackay, Queensland.

Type: No. Hy 3073, Queensland Museum, Brisbane, the specimen on a tag; head, hind tibia and a fore wing on a slide.

12. ANAGYRUS SPONGITUS new species.

Female:—Length, 0.80 mm. Ovipositor not extruded.

With the general color pattern of albicicara but differing from that species in being much less robust and more depressed, the axilla usual (that is, a little separated), the general coloration a little brighter, the distal five antennal joints are yellowish white and apex of scape and pedicel, the scape is only moderately dilated, the funicle joints all somewhat wider than long and gently widening distally, all shorter than the pedicel. Funicles 1-4 slightly dusky. Otherwise the same as albicicara.
From one female specimen caught in a mangrove swamp, May 14, 1914 (A. P. Dodd).

**Habitat:** Chinderah (Tweed River), New South Wales.

**Type:** No. Hy 3074, Queensland Museum, Brisbane; the specimen on a tag with type albicleta; head, a fore wing and a hind tibia with slide type of Cheiloneurodes bicristatus Girault.

13. **ANAGYRUS CICADA** new species.

**Frons** narrow. Scape rather much dilated.

**Female:**—Length, 1.05 mm. The ovipositor distinctly extruded a short distance. Hind tibial spur slender.

Like howardi but a half smaller, the middle coxae are pure white, the legs are white, the thorax metallic and without numerous distinct large punctures, finely, densely punctulate, the axilae reticulated, the fore wings are hyaline, the funicle and club yellowish white, one side of funicles 1-3 and base of club 1, black. Apex of scape pale. Venation pale; postmarginal vein very short, shorter than the marginal, the stigma moderately long and slender, the marginal a little longer than wide. Hairless line of fore wing guarded proximal by a distinct line of stiff setae proximal of which are about six lines of smaller cilia. Funicles 2 and 3 longest, subequal, somewhat longer than wide, subequal to the pedicel, 1 a little shorter.

From two females caught in forest, July 27 and August 2, 1913.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 3075, Queensland Museum, Brisbane, one specimen on a tag with type howardi; head, fore wing, hind tibiae and head with slide type of dias.

14. **ANAGYRUS DYARI** new species.

**Female:**—Length, 2.20 mm. Mandibles rather abnormal in that the lateral angle of each forms an acute tooth. Thus two short acute teeth and an inner truncation from base of the mesal one.

Diffrs from all of the first eight species except cellinini and howardi by having the numerous large punctures on head, scutum and (less numerous) scutellum distinct. Differs from both the named species in having all the coxae metallic. Specifically from cellinini in having the fore wings a little less darkly infected, the abdomen is shorter, the hind tibiae dorso just below knee blackish, the funicle a little stouter, the cephalic fensura dark metallic along proximal half. In howardi, the legs are distinctly paler, the wings hyaline, the antennae different. Scape greatly dilated. Hind tibial spurs double. Tegula reddish brown.

From one female caught in jungle, Tweed River, May 4, 1914 (A. P. Dodd).

**Habitat:** Tweed Heads, New South Wales.

**Type:** No. Hy 3076, Queensland Museum, Brisbane, the specimen on a tag with type cellinini; head, a fore wing and a hind tibia on a slide.

15. **ANAGYRUS DIUS** new species.

**Frons** moderately broad. Hind tibial spurs single.

**Female:**—Length, 1 mm.

Like novipurpureus in structure (the axilae with a carina between them) but the legs are bright golden yellow, the thorax metallic green (not purple), the form more slender and flattened and less robust, the ovipositor not extruded, the scutum more densely acule, the scutellum not longitudinally lined but densely punctulate. Venation yellow. Hairless line of fore wing with about six lines proximal of it. Funicles 1 and 2 dusky, rest of antenna distal yellowish white. Apex of scape whitish. Funicles 1-3 subequal, a little longer than wide, shorter than the pedicel; 4-6 wider than long. Scape not greatly dilated, only moderately so.

From one female caught April 13, 1913 in forest (A. P. Dodd).

**Habitat:** Cloncurry, Queensland.

**Type:** No. Hy 3077, Queensland Museum, Brisbane, the specimen on a tag with type novipurpureus; head, fore wing and hind tibia on a slide.
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18. ANAGYRUS SUBGIGANTEUS new species.

Female.—Length, about 3.35 mm. Robust.

Dark roseaceous coppery, the head, face of pronotum and mesopleuron roseous green, the antennae black metallic. Legs concolorous but the tarsi soiled white, the cephalic knees, middle coxae, femora and knees and most of dorsal edge of caudal femur, reddish brown. Cephalic femur toward apex above and immediate tips of cephalic tibiae, reddish brown. The very broad caudal wings hyaline, the fore wings very deeply infuscated from base nearly to apex, the latter rather broadly hyaline, the infuscation rather light proximad, distinctly much darker and pronounced from a little proximad of the head of the submarginal vein distad to apex, scutely except the first part out to end of stigmatic vein which is dark brown; proximal margin of the deeper infuscation proximad of the hairless line and oblique caudo-proximad from cephalad; distal margin of infuscation convex. Venation brown-black, the postmarginal vein nearly four fifths the length of the stigmatic; hairless line with many lines of cilia proximad of it. Axilae normal. Frons with rather dense pin-punctures, moderate, a little wider than the cheeks are long, the latter a little over half the length of the eyes. Femora and tibiae distinctly compressed (except middle legs); hind tibial spur distinct. Mesopleuron very finely, densely sheened. Dorsal thorax (except propodeum) with numerous, small yet distinct setigerous punctures, the pubescence contrasting, silvery, moderately dense. Scutellum extending to abdomen. Expansion of scape great; pedicel small, scarcely longer than wide at apex; funicle 1 somewhat longer than wide, somewhat longer than the pedicel, the others all a little shorter and shortening slightly distad.

From one female caught by sweeping foliage of forest trees. September 29, 1914.

Habitat: Capeville (Pentland), Queensland.

Type: No. Hy 3078, Queensland Museum, Brisbane, the specimen in alcohol with type of Atoposema nigritipica, the head and several legs severed from the body.

This species is able to jump enormous distances.

GENUS COCCIDOXENUS Crawford.

This genus seems to intergrade with Anagyrus Howard, the scape gradually widening, the frons variable. However, it may prove sufficiently distinct to be retained. The tendency of the species to cluster about the genotype is marked.

1. COCCIDOXENUS AUSTRALIENSIS (Girault). Female.

Anagyrus australiensis Girault.

Length, 2.75 mm. Robust. Dark roseous green, shining; cephalic knees, tips of cephalic tibia and cephalic tarsi fusaceous, the other tarsi white, the distal joint black. Fore wing with a distinct broad smoky stripe across it from the apex of the submarginal vein, its distal margin conical, the apex obtuse and distad of end of stigmatic vein, the proximal margin nearly straight. Venation black. Frons shinygreen, with scattered thin line punctures; eyes convergent above, the lateral ocelli near them; clypeus emarginate at the meson shallowly (cephalic margin); antennae widely separated at base, inserted near the clypeus. Marginal vein not much longer than wide, slightly shorter than the postmarginal which is only about two thirds the length of the stigmatic. First tooth of mandible acute, the second broadly somewhat conecave truncate. Thorax and abdomen very finely polygonally reticulate, the scutellum also with minute, shallow punctures, the punctatus densely punctulate. Abdomen depressed conic-ovate, the valves of the ovipositor extruded for a sixth of the length of the abdomen. Oblique hairless line of fore wing narrow. Propodeum short, without a median carina, lateral with dense feathery, greyish pubescence. Discal cilia of fore wing dense and fine, the marginal cilia very short. Antennae 12-jointed, cylindrical, the club 3-jointed and only slightly enlarged, its distal joint subhemispherical, its intermediate joint shortest, wider than long; pedicel slightly shorter than funicle.
1. the funicle joints shortening distal, the distal two subquadrate. Scape moderately widely dilated at apex. One very short ring-joint present. Antennae concolorous, moderately pubescent. From with some bronze.

_Habitat:_ Brisbane, Queensland. Associated with a psyllid.

_Type:_ No. _Hy 3079_, Queensland Museum, Brisbane, a female on a card, the head on a slide.

This species resembles the North American _Anagrus nabilipennis_ Girault.

2. **Coccidoxyclus Channingi** (Girault). Female.

_Anagrus channingi_ Girault.

Length, 2.25 mm., excluding ovipositor.

Bright metallic blue-green, the wings wholly hyaline; postmarginal vein as long as the stigmal, the marginal a little longer than wide. Legs and tegula yellow. Valves of ovipositor black. Head and thorax densely reticulated, the mesonotum with numerous thimble punctures. Posterior tibiae with an obscure, roundish spot above near each end. Posterior coxae concolorous. Antennae 12-jointed, with one very short ring joint, the scape compressed distal, joints 2 and 3 of funicle longest, subequal to the pedicel, 1 slightly shorter, 6 a little wider than long; club wider than funicle, short, ovate, 3-jointed; antennae dark, suffused slightly with brownish. Ovipositor exerted for half the length of the abdomen.

_Habitat:_ South Australia: Port Lincoln.

_Type:_ I. 1471, South Australian Museum. One specimen and a slide with the head.

3. **Coccidoxyclus Penni** (Girault). Female.

_Anagrus penni_ Girault.

Length, 2 mm., excluding ovipositor.

Dark metallic green, the scutellum more or less coppery; wings hyaline, the postmarginal vein distinctly not more than a half the length of the stigmal; legs dark brown; antennae as in _channingi_ but the club is more or less distinctly brownish, the scape less compressed distal, the second and third funicle joints not distinctly longer than wide, a little wider than long, somewhat shorter than the shorter pedicel, the funicle widening distal. Axilla blue, barely separated. Ovipositor exerted for a length equal to a fifth that of the abdomen.

_Habitat:_ South Australia: Port Lincoln.

_Type:_ I. 1472, South Australian Museum. One specimen and a slide with the head.

4. **Coccidoxyclus Emersoni** (Girault). Female.

_Anagrus emersoni_ Girault.

Length, 1.50 mm.

Like _penni_ in mandibular structure. Bright bluish green, the scutellum with amethyst tinges; legs bright yellowish brown, the cephalic femur and the middle of cephalic tibia metallic greenish, the posterior femur dusky proximad. Fore wings with a distinct yellowish stain under the stigmal and marginal veins, otherwise hyaline. Antennae concolorous with the legs but the scape metallic. Postmarginal vein no longer than half the length of the stigmal, the marginal subquadrate form. Head and thorax with a minute scaly sculpture. Ovipositor not extruded.

_Habitat:_ New South Wales: Sydney.

_Type:_ I. 1474, South Australian Museum. One specimen and a slide with the head.

5. **Coccidoxyclus Worcesteri** new species. Female.

Length, 1.32 mm.

Like _channingi_ but bright metallic green, the ovipositor not exerted, the postmarginal vein a fourth shorter than the stigmal, the sculpture of the head a little rougher than that of the scutum, the caudal tibia without a black spot, the legs bright lemon yellow except caudal
6. COCCIDOEXUS WUNDTI new species.

Female:—Length, 1.05 mm.

Rusts to Anagrus purpureus but the legs are concolorous except the brown intermediate femora and tibiae and the yellow tarsi, knees, front tibiae and distal half or more of hind tibiae. Body densely scaled. Ovispositor barely exerted. Dark metallic green. Antennae black or else concolorous, the club lighter; scape only very slightly thickened distad, the pedicele much longer than any of the funicle joints which are subquadrate, the distal two wider than long; funicle 1 not quite half the length of the pedicele. Postmarginal vein about a third the length of the slender stigmal, a little longer than the marginal. From broad. Axille a little separated. Hind tibial spurs apparently single. Middle tibia with a dusky spot just below knee.

Habitat: Hughenden, Queensland.

Type: No. Hys 3081, Queensland Museum, Brisbane, the specimen on a tag.

7. COCCIDOEXUS LUNULATUS new species.

Female:—Length, 1.28 mm., exclusive of ovipositor which is distinctly, shortly extruded.

Very similar to australicus but differs in the following particulars: The general coloration is lighter green, the lower face dark blue; the middle legs are pale brownish yellow except femora proximad; funicle 2 is longest, somewhat longer than wide, 1 subequal to 3 and the pedicele, 5 and 6 wider than long; the hand on the fore wing is not so black; the axille are acute at mesal aspect, distinctly separated for a short distance (in australicus blunt at mesal end and separated narrowly by a short sulcus); the abdomen is somewhat shorter, the pubescence on scutum more variable; the thorax bears a white lunula laterad just cephalad of the tegulae and the latter are margined cephalad with pale brown. Ovispositor valves reddish brown just beyond middle nearly to tip (also present more faintly in australicus); the funicle is suffused with white. Scape serrate dorsad. From densely shagreened, moderately narrow, about three and a half diameters of the cephalic ocellus. Ring-joint present. Hind tibial spur single. Face inflexed. Compared with type of australicus.

Habitat: Cloncurry, Queensland.

Type: No. Hys 3082, Queensland Museum, Brisbane, the female on a tag; hind leg, fore wing and a head on a slide.

8. COCCIDOEXUS TRICOLOR new species.

Female:—Length, 0.70 mm. Small, stout.

Dark metallic green, the broad wings hyaline, the abdomen orange yellow at proximal half except narrowly along the margin; antennae and legs pale yellow. Head and thorax densely scaled. Marginal vein quadrate (a little longer than wide in one wing), the stigmal a little longer than it, the postmarginal vein subequal to the marginal or a little shorter. Axille distinctly but not widely separated. Abdomen short, triangular, the ovipositor slightly
extruded. Mandibles with the second tooth broadly truncate. Resembles Ectopiognatha minor Perkins. Frons twice the diameter of the cephalic ocellus. Pedicel a little dusky. Cheeks somewhat shorter than the eyes. Pedicel longer than any of the funicle joints of which 4 is longest, somewhat longer than wide, 5 next, then 6 which is barely longer than wide; 1-3 subequal, moniliform. Club somewhat over half the length of the funicle. Segment 3 of abdomen apparently occupying two thirds of the surface. Differs from Fulgoridicidae dichroma Perkins in having the second tooth of mandible broad, the proximal three joints of funicle smaller than the distal and the general metallic green color of the thorax. Near to bicolor from which it differs principally in the color of the abdomen.

From one female taken by sweeping in jungle, May, 1913 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2083, Queensland Museum, Brisbane, the female on a slide.

9. **Coccidoxenus Bicolor** new species.

*Female*:—Length, 0.80 mm. Habitus of a scelionid.

Brown, the head and thorax washed with metallic greenish, the wings hyaline, the abdomen pale honey yellow (darkening after death or drying), the antennae and legs concolorous with the abdomen. Head and thorax finely scaly. Axillae distinctly separated for a short distance. Marginal vein slightly longer than wide, the postmarginal and stigmal veins subequal, each distinctly longer than the marginal but not twice its length, the two forming a V. Second tooth of mandible broadly truncate. Pedicel much longer than any of the funicle joints of which the first three are subquadrate and narrower, the distal three subequal, a little longer than wide, each distinctly longer than the proximal three. Club about two thirds the length of the funicle. Frons narrow but not very narrow.

From one female caught by sweeping a jungle-clothed forest streamlet, January 3, 1913 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2084, Queensland Museum, Brisbane, the specimen on a tag; head on a slide.

10. **Coccidoxenus Inconspicuus** new species.

*Female*:—Length, 0.80 mm. Axilla with a carina between them. Ovipositor not extruded.

Metallic purple, the wings hyaline. Body finely scaly. Tarsi yellowish, also knees and tips of tibia; middle tibia yellow except proximal. Scape and pedicel concolorous, rest of antennae yellowish brown, the first two funicle joints darker, subequal, wider than long, 5 slightly longer than 2, rest like 2 but 6 distinctly wider; pedicel distinctly longer than any of the funicle joints. Scapa pale at tip, compressed, its bulla concolorous. Frons narrow. Club two thirds the length of the funicle or a little more. As compared with wundti, the body is distinctly smaller, the thorax distinctly less flat, convex, the abdomen more produced beneath. Venation pale yellow, the postmarginal vein not quite half the length of the average stigmal. Hairless line of fore wing with at least five lines of cilia proximad of it. Disclial ciliation of the broad fore wing exceedingly dense and fine. Hind tibial spur single.

From one female caught in forest, January 6, 1913.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 2085, Queensland Museum, Brisbane, the specimen on a tag with type wundti; head, hind tibia and fore wing with slide type of Rhopalencyrtoidae paraplicorpus Girault.

_Fulgoridicidae_ apparently differs from this genus in having the third segment of the abdomen occupying most of the surface.
PARACALOCERINUS new genus.

1. PARACALOCERINUS AUSTRALIENSIS new species. Genotype.

Female:—Length, 1.20 mm.
Metallic purple, the scutellum and propodeum green; cephalic and intermediate tibie pale brown, the hind tibiae whitish below the knees for some distance; tarsi pale brown. Fore wings brown from the bend of the submarginal vein to apex, the brown broken by a large, obliquely ovate white area at each wing margin and thus two opposite white areas, situated just a little distad of the apex of the venation. Stigmal and postmarginal veins short, the former a little the longer, the marginal vein long, four or more times longer than the stigmal; oblique hairless line distinct. Axilla nearly meeting. Ovipositor valves black, extruded for a length equal to half that of the abdomen. Head and thorax with a fine scaly sculpture. Mandibles with two equal acute teeth. Propodeal spiracle minute, round. Antennae 9-jointed, the club solid, no ring-joint. Scape slender, the pedicel much longer than any of the funicle joints which are all much wider than long, and widening distad; scape without the bulb a about as long as the funicle, the club more or less the same length. Pronotum moderately broad, the face indexed.

From one female captured by sweeping the forest floor, top of coast range of mountains (1,500 feet), May 26, 1912.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3096, Queensland Museum, Brisbane, the specimen on a tag; head on a slide.

In a female from Gordonvale, January 1, 1913, caught by A. P. Dodd sweeping a jungle-clad forest streamlet, the middle tibia was lemon yellow.

A female was caught in jungle; May, 1913, at the same place and another there in the forest on March 31, 1914, the latter with no trace of wings. Also, a normal female by sweeping grass in forest, Capeville, Pentland, Queensland, September 15, 1914. A female from Kuranda, Queensland, September 12, 1913 (A. P. Dodd).

ECTROMELLA new genus.

Female:—Head thin, somewhat longer than wide, the antennae 11-jointed, the funicle 5-jointed, three club joints, one very short ring-joint; scape cylindrical. Wings hyaline, the marginal vein barely longer than wide, the stigmal short but distinctly longer than the marginal, the postmarginal nearly as long as the marginal, subnodular; wings with an oblique hairless line. Axilae barely separated. Abdomen pointed conic-ovate, the ovipositor not extruded. Form small, slender. The mandibles are very small, with two acute teeth. Pronotum narrow at upper face, rather broad caudad at occipital margin, the eyes rounded; cheeks long. Hind tibial spur single, the middle tibial spur over twice its size but not very stout. Oblique hairless line of fore wing obscure, apparently running along against the submarginal vein. Fore wings densely, very finely elate discally. Scutellum convexly rounded at apex.

1. ECTROMELLA BICOLOR new species. Genotype.

Female:—Length, 0.65 mm.
Dark metallic purple, the thorax mostly yellowish brown washed lightly with purplish, the pronotum and propodeum purple. Antennae yellowish brown, the pedicel as long as the first funicle joint which is twice longer than wide and distinctly longer than the other four joints of which 2 is shortest, somewhat shorter than 3 and narrowest; joints 3 and 4 subequal, each a fourth shorter than 1; club dusky, wider than the funicle. Thorax with a distinct scaly sculpture. Legs pale yellow.
AUSTRALIAN HYMENOPTERA CHALCIDIOIDEA, VII.—GIRAULT.

Described from one female captured from a window in a wool-house in the city, October 3, 1911.

Habitat: Brisbane, Queensland.

Type: No. Hy 3087, Queensland Museum, Brisbane, the specimen on a slide.

Also one female, Townsville, January 23, 1913. Compared with type.

Genus EPIDINOCARSIS Girault.

Head a little longer than wide (cephalic aspect), the antennae inserted near the elytra, 12-jointed with a ring-joint, the scape enormously dilated ventrad, the funicle filiform, the joints all longer than wide, the first as long as the pedicel which is elongate; club 3-jointed, cylindrical. Abdomen elongate, sharply pointed, distinctly longer than the head and thorax combined, the ovipositor slightly exerted. Marginal and stigmal veins subequal, moderately long, the stigmal curved, the postmarginal a half shorter; oblique naked line present. Vertex punctate. No carina between the base of the antennae. Propodeum without a median carina, transverse, widening distally. Frons moderately broad. Mandibles with two acute teeth. Axillae meeting or separated. Corrected description.

1. EPIDINOCARSIS TRICOLOR Girault. Female. Genotype.

Length, 1.80 mm. Orange yellow, the legs pale yellow, the coxae nearly white, the fore wings slightly stained proximad under the submarginal vein; pronotum (except lateral), cephalic margin of scutum, a large egg-shaped spot filling the center of scutellum from base to apex, two large areas on metathorax, their lateral margins involving the spiracle and separated broadly at meson and the distal half or more of the abdomen, purplish black. Head black, also the antennae except distal fifth or more of the scape, a little less than distal half of the pedicel, distal (sixth) funicle joint and the club which are white. Head and thorax finely densely strigulate; the vertex and scutum with many pit-punecutures. Distal funicle joint a little over half the length of the first which is three and a half times its own width. Funicle 6 not twice longer than wide, subequal to club 1.

Habitat: Gordonvale (Cairns), Queensland. Forest, 1,500 feet, May 30, 1913.

Type: No. Hy 3088, Queensland Museum, Brisbane, the female on a tag; head on a slide.

2. EPIDINOCARSIS SUBFLAVICEPS new species.

Female:—Length, 2 mm., excluding the ovipositor which is extruded for a length equal to a fifth that of the abdomen.

Like tricolor but the head is concolorous with the body as are also the legs; the fore wings are hyaline; all of the pronotum and scutum immaculate but the face of pronotum is black; scutellum with a narrow black line down the meson or a central spot mesad. Otherwise as in tricolor except that the funicle and club are orange yellow to brown-black, the second funicle joint white, the third and fourth more or less blackish. The pedicel is a little shorter than the first funicle joint while the distal joint of the funicle is longer than in tricolor, over twice longer than its width, over half the length of the club while funicle 1 is subequal to the pedicel. Cephalic margin of scutum sometimes blackish.

From one female caught by sweeping in forest, September 12, 1912.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3089, Queensland Museum, Brisbane, the specimen on a tag; head on a slide with type of tricolor.

3. EPIDINOCARSIS MIRUS new species.

Female:—Length, 1.30 mm.

Uniformly brownish yellow, the wings hyaline. From tricolor antennae, differing in that all of the funicle joints are black except 2 and 3 which together with the club are pure white; and from subflaviceps in having much shorter distal funicle joints as in tricolor and in
Only the second joint of the funicule is white. Mesonotum clothed with short white pubescence. Legs pale yellowish. Ovipositor only slightly exerted. The short ring-joint is present. The extreme tip of the scape is black in all three species. The ovipositor in mirus is barely exerted. Scape colored as in the other species.

Described from one female captured by sweeping miscellaneous vegetation along the left bank of the Pioneer River, October 21, 1911.

Habitat: Mackay, Queensland.

Type: No. Hg 3070, Queensland Museum, Brisbane, the above specimen on a tag; the head and a hind leg on a slide.

A second female from virgin jungle, Malanda, Northern Queensland, December 31, 1911.

4. EPIDINOCARISIS FUSCIVENTRIS new species.

Female.—Length, 1.80 mm.

Orange yellow, the face of pronotum, ventral margin of the face and the antennae jet black; wings hyaline; legs white; coxae, abdomen and metapleura, brownish black; pronotum silvery white, also an oval spot in center of propodeum with a black dot in its center. Tegulum silvery. An inverted crescentic, tan-shaped marking on each side of scape at apex silvery white. Eyes hairy. A quadrato, white dot on scape at base. Mandibles with two acute teeth. Funicle 1 about four times longer than wide, somewhat longer than the pedicel; 2-4 subequal to each other and to the pedicel, 6 somewhat longer than wide; club longer than distal two funicle joints together. Caudal tibial spurs double. Pronotum moderate. Cheeks not half the length of the eyes. Ring-joint present. Oblique hairless line of fore wing closed at both ends; the numerous cilia proximad of it no coarser than the main ciliation; marginal vein four times longer than wide, a little shorter than the long stigmal, the latter a little shorter than the postmarginal. Scutum and prothorax with short silvery pubescence. Postscutellum lemon yellow, laterad the propodeum concolorous with abdomen. Head and thorax extraordinarily finely, densely, pin-punctured and also the dorsal surface of the abdomen. Venation rather abnormal. Axille distinctly separated for some distance.

From one female taken by sweeping, May 4, 1914 (A. P. Dodd).

Habitat: Tweed Heads (Tweed River), New South Wales.

Type: No. Hg 3090, Queensland Museum, Brisbane, the female on a tag; fore wing, caudal tibiae and head on a slide.

5. EPIDINOCARISIS AURATISCUTUM new species.

Female.—Length, 1.25 mm.

Like tricolor but differing as follows: The large, black spot on scutellum is absent, the mesopleurum is purplish black while the distal half of dorsum of the honey yellow abdomen is not black, the extreme tip of abdomen silvery white. The funicle jointes are all a little shorter. Postmarginal vein hardly developed, the stigmal somewhat shorter than the marginal. Otherwise the same.

From one female caught sweeping jungle along a forest streamlet, December 4, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg 3092, Queensland Museum, Brisbane, the specimen on a tag; head and a fore wing on a slide.

6. EPIDINOCARISIS CUNEINOTA new species.

Female.—Length, 1.80 mm., including the ovipositor which is shortly extruded, black, white at base.

Diffrs from tricolor only in having the postmarginal vein a little over a third the length of the stigmal and in bearing a long conical black marking on scutum from base nearly to apex, the base of this marking fitting the broad mesal black of the pronotum which widens rapidly from it; hence the base of the marking is but moderately broad, the whole a little
longer than wide at base. Also only distal third of pedicel is white, the distal two thirds of dorsum of abdomen is purplish black and there is a wider than long marginal blackish area on each side of abdomen at base. Tibie concolorous with the body. Axilla join, with a carina between them. Venation yellow. Hairless line of fore wing with many lines of cilia proximad of it, broad, closed caudad. Hind tibial spurs double. Marginal vein four or five times longer than wide. Face inflexed. Cheeks nearly as long as the eyes, the frons moderately broad.

From one female caught June 10, 1914, sweeping in forest.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. *Hy* 3093, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide.

7. **EPIDINOCARIS FOERSTERI** new species.

*Female:*—Length, 1.35 mm.

Orange yellow, the face and dorsum of pronotum except lateral, propodeum, dorsal abdomen, median line of scutellum centrally and antennae, black. A silvery, curved stripe across scape just before apex; club and funicles 5 and 6 silvery white, also the legs, funicle 4 a little suffused with whitish. Wings hyaline. Scrobes not joined dorsal. Funicle 1 a little longer than the pedicel, 2 about equal, each a little shorter than 3, 6 a little longer than wide. Hind tibial spur single. Hairless line of fore wing closed at each end, proximad of it, many lines of cilia. Axilla with a carina separating them. Scutum and scutellum with short silvery pubescence. Scape greatly dilated. Venation normal. Funicle 1 about two and a half times longer than wide.

From one female caught by sweeping forest on sand ridges near coast, May 8, 1914 (A. P. Dodd).

*Habitat:* Chinderah (Tweed River), New South Wales.

*Type:* No. *Hy* 3094, Queensland Museum, Brisbane, the specimen on a tag; fore wing, head and a hind tibia with slide type of *Aphyes sanginithorax*.

8. **EPIDINOCARIS SIMILIS** new species.

*Female:*—Length, 1.10 mm.

Very similar to *auraticatum* Girault but only the face of the pronotum is purplish and the antennae differ in that the scape is much less dilated and is distinctly narrowly black at tip, the scapes funicle joint is white only at tip; the pedicel and first three funicle joints are rather shorter and the head is orange yellow. Dorsum of abdomen more or less purplish or washed with that color. Propodeum wholly black in both species except cephalad of spiracle. The fore wing is more stained under the venation in this species, the venation more distinct (in both species about eight lines of discal cilia proximad of the hairless line). The scape is distinctly white at base (barely so in *auraticatum*). Hind tibial spurs single.

From one female caught sweeping in forest, April 12, 1914.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. *Hy* 3095, Queensland Museum, Brisbane, the specimen on a tag; fore wing, hind legs and head on a slide.

9. **EPIDINOCARIS NIGRIFLAGELLUM** new species.

*Female:*—Length, 1.75 mm.

Orange yellow, the wings hyaline, the phragma, propodeum and abdomen brown-black, the antennae jet black except part of the scape which is colored as in the other species. Postmarginal vein a little longer than the stigmata which is still longer than the marginal. Head and thorax densely, finely, scaly reticulate, the abdomen somewhat more coarsely so, the second segment occupying somewhat less than a fourth of the surface, the third occupying the rest of the surface, bearing a spiracle at base which bears several very long setae. Pedicel
subequal to funicle 3, a little shorter than 1 which is longest, nearly thrice longer than wide; funicle 6 somewhat longer than wide. Ovipositor inserted a little beyond proximal half. Legs pale, whitish. Oblique hairless line present. Stigmal and postmarginal veins longer than in the genotype. One minute ring-joint present. Axilla separated. Abdomen depressed, obtusely triangular, no longer than the thorax. Scutum with short, black not very dense pubescence, the scutellum with much less pubescence. Like the genotype but the abdomen shorter.

From one female caught on flowers of *Bacopa*, April 22, 1913 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 3006, Queensland Museum, Brisbane, the female on a slide.

**Genus Meniscocephalus** Perkins.

Head meniscoform, the eyes widely separated in front, the axilla in a triangle with extremely wide base, the caudal ones close to or touching the eye margins, the sculpture consisting of very large deep punctures. Mandibles short, wide, with two acute teeth at the apex. Antennae short and stout, inserted far below the middle of the face, the funicle joints short and becoming wider toward the club, clothed short bristly black hairs. Mesoscutum about as long as the scutellum and bears appressed white setae. Axilla meeting inwardly. Propodeum clothed with conspicuous silvery hairs. Wings hyaline, the marginal vein very short, subquadrate, the stigmal moderate, shorter than the marginal, the postmarginal subobtuse. Abdomen short and wide, depressed above, subtriangular, the ovipositor slightly exserted. Antenna 9 jointed, no ring-joint the club solid.

In the male the antennae are inserted much nearer the middle of the face and the six funicle joints are elongate, subequal, each constricted in the middle and bearing above and below the constriction a whorl of long hairs, the pedicel being much shorter than any one of these joints; but the club is one and a half times longer than one of the funicle joints. The axilla are well separated inwardly. The marginal vein is rather longer than with the female. Genitalia almost entirely extruded.

1. **Meniscocephalus Eximius** Perkins. Female; male. Genotype.

Length, 2 mm. Robust.

Head dark blue, the great punctures metallic green, the antennae yellowish, more or less sordid, largely owing to the dense clothing of setae, the club paler than the rest. In the male the antennae, except the scape, are entirely infuscate. Mesonotum dark purplish, opaque or subopaque, punctured like the head but not so deeply and coarsely; the scutellum very dull; mesopleura blue, opaque. All the tarsi and the tips of the middle tibia pale, white or yellowish. Abdomen shining blue across the base.

*Habitat*: Bundaberg, Queensland. Internal parasite of jassids.

*Type*: Most likely in the entomological collection of the Hawaiian Sugar Planters' Association, Honolulu.

Form robust, the head thin, large, convex, lenticular, the antennae inserted near the mouth, their scrobes subobtuse, the scape slender, the flagellum clavate, one large ring-joint. Thorax convex. Axilla separated by a distinct carina, otherwise broadly conuate. Hind tibial spurs double, the hind tibia compressed; front coxae large, together with their femur and tibia strongly compressed or flattened, the front tibia not quite two-thirds the length of the front femur. Abdomen short, triangular, depressed, the ovipositor not exserted. Frons broad. Scutum with scattered, white, thickened setae. Fore wings shaped as figured for *Meniscocephalus eximius* Perkins and with the exception of the flattened front legs, large ring joint in the antennae and the 3-jointed club, this specimen agrees with the description of that species. Marginal vein twice longer than wide, subequal to the stigmal; oblique hairless line present, short, guarded proximad by several short lines of coarse discal cilia, from thence proximad, the
wings naked except at base where there are numerous cilia. The specimen agrees with the original description except that the pedicel is black, the distal half of the club white. Scutellum and axilla densely shagreened."

The added notes made from one female, caught on flowers of *Bacopa*, Brisbane, April 22, 1913 (H. Hacker). The specimen is in the collections of the Queensland Museum, a female on a tag, appendages on a slide.

**Genus Fulgoridicida Perkins.**

Head very wide, the hairy eyes extremely large, so that the part between them is very narrow, not more than a third as wide as one of these; ocelli in the form of an isosceles triangle which is much less wide at base than high and the caudal ones are close to the eye margins. Front dull, with dense, excessively minute sculpture. Antennae slender, the scape simple, the pedicel longer than the first funicle joint, the six funicle joints mostly longer than wide, the club as long or longer than the last three funicle joints. Mandibles bidentate, the teeth acute. Club 3-jointed, wider than the funicle. Thorax dull, sculptured like the front, the axillum meeting inwardly. Wings hyaline, hairy, the marginal fringes very short, the naked oblique line thin, the marginal vein short and thick and longer than wide, longer than the stigmal, the postmarginal acute and barely developed, shorter than the stigmal. Abdomen subtriangular, wide, depressed, foveated on each side toward base, the fovea bearing short bristles; ovipositor slightly exerted.

In the male, the eyes are much more widely separated, the intervening space about as wide as one eye; the funicle joints are elongate, mostly twice longer than their width, bearing conspicuous, shortish hairs, the pedicel much shorter than the first funicle joint, the club about equal to the two preceding. The head is more decidedly menisciform, the ocelli placed in the portion of the angles of an almost equilateral triangle.

1. **Fulgoridicida Dichroma** Perkins. Female; male. Genotype.

Length, 1.25 mm.

Head dull black, the scape yellowish or brownish yellow, the rest of antenna sordid. Thorax opaque, black with slight greenish or bluish tinge, the tip of the scutellum more brightly blue or green in some aspects; mesepisternum more or less brownish or piceous; legs yellow, the cephalic femora darker.

Abdomen of male very short and wide, blackish; that of the female yellow or brownish, dark apically and along the sides to near base. Antennas of male sordid yellowish, the elongate funicle joints subequal, the pedicel much shorter than the first of these and apparently darker than the other joints.

**Habitat:** Cairns, Queensland. From eggs of *Platybrachys* or an allied genus.

2. **Fulgoridicida Saintpierrei** (Girault). *Anagyrus saintpierrei* Girault. Female.

Length, 2 mm.

Differs from *Anagyrus penni* Girault in that the mandibles have the second tooth acute, not broadly truncate at apex and it is only a third of the size of the first tooth. Dark metallic bluish, the head and mesothorax rather bright green; legs metallic bluish, the tarsi brown. Wings hyaline, the venation blackish, somewhat as in *penni*. Antennae the same but the scape hardly at all dilated, the first and second funicle joints longest, each subequal to the pedicel, longer than wide (distinctly), the following joints more or less subquadrate; antennae blackish. Ovipositor projecting slightly.

**Habitat:** South Australia: Port Lincoln.

**Type:** I.1473, South Australian Museum, one specimen on a card and the head on a slide.
3. FULGORIDICIDA MINUTA new species.

Female:—Length, 0.70 mm. Frons moderate. Dark metallic green, polygonally scaly. Knees, cephalic tibiae, other tibiae except a dusky ring a short distance below knee and the tarsi yellowish white; also the funicle, club and apex of pedicel. Axillae very slightly separated if at all. Mandibles with two equal acutely teeth, very small. Funicle joints enlarging distad, the first three subequal, narrower than the distal three, each a little longer than wide, 4 and 5 subequal, somewhat longer and wider than 3, 6 somewhat longer and wider than 5, about twice the size of 3, a little longer than wide, a little shorter than the pedicel. Club three fourths the length of funicle and a little wider. Cheek as long as the eyes. Hairless line of fore wing with many lines of discal cilia proximad of it. Venation yellow; a small dusky spot at the quadrate marginal vein. Postmarginal vein nearly as long as the thickened marginal, the stigmal not long but somewhat longer than the marginal. Fore wings moderately broad, finely, densely, ciliate. Club 1 longer than funicle 6.

From one female caught in forest, November 1, 1911. Habitat: Cairns, Queensland. Type: No. Hy 3097, Queensland Museum, Brisbane, the female on a slide with type slide of Epidiscocoris simillis Girault.

4. FULGORIDICIDA NIGRICORFUS new species.

Female:—Length, 1.05 mm. Black, the wings subhyaline, the antennae and legs brown-black. Head and thorax densely punctate. Marginal vein semicircular, barely longer than wide, the postmarginal vein much shorter than the marginal, as long as wide, the stigmal a little longer than the marginal. Axillae a little separated. The second tooth of mandible a little longer than the first. Frons about two and two thirds times the width of an ocellus. Antenna filiform, the scape (excluding bulb) not as long as the funicle; pedicel longer than any of the funicle joints of which 2 is longest, one and a half times longer than wide, 1 somewhat shorter than it, 3-4 subequal, each a little shorter than 2; funicle 6 subquadrant. Club a little wider than the funicle. Propodeum finely transversely lineolated. Thorax with scattered short yellowish hairs. Hind tibial spur single. At least ten lines of somewhat coarser cilia proximad of hairless line.

From one female taken by sweeping forest, March 6, 1912. Habitat: Thursday Island, Torres Strait. Type: No. Hy 3098, Queensland Museum, Brisbane, the specime on a tag; head, hind tibien and a fore wing on a slide.

5. FULGORIDICIDA SIMPLICISCAPUS new species.

Female:—Length, 0.80 mm. Very dark metallic green, the head and thorax almost black; knees, tips of tibiae and the tarsal brownish; middle legs suffused with brownish. Wings hyaline. Antenna concolorous; scape long and slender; pedicel rather long, as long as funicles 2 and 3 united, much longer than any of the funicle joints of which 3 is longest, somewhat longer than wide; funicle 1 barely longer than wide together with 2 which is a little longer, not as long as the pedicel. Distal funicle joint somewhat wider than long; club somewhat over half the length of the funicle, somewhat wider than the funicle. Mandibles with two short, subequal, acute teeth. Marginal vein a little longer than wide, the postmarginal very short, half the length of the marginal, the stigmal nearly twice the length of the marginal. Oblique hairless line present. Frons about half the width of the eyes, moderately narrow. Lateral ocelli slightly separated from the eyes. Cheeks nearly as long as the eyes. An obscure stain about the marginal vein. Head and thorax densely, finely punctulate, the axillae a little smoother, the abdomen shining, finely scaly reticulate. Axillae joined at meson. Scrbes rather long. Abdomen as long as the thorax.
From one female from miscellaneous sweepings along the Herbert River, February 26, 1913.

**Habitat:** Halifax (Ingham), Queensland.

**Type:** No. Hg 3090, Queensland Museum, Brisbane, the female on a tag; head, a fore wing and an antenna on a slide.

**EPISTENOTERYS** new genus.

**Female:** In my table of genera runs to the group containing *Coccidozenas* Crawford but differs from all the included genera in having the vertex flat (the frons prominent), the face greatly inflected and inclined ventro-caudad. Prorons of moderate width. Antennae capitate, the large club somewhat longer than the funicle, the joints of the latter transverse linear, rapidly widening distad; scape slender; pedicel over half the length of the funicle. Mandibles small, with two acute teeth. Cheeks long. Marginal vein punctiform, the stigmal long and slender, curved, the postmarginal as long as the marginal; oblique hairless line present. Axille just meeting inwardly. Pronotum transverse-linear. Abdomen ovate, as long as the rest of the body, the ovipositor extruded for a third of its length. Hind tibial spurs single. Scutellum rounded at apex. Thorax with a short phragma.

1. **EPISTENOTERYS MARMORATIPES** new species.

**Female:** Length, 1 mm., excluding the ovipositor. Orange yellow, the legs, occiput, ventral half of face, apex of pedicel, club and ventral edge of scape, silvery white. Abdomen silvery white, the distal half of ovipositor valves dusky, the dorsal abdomen with five rather broad brownish black cross-stripi, the first at base, the fifth at apex; two quadrate marginal spots of the same color between stripes 1 and 2, the latter and 5 accentuated quadrately at lateral margin. Pronotum except lateral and the cephalic margins (cephalic fourth) of scutum blue-black; phragma, antenae, propodeum except cephalo-lateral rather broadly, a convex stripe across scutellum just before apex, brownish black. Legs marked as follows: A broad dusky band around middle of cephalic tibiae and apex of same; cephalic knees dusky; two rather broad bands of same encircling middle tibiae, middle tibiae at apex and base; the same on caudal tibiae but the caudal knees are also dusky black and the tibiae at apex black only dorsad. Base of scape white. Fore wings very finely ciliate distally, stained lightly from bend of submarginal vein to apex of stigmal; proximal of hairless line (which is closed caudal), over fifteen lines of cilia which are about twice as long as the main ciliation yet fine. Cheeks just ventrad of eye dusky.

From one female taken in forest, May 2, 1914 (A. P. Dodd).

**Habitat:** Tweed Heads (Tweed River), New South Wales.

**Type:** No. Hg 3100, Queensland Museum, Brisbane, the specimen on a slide with the slide type of *Aestegus noviparvus* Girault.

**Genus ECHTHRODRYinus** Perkins.

Head much wider than the cephalic part of the mesonotum, subsemicircular, the space between the great eyes very narrow, where narrowest not more than half the width of one of the eyes; caudal ocelli close to the eye margins and much more remote from the cephalic one than from each other, the face inflexed. Eyes clothed with very short, pale hairs. Mandibles with one small but distinct and more or less acute tooth and an inner apical truncation with its angle subrectangular, forming a distinct truncate second tooth. Antennae inserted near the mouth, the scrobes elongate and convergent above, the scape simple, the six funicle joints short and not differing much in length but the apical ones much wider than the basal; club with three subequal joints and as long as the three or four preceding joints of the funicle united; pedicel elongate, as long, or longer than, the first two joints of the funicle but not much thickened. Maxillary palpi short, joints 2 and 3 extremely short, 4 distinctly longer than either.

WITH THE HABITUS OF Paracyrtinus Ashmead. ANTENEE 11-JOINTED, THE CLUB 3-JOINTED.


1. ECHTHRODRYRINUS DESTRUCTOR Perkins. Female; male. Genotype.

LENGTH, 1 MM.

HEAD BLACK, THE MESONOTUM BLUE, METALLIC, IN SOME ASPECTS SHINING, VERY FINELY PUNCTURED AND CLOTHED WITH SHORT BLACK HAIRS; SCUTELLUM DULL AT BASE AND WITH A Stronger, MICROSCOPIC SCULPTURE, ITS Apex IN SOME ASPECTS SHINING AND BRILLIANTLY GREEN OR BLUE AND WITH SOME LONGISH DARK HAIRS; THORAX BENEATH AND THE PLEURA, BLACK, NOT OR HARDLY METALLIC; ABDOMEN BRIGHT METALLIC GREEN ON THE BASE PORTION. WINGS HYALINE, UNIFORMLY HAIRY EXCEPT AT BASE, THE VENATION Opaque BROWNISH YELLOW. ANTENAE SORDID BROWNISH, CLOTHED WITH SHORT HAIRS. THE WHOLE OF THE LEGS PALE YELLOWISH.

HABITAT: Queensland. Parasite on larvae of Neozygus, Parodyzus and so forth.

TYPE: Query.

2. ECHTHRODRYRINUS XANTHOCASTER new species.

FEMALE: LENGTH, 1.20 MM. WITH THE HABITUS SOMEWHAT OF Hydronotus.


DESCRIBED FROM ONE FEMALE CAPTURED BY SWEEPING IN THE JUNGLE, JULY 24, 1913.

HABITAT: Gordonvale (Cairns), Queensland.

TYPE: No. Hy 5101, Queensland Museum, Brisbane, the specimen on a tag; the head, a fore wing and the anterior legs on a slide.

The species resembles Coccidoxenus tricolor Girault but the marginal and stigmatic veins are longer and the color of the abdomen is different.

GENUS LEPTOMASTIX Foerster.

SYNONYM: Colocyrtina Girault.

In the Australian species the head is lenticular, the costal cell extraordinarily narrow so that the marginal vein appears to be very elongate. Froms broad. Wings long, rather slender. Cheeks short, the eyes long. Scaphe long, slender, the bulb long. Stigmatic and post-
marginal vein moderately long, subequal. Lateral ocellus nearer the cephalic one than to the eye; axilla meeting. Face convex, the antennae inserted near the mouth border, 12-jointed with one very short ring-joint, the club 3-jointed, the funicule joints very long, 1 being over twice the length of the pedicel. Mandibles with nearly equal acute teeth. Propodeum with three median carinæ, the lateral ones curved. Fore wings with an oblique hairless line from the stigmatic vein, the line being more or less parallel with the cephalic margin. Stigmatic vein a little shorter than the postmargin, both moderately long. Abdomen shorter than the thorax, compressed, pointed at apex the wings extending beyond it for some distance. Legs long.

Corrected description.

1. **LEPTOMASTIX TRIFASCIATUS** (Girault). Female. Genotype of *Calocerinella*.

   Length. 1.90 mm. Very dark metallic purplish, the proximal four tarsal joints and cephalic femora and tibiae dusky yellowish, also the head and first two antennal joints. Finely alutaceous, the scutum also with small thimble punctures. Club not as long as funicule 1, its joints short, the region a third longer than funicule 6, the latter only about half the length of the first. Third band of fore wing much the longest, covering all of the distal third of the blade except around apical margin, which is clear; middle band with its distal margin crossing the apex of the stigmatic vein. About equal to the proximal band. Propodeum and base of abdomen with silvery pubescence.

   **Habitat**: Gordonvale (Cairns), Queensland. Forest. April 9, 1913.

   **Type**: No. *Hy 3102*, Queensland Museum, Brisbane, a female on a tag, the head on a slide.

   One male, forest, Gordonvale, April 16, 1913 (A. P. Dodd). In the male, the funicule joints submodular, with 3-4 whorls of long hairs to each. Honey yellow except the purple brown of thorax and abdomen; antennæ 10-jointed, the club solid, hairy; funicule joints elongate, the first three longest, each subequal to the club. Two females, sweeping grass in forest, Capervile (Peetland), Queensland, September 12, 1914. Associated with forest grasses.

2. **LEPTOMASTIX GUTTATIPENNIS** new species.

   **Female**—Length. 1.75 mm.

   Dull brown, the scutellum, axilae and abdomen deep purplish black; scutum with a purplish tinge; hind legs (except tarsi) purple, also the antennae except scape and pedicel. Nearly distal half of caudal wings dusky. Tips of hind tibiae brown. Fore wings very deep purplish black, the extreme base hyaline and with the following perfectly clear areas—two obconical areas suspended from the submarginal vein, the first with pubescence, the second naked; a similar naked area from the costal margin just distal of venation, obliqued proximad so as to touch the apex of the stigmatic vein; a somewhat smaller, similar area opposite, from caudal margin and obliqued proximad; and a smaller, naked, oval spot nearly central on the wing blade and a little distal of the disto-caudal angle of the area distad of venation. A subquadrate, half clear area under marginal vein between it and the hairless line. Postmarginal vein shorter than the stigmatic. Costal cell exceedingly narrow. Head densely, polygonally scaly, lenticular. Funicule 1 longest, somewhat over thrice the length of the pedicel, 2 a little shorter, 3 and 4 subequal, each a little shorter than 2; 6 somewhat over thrice longer than wide. Resembles structurally *trifasciatus*. Thorax sculptured like the head but the areas smaller. Axilae with a carina between them. Scutum with greyish pubescence. Club joints somewhat longer than wide. Two hind tibial spurs, one very short.

   Described from one female caught in forest, April 20, 1914.

   **Habitat**: Gordonvale (Cairns), Queensland.

   **Type**: No. *Hy 3103*, Queensland Museum, Brisbane, the specimen on a tag; head, fore wings and hind tibia on a slide.
3. LEPTOMATIX TRIFASCIATIPENNIS new species.
Female:—Length, 2.15 mm.
Similar to the original description of trifasciatus but the pronotum is also golden yellow except across cephalic and caudal margins and down the meson narrowly; propodeum golden yellow. Middle tibiae in both species yellowish. Axillae with a carina between them in both species and the scutum bears short silvery pubescence. In this new species maxillary palpi 4-jointed, hind tibial spurs double, the two white stripes on fore wing nearly equal in length (proximo-distal). Proximal margin of third stripe triangularly produced.
From one female caught by sweeping forest, May 27, 1914.
Habitat: Gordonvale (Cairns), Queensland.
Type: No. Hy 3104, Queensland Museum, Brisbane, the specimen on a tag with type trifasciatus; head, fore wing and hind leg on a slide.

4. LEPTOMATIX AURATICORPUS new species.
Female:—Length, 1.35 mm.
Bright golden yellow, the flagellum (excluding pedicel) and a conspicuous spot on the thoracic pleuron caudal, jet black. Bulbus and dorsal edge of scape dusky black, the former long; scape extending to tip of vertex; pedicel twice longer than wide; funicule 1 six (or more) times longer than wide, twice the length of the pedicel, 3 and 4 subequal, a little shorter than 1 or 2, a little longer than the pedicel; elb not as long as the scape. Fore wings hyaline but distinctly embrowned along each margin (all of caudal margin narrowly except at each end and the cephalic margin more broadly from venation to cephalic-distal apex); fore wings somewhat over thrice longer than wide. Frons and face coarsely scaly reticulate; thorax more finely so, the scutum with numerous, minute, setigerous punctures. Axillae very narrowly separated by a short, narrow carina (same in trifasciatus); propodeum without a median carina. Propodeum and base of abdomen naked, not with silvery subscutum as in the genotype. Marginal vein normal, about three and a half times longer than wide, a little longer than the stigmal vein which in turn is a little longer than the postmarginal. Costal cell very narrow. Head (cephalic aspect) a little wider than long, the eyes large, the cheeks only about a fourth the length of the eyes; frons broad; lateral ocelli about as far from the cephalic ocellus as from the eye margins; face convex, head lenticular, the scrobes very short. Mandibles with two small acute teeth. Abdomen as in Epidinoceras, shorter than the slender fore wings but as long as the thorax. Hind tibial spurs double, very unequal.
From one female taken by sweeping in forest, August 30, 1913 (A. P. Dodd).
Habitat: Gordonvale (Cairns), Queensland.
Type: No. Hy 3105, Queensland Museum, Brisbane, the specimen on a tag; head and fore wings, middle and hind tibia on a slide with fore wing of genotype.

5. LEPTOMATIX BICOLORICORNIS new species.
Female:—Length, 1.80 mm. Wings shorter than the abdomen which is longer than the rest of the body and acute.
Dark metallic purple, the wings hyaline, the coxae concolorous, the legs yellowish brown except the femora above and near base. Antennae black, scape at apex broadly, a silvery white stripe along each side of scape, proximal fifth of funicule 1 and proximal four fifths of funicule 2, silvery white. Pedicel over thrice longer than wide at apex, somewhat over half the length of funicule 1 which is longest, somewhat longer than 2 or 3 which are elongate and subequal; funicule 6 somewhat less than twice longer than wide, somewhat shorter and thicker than the pedicel. Head with very fine surface sculpture and distinct, moderate-sized thimble punctures. Body similar to that of the genotype except that the abdomen is longer than the thorax, the propodeum lacks the median carina and the scutellum and scutum also bear the silvery pubescence. Thorax minutely densely sheened; scutum with short silvery pubescence, the
punctures evident, the pubescence a little less conspicuous than that of the scutellum. Hind tibial spurs unequal. Postmarginal vein a little longer than the stigma, subequal to the marginal which is about two and a quarter times longer than wide. Funicle 6 twice longer than wide. Head finely reticulated, with scattered thin ble punctures.

From two females captured by sweeping in forest, December 19, 1911 and March 21, 1912.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3106, Queensland Museum, Brisbane, a specimen on a tag; head, fore wing and a hind tibia on a slide.

6. LEPTOMASTIX NIGRITEGULAE new species.

Female:—Length, 1.80 mm.
Like auraticorpus but the pedicel is only a little longer than wide at apex, the body is wholly golden except the large black tegula, funicle 1 is over twice the length of the pedicel, 6 distinctly longer than the pedicel; margins of fore wing embossed cephalad from apex of marginal vein to apical bend, caudal barely at all; fore wings not quite thrice longer than wide. Propodeum short at the meson. Marginal vein a little shorter than the stigmal. An obscure brown streak on fore wings disto-caudal, a little away from the margin. Costal cell narrow but distinct. Cheeks about a third the length of the long eyes. Dorsal-lateral margins of abdomen forming narrow carina. Caudal tarsi blackish. Otherwise about as the description of the named species. Hind tibial spurs not seen.

From one female caught September 15, 1914 in grass in forest.

Habitat: Capeville (Pentland), Queensland.

Type: No. Hy 3107, Queensland Museum, Brisbane, the specimen in alcohol with type of Atoposoma unguattipes.

GENUS ANUSIA Foerster.

1. ANUSIA FLAVA new species.

Male:—Length, 1.25 mm.

Honey yellow, fusous in places, wholly wingless. Pedicel minute; scape, funicles 1 and 2 and proximal part of 3 reddish brown, the pedicel pale yellow; rest of antenna and the ventral margin of the flat scape, black. Pronotum conical, broad and long, nearly twice longer than the scutum and together with the latter pubescent. Axilla meeting at meson, the triangular scutellum finely longitudinally striate. Propodeum with an inverted V-shaped median carina, the arms diverging from base and separated there. Abdomen glabrous except the rather long second segment and segments 3-5 united, the latter transverse; segment 6 occupying the rest of the surface of the abdomen or over half, much over twice the length of 2, at base laterad with a spiracle which bears very long setae; base of abdomen fusous. Mandibles small, with two acute teeth. Head held nearly horizontally (face dorsad), narrowed cephalad of the eyes as though the cheeks were absent. Funicle 1 much the longest, the antennae 11-jointed, no ring-joint. Frons moderately broad. Ant-like.

Habitat: Gordonvale (Cairns), Queensland. Jungle, July 24, 1913 (A. P. Dodd).

Type: No. Hy 3108, Queensland Museum, Brisbane, the specimen on a tag, the head on a slide.

GENUS PARANUSIA Girault.

Cephalic aspect, head rounded, the antennae inserted below the middle of the face, much below the eyes, but not near the clypeus, widely separated, the scape very long, extending far beyond the vertex, cylindrical, the flagellum compressed, clavate, the funicle joints transverse and short, much wider than long, the club solid, no ring-joint, the antenna 9-jointed; pedicel very short. Lateral ocelli distant from the eye margins; a distinct transverse suture across face
above antennal insertions. Axilla not quite meeting inwardly. Mandibles bidentate, both teeth strong. Abdomen short, produced ventrad, the ovipositor usually projecting some distance beyond, naked and slender. Fore wings simple, infuscated, with an oblique hairless line from the junction of the marginal and stigmal veins, the marginal vein rather long but a third shorter than the postmarginal, the stigmal well developed slightly shorter than the postmarginal. Legs normal, the posterior tibia with one spur, the intermediate tibial spur not enlarged. Mandibles appearing acute or edentate from above (their lateral aspect). Labial palpi 3-jointed, the maxillary 4-jointed.

The cylindrical scape, cephalic characters, antennal segmentation and the long postmarginal vein serve to distinguish this genus.

1. **PARANUSIA LONGISCAPUS** Girault. Female. Genotype.

Length, 1.75 mm.

Submetatelic greenish black, the face below the transverse suture, the mesoscutum and axillae dark reddish; legs black, the tarsi lemon yellow; fore wings stained irregularly, the venation fuscous. Sides of thorax reddish; antennae black. Head and thorax impunctate, finely alutaceous. Pedicel longer than any of the funicule joints, of which the third is longest, all widening distad and prolonged at one side from apex, the sixth four times wider than long; club somewhat over half the length of the funicule.

Described from eleven specimens on two cards (one pin) and mounted with ants upon which they are probably parasitic.

*Habitat*: Murray Bridge, South Australia.

*Type*: L. 1290, South Australian Museum, the above specimens and a slide bearing head and fore wing.

**GENUS EPANUSIA** Girault.

Like *Anusia* Poerster but the marginal vein not short, over twice longer than wide, the postmarginal vein not much shorter than the marginal, somewhat longer than the stigmal; the lateral ocelli are far distant from the eye margins, the frons is moderately broad, with a very fine scaly sculpture and scattered pin-punctures. The wings are perfect and banded. Otherwise the same. Fore wing with a long hairless line back from stigmal vein and which curves, proximal. Axillary slightly separated. Robust.

1. **EPANUSIA BIFASCIATUS** Girault. Female. Genotype.

Length, 2.10 mm.

Dark blue, submetallie, the scutum and propodeum with short white pubescence, the scutellum bright orange, the axilla and pronotum (less so) suffused with orange; head also orange, the vertex darker. Fore wings with two narrow black bands, the first across from the marginal and postmarginal veins, subersecentic, its distal margin concave; the second across from the bend of the submarginal vein, both fainter near caudal margin; the blade distal of the apex of the postmarginal vein densely, finely, uniformly ciliate and lightly embrowned; venation brown-black; stigmal vein nearly at right angles to the marginal. Legs concolorous, except cephalic femora, all knees and tarsi which are brownish. Antennae foliaceous, including the scape, greatly compressed, concolorous, the 3-jointed club, however, conico-cylindrical, the sixth or distal joint of the funicule subquadrate but still flat, the pedicel triangular, minute, the first funicule joint obconic, much the longest of the funicule, the next three joints distinctly much wider than long; no ring-joint, eleven antennal joints. Scutum green, body finely sculptured.

*Habitat*: Gordonvale (Cairns), Queensland. Forest, September 3, 1913.

*Type*: No. *Hy* 3109, Queensland Museum, Brisbane, the female on a tag, the head and a fore wing on a slide.

A second specimen, type locality, May 29, 1912 in forest at 1,500 feet.
AUSTRALIAN HYMENOPTERA CHALCIDIOIDEA, VII.—GIBAULT.

PSEUDANUSIA new species.

Female:—Head with the vertex perfectly flat as viewed from above and long, the face inclined ventro-caudal, the antennae inserted below the ventral ends of the eyes, the scape and pedicel foliaceous to dilated, the funicle compact, compressed, its six joints transverse-linear and subequal, together no longer than the 3-jointed cylindrical club which is as wide as the funicle and as long. Mandibles small, the second tooth broadly truncate. Marginal vein punctiform, the postmarginal barely developed, the stigmal much longer than it, moderately long. Fore wings with fuscous rays. Axillae barely separated. Hind tibiae with one spur. Abdomen short, depressed, cordinate. Allied with Epanusia but the antennal joints are not greatly flattened. Scutelum convex at apex. Frons moderate.

1. PSEUDANUSIA PIA new species. Genotype.

Female:—Length, 1.20 mm. Dark metallic green, the vertex white and with a black stripe along its center. Legs and antennae concolorous, the middle tibiae suffused with yellowish, the tarsi yellow except the distal joint; caudal leg compressed, the middle tibiae slender. Fore wings beautifully infused wth brown (in rays); a long-ovate clear area under the submarginal vein proximal of the bend and a shorter and broader one distal of the bend; at the disto-ephalic angle of this and just under the marginal and base of stigmal veins is a jet black spot. Just distad of the venation the blade is clear with the exception of the cephalic oblique ray to be described; in a little less than the distal half of the blade, there are two prominent, diverging, broad, fuscous rays, the cephalic one longest, its caudal margin just reaching the distal blade margin a little caudad of extreme apex; the shorter ray runs more nearly distad to the caudal margin; those two rays converge proximad but do not quite meet and are separated from the convex margin of the proximal infuscation by rather narrow clear spaces. Cephalic margin of fore wing changing angle at the marginal vein, the wing with a broken appearance. Club joints all wider than long, the first of them longest. Oblique hairless line of fore wing not very distinct, limited proximad by a single line of cilia but there are more cilia farther proximad.

From one female taken from a window in February.

Habitat: Ingham, Queensland.

Type: No. Hy 3110, Queensland Museum, Brisbane, the specimen on a slide.

ANAGYRODES new genus.

Female:—Like Anagyrus Howard but more robust, the pronotum large, over half the length of the scutum, the mandibles necte and with two necte teeth, the head lenticular. Marginal vein punctiform, the stigmal long, curvad, the postmarginal elongate, about twice the length of the stigmal. Second segment of abdomen occupying about a third of the surface, segment 8 over half the length of the second, the others moderately short. Hind tibial spurs double. Frons moderately broad, the cheeks over half the length of the large eyes. Distal or fourth joint of maxillary palpus as long as the others combined, 3 shorter than 2, 1 very small.

1. ANAGYRODES MAXIMUS new species. Genotype.

Female:—Length, 2.69 mm. Deep orange yellow, the head, pronotum, scutum, axillae except lateral margin, scutelum (triangularly) except lateral and distal margins and a little more than distal half of abdomen (distal of segment 3) steel blue. Club blackish. Head and thorax densely scaly, the head with punctures scattered over it. Fore wings with the distal third dusky, the diskiness also projecting proximad along the midlongitudinal line to the oblique caudal margin about opposite the submarginal vein at its distal third. Venation yellow. Scape cylindrical, the funicle cylindrical, the 3-jointed club not much wider; joints 1 and 2 of funicle somewhat longer than wide, subequal, longest, longer than the pedicel, the
MEMOIRS OF THE QUEENSLAND MUSEUM.

distal funicle joint a little wider than long. Antennae 12-jointed with a short ring joint.
Scutum and scutellum with scattered obscure, setigerous punctures. Hairless line of fore wing
with over a dozen lines of coarser cilia proximal of it. Axillae broadly joined, with a carina
between them. Type re-examined.

Described from one female captured by sweeping in jungle, June 10, 1913 (A. P.
Dodd).

Habitat: Little Mulgrave River, Gordonvale, Queensland.

Type: No. Hy 3111, Queensland Museum, Brisbane, the specimen on a tag; head, fore
wing and a hind tibia together on a slide.

2. ANAGYRODES GIGANTEUS new species.

Female:—Length, 3 mm. Larger than the genotype.

Differing from maxima in having the entire thorax, a large part of the maxillary palpi.
the middle tibia spurs (only tip of same in maxima), distal half of abdomen dorsal and a
broad band around caudal tibia at proximal third, caudal tibia dorsal except at base and a
narrower stripe across caudal tibia slightly before tip, metallic blue. Also, the infuscation of
the fore wing is different in that its proximal margin is straight and across from the base of the
Stigmatic vein. The latter is also longer, a little over half the length of the elongate post-
marginal; the hind tibiae are a little more compressed. Head with numerous pin-punctures, the
scrobes somewhat longer than wide. Thorax sculptured as in the genotype but the pronotum is
shorter, only about a fourth the length of the scutum while the axillae are separated a short
distance distinctly yet with a short carina between them. Joints 3-6 of funicle each a little
wider than long. Otherwise like the genotype.

From one female caught in jungle, June 4, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3112, Queensland Museum, Brisbane, the female on a tag; head, fore
wing and hind tibia on a slide.

Even after careful examination, the mandibles of both species seem edentate; they are
shaped like those of the Arrhenophagini yet a second and shorter minute tooth is undoubtedly
present but very difficult to discover. The hind tibial spurs are short and stout. The ovipositor
in death is curved ventro-proximal from about the middle of the venter and the valves are
inconspicuous.*

GENUS CRISTATITHORAX Girault.

The same as Cheilonecurus except in the mandibles.

1. CRISTATITHORAX HUGOI new species.

Female:—Length, 1.30 mm.

Stigmatic vein tolerably long, the frons very narrow, the eyes convergent, the fore wings
infuscated but without fuscous rays. Head longer than wide, the scrobes forming a semicircle.
Antennae 12-jointed, the club enlarged, 5-jointed, the funicle joints all short, wider than long,
less than half the length of the pedicel. Marginal vein twice the length of the stigmatic, the
postmarginal very short; oblique, hairless line present. Axillae rather broadly meeting, the
scutellum with a tuft of hairs at apex. Face obtusely convexed between the antennae but
there is no distinct carina there. Somewhat like Echthrisophagus Perkins but the head is longer,
the scrobes are not elongate, the narrow front is densely punctate, the marginal vein much

* The abdomen in this genus is proctotrupoid, the venter undivided, the ovipositor issuing from
the apex. Other encyrtid genera have this anomalous structure (e.g. Eucopsyche) which does not seem
to have been noticed before.
longer, the wings infuscated and the scutellum with a tuft of hairs, the antennae with a ring-joint and ringed with white. Like Chrysophiphus Ashmead but the latter bears tridentate mandibles and the head differs. Scape only very slightly compressed.

Dark metallic purplish, the scutellum green, the thorax densely, finely shagreened or scaly; antennae dusky yellowish, the distal three funicle joints white, the club black, the two distal funicle joints longer and wider. Club obliquely truncate. Legs concolorous except a spot below knees on tibia; distal two thirds of hind tibia, distal half of other tibiae and the tarsi which are yellow. Fore wings deeply embrowned from a little proximad of the origin of the marginal vein nearly to apex where there is a narrow spiral clear portion. Nearly all of second femora pale yellowish except a concolorous band around before apex, the other femora yellowish near base.

Described from one female captured by sweeping in the forest, April 13, 1912.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 3115, Queensland Museum, Brisbane, the above specimen on a tag, the head on a slide.

The species is respectfully dedicated to Victor Hugo.

### 2. CRISTATITHORAX BIDENTIMAXILLÆ new species.

**Female:**—Length, 0.92 mm. With the form of Cheloneurus purpureiventris Girault.

Dark metallic green the head orange yellow, the legs whitish except the concolorous caudal femora and tibiae; caudal tibiae white at tip. Antennae white, the club black; pedicel and funicles 1 and 2 dusky. Scutum with close silvery hispidosecence except along cephalic margin. Pedicel subconcolorous with body. Second tooth of mandible truncate, broad, only two teeth. Fore wings embrowned from origin of marginal vein distad nearly to apex, deeper under the marginal vein, clear at apex, the latter distinctly longer than the stigmatic vein which is longer than the postmarginal which is little developed. Scutellum with the black tuft of bristles. Scape curved not dilated, the short pedicel longer than any of the funicle joints all of which are transverse, 6 largest, thrice the size of 1 or 2. Thorax densely shagreened, the axillary smoother, coppery, very slightly separated.

From one female taken in forest, November 30, 1913.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 3114, Queensland Museum, Brisbane, the female on a slide.

Later, one female reared from leaf-hopper eggs on gum, November 27, 1911, Gordonvale.

### 3. CRISTATITHORAX MANDIBULARIS new species.

**Female:**—Length, 0.80 mm. Same as the preceding but dark metallic purple, the axilla, scutellum, neck of prothorax orange yellow, the pronotum honey yellow, the abdomen dull brown, margined very narrowly all around with purplish and with a dark purplish stripe across base. Sides and venter of thorax yellowish. Legs pale yellow, the hind legs purplish except the tarsi. Otherwise about the same. Segment 3 of abdomen apparently occupying more than half of the surface; extreme apex of abdomen silvery white. Head (at least above the inflection) densely finely punctate. Ocelli in an equilateral triangle. Club somewhat shorter than the funicle. Scutum same length as in *mackayensis*.

From one female caught November 30, 1913 by sweeping in forest.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hy 3115, Queensland Museum, Brisbane, the specimen on a tag.

### 4. CRISTATITHORAX QUADRICOLOR new species.

**Female:**—Length, 1.60 mm.

Very similar to Cheloneurus gonatopodis Perkins but the head wholly lemon yellow, also the scutellum, the axillary and scutum except the purplish caudal part, deep reddish orange.
Also funicle 6 is black as well as the club. A stripe across the honey yellow abdomen at base, margins of abdomen centrally, propodeum, the part of the mesothorax just lateral of scutellum and a concave curved stripe across abdomen at about middle about in the shape of a U, purplish. Fore wings embrowned margin to margin from about the marked concave bend of the submarginal vein to apex but obscurely clearer at apex centrally, distinctly clear in a triangular spot just distad of postmarginal vein and a larger oblong area opposite at caudal margin. Discal cilia proximad of hairless line about two lines, coarser and blacker than the other ciliation. Vertex singreened. Segment 3 of abdomen occupying more than half the surface.

From one female caught sweeping in forest, June 27, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 5115, Queensland Museum, Brisbane, the specimen on a tag.

5. CRISATITBORAX VIRIDISICTUM new species.

Female:—Length, 1.45 mm.

Like mackayensis but a little stouter, the abdomen broader, less pointed, the middle of the propodeum visible and yellowish, the metallic green band across the base of abdomen narrow and only a little purplish on abdomen above centrally. Legs all white except caudal knees and a dusky band above and one below middle knees. The scutum is distinctly longer. Scape rather greatly swollen its entire length, the club dusky, much enlarged, longer than the funicle. Funicle and pedicle dusky, scape yellow. Scape hardly more than a half longer than broad. From four times as wide as an ocellus. Funicle 6 longest and widest. Fore wings about as in mackayensis and so the mandibles. Axilla slenderly joined not distinctly so as in mackayensis and with a short carina between as in that species. First five funicle joints annular.

From one female caught August 12, 1913, sweeping forest (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 5117, Queensland Museum, Brisbane, the female on a tag, the head and a fore wing on a slide.

6. CRISATITBORAX NOVIMANDIBULARIS new species.

Female:—Similar to mandibularis but honey yellow, the axillae distinctly separated for some distance, the pronotum also purplish. Middle legs with a dusky spot just below knee. Frons somewhat narrower. Abdomen mostly all purplish.

From two females caught crawling over a seashore plant infested with unarmored coeloids, October 30, 1911.

Habitat: Port Douglas, Queensland.

Types: No. Hy 5118, Queensland Museum, Brisbane, the specimens on a tag; heads on a slide.

7. CRISATITBORAX MACKAYENSIS new species.

Female:—Length, 1.30 mm. Short, rather stout.

Orange yellow; scutum dark metallic green; propodeum and a rather broad stripe across base of the abdomen washed with the same color; knees, caudal legs except articulations and tarsi and ventral edge of the somewhat swollen scape, dusky. Pedicel at base above, club, first two funicle joints and part of the third, black. Tuft of hairs on scutellum black, the selerite finely longitudinally scaly striate; axilae broadly joined, transversely scaly reticulate. Ocelli in a nearly equilateral triangle, the frons moderately narrow. Scutum with short silvery pubescence. Pedicel distinctly longer than any of the funicle joints, all of the latter plainly wider than long, 3 and 4 shortest. Second tooth of mandible subtruncate, the third tooth thus not formed. Fore wings embrowned to apex from base of marginal vein but the apex is
hyaline and also the spot just distad of venation at cephalic margin and the larger one opposite to it. Marginal vein twice or more the length of the short stigmatic, the latter a little longer than the postmarginal.

From one female caught October 20, 1914, by sweeping foliage of lantana and other bushes in a field near town.

Habitat: Mackay, Queensland.

Type: No. Hy 3119, Queensland Museum, Brisbane, the specimen on a tag.

8. CRISTATITHORAX VINCULUM new species.

Female:—Differs from pasteurii as follows: The frons is a little broader, the distal three funicle joints are white, the infuscation of the fore wing does not proceed so far distad, the apex of the wing more broadly hyaline, the tip of the pediceel is white and of all tibias and the first two pairs of knees are much more distinctly white. Otherwise the same. Differs from bidontinazzilae in having the cheeks more distinctly metallic, the scape black, the first three funicle joints distinctly black, the legs black (except as noted; there is a white spot dorsad on hind tibia in both species), the fore wing more deeply infused. Otherwise the same.

From one female taken May 9, 1914 by sweeping sand-ridges near coast, forest (A. P. Dodd).

Habitat: Chinderah (Tweed River), New South Wales.

Type: No. Hy 3120, Queensland Museum, Brisbane, the specimen on a tag; head and caudal tibia on a slide.

9. CRISTATITHORAX PASTEURII new species.

Female:—Length, 1.10 mm.

Dark steel blue, the scutellum dark green, the head orange yellow but the face suffused with dusky, the cheeks ventral of the eyes dark metallic blue, also the ventral edge of the head narrowly (cephalic aspect). Antennæ and legs concolorous, the tarsi white. Fore wing sooty from the origin of the marginal vein distad to within a short distance of apex which is thus left broadly hyaline; the proximal margin of the infuscation is straight and coterminous with the discal ciliation. Marginal vein over four times the length of the stigmatic which is short but longer than the postmarginal. About five lines of cilia proximal of the hairless line. Scape compressed. Pedicle much longer than any of the funicle joints which are wider than long, 6 largest. Club much wider than and nearly as long as the funicle. Frons densely punctate, narrow. Second tooth of mandible broadly truncate. Scutum with short silvery pubescence, minutely, densely scaly, the scutellum densely punctulate. Axille acuta mesad, there a little separated. Tegula reddish brown. Hind tibial spur single. A yellowish lunula (laterad) just cephalad of tegula.

Described from one female caught in forest, April 14, 1914 (A. P. Dodd).

Habitat: Clooneurry, Queensland.

Type: No. Hy 3121, Queensland Museum, Brisbane, the specimen on a tag; head, a caudal tibia and a fore wing on a slide.

GENUS CALOCERINELOIDES Girault.

Like Calocerius Howart but the marginal vein punctiform, the wings hyaline, the axille not quite meeting inwardly, the sixth funicle joint elongate but not much longer than the other five joints, distinctly not twice longer than their united length, funicle joint 5 only half the length of the preceding part of the funicle; branches long, subequal, clarate, on funicle joints 2 to 5. Antennæ 9-jointed, inserted slightly below the middle of the face, the club solid, no ring-joints. Stigmatic vein slender, twice the length of the short postmarginal. Second tooth of mandible broadly emarginate.

Length, 1.50 mm. Steel blue, the abdomen metallic greenish; head and thorax polygonally shagreened, the abdomen likewise but smoother, the axilae still smoother, scaly. Legs yellowish brown; the antennae dusky brownish. Club about half the length of the sixth funicle joint.

Habitat: Murray Bridge, South Australia.

Type: I. 1470, South Australian Museum, Adelaide.

EPANAGYRUS new genus.

Male:—Agrees with Amonagrus Howard but the antennae are only 10-jointed with one very short ring-joint, the club solid and not much longer than one of the funicle joints. Second mandibular tooth broad and truncate. Scape more or less dilated, the antennae inserted very widely apart, under the mesal half of the eyes, the head subquadrate. Lateral ocelli a little separated from the eyes. Marginal vein quadrate, the postmarginal nearly twice longer than it, three fourths the length of the stigmal. Oblique hairless line present. Head and thorax densely finely scaly punctate, the scutum and scutellum with scattered obscure thimble punctures; axilae finer, wider, nearly meeting inwardly. Punctures on scutum numerous, sparse on scutellum. Abdomen depressed above, triangular, sculptured like the head but not quite as densely, mostly scaly, as long as the thorax. Pronotum transverse. Legs normal; hind tibial spurs double.

1. EPANAGYRUS PUNCTATISCUTUM new species. Genotype.

Male:—Length, 1.55 mm.

Bright metallic green, the scutellum coppery, rest of body (except the bright green head), nearly black. Wings hyaline. Scutum and scutellum with slight down. Axilae, legs except hind coxa and hind tibiae (dorsal only) and the scape bright lemon yellow. Pedicel short, a little longer than wide; funicles 1-3 subcompressed, a little wider than long, longer than the pedicel; joint 4 more rounded, 1 and 7 cylindrical ovate, hence longest, the club the same shape but larger. Scape short, with a metallic green stripe along and just below dorsal edge. Marginal fringes of fore wing very short, dense. Middle tibial spur stout, long.


Habitat: Melbourne, Victoria.

Type: No. Hy 3122, Queensland Museum, Brisbane, the male on a card; hind leg and head on a slide.

ECTROMOMYIELLA new genus.

Male:—Head (cephalic aspect) rounded, the face inflected, the frons moderately broad, the cheeks as long as or longer than the eyes, the antennae inserted on the middle of the face, 6-jointed including a very short ring-joint; the club solid, the first funicle joint elongate, longer than the rather long club (about six times longer than wide), the second funicle joint long but only about half the length of the first; scape short, simple. Mandibles small, bidentate, the second tooth truncate. Hind tibial spur single, small. Axilae a little separated at meson. Marginal vein about thrice longer than wide, the stigmal and postmarginal veins much shorter, the former a little the longer, slightly longer than wide. Oblique hairless line present. Pronotum transverse. Scutellum hemispherical, somewhat shorter than the scutum. Abdomen triangular, shorter than the thorax. A spiracle on abdomen at proximal third bearing long setae.

1. ECTROMOMYIELLA ARTICULUS new species. Genotype.

Male:—Length, 0.52 mm.

Dark metallic green, the wings hyaline, the antennae, face and middle legs (except a band around middle tibiae just below knees), knees, tips of tibiae and tarsi of caudal legs yellowish
white. Hairless line of fore wing with about 5 or 6 lines of coarser cilia proximal of it. Thorax finely scaly. Fore wing pyriform, not especially broad, the marginal fringes short.

From one male taken by sweeping forest, January 8, 1913.

Habitat: Capville (Pentland), Queensland.

Type: No. Hy 3123, Queensland Museum, Brisbane, the specimen on a slide.

PSEUDECTROMA new genus.

Female:—Short and slender, the abdomen conic-ovate, a little longer than the rest of the body, the ovipositor and its valves plainly extruded for a third of the abdomen's length. Distal four tarsal joints very short; first tarsal joint of cephalic legs half shorter than the same of other legs. Scutum wider than long; the axillae barely separated. Pore wings densely ciliate distally, with an oblique hairless line from the stigmal vein, the marginal vein quadrate, the stigmal short and broad, longer than the marginal, the postmarginal very short; fringes of margin short. Head somewhat wider than long. Mandibles narrow, with two equal acute teeth. A spiracle on each lateral margin of abdomen a little beyond middle and which bears long setae from pores. Antennae 9-jointed; five funicle, two club joints, the first shorter, the articulation not very distinct, no ring-joint, the flagellum elevate but not compressed, the funicle joints all very much wider than long, 5 much the widest, 1 narrowest; pedicel obconic, two thirds or more the length of the funicle. Scape somewhat compressed. Antennae inserted at the base of the mandibles. Head a little wider than long. Middle tibial spur normal for the family. From broad.

1. PSEUDECTROMA AURICORPS new species. Genotype.

Female:—Length, 0.65 mm.

Golden yellow, the wings subhyaline; abdomen with three narrow dusky stripes across, the first complete, at proximal third, the second and third abbreviated laterad, on distal third; also between the spiracles a dusky crescent (just caudad of first crossstripe). Propodeum suffused with dusky. Valves of ovipositor black. Club ovate, large, longer than the funicle. Pore wing with indefinite infuscation along the oblique hairless line. Hind wing acute, the part distal of venation very short, about ten lines of fine discal cilia.

Described from one female captured by sweeping second forest growth and in grass, January 8, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3124, Queensland Museum, Brisbane, the female on a slide.

SCELIOENCYRTUS new genus.

Female:—Form slender, depressed, the abdomen much like that of the genus Phanurus of the Proctotrupidae but broad at base. Head depressed, circular, the face directed dorsal as in the seclionid genus Aradophagus, the antennae inserted at the base of the acute bideterminate mandibles, 10-jointed, the club 2-jointed, no ring-joint. Middle tibial spurs not stout, small. Pore wings slender, with an oblique hairless line from the stigmal vein, the marginal vein punctiform, the stigmal short but distinct, twice the length of the very short postmarginal. Abdomen long, obtusely conical, the ovipositor very short, inserted near the tip, the abdomen longer than the rest of the body. Axillae not widely separated. Body finely sculptured. From wide. Checks a little over half the length of the eyes.

1. SCELIOENCYRTUS NIGRICLAVIS new species. Genotype.

Female:—Length, 1.10 mm.

Honey yellow, the wings hyaline, the antennae dusky yellowish, the club jet black. Pore wings densely finely ciliate, the marginal fringes longer than usual, a fifth the greatest wing width. Scape (excluding bulla) shorter than the club, the latter ovate, wider than the funicle. Pedicel
longer than any of the funicle joints of which 6 is longest, a little wider than long, 1 subquadrate, small, the others small, wider than long. Funicle 6 over twice the size of 1 which is subequal to the others or nearly.

From one female caught in forest, August 13, 1913.

_Habitat:_ Gordonvale (Cairns), Queensland.

_Type:_ No. _Hy3125_, Queensland Museum, Brisbane, the female on a slide.

2. _SCLEIOECYTUS TRICOLOR_ new species.

_Female:_—Similar to the genotype but the frons is narrower, the scape of the scape somewhat longer, the scape and pedicel dusky, pale beneath (the former) and at tip (the latter); first three funicle joints blackish, the distal three white. Also the fore wings are broader, very much more finely ciliate distally and the marginal cilia are very short, not distinctly longer than usual. Shaft of scape nearly twice the length of the pedicel (not distinctly less than that). The body is golden yellow. Axillae rather broadly joined. Funicles 1.5 subequal, 6 distinctly longer.

From one female captured in forest, December 29, 1912 (A. P. Dodd).

_Habitat:_ Gordonvale (Cairns), Queensland.

_Type:_ No. _Hy3136_, Queensland Museum, Brisbane, the specimen on a slide with the type of _Coccophagus boswelli_ Girault.

3. _SCLEIOECYTUS KEATS_ new species.

_Female:_—Length, 1 mm.

Similar in all respects to _nigriscapala_ but the whole antennae are jet black and the body is marked with dusky black as follows: Proximal three fourths of abdomen except near base, cephalic margin of the triangular scutellum (the blunt apex of the triangle cephala), pronotum, caudal margin of scutum, propodeum and a round spot in center of scutellum just before apex. Both wings are somewhat broader. Body finely sculptured.

From one female caught April 16, 1914 by sweeping in forest

_Habitat:_ Gordonvale (Cairns), Queensland.

_Type:_ No. _Hy3157_, Queensland Museum, Brisbane, the specimen on a slide.

Dedicated to the poet Keats.

_HOLANUSIA_ new genus.

_Female:_—In the table of genera runs to _Eupausia_ Girault but differs in not having the flagellum foliaceous and greatly compressed, only the scape being so. Frons moderately broad, a little over twice the diameter of the large cephalic ocellus. Cheeks two thirds the length of the eyes. Mandibles with two acute teeth. Marginal vein about twice longer than wide, subequal to the stigmatic vein, the postmarginal vein a little shorter. Hind tibial spur single. Eyes hairy. Thorax rather much convexed, no longer than the abdomen which is conic-ovate, depressed, the ovipositor not exerted. Axillae not separated. Marginal fringes of fore wing short, the oblique hairless line present. Scrobes evident.

1. _HOLANUSIA CONVEXUS_ new species. Genotype.

_Female:_—Length 1.10 mm.

Black, the abdomen shining dark purplish, the wings hyaline excepting for a brownish spot against the marginal vein; funicle 1 silvery white. Knees, tips of tibia and tarsal brownish. Head and thorax very finely, densely scaly, the scutum and scutellum with a soft, non-dense yellowish pubescence from obscure punctures. Club three fourths the length of the funicle; pedicel distinctly longer than any of the funicle joints which are wider than long but not annular, widening distad, 5 and 6 being distinctly the longest, 1 narrowest, somewhat wider than long, 3 shortest. Flagellum clavate, the club obliquely truncate.
From one female caught sweeping in jungle, February, 1914 (A. P. Dodd).

**Habitat:** Babianda, Queensland.

**Type:** No. Hg 3128, Queensland Museum, Brisbane, the female on a tag; head, pair of wings and a hind tibia on a slide.

**BÆOANUSIA** new genus.

**Female.**—Runs to Holonus Girault but the club is greatly enlarged, nearly twice the length of the funicle, the joints of the latter subannular. Also the second tooth of the mandibles is broadly truncate, the hind tibial spurs are double, the marginal vein about three longer than wide, over twice the length of the stigmatic which is not long and only somewhat longer than the postmarginal. The axillae have a carina between them. Otherwise much the same. Frons moderately narrow, somewhat over three the diameter of an ocellus. Pronotum transverse. Ring-joint present. Scutum and scutellum not much unequal in length.

1. **BÆOANUSIA MAGNIGLAVA** new species. **Genotype.**

**Female.**—Length, 1.30 mm.

Dark metallic blue-green, the axillae and scutellum coppery, the wings hyaline; knees, tips of tibia and tarsi pale yellow; antennae concolorous but funicle 6 is white, also the palpi.

Head very densely punctate-scaly, also the thorax, the scutum with distinct short, white pubescence which contrasts with its background. Funicle joints each widening, 6 distinctly wider than 1 but all subequal in length. Pedicel barely longer than wide but much longer than any of the funicle joints. Cheeks subequal to the eyes. Propodeum and abdomen scaly. Hairless line of fore wing with about ten lines of coarser cilia proximal of it.

From one female taken by sweeping forest, January 8, 1913.

**Habitat:** Capeville (Pentland), Queensland.

**Type:** No. Hg 3129, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide.

2. **BÆOANUSIA PERFUSCIPENNIS** new species.

**Female.**—Length, 1.30 mm.

Differs from the genotype in that the frons is a half narrower, the scape much more dilated and the club somewhat narrower but as long. Dark metallic blue-green, the abdomen and legs metallic purple, the tarsi pale yellow, the antennae wholly concolorous. Thorax densely scaly, the axillae and abdomen smoother; axillae with a carina between them. Scutum somewhat wider than long, a little shorter than the scutellum; scutum with scattered setigerous punctures, the pubesence not as distinct as in the genotype. Fore wings very deeply embrowned but clear around apex, the infuscation deeper under the venation; a white, transverse dash just cephalad of venation. Much discal elution proximal of hairless line. Funicle and club hispid. Otherwise about as in the genotype. Costal cell of hind wings extending to the hooklets.

From one female captured on edge of jungle, May 29, 1913.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. Hg 3130, Queensland Museum, Brisbane, the specimen on a tag; head, hind tibia and a pair of wings on a slide.

3. **BÆOANUSIA PERSIMILIS** new species.

Like the genotype but the axillae are a little separated and thus without the distinct carina between them. Otherwise the same or very nearly.

Dark steel blue, the scutellum dark coppery, the legs concolorous except on each side of knee, tips of tibia and tarsi which are white. Body densely scaly, the scutellum densely punctulate, the scutum with a fine silvery pubescence. Distal funicle joint white. Caudal femur black to knee. Axillae a very little separated. Scutellum reaching base of abdomen. Hind
tibial spurs double. Face much inflexed, the scrobes forming a deep semicircle. Postmarginal and stigmal veins subequal. Compared with type body of *magniclava*.

From one female caught on sand-ridges, forest, May 15, 1914 (A. P. Dodd).

**Habitat:** Chinderah (Tweed River), New South Wales.

**Type:** No. *Hy 3131*, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and hind tibia with slide type of *Zooencyrtus acuticrinis* Girault.

**ANUSOMYIA** new genus.

1. **ANUSOMYIA AURATISCUTUM** new species. Genotype.

**Female:**—Length, 0.90 mm.

Dark metallic purple, the scutum and propodeum, venter and sides of thorax deep reddish orange; legs yellowish brown except the purple middle coxae. Wings lightly stained throughout. Distal half of body of scape, apical part of pedicel and distal four joints of flagellum silvery white, rest purple. Pedicel thrice longer than wide at apex, distinctly longer than funicle 1 which is longest, one and a half times longer than wide, 2 longer than wide, 3 subquadrate, 6 wider than long; club somewhat over half the length of the funicle. Hind tibia with two spurs. Marginal vein twice longer than wide, the stigmal a third shorter, the postmarginal a little shorter than the stigmal. Mandible acute as in the Arrhenophagini but inwardly with a second small acute tooth some distance down from tip of the other. Frons punctate. Head and thorax hairy, the scutellum punctate, the scutum with scattered (setigerous) punctures. Axilae a little separated, without a carina between them. About five lines of coarse cilia proximad of hairless line. Otherwise as in *Holanausia* but the thorax is less convex.

From one female taken January 15, 1914 in jungle (A. P. Dodd).

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. *Hy 3132*, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide with type of *Holanausia convexus*.

2. **ANUSOMYIA AERISICUTUM** new species.

**Female:**—Length, 1 mm.

Dark shining metallic green, the scutellum and abdomen bronze or coppery, the wings hyaline, the legs, propodeum and caudal end of mesopleurum, rich yellowish brown; antennæ concolorous except extreme tip of scape which is white. Vertex with numerous thimble punctures; scutum scaly and with scattered, numerous, minute setigerous punctures; scutellum and abdomen glabrous. Axilae finely transversely sheened, separated by a carina. Scape greatly dilated (more than twice wider than that of the genotype); pedicel only half longer than wide at apex, somewhat longer than funicle 1 which is longest and a little longer than wide, 2 and 3 subquadrate, the rest very slightly shortening distad. Club a little wider than and half the length of the funicle. Vertex flat. Postmarginal vein a little shorter than the stigmal, the latter a little shorter than the marginal which is two and a fourth times longer than wide. Mandibles short with two acute, slender teeth of which the first is much longer than the second. Otherwise as in the genotype. Eyes hairy.

From one female taken by sweeping jungle along a forest streamlet, foothills, March 31, 1914.

**Habitat:** Gordonvale (Cairns), Queensland.

**Type:** No. *Hy 3135*, Queensland Museum, Brisbane, the female on a tag; fore wing, head and a hind tibia on a slide.

**EPITETRACNEMUS** new genus.

1. **EPITETRACNEMUS SEXGUATTATIPENNIS** new species. Genotype.

**Female:**—Length, 0.75 mm., excluding ovipositor which is distinctly but slightly extruded.

Dark bluish black, the head and scutum metallic green, both finely scaly reticulate with scattered minute setigerous punctures, the scutellum triangular, with a wide base, scaly punctate;
axilae distinctly separated for some distance; knees, tarsi and tips of tibiae yellowish white. Joints 5 and 6 of funicule white, 5 suffused with dusky; distal two club joints suffused with whitish. Fore wings sooty from the head of the submarginal vein distad to apex, the sootiness broken by the oblique hairless line and by six rounded spots—two egg-shaped ones facing each other in the center of the blade just before apex; two larger rounded ones, one at apex of venation at cephalic margin, one at caudal margin somewhat distad of a point opposite the first; a similar spot opposite the marginal vein at caudal third, one end against the oblique hairless line; and the sixth (smallest) one between the oblique hairless line and venation, in the angle subtended by them. Scape distinctly dilated (compressed) ventrad but the convexity not very great; pedicel a little longer than wide, somewhat longer than funicule 6 which is longest of the funicule, yet wider than long; funicule joints 1-4 short, twice longer than wide, 4 a little the longest, 5 twice the length of 4, a little smaller than 6. Club conic-ovate, nearly as long as the funicule. Second tooth of mandible truncate. Marginal vein a little over thrice longer than broad, the postmarginal subobsolete, the stigmal vein short, colorless, the fuscous patch just cephalad of the hyaline spot at apex of the black marginal vein, distinctly darker. Discal ciliation of fore wings extremely fine and dense, the marginal ciliation short. From moderate, the antennae 11-jointed, inserted about on a level with the ventral ends of the eyes. Head (cephalic aspect) rounded. Pubescence not conspicuous, very sparse, no ring-joint. Scrobes distinct, moderate. Cheeks nearly as long as the eyes.

From one female caught by sweeping jungle along a forest streamlet, December 2, 1912 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3134, Queensland Museum, Brisbane, the female on a tag; head and a fore wing on a slide.

Later, a female was found from Ayr, Queensland, captured November 6, 1912 by sweeping in natural forest. In this specimen all of funicule 5 was white.

Also a female from Clencurry, forest, April 18, 1914 (A. P. Dodd); one from Chinderah, New South Wales (forest, sand-ridges near coast), May 9, 1914 (A. P. Dodd); and one at Capeville (Pentland), Queensland, forest, September 10, 1914.

PARASTENOTERYS new genus

Female:—In Ashmead's (1904) table of genera running to the second part of couplet 15 but differs from the included genera in having the axilae distinctly separated yet not for a great distance. The flagellum is strongly clavate, the vertex and frons moderate (neither broad nor especially narrow), the scrobes deep, tolerably long, not joined above but separated by a distinct ridge from the base of the antennae. From cephalic aspect, the head is longer than wide. Marginal vein of fore wing a little over thrice longer than wide, the postmarginal and stigmal veins subequal, each about two thirds the length of the marginal. Oblique hairless line and marginal cilia present, the former narrow. Abdomen not as long as the thorax, pointed, depressed, the second segment occupying over a third of the surface, the others short, transverse. Ovipositor not exerted. Propodeum large. Mandibles with two equal, acute teeth.

1. PARASTENOTERYS PUNCTATUS new species. Genotype.

Female:—Length, 1.33 mm.

Metallic purple, the scutellum roseaceous coppery; legs except the concolorous hind coxae and the scape reddish or yellowish brown, the distal two club joints yellowish white. Fore wings distinctly embrowned from a little out from base to apex but with a midlongitudinal hyaline line from apex to proximal third. Thorax very finely scaly, the pronotum, scutum, axilae and scutellum with numerous, distinct, but not large, setigerous punctures. All of the mean part of propodeum foveolate, farther lateral smooth, with a lateral carina and the lateral
margin carinated; propodeal spiracle minute, lateral of the lateral carina. Abdomen glabrous. 
Propodeum black. Club larger than the funicule but only about half its length, obliquely 
truncate; pedicel a little over twice longer than wide at apex, a little longer than funicule 1 
which is longest, the following joints shortening and widening gradually to the club, 4 
subsquare, 5 and 6 somewhat wider than long. Hind tibial spurs double. Cheeks two thirds 
the length of the eyes. Antennae well clothed; pubescence on thoracic dorsum present but 
not conspicuous yet from lateral aspect rather dense. Scutellum more coarsely scaly than rest 
of thorax. Mesopleurum densely, distinctly punctate, smooth at extreme cephalic end. Head 
impunctate but a row of fine punctures across the vertex by the eye margins.

From one female caught May 19, 1913 by sweeping in jungle (A. P. Dodd).

Habitat: Kuranda, Queensland.

Type: No. Hy 3155, Queensland Museum, Brisbane, the specimen on a tag; head and a 
hind leg on a slide.

2. PARASTENOTETRYS VARIFERES new species.

Female:—Length, 1.50 mm.

Black or nearly, the scutellum metallic blue, the abdomen dark coppery, green at base.

Fore wings lightly stained yellowish under marginal vein, the venation pale. All coxae and 
cephalic legs except the tarsi and each end of the tibiae, concolorous; rest of legs reddish brown.

Scape reddish brown except the bulb which is concolorous; rest of antennae black, except the 
yellowish apex of pedicel. Pedicel somewhat longer than wide at apex, somewhat 
longer than any of the funicule joints which thicken a little distad but are subequal, a 
little longer than wide; club two thirds the length of the funicule and distinctly much wider, 
conic-ovate. Hairless line rather obscure, with about five lines of cilia proximad of it.

Marginal vein about five times longer than wide, the postmarginal a little longer than the 
stigmal which is two thirds the length of the marginal or a little longer. The smaller spur of 
hind tibia no longer than the apical setae but distinctly stouter. Head somewhat longer than 
wide. Scutum polygonally scaly and with pilosity; axillae more finely scaly, the scutellum 
like the axillae but the scallines has a longitudinal trend. Meson of propodeum with oblique 
rugae. Segment 2 of abdomen occupying a third of the surface, much longer than any of the 
other segments. Face rather much inflexed, frons not prominent, the scrobes as in the genotype.

Ovipositor slightly extruded. Otherwise as in the genotype.

From one female caught May 4, 1914 in jungle near Tweed River (A. P. Dodd).

Habitat: Tweed Heads, New South Wales.

Type: No. Hy 3137, Queensland Museum, Brisbane, the specimen on a tag; head, a pair 
of wings and hind tibiae with slide type of Retromaniella articularis Girault.

PARATETRACNOEIDOIDEA new genus.

Female:—Differs from Tetracoonidae Howard in that the venation does not reach the 
costal margin, the marginal vein punctiform, the postmarginal absent, the stigmal short 
but distinct, elavate, about twice longer than wide. Mandibles with two unequal, acute teeth.

Carina on epistoma not distinct; the thorax is globular, the axillae separated a short distance; 
abdomen very short, depressed, pointed triangular; shorter than the thorax, the ovipositor 
extruded a short distance. Fore wing extending well beyond the body. Scutellum overhanging 
the short propodeum, convex, globular from dorsal aspect.

1. PARATETRACNOEIDOIDEA BREVIVENTRIS new species. Genotype.

Female:—Length, 0.70 mm. Very short but rather robust. Dark metallic purple, the 
legs and scape except at apex, rich yellow-brown, the coxae mostly concolorous with the body.

Antennae inserted at the clypeus, the flagellum spear-shaped, the scrobes long, the scape 
slender; pedicel somewhat longer than funicule 1 which is longest, somewhat longer than wide, 
2 somewhat shorter than 1, a little longer than wide, 3 and 4 quadrate, 5 and 6 wider and
subequal in length to 2. Club long, acutely conic-ovate, a little shorter than the funicle; the flagellum concolorous with body. Frons broad. Fore wings distinctly stained yellowish brown to apex from the head of the submarginal vein, the marginal fringes very short, the discal cilia very dense and fine, the hairless line not distinct though indicated. Thorax and head densely, moderately coarsely polygonally scaly, appearing like scaly punctuation but the areas not truly sunken. Abdomen subglabrous. Pronotum distinct, transverse. Scutum subequal to the scutellum in length. Pubescence not conspicuous. Antennae 12-jointed, with one ring-joint, the club 3-jointed.

From one female taken from a window, October, 1912.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg 3136, Queensland Museum, Brisbane, the specimen on a tag; head and fore wing on a slide.

**AMENISCOCEPHALUS** new genus.

*Female:*—Agrees with the description of *Meniscocephalus* Perkins but the lateral ocelli are distinctly separated from the eyes, the flagellum is filiform, the club 3-jointed, the axille are widely separated and the marginal vein is linear, five or six times longer than wide, the postmarginal distinctly absent, the stigmatic long and slender, subequal to the marginal. Oblique, hairless line of fore wing only twice longer than wide, completely enclosed. Hind tibial spur single. Scutum wider than long, shorter than the triangular scutellum. Pronotum transverse linear. Scrobes distinct, separated at apex, the face not inflexed. Cheeks half the length of the eyes.

1. **AMENISCOCEPHALUS MENISCOCEPHALUS** new species. Genotype.

*Female:*—Length, 1.15 mm. Short, robust.

Deep golden yellow, the head and thorax very finely, densely scaly and with minute scattered setigerous punctures. Proximal half or two thirds of fore wing embrowned but not very deeply so. Antennae and legs pale yellow; pedicel dusky above at proximal half. Scape long and slender, longer than the club which is not enlarged and somewhat over half the length of the funicle; scape dusky centrally; pedicel subequal to funicle 1 which is not quite twice longer than wide, 2 a little shorter than it, 5 and 6 quadrate or very little longer than wide. Distal two club joints dusky. Discal cilia of fore wing very short.

From one female caught in forest, April 9, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hg 3138, Queensland Museum, Brisbane, the female on a tag; head, fore wing and a hind tibia on a slide with type *Echithobacca armaticorpus* Girault.

**ECTROMOIOIDES** new genus.

*Female:*—The stigmatic vein is slightly longer than the marginal, the postmarginal distinctly longer than the marginal, the latter only slightly over twice longer than wide. Mandibles slender with two rather long, acute unequal teeth. Frons moderate, about four times the diameter of the cephalic ocellus; face inflexed, frons not prominent. Hind tibiae apparently with two spurs. Antennae cylindrical.

1. **ECTROMOIOIDES PURPUREISCUTELUM** new species.

*Female:*—Length, 1.25 mm.

Orange yellow, the head, abdomen, scutellum, pronotum and cephalic part of scutum at meson narrowly, metallic purple. Wings slightly yellowish throughout. Scape concolorous; funicle and pedicel purple, the club white; distal two funicle joints inclined to be paler. Pedicel subequal to funicle 1 which is longest, one and a third times longer than wide, 2-3 subequal, a little shorter than 1, 4 and 5 subequal, a little shorter, 6 still shorter, a little longer than wide. Club no wider than the funicle and not quite half its length. Cheeks about half the length of the
eyes. Pronot with some punctures; scutum finely scaly, the scutellum glabrous; scutum with numerous obscure setigerous punctures, the scutellum with only few. Axillae separated for a short distance.

From three females caught May 28, 1913 by sweeping jungle.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3139, Queensland Museum, Brisbane, one specimen on a tag; head, a wing and a hind tibia on a slide.

**Paraleptomastix** new genus.

Female:—Form robust, the head lenticular, narrowed ventrad of the face, the mandibles not large, with two acute teeth, the second tooth much shorter than the first, from lateral aspect acute. Pronot broad, the cheeks over half the length of the eyes; scrobes very short. Fourth joint of maxillary palpus elongate. Antennae slenderly elavate, the scape slender but normal, the first funicle joint elongate, the club short, ovate, its first two joints much wider than long, together forming only about a third of the length. Marginal vein about thrice longer than wide, the postmarginal elongate, over two and a half times the length of the marginal, the stigmatic long, curved, one and two third times longer than the marginal. Costal cell large. Hind legs (including first tarsal joint, excluding coxae) compressed, the femur along distal half ventral with a narrow colorless membranous exfoliation; two tibial spurs. Ovipositor not exerted, the abdomen much smaller than the thorax. Pronotum transverse. Axillae meeting.

1. **Paraleptomastix Thoreauini** new species. Genotype.

Female:—Length, about 2.30 mm.

Dark metallic green with bluish tinges, the abdomen and hind legs black-blue, the first two pairs of legs and antennae reddish brown; antennal club black. Venation dusky brown, the fore wing with a large, diamond-shaped smoky area suspended from the distal half of stigmatic vein and reaching nearly to caudal margin, its apex distal and extending to a point beyond apex of the postmarginal vein. The area is divided longitudinally nearly into two equal halves by a clear line.

Head densely punctulate. Scutum finely scaly, pilose. Scutellum longitudinally lineolated. Axillae with a short carina between them. Oblique hairless line with over a dozen lines of coarser cilia proximad of it. Club shorter than funicle 1 which is distinctly twice longer than the normal pedicel; funicle 2 a little over half the length of 1, distinctly longer than the pedicel, 4 and 5 subequal, each slightly longer than wide, 6 a little wider than long. Joint 1 of maxillary palpus black.

From one female taken November 19, 1913 (H. Hacker).

Habitat: Brisbane, Queensland.

Type: No. Hy 3140, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind leg on a slide.

**Paratetralophidea** new genus.

Female:—In Ashmead’s (1904) table of genera runs to Calocerinus Howard but the scape is distinctly but not greatly dilated, foliaceous widening toward apex. Head a little longer than wide, the second tooth of mandible broadly truncate, the cheeks not quite as long as the eyes, the scrobes tolerably short, forming more or less of a semicircle, the face sublenticular; femur tolerably narrow. Antennae inserted not far above the eyepeus, elavate, 12-jointed with one short ring-joint, the club short and stout, compressed, about a third the length of the funicle; pedicel subequal to funicle 3, the distal three funicle joints wider than long. Axillae broadly joined. Marginal vein about four times longer than wide, the stigmatic a fourth shorter than it, the postmarginal just developed. Oblique hairless line present. Fore
wings with a pattern, the marginal fringes short. Hind tibial spurs double. Funicle 1 nearly
twice longer than wide, longest. Cephalic and caudal femora and tibiae compressed. Scutum
a little longer than the scutellum, the abdomen depressed, triangular, as long as the thorax,
the ovipositor not exerted, segment 3 apparently occupying two thirds or more of the surface.

1. PARATETRALOPHIDEA ORNATIPENNIS new species. Genotype.
   Female:—Length, 1.69 mm. Stout, rather short.
   Dark metallic purple, the scutellum dark blue at distal third, rest green; middle legs
   except coxae and femora proximad and all tarsi, brown. Fore wing with two conspicuous,
broad, black stripes across them, the first from the distal fourth or less of the submarginal,
all of marginal and stigmal veins (not crossing the latter), its proximal margin straight, continuous
with the discal ciliation, its cephalic margin convex; the second stripe is a little longer and
occupies about the distal third of the wing; a rather broad hyaline band between the two;
cilia proximad of the hairless line dense, twice coarser, about 10 lines. Head and thorax
delicately reticulate and with numerous, distinct but minute setigerous punctures, the scutellum
polished but with faint traces of sealiness proximad and with a few scattered setigerous
punctures. Propodeum with a weak median carina, the surface nearly smooth. Pubescence
not conspicuous.
   From one female taken in jungle, March 5, 1914.
   Habitat: Gordonvale (Cairns), Queensland.
   Type: No. Hy 3141, Queensland Museum, Brisbane, the specimen on a tag; hind tibia,
   head and a fore wing on a slide.

OMPHALENCYRTUS new genus.

Female:—Antennae inserted below the middle of the face, 9-jointed with no ring-joint,
the club long, 3-jointed, the incisions faint. Abdomen rather stout, longer than the thorax,
the ovipositor short, inserted toward tip, not extruded. Middle tibial spur normal for the
family. Axilae wedge-shaped, meeting at meson or nearly. Mandibles with the second tooth
truncate. Eyes not convergent. Wings present, the marginal vein about twice longer than
wide, the stigmal and postmarginal veins still shorter. Scape a little compressed. With the
habitus of an omphaline culex.

1. OMPHALENCYRTUS WALLACEI new species. Genotype.
   Female:—Length, 0.75 mm.
   Dark metallic green, the wings hyaline, the coxae concolorous, also the pedicel above;
   antennae and legs pallid white except hind femur and proximal two thirds of hind tibia which are
   concolorous. Club longer than the funicle. Incisions of abdomen showing as more or less
   distinct whitish cross-stripes. Pedicel not much over a third the length of the club, distinctly
   longer than any of the funicle joints of which 1 is longer than wide and plainly the longest,
   the others wider than long, 2 and 3 subequal, shorter than 4 which is not much wider than
   long. Pedicel nearly twice the length of funicle 1. Thorax finely scaly.
   Described from one female caught January 2, 1913 by sweeping forest (A. P. Dodd).
   Habitat: Gordonvale (Cairns), Queensland.
   Type: No. Hy 3142, Queensland Museum, Brisbane, the female on a slide.

ERICYDNELLA new genus.

1. ERICYDNELLA ASHMEADI new species. Genotype.
   Female:—Length, 1.80 mm.
   Dark metallic purple, the wings hyaline; tarsi, cephalic tibiae and distal half of inter-
   mediate tibiae reddish brown, the scape so at proximal third and the intermediate femora in
the same place. Scape slender not reaching beyond the vertex; pedicel one and a half times longer than wide, longer than any of the funicle joints of which 1 is longest, somewhat longer than wide, 2 and 3 subquadrates, 4 a little wider than long, 6 distinctly wider than long; club not especially enlarged, the flagellum regularly clavate, the club a little less than half the length of the funicle; antennae 12-jointed, inserted at the clypeus. Frons very broad, the lateral ocelli their own diameter from the eye margins, the eyes somewhat longer than the cheeks. Fore wing with an oblique hairless line; marginal vein about thrice longer than wide, the postmarginal very short, about a third the length of the marginal, the stigma a little longer than the marginal. A single line of coarser discal cilia proximal of the hairless line; marginal fringes very short. Mandibles with two rather stout, acute teeth. Head sublenticular, the scrobes not long, the surface finely, transversely sheened but with scattered thimble punctures a line of which runs over the partially impunctate vertex along the eyes. Axillae joined acutely at the meson. Scutum and axillae sculptured like the head but the punctures are rather numerous minute setigerous ones; scutellum glabrous. Metapleura with white pubescence; propodeum short at meson, with a median carina joined to the apex of scutellum, widening laterad and there with distinct transverse rugae (cephalo-lateral), otherwise glabrous. Abdomen pointed conico-ovate, a little longer than the rest of the body. Scutellum with sparse pubescence. Segments 3 and 6 of abdomen transverse, shorter than 2, 7 apparently occupying the rest of the surface (a third). Pronotum transverse. Hind tibia and wing on a slide.

From one female caught on a window, June 4, 1912.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3144, Queensland Museum, Brisbane, the female on a tag; head, hind tibia and wing on a slide.

TETRACNEMELLA new genus.

1. TETRACNEMELLA AUSTRALIENSIS new species. Genotype.

Female:—Length, 1.05 mm.

Dark metallic blue, the abdomen purple, the scutellum green; wings hyaline; legs and antennae pale yellow (coxae not plainly seen). Antennae inserted near the mouth border, the scrobes tolerably long, forming a triangle, the scape slender; pedicel metallic, bluish except at apex, twice longer than wide at apex, much longer than any of the funicle joints of which 1-4 are subequal, each a little longer than wide, 5 and 6 longest, somewhat longer than wide and a little wider than the others; club slender, a little longer than the funicle and somewhat over half its length. Mandibles with the second tooth truncate, rather broad, its lateral apical angle subacute, the apex a little concaved. Axillae widely separated. Marginal vein somewhat thickened, a little longer than wide, the postmarginal vein a little shorter than the marginal, the stigma nearly twice longer than the marginal; oblique hairless line present. Frons narrow, the cephalic ocellus about its diameter (or a little less) from the eye margin; cheeks nearly as long as the eyes; frons not prominent but the face inflected. Head with very fine surface sculpture and with a few very minute setigerous punctures. Scutum and axillae like the head but the minute setigerous punctures rather numerous on the former. Scutellum finely, densely punctulate or shagreened. Pronotum transverse. Proximal two segments of abdomen greenish, scaly, the rest shining, the abdomen flat, pointed-ovate, as long as the thorax, the ovipositor distinctly but very shortly extruded, white. Scutellum overhanging meson of propodeum. Pubescence not conspicuous.

From one female captured by sweeping miscellaneous vegetation along the Herbert River, February 26, 1913.

Habitat: Halifax (Ingham), Northern Queensland.

Type: No. Hy 3144, Queensland Museum, Brisbane, the specimen on a tag; fore wing and hind legs on a slide.
2. TETRACNEMELLA VIRIDISCUTELLUM new species.

Female:—Length, 0.85 mm. Differs from the preceding principally in having the frons broad.

Dark metallic blue, the wings hyaline, the scutellum contrasting green; knees, tarsi, tips of tibiae (all of middle tibiae except just below knees), yellowish; funicle and club whitish, also tips of pedicle and scape. Head and thorax densely scaly. Funicles 1 and 4 shortest, all the others short, subquadrate, 4 a little wider than long; pedicle distinctly longer than any of the funicle joints; club a little over half the length of the funicle. Scutum with soft scattered pileosity. Axille not greatly separated. Stigmal vein twice the length of the marginal which is quadrate and subequal to the postmarginal. Otherwise as in the preceding.

From one female taken by sweeping in forest, December 25, 1912.

Habitat: Capeville (Pountland), Queensland.

Type: No. Hy 3145, Queensland Museum, Brisbane, the specimen on a tag; head, hind wing and hind legs on a slide.

3. TETRACNEMELLA MINUTELLA new species.

Female:—Length, 0.85 mm.

Dark grass green, metallic, the wings hyaline, the venation, knees, distal half of cephalic tibiae, distal three fourths of middle tibiae, tips of caudal tibiae, tarsi and tibial pale yellowish brown. Funicle yellowish brown, the club a little darker, the pedicle and scape dark metallic green. Abdomen dark, shorter than the thorax. Funicle joints subequal but widening a little distad. Frons moderately narrow. Venation as in viridiscutellum and resembles that species closely but in the head it is like australiensis except that the frons is subprominent. Differs from viridiscutellum in having the cephalic tibiae mostly yellowish, the scape and pedicel wholly dark metallic, the frons is narrower, the thorax is a trifle more densely, finely scaly. Scutum and scutellum large in both species, the scutellum extending to base of abdomen.

From one female caught on forest uplands, May 3, 1914 (A. P. Bodd).

Habitat: Tweed Heads (Tweed River), New South Wales.

Type: No. Hy 3146, Queensland Museum, Brisbane, the specimen on a tag; head, a hind leg and a fore wing on a slide.

PARECTROMOIDES new genus.

Female:—In the table of genera runs to Paretromoides Girault but differs in that the marginal vein is longer than either the postmarginal and stigmal which are subequal and rather long, the venation as in Eurytoma. Also, the scutellum is larger, extending to base of abdomen. The marginal vein is five or more times longer than wide. Serrae long, separated by a median ridge from between base of antennae. Frons moderately narrow. Mandibular teeth a little unequal, acute. Flagellum capitulate, the funicle cylindrical, the scape long and slender, longer than the club which is about two thirds the length of the funicle. Cheeks about as long as the eyes. Ovipositor distinctly shortly extruded. Club long-ovate. Thorax convex, not flat as in Paretromoides. Cephalic legs compressed.

1. PARECTROMOIDES MAGNISCUCELLUM new species. Genotype.

Female:—Length, 1.50 mm. Stout.

Dark purple, the abdomen dark green, the extruded valves of ovipositor and antennae (except the brownish yellow apical end of scape) black. Scutum with an obscure silvery stripe across caudal edge. Fore wings with a distinct yellow stain from whole of the marginal vein two thirds the way across the caudal margins and diffused distad under the stigmal vein, the venation yellow. Legs inconspicuous except tarsi, tibial tips of tibiae, distal half of caudal femur, caudal two pairs of knees, distal half of middle tibiae and all of caudal tibiae, which are rich yellowish brown. Frons with a double row of fine punctures along the eyes, otherwise scaly.
Scape dusky. Distal three funicole joints longest, each somewhat longer than wide, the proximal three slightly longer than wide. Pedicel somewhat longer than funicole. 4. Oblique hairless line of fore wing with about half a dozen lines of common cilia proximal of it. Hind wings short and broad, with about twenty-three lines of fine discal ciliation where broadest. Ring-joint present. Axillae finely scaly, narrow, just joining at meson, with an obscure carina between them; scutellum longitudinally lined; scutum and the transverse pronotum densely scaly, the former with very many minute setigerous pin-punctures, the pubescence not silvery. Abdomen shorter than the thorax, finely scaly, bright green at base. Hind tibial spur single.

From one female taken May 29, 1914, forest uplands (A. P. Dodd).

Habitat: Maclean (Clarence River), New South Wales.

Type: No. Hg. 3117, Queensland Museum, Brisbane, with type of Epipictonous sexguttatipes Girault. tag and slide.

GENUS ERICYDNUS Walker,


2. ERICYDNUS MEGALARUS Walker. Female.


3. ERICYDNUS HEMIPTERUS new species

Female:—Length, 1.15 mm. Short and robust, resembling a Heteronomus.

Brilliant metallic dark green, the mesopleuron and abdomen purple; distal fourth of fore wing sooty; legs purple except tarsi and distal two thirds of middle tibia which are brownish yellow, also the knees and more or less of tips of tibiae. Antennae purplish, the club paler; scape slender, cylindrical; pedicel subelliptical, longer than any of the funicole joints, all of the latter longer than wide, 4 somewhat the longest, 6 somewhat the shortest. Club slightly wider than the funicole, its three joints a little shorter than the funicole joints; pedicel not quite a third the length of the funicole; antennae 12-jointed, one short ring-joint. Middle tibia armed with black teeth beneath as in many Eupelminae. Head densely scaly punctate, the thorax polygonally scaly; axilae widely separated, the scutellum convex, sublenticular but nearly as long as wide, rounded at apex. Wings very small, reaching to proximal fifth of abdomen, the latter short. Front femur compressed, middle tibia somewhat dilated at apex, the spur with hairs ventrally. Lateral ocelli somewhat separated from the eyes, the ocelli minute. Mesopleuron finely, longitudinally linedolate. Abdomen finely scaly, green at base. Scrobes not long. Vertex moderate in width, the frons moderately narrow. Ovipositor not exerted. Hind tibial spurs apparently double. Pronotum transverse-linear. Second tooth of mandible broad, truncate, the first small.

Described at first from eight females reared from a mass of pentatomid eggs on a bush in the forest. The hosts were obtained May 7, the parasites emerging May 30, 1912. Later two females were seen in the collections of the Queensland Museum labelled "Sweeping undergrowth, mostly eucalypts, Brisbane, April 4 and 16, 1913 (H. Hacket)." Also, what appears to be a male was captured by sweeping in the dry bed of the Proserpine River, at Proserpine, Queensland, November 3, 1912. It is similar to the female except that the middle tibiae are wholly yellow, the club is solid, the pedicel shorter, the funicole joints longer; pedicel much shorter than funicole 1; funicole 2 and 3 slightly the longest, two and a half times longer than wide. The antennal pubescence though not long is longer than in the female. Discal cilia of fore wing confined to the small distal sooty area, the venation running to apex.

Habitat: Gordonvale (Cairns), Proserpine and Brisbane, Queensland. Forest.

Type: No. Hg. 3118, Queensland Museum, Brisbane, four females on a tag; two female heads and three legs on a slide.

Type locality, Gordonvale.
A. ERICYDRUS HEMIPTERUS PENTLANDENSIS new variety.

Female:—Like the typical form but the funicle joints all shorter, subequal, all somewhat longer than wide; funicle 4 not distinctly longest.

From one female taken by sweeping forest, January 4, 1913.

Habitat: Capeville (Pentland), Queensland.

Type: None designated.

GENUS TETRACNEMOIDEA Howard.

1. TETRACNEMOIDEA AUSTRALIENSIS Howard. Female, male.


EPICHELONEURUS new genus.

Female:—Like Cristathorax but the scutellum is simple, scape distinctly compressed. In the table runs to Paratetralophidea Girault from which it is easily distinguished by reason of the long marginal vein and the short stigmal, the latter about a fourth of the length of the former.

1. EPICHELONEURUS ALBICOSA new species. Genotype.

Female:—Length, 1.25 mm.

Very similar to Cristathorax posturii Girault but the legs are lighter, funicle 6 suffused with whitish, tips of tibiae white and the scape somewhat more dilated and of the head only the occiput is dark metallic. Compared with type of C. bidentimaculata. Dark metallic green, the head orange yellow, the scutum with a short dense silvery pubescence, the middle coxae concolorous. Antennae all black, funicle 6 suffused with white. First and last pairs of coxae, tarsi, tips of tibias (broadly so on middle legs) and middle femur silvery white. Rest of legs blackish, front legs dusky. Tegulae orange. Scutellum with a pair of long setae from extreme apex. Head as in C. posturii and also the antennae. Wings as in the same species. Hind tibial spur single. Scutellum densely shagreened, the scutum very finely scaly, the propodeum yet finer, laterad with silvery pubescence. Axillae separated distinctly a short distance.

From one female caught in forest, August 14, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. H.T.y 3419, Queensland Museum, Brisbane, the specimen on a tag; head, fore wings and a hind leg on a slide.

COCIDIOXENOIDEAS new genus.

Female:—Like Fulgoridictiota Perkins but the antennal club but 2-jointed, the frons moderately broad. Marginal vein a little longer than wide, the postmarginal barely developed, the stigmal somewhat longer than the marginal. Mandibles very small, with two minute, acute teeth. Fore wings of moderate width.

1. COCIDIOXENOIDEAS PERMINUTUS new species. Genotype.

Female:—Length, 0.50 mm.

Dark metallic purple, the wings hyaline, the knees, tarsi and tips of tibiae yellow, the venation dusky. Hairless line of fore wing with 3-4 lines of cilia proximad of it. Thorax polygonally scaly. Axillae meeting inwardly. Abdomen triangular, pointed, as long as the thorax. Scape of moderate length; first five funicle joints short, subequal, each much wider than long (nearly twice wider), 6 abruptly much larger, a little longer than wide, thrice the
length of one of the others or nearly and a little longer than the pedicel. Club conic-ovate, not enlarged, nearly as long as the funicle or scape.

From one female caught in forest in January.

**Habitat:** Gordonvale (Ca irns), Queensland.

**Type:** No. Hy 3151, Queensland Museum, Brisbane, the specimen on a tag; a fore wing and the hind tibiae on a slide.

**NEANAGYRUS** new genus.

**1. NEANAGYRUS CAPITATUS** new species. Genotype.

**Female:**—Length, 1.33 mm. Habit of *Anagyrus*. Body depressed.

Dusky green, the wings hyaline, the abdomen dark coppery, the legs reddish yellow except the metallic caudal coxa, the somewhat dusky metallic tibiae and two blackish spots on caudal tibiae dorsad, the first some little distance below knee and small, the second large and midway between middle and apex. Vertex densely punctate. Apex of pedicel and proximal third or more of scape lemon yellow, rest black, the funicle and club dull brown. Venation black. Thorax densely polygonally setose, with numerous obscure, small, setigerous punctures, the axillae finely, transversely setose, a little separated, no carina between them.

Face much inflexed, the scrobes arched above but the frons sloping, not prominent. Frons moderate. Cheeks a little over half the length of the eyes. Scape a little dilated foliaceous, the funicle joints all wider than long but not annular, the flagellum capitatus, the club very short, 2-jointed, strongly obliquely truncate, not much longer than wide, the flagellum somewhat as in *Taffa* Ashmead. Pedicel longer than any of the funicle joints, the latter gradually enlarging distad. Second tooth of mandible truncate. Marginal vein punctiform, the postmarginal and stigmal veins subequal, moderately long, normal. Hairless line of fore wing with many lines of cilia proximad to it. Caudal wings short and broad, the submarginal vein convexly curved, the costal cell not extending to the hooklets, the blade where widest with about twenty-five lines of fine uniform discal cilia. Fore wing broad, very finely ciliate. Hind tibia spurs double. Abdomen flat ventrad and dorsad, the ovipositor valves apparently absent. Club distinctly shorter than the funicle.

From one female caught May 30, 1914 on forest uplands (A. P. Dodd).

**Habitat:** Maclean (Clarence River), New South Wales.

**Type:** No. Hy 3151, Queensland Museum, Brisbane, the specimen on a tag; head, pair of wings and hind tibiae with slide type of *Paraphanodiscus versus* Girault.

**ARHOPOIDEUS** new genus.

**Female:**—Head (cephalic aspect) longer than wide, the scrobes long, the frons rather broad, not prominent, the cheeks fully as long as the eyes, the mandibles small, apparently acute, the antenna inserted near the mouth border, 10-jointed without a ring-joint, the club 3-jointed and distinctly wider than the funicle and nearly its length. Marginal vein a little over twice longer than wide, subequal to the stigmal, the postmarginal absent. Hind tibial spur single. Abdomen longer than the rest of the body, compressed, pointed slender, the ovipositor nakedly extruded for a third of its length. Tarsi 5-jointed. Axillae a little separated, the pronotum transverse-linear, barely visible from dorsal aspect. Propodeal spiracle minute, round, situated a little caudad of center. Scutellum rounded at apex, nearly as long as the scutum. Mandibles small, appearing acute but really with two small acute teeth at apex, one longer than the other.

**1. ARHOPOIDEUS BREVICORNIS** new species.

**Female:**—Length, 1.30 mm. excluding ovipositor. Slender.

Dark metallic green, the scutellum purple, the wings hyaline, the legs white except caudal coxa. Propodeum and abdomen very dark green. Body scaly, the scutum somewhat more
coarsely so, the propodeum subglabrous, short at meson. Venation dark. Proximal half of scape except bulla and apex of pedicel, lemon yellow. Fore wing densely ciliate discally, the hairless line very broad and but obscurely defined proximad by scattered minute cilia. Club conic-ovate, rather large; pedicel large, nearly a half longer than at apex, longer than any funicle joint; funicle 1 longest, not quite twice longer than wide, 2 and 5 subequal, subquadrate, shortest, 4 and 5 subequal, widest, a little longer than wide. Scape subequal to the club, a little compressed.

From one female caught in forest, June 4, 1914 (A. P. Dodd).  
Habitat: Copmanhurst (Upper Clarence River), New South Wales.  
Type: No. Hy 3132, Queensland Museum, Brisbane, the specimen on a tag; head, hind tibia and a fore wing on a slide with type Achrysocharis evidensus.

2. ARHPOIDEUS SECUUSDUS new species.

Female:—Slightly smaller than the genotype and differing in having the scape all black, shorter and stouter, the caudal femora and tibiae washed with dusky. Also, the frons is moderate and the scutellum black-green. Compared with type of genotype.

From one female caught on forest uplands, May 28, 1914 (A. P. Dodd).  
Habitat: Maclean (Clarence River), New South Wales.  
Type: No. Hy 3152, Queensland Museum, Brisbane, the specimen on a tag with type of brevicornis, head and a fore wing with slide type of Signiphora beethovenii.

PARECTROMOIDELELA new genus.

Female:—In my table of genera runs to Ectromoides from which it differs in having the postmarginal vein much shorter than the stigmatic and the hind tibial spars single.

1. PARECTROMOIDELELA THACKERAYI new species.

Female:—Length, 1.10 mm.  
Dark metallic purple, the prothorax except apex of neck and caudal margin dorsad, the head and the scutellum, orange yellow, the face slightly washed with purple. Legs concolorous except middle femur, a ring at base of caudal tibia a little out from knee and the tarsi which are silvery white. Cephalic tibie brownish. A small elliptical purplish spot on scutellum medad at about middle. Axilla orange cano-laterad, with a distinct carina between them. Fore wings hyaline but with a broad subquadrate smoky cross-stripe from about distal third of submarginal vein to apex of postmarginal (broken centrally by an elliptical hyaline area against the venation—submarginal and marginal veins—and distal immediately followed by a naked hyaline cross-band about a third of its width). Distal rest of fore wing lightly dusky and more finely ciliated. Hairless line of fore wing closed at both ends, proximad of it about eight lines of cilia. Venation black, the marginal vein about five times longer than wide, slightly longer than the stigmatic which is about twice the length of the postmarginal. Fuscous stripe of fore wing proximad coterminous with the discal ciliation. Scape long, slender, distad a little dilated ventrad (apex), distinctly longer than the club which is about half the length of the funicle and ovate, not much enlarged; pedicel slender, two and a half times longer than wide at apex, distinctly longer than funicle 1 which is a little the longest, somewhat longer than wide; funicle 6 a little wider than long. Scape serrate along the dorsal edge. Frons moderately narrow, convex, not prominent but the facial impression deep. Lateral ocelli not quite their own diameters from the eyes. Cheeks not half the length of the eyes. Mandibles slender, with equal, acute teeth. Scutellum with scattered black hairs (a pair of long ones near apex), the scutum with short greyish pubescence. Body scaly. Abdomen pointed. Thorax with numerous minute setigerous pin-pointes. Pronotum transverse-linear, inverse V-shaped (dorsal aspect). Propodeum laterad with rather dense silvery pubescence, the spiracle minute. Scutellum not quite reaching the abdomen.
From one female caught May 10, 1914 (A. P. Dodd).

Habitat: Murwillumbah (Tweed River), New South Wales.

Type: No. Hy 3154, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and hind tibia with slide type of Eucryptomyia viridiscutellum.

Dedicated to the author of "Vanity Fair."

STENOTEROPSIS new genus.

Female:—In my table runs to Fulgoridicinae Perkins but differs in that the stigmal and postmarginal veins are subequal, each somewhat longer than the marginal, the latter a little longer than wide. Also the head is a little longer than wide, the scrobes very long extending not quite to the cephalic ocellus. Hind tibial spur single. Club five-sixths the length of the funicle, long conic-ovate. Abdomen rounded triangular, depressed, not as long as the thorax. Scutum and scutellum not much unequal. Pronotum transverse-linear.

1. STENOTEROPSIS ABJECTUS new species. Genotype.

Female:—Length, 0.80 mm. Dark metallic blue, the abdomen green, the wings hyaline. Body finely scaly, the scutum clothed with black setae which are not very dense. Axillae slender, separated by a short carina. Antennae black. Scapus long, very slender, as long as the funicle whose joints are all subquadrate and nearly of equal width, shorter than the usual pedicel. Venation pale yellow, the fore wings broad, densely finely ciliate. Frons moderately narrow. Cheeks much shorter than the eyes. Antennae inserted at the mouth border.

From one female from the Queensland Museum collections labelled "April 20, 1913 (H. Hacker). Sweeping young Eucalyptus."

Habitat: Brisbane, Queensland.

Type: No. Hy 3154, Queensland Museum. Brisbane, one female on a tag; head, hind tibiae and fore wing on a slide.

EPITETRALOPHIDEA new genus.

Female:—Runs to Paratetralophidae Girault but differs in having the head rounded, the scape dilated for its entire length, the face much inflexed, the frons subprominent; also the postmarginal and stigmal veins are short and subequal, the marginal vein nearly twice the length of either and a little more than twice longer than wide; the club is not compressed and is over half the length of the funicle, the joints of the latter enlarging distally. The legs are slender, the hind tibial spur single. Axillae with a short carina between them. Otherwise agreeing with the generic description of the genus named except that the ovipositor is distinctly but very shortly extruded.

1. EPITETRALOPHIDEA BIGNICTIPES new species. Genotype.

Female:—Length, 0.85 mm., excluding ovipositor; the latter is extruded for a length less than a seventh that of the abdomen.

Metalllic purple, the abdomen very dark, the fore wings hyaline but very lightly dusky along distal third. Venation pale yellow. Legs concolorous; all tibiae and tarsi silvery white; cephalic tibiae black just below knee, middle tibia with a rather broad black band between middle and knee; cascal tibia with a broad black band nearer to knee than to apex; middle femur silvery white encircled by a tolerably broad black band between middle and knee; knees silvery white. Antenna: yellowish white except over proximal half of scape and proximal half of pedicel above; dilation of scape moderate. Pedicel subequal to funicle 6 which is largest, a little longer than wide; funicles 1-2 subequal, small, a little wider than long, 3-4 subequal,
AUSTRIAN HYMENOPTERA CHALCIDOIDA, VII.—GIRAUT.

A little longer than wide. Funicle 1 not half the size of 6. Club distinctly wider than the funicule, conico-ovate. Hairless line of fore wing with about six lines of faint but coarser cilia proximad of it. Scutum and scutellum densely polygonally scaly.

From one female caught in forest, sand-ridges near coast, May 9, 1914 (A. P. Dodd).

Habitat: Chinderas (Tweed River), New South Wales.

Type: No. Hy 3155, Queensland Museum, Brisbane, the specimen on a tag; fore wing, middle leg, hind tibiae and head with slide type of *Paratetraecinodica brevicerviris* Girault.

2. **EPITETRALOPHIDAE MINUTA** new species.

Female:—Length, 0.40 mm. Axillae distinctly separated a short distance. Ovipositor slightly extruded.

Metallus purple, the scutellum green. Legs white except caudal coxae, femora and tibiae (except tip of latter broadly and the knees), conelocular; a rather wide dusky band on middle legs on each side of knee. Antennae white, the club and proximal two thirds of pedicel dusky, also the venation, the marginal and stigma veins with a small dusky spot against them. Hairless line of fore wing with about four lines of discal cilia proximad of it. Scutum a little less dilated than in the genotype, the funicule joints all wider than long, the club three fourths the length of the funicule. Prosternum moderate. Funicle 3 shortest, twice or more wider than long, the joints enlarging distad. Thorax finely scaly. Fore wing extraordinarily finely ciliate in the disk. Otherwise like the genotype.

From one female caught in forest, December 4, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3156, Queensland Museum, Brisbane, the specimen on a tag with biécinotipes; head, fore wing and hind tibia with slide type of *Paralopulomastix thoracini*.

CHEILONEURELLA new genus.

1. **CHEILONEURELLA BINOTATIVENTRIS** new species. Genotype.

Female:—Length, 1.30 mm.

Bright golden yellow, the face paler; ventral margin of face except at each side (practically the elytrum), lateral margin of axilla and a large rounded marginal spot on abdomen at apex of proximal third, black. Fore wing lightly incised from about the middle of the submarginal vein to apex, the portion under the veination deeper and there is a subhyaline cross-band just distad of veination which is of moderate width and somewhat curved. Tarsi white; pedicel and club dusky. Marginal vein dark, a little over three longer than wide, the stigma somewhat over half its length, a little longer than the postmarginal. About six lines of coarser cilia proximad of hairless line. Mandibles with two outer acute teeth and a third, inner truncation from near base of the second tooth. Face inflexed. Prosternum moderate, not prominent. Cheeks rather long. Antennae with short funicule joints, 1 only a little longer than wide, subequal to 2 and 3, the next three a little shorter, all shorter than the pedicel; the funicule is a little narrower than with that in *Neastigmachus auraticorpus*. Body finely polygonally scaly. Axillae with a short carinae between them. Hind tibial spur single. Club not much enlarged. Head subtridentate.

From one female caught in forest, April 12, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. Hy 3157, Queensland Museum, Brisbane, the specimen on a tag, the fore wing on a slide.

A second female same place, June 6, 1914. The marginal spots on abdomen are really short crescents.
CHEILONEUROMYIA new genus.

1. CHEILONEUROMYIA SIMPLICISCUTELLUM new species. Genotype.

*Female:*—Length, 1.10 mm. A marginal dusky spot on each side of abdomen at base. Orange yellow, the head except the vertex lemon yellow, the face with a black line across at the insertion of antennae, this line curving dorsad obtusely at meson; funicle and distal club joint whitish; proximal two club joints black. Fore wings embrowned, crossed by a broad naked hyaline band at apex of the stigmal vein, this band a little longer than the deeper infusented stripe distal of it, the proximal margin of latter projected proximad at meson. Apex of fore wing clearer. Propodeum, two round marginal spots on each side of the abdomen out about middle and hind tibia just below knee, purplish black. Ovipositor valves slightly extruded, concolorous. Legs yellow. Mandibles with second tooth truncate. Axille just joined at meson, with a distinct carina between them. Lateral ocelli barely separated. Head as in *Habroleptopterygus*. Scape slender; pedicel a little longer than funicle 1 which is subequal to 2, both distinctly longer than wide; funicle 6 quadrato. Club ovato, wider than the funicle. Stigmal vein short, the postmarginal not quite as long as it, the marginal about twice its length. Oblique hairless line present. Scutellum simple. Thorax reticulated, with black setae which are not very long. Abdomen acute, its second marginal spot at the spiralure and more or less obscure.

From two females caught in jungle, April 3, 1914.

*Habitat:* Gordonvale (Cairns), Queensland.

*Type:* No. *Hy* 3158, Queensland Museum, Brisbane, one specimen on a tag, the head and a fore wing on a slide.

GENUS *ENASIOIDEA* Girault.

1. *ENASIOIDEA VARIA* new species.

*Female:*—Length, 1.50 mm. exclusive of ovipositor which is extruded for a fifth the length of the abdomen.

Differs from the genotype in having the mandibles with two short, subacute teeth. Silvery white, the wings hyaline, the following parts black: Upper third of occiput, caudal margin of cheeks ventral of the eyes, cephalic margin of axille, dorsum of abdomen, face of pronotum, propodeum, a small spot just above and below (the latter split into two) knees, a linear dot on middle tibia dorso-caudal a little distad of middle, caudal knees lightly and a very thin dot below them, scape except apex of balbus, apex and base of its body, pedicel except apical third, first four funicle joints, fifth slightly and base of first club joint. Vertex, scutum, scutellum and axille orange reddish. Rest of funicle and club yellow. Thorax and head finely scaly. Scutellum large, extending to base of abdomen, the axille very broadly joined at meson, with a carina between them. Scutum and scutellum with short, moderate silvery pubescence. Abdomen acutely conic, nearly as long as the thorax, scaly. Hind tibial spurs single. Face much inflexed, but the vertex not flat, the frons rather narrow; cheeks over half the length of the eyes. Pedicel nearly twice longer than wide at apex, the first four funicle joints subelliform, 5 and 6 wider, wider than long; club large, blunt at apex, three fourths the length of the funicle. Ring joint minute. Hairless line of fore wing with many lines of discal cilia proximad of it. Stigmal vein long. Venation very pale.

From one female caught in forest, June, 1914 (A. P. Dodd).

*Habitat:* Burnett Heads, South Queensland.

*Type:* No. *Hy* 3159, Queensland Museum, Brisbane, the specimen on a tag; head, fore wing and a hind tibia on a slide.
TABLE TO THE EARTH'S ECTROMINE GENERA OF ENCYRTIDÆ.\textsuperscript{*}

**Females.**

The minute ring joint is usually not considered as of any weight. It is probably present in most of the old genera. The frons is normal unless stated to the contrary.

**Winged.**

I. Venation of fore wing not reaching the costal margin, the postmarginal vein absent.

- Antennæ 12-jointed, with one ring-joint, the scape slender; mandibles with two unequal, acute teeth; frons broad; marginal vein punctiform, the stigmal twice longer. Abdomen very short, depressed, triangular
  - *Paratetracnemoidæ* Girault.

II. Venation of fore wing normal.

1. Funicle 2-jointed, the club solid, one ring-joint.
   - Antennæ inserted on middle of the face; funicle 1 elongate; marginal vein thrice longer than wide. Male
     - *Ectromomyiella* Girault.

2. Funicle 4-jointed, the club 3-jointed.
   - Two ring-joints. Sometimes wingless. Marginal vein linear. Scape slender
     - *Meromyzobia* Ashmead.
   - No ring-joints. Ovipositor inserted near tip of abdomen. Winged. Marginal vein about twice longer than wide. Scape a little compressed
     - *Omphalencystus* Girault.

3. Funicle 5-jointed, the club solid (male). Postmarginal vein absent.
   - Axillæ widely separated; frons broad; funicle with four branches (joints 1–4 of funicle)
     - *Tetracnemus* Westwood.

4. Funicle 5-jointed, the club 2-jointed. No ring-joint.
   - Ovipositor extruded; marginal vein quadrato; mandibles narrow, with two equal acute teeth; funicle joints all much wider than long. Club longer than the funicle. Frons broad. Articulation of club not very distinct
     - *Pseudectroma* Girault.

5. Funicle 5-jointed, the club 3-jointed. One ring-joint.
   - Abdomen normal. Scape slender. Form small, slender; marginal vein barely longer than wide, the stigmal longer. Frons narrow, broadening at caudal vertex. Club distinctly articulated
     - *Ectromella* Girault.
   - Abdomen distal compressed, longer than the rest of the body, the ovipositor nakedly extruded. Postmarginal vein absent, the stigmal as long as the marginal which is about twice longer than wide
     - *Arhopoideus* Girault.

6. Funicle 6-jointed.
   - Club solid.
     - Scape extending far beyond the vertex. No ring-joint.
       - Flagellum clavate, compressed, the funicle joints much wider than long; mandibles with two acute teeth; face with a transverse suture above antennae; marginal vein long but shorter than the postmarginal and stigmal veins
         - *Paranusia* Girault.

**Scape of normal length.**

- Marginal vein punctiform or only slightly longer than wide.
  - Scape slender. Funicle joints a little longer than wide. Postmarginal and stigmal veins short, longer than wide. Male with antennal branches
    - *Pentacnemus* Howard.

*Compare Tetracladia Howard and Tetralophellus Ashmead.*

\textsuperscript{*} *Axinoioidæ* Girault excluded.
Marginal vein distinctly much longer than wide.


Club 2-jointed. No ring-joint.

Form slender, depressed, the face directed dorsad; mandibular teeth acute; fore wings slender, the marginal vein punctiform, the stigmal longer; ovipositor inserted near tip of the long obtusely conical abdomen ....... SCHEIOGYRUS Girault.

Compare NEANAGYRUS Girault and COCCIDEXOEOIDES Girault.

Club 3-jointed.

Scape with a broad leaf-like expansion, broadly foliaceous distally for its entire length.

Flagellum greatly compressed, flat.


The same but fully winged, the marginal vein over twice longer than wide, the postmarginal vein not much shorter, longer than the stigmal; frons moderately broad. Robust ....... EPANUSIA Girault.

Flagellum not flattened, normal or nearly.

Flagellum very long, filiform, the funicle joints elongate.

Wings vestigial, the axillae well separated (weit von einander getrennt). Postmarginal vein very short, the stigmal long, the marginal short and thick.

No ring-joint ....... DINOCARIS Foerster.

Fully winged. Axillae usually connate; marginal and stigmal veins subequal, moderately long, the postmarginal distinct, somewhat shorter, frequently subequal to marginal. Antennae usually varicolored. Abdomen conic-ovate.

One ring-joint. Nonmetallic. Mandibular teeth acute ....... EPIDINOCARIS Girault.

Flagellum normal or short and thick.

Marginal vein punctiform or quadrate, the postmarginal variable; second tooth of mandible truncate.

Vertex normal, the flagellum cylindrical, normal.

Stigmal vein well developed, longer than the postmarginal ....... ANAGYRUS Howard.

Compare NEANAGYRUS Girault and male EPANAGYRUS Girault.

Vertex flat (the frons very prominent); funicle joints transverse-linear, the pedicel flattened. Stigmal vein moderately long. Club equal in length to the funicle.

PSEUDANUSIA Girault.

Marginal vein twice or more longer than wide.

Club greatly enlarged, twice or more the length of the funicle. Funicle joints subannular.

Hind tibial spurs double; second tooth of mandible truncate; marginal vein over twice the length of the stigmal. Frons rather narrow ....... BAGANUSIA Girault.
AUSTRALIAN HYMENOPTERA CHALCIDIOIDEA, VII.—GIRault.

Club normal, the funicle normal.
Mandible with two acute teeth.

Hind tibial spurs single. Mandibles with two acute teeth; marginal vein about twice longer than wide, subequal to the stigmal. Flagellum elavate, the funicle joints wider than long, not annular ... ... ... ... Holanushia Girault.

Hind tibial spurs double. Mandibles abnormal, acute but with a small tooth inwardly some distance proximad of tip. Marginal vein three longer than wide, longer than the stigmal. Funicle joints longer than wide, except distal ... ... Anusomyia Girault.

Mandibles with the second tooth broadly truncate.
See description ... ... ... Paratetralophidae Girault.

Scape normal or only compressed or else dilated only toward tip, not with a foliaceous expansion.
Pronotum large, a quarter to a half the length of the scutum. Postmarginal vein elongate.
Marginal vein punctiform. Mandibles with two acute teeth. Flagellum cylindrical. Robust. Hind tibial spurs double ... ... Anagyrophes Girault.
See Ecromia where the pronotum is described as gross.
Pronotum normal, transverse.
Marginal vein punctiform, or only slightly longer than wide, the stigmal normal, the postmarginal very short.
Axillae normal.
Vertex normal, the frons not prominent.
Frons rather narrow or moderately so. Fore wings with an oblique hairless line. Scape slender, the flagellum normal.
Mandibles with the second tooth broadly truncate; axillose a little separated. Stigmal vein plainly longer than the marginal ... ... Cocidoxenus Crawford.

Mandibles with the second tooth acute like the first; axillose connate. Stigmal vein subequal to or longer than the marginal, longer than the postmarginal ... ... Pulchorindidae Perkins. Compare Stenopteropsis Girault.

Frons broad.
Fore wings without an oblique hairless line.
Antenne capitale, the scape slender; stigmal vein semicircular; axillose meeting ... ... ... Taptia Ashmead.
Fore wings with an oblique hairless line.
Scape usually more or less distinctly dilated toward apex, the flagellum long, cylindrical; axillose a little separated; stigmal vein normal ... Tetrageminoideida Howard.

Vertex flat, the frons prominent.
Mandibles with two acute teeth; funicle joints transverse linear, the funicle not as long as the club, the latter large. Oblique hairless line present ... ... ... ... ... Epistheteres Girault.
Axilae widely separated.

Scutellum slender, the flagellum normal; second tooth of mandible truncate; marginal vein a little thickened, somewhat shorter than the stigmal; frons variable; face indexed. . . . . TETRACREMELLA Girault.

Marginal vein distinctly longer than wide, usually much more so.

Axilae distinctly separated.

Both teeth of mandibles acute.

Flagellum filiform; marginal vein linear, the postmarginal absent, the stigmal long and slender, subequal to the marginal. Face lenticular or convex. AMENISCOCEPHALUS Girault.

Flagellum rather strongly clavate; stigmal and postmarginal veins subequal, two thirds the length of the marginal. Face indexed. . . . . PARASTENOTERNYS Girault.

Second tooth of mandible broadly truncate.

Scutellum compressed, the club nearly as long as the funicule; stigmal vein short, the postmarginal still shorter. Face indexed. EPTETRACREMUS Girault.

Axilae connate or but slightly separated.

Abdomen compressed, distinctly longer than the rest of the body, the ovipositor prominently extruded.

Flagellum subclavate; stigmal and postmarginal veins very short, the marginal linear . . . . . TINZOPHOSTONUS Ashmead.

Abdomen usual.

Scutellum with a tuft of hairs near apex.

Frons sublenticular; second tooth of mandible broadly truncate; marginal vein long and slender, twice the length of the stigmal, the latter longer than the short postmarginal. Like Cheilonurus . . . CRISTATITHORAX Girault.

Scutellum naked at apex or practically so.

Antennae long and slender, funicule 1 elongate, the other joints gradually shortening, 6 short.

Axilae united, with a carina between them. Marginal vein longer than stigmal or postmarginal. Legs slender . . . . . LEPTOMASTIC Foerster, STENOSTERYS Thomson.

Axilae united. Marginal vein thrice longer than wide, the postmarginal elongate, over twice the length of the marginal, the stigmal shorter but much longer than the marginal. Hind legs compressed . . . . PARALEPTOMASTIC Girault.

Antennae not especially long, usual.

Frons broad.

Marginal vein not much longer than the stigmal.

Postmarginal vein absent.

Head lenticular; marginal vein rather thick, about twice longer than wide; front legs compressed; mandibular teeth acute; flagellum clavate; scutum with short thickened setae . . . MENISCOCEPHALUS Perkins.

Postmarginal vein present, long.

Face indexed; flagellum cylindrical; often wingless . . . . ERYCYNUS Walker.

Postmarginal vein short . . . . . ERYCYNELLA Girault.
Marginal vein distinctly longer than the stigmal.
Stigmal and postmarginal veins short, less than half the length of the marginal. Wings usually fuscous, with white rays .
CALOCERINUS Howard, TETRALOPHIDEA Ashmead.

Frons narrow or moderate.
Stigmal vein twice the length of the marginal.
Marginal vein about twice longer than wide; postmarginal vein very short; antennae clavate; the club much shorter than the funicle. Valves of ovipositor prominent .
TETRACNEMOPSIS Ashmead.

Stigmal vein only as long as or a little longer than the marginal.
Flagellum clavate. Wings variable .
HARRIOLEPIDAEA Howard, HARRIOLEPIDERA Ashmead.
Flagellum subepipatate or cylindrical.
Second tooth of mandible truncate; postmarginal vein very short
ECHTHROSTYUS Perkins.
Second tooth of mandible acute, shorter than the first; postmarginal vein as long as stigmal. Face infecked .
ECTROMOIDE Girault, PARECTROMOIDE Girault.
COMPAR VARIANTA CHERLONEURELLA Girault and CHERLONEURONIA Girault.

Apterous or subapterous.
Antennae 11-jointed, the club 3-jointed.
Axilae separated, the scutellum between them with two foveae.
Scapae extending beyond the ocelli, the flagellum cylindrical; pronotum large. Frons broad .
ECTROMA Westwood.
Axilae the same but scutellum without two foveae between them, the scutellum infecked.
Frons rather narrow. Flagellum cylindrical .
BACCHARIS Mayr.
HEMICYPYUS Ashmead.
Axilae the same; scapae greatly foliaceousy dilated. Scutellum acute at apex .
DINOCARIS Foeber.

See ECRODUS, MERAMYRABDIA, ANUSIA.

The genus CALOCERINAE Girault, male, is not included in the table.

In the Encyrtinae, there are three or four kinds of heads: (1) The infecked or normal is when the vertex is normally rounded, the antennal scrobes present, the ventral half of the face depressed, the outline of the head usually circular (cephalic aspect), the frons broad or narrow; (2) the kind in which the frons is prominent (from lateral aspect especially), the infeckion very great, the vertex flat and abruptly declivious so that from lateral aspect it forms the base of a more or less distinct triangle; (3) the lenticular or convex-lens-shaped head, characterized by the face not being infecked, the scrobes absent or very short, the whole surface a regular convexity (the occiput usually a regular concavity); and (4) the head which is plainly longer than wide as viewed from the cephalic aspect (normal position).*

* Like the head of an ant or a Spalangia. The frons is considered broad when the distance between the eyes is great or normal, the eyes wide apart and narrow when they are much converged so that the vertex is linear caudo-cephalad, or more or less so. A moderate frons is therefore the state more or less between these two extremes.
The following eucrytids have been described or recorded from Australia, besides those in foregoing:

*Cocophoctonus dactylopi* Ashmead.
*Aphycus alberti* Howard.
*Aphycus australicus* Howard.
*Heterarthrotus australiensis* Howard.
*Encyrts asarinae, cheles, laceticus, odaron, paeonius, salacton, xuthus, zaneis* and *zebra* of Walker.
*Chirolophus koebelei* Ashmead.
*Mymecomimus nigricans* Walker.
*Eupelumus dodone* Walker.
*Eupelumus howardi* Olliff.
*Timobius citri* Ashmead.

Walker records *Eupelumus urozonas* Dalman from Sydney and King George’s Sound.

Of the foregoing, Walker’s species seem hopeless from the descriptions which do not relate, apparently, to species of *Encyrts*. *Eupelumus dodone* Walker does not seem to be an *Eupelumus*. The other descriptions have not been available.

This most fascinating group must have many more species and genera in the Australian fauna. The species seem rather widely distributed. The group will repay careful study. The abdomen of the *Eupeluminae* shrivels; the *Aphelininae* are better preserved in xyol-balsam.