Synonymic and Descriptive Notes on the Hymenoptera Chalcidoidea with Descriptions of Several New Genera and Species.[1]

By

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Family **Torymidae.**

Subfamily *Monodontomerinae.*

Genus *Monodontomerus* Westwood.

1. *Monodontomerus montivagus* Ashmead.

This species is somewhat variable in the characters of the scutellum, the apical portion of that sclerite distad of the narrow transverse groove being sometimes nearly glabrous in the direct dorsal aspect (or mesially). Also the small brown spot at the stigmal vein varies in intensity and the slight brownish dash projecting distocaudad from the end of the stigmal knob may be absent as may also the faint suffused brownish area under the stigmal vein.

Family **Pteromalidae.**

Subfamily *Merisinae.*

Tribe *Raptrocerini.*

Genus *Uriella* Ashmead.

1. *Uriella rufipes* Ashmead.

The mandibles of this species are 3- and 4-dentate. In some specimens the ovipositor is exserted for some length but not its valves; there are certainly traces of a spiracular sulcus and lateral carina on the metathorax. In the Pteromalidae, the spiracular sulcus is rather obscure and its use as a character in taxonomy will doubtless cause confusion.

Subfamily *Entedoninae.*

Tribe *Omphalini.*

Genus *Closterocerus* Westwood[2]).

1. *Closterocerus cinctipennis* Ashmead.

[1]) Owing to the fact that time did not allow us to send the proofsheets to the Author in America, I myself have undertaken to read the proofs. For misprints which may have escaped notice I thus only am responsible, the Author is it in no way.

The Editor of the „Archiv f. Naturg."
Embrik Strand.

[2]) I had intended to make this species the type of a new genus, hence the arrangement here. The description is comparative and when *Closterocerus* is referred to the type species, *trifasciatus* is meant.

Normal position.

Normal for the subfamily and tribe and the genus *Closterocerus* Westwood in habitus and fore wings but the antennae are but 7-jointed, the funicle 2-jointed, the ring-joint absent; flagellum not so conspicuously compressed fusiform, the pedicel large. Fore wings with moderately long marginal fringes. Body sculptured.

Female: — Vertex (dorsal aspect) thin, the occiput deeply concaved, the lateral ocelli close to the eye margin, the eyes prominent, their surfaces rough; head and thorax with prominent sculpture, which on the mesothorax becomes close, distinct punctation; parapsidal furrows complete, widely separated, moderately short and regularly curved; mesocutellum prominent, peltate, regularly rounded caudad, its disk impressed, its edges raised but not acute, only prominent margins, bearing no longitudinal grooved lines, its cephalic margin straight; abdomen rounded ovate, its ovipositor not exserted, sessile, the petiole not distinct, extremely short, barely indicated, normal to the tribe, abdomen not any longer than the thorax; the mesopost-scutellum apparently very short and curved attached to the apex of the scutellum, its posterior margin ridged and convex, forming a small hemispherical ridged sclerite, impressed within and not easily visible at the apex of the scutellum.

Antennae moderately long, normal, not greatly compressed as in *Closterocerus* Westwood, cylindrical, most of the joints longer than wide or as long as wide, 7-jointed, scape, pedicel, 2 funicle joints and a 3-jointed club, the terminal club joint ending in a long acuminate spine-like seta and itself acuminate, the frist funicle joint short, wider than long, shorter than the pedicel.

Fore wings moderate in width, regularly rounded distad, the marginal fringes moderate in length, not more than a fourth as long as the greatest wing width, the discal ciliation not uniform, moderately dense, but grouped and conspicuous in two transverse rows, one at the apex and one at the stigmal vein, the latter most conspicuous and longest, these two rows corresponding with the two transverse fumated bands crossing the wings; between these more conspicuously ciliated areas, the ciliation is distinctly less conspicuous, the cilia minute, nearly invisible, casually appearing as a naked area crossing the wing; marginal vein very long and straight, one and a half times longer than the short submarginal vein, the postmarginal vein merely appearing as the prolonged apex of the obliquely truncate end of the marginal vein, the stigmal vein projecting from the opposite angle of the truncation, gourd-shaped, the knob on a short petiole being ovate and bearing the uncus closer to the petiole than to the apex of the knob. Posterior wings bearing the discal ciliation mostly under (caudad) the marginal vein and from thence half-way distad to the apex, not denser than three or four longitudinal rows, the latter not in regular lines; ciliation absent distad, excepting for the usual line at each margin; the marginal cilia short on the cephalic margin but as long on the caudal margin as the moderately long marginal cilia of the

fore wing, about as long as the greatest width of the posterior wing (at the apex of the marginal vein). Marginal and submarginal veins of the posterior wings subequal, straight.

Tarsi 4-jointed, the first 3-joints subequal, the distal joint distinctly the longest; tibial spurs single, straight, weak.

M a l e: — The same as the female, excepting that the abdomen is somewhat longer, having parallel sides and the first funicle joint of the antennae shorter, nearly discshaped, still wider than larg.

The type species of this genus (*Closterocerus cinctipennis* Ashmead, 1888, p. 104) was originally described as follows:

„♂. Length 0.04 inch. Head, pleura, sternum, metathorax and abdomen blue; collar, mesothorax and scutellum golden green, strongly punctate. Head emarginate in front and consequently very thin antero-posteriorly. Antennae brown-black, hairy. Legs brown, trochanters, tips of tibiae and tarsi pale or whitish. Wings hyaline, fringed with long hairs, forewings with a brown band extending across the stigmal region and another at the apical margin.

Hab. — U. S."

This species differs from *trifasciatus* structurally in the fore wings and antennae; the former have somewhat longer marginal fringes while the latter are hardly compressed fusiform but cylindrical, the pedicel large, the first funicle joint wider than long, the pedicel wider than the club, the latter with its joints subquadrate, not much wider than long and compressed as in the type species; in the latter also the first funicle joint is large and distinctly larger than wide. I have failed to find a ring-joint in *cinctipennis* and in *trifasciatus* it is exceedingly short and usually hidden. Otherwise the antennae of the two species agree in regard to the number of joints — the funicle 2-jointed, the club 3-jointed, the third joint terminating in a spinelike seta.

I add the following descriptive details: The blueness of the parts mentioned in the description is a brilliant metallic blue and the brilliant metallic greenness of the mesoscutum, scutellum and occiput changes to this blue at certain angles of vision. The original description is correct. The punctation of the scutellum is quite as described; the abdomen and occiput are delicately sheened but the metathorax is smooth. Venation dusky yellowish or brownish. The proximal dusky band of the fore wing is more pronounced at the stigmal vein and both bands in some specimens more distinct.

Antennae differ slightly for the sexes; in the female the first funicle joint is more nearly quadrate and the following joints subequal, subquadrate, the terminal joint ending in a long, more prominent spine, the joints more pubescent, the scape moderately long, cylindrical, subequal to the club in length, the pedicel enlarged, oval, by far the thickest joint, very much longer than the first funicle joint and twice the size of the second; the first funicle joint abruptly small, short, and wider than long, about one half the length of the second funicle joint which is subquadrate but longer than wide from some aspects, from others nearly globular, subequal to but yet somewhat

larger and wider than the proximal club joint, which is also subquadrate or subglobular; intermediate club joint equal to the basal club joint, the third club joint conical, subequal in length to the preceding and terminating in a stout seta or several setae combined. Antennae clothed with scattered long hairs.

From sixteen specimens, 2/3-inch objective, 1-inch optic, Bausch and Lomb.

Redescribed from seven males and nine females received for determination from Mr. R. L. Webster, Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa, mounted in balsam and on tags and labelled as follows:

Balsam mounts: 1. „From egg of *Eriocampoides limacina*. Exp. 84. July, 1909. R. L. Webster", 2 males, 1 females, 14 and 22 July and 20 July respectively. 2. Same label. Exp. 89. 15 July, 1909. 1 male. 3. Same label. Exp. 60. 5 July, 1909, 1 male. 4. Same label. Exp. 85. 10 July, 1909. 1 male. 5. Same label. Exp. 62. 28 June, 1909. 1 male. 6. Same label. Exp. 78. 5 July, 1909. 1 female. 7. Same label. Exp. 68, 10 July, 1909. 1 female. 8. „From cherry leaves infested with *Eriocampoides limacina*. Ames, Iowa, 7 August, 1909. R. L. Webster". 1 female.

Tag-mounts: 1. „From egg of *Eriocampsoides limacina*." Exp. 81, 3 July, 1909. 1 female. 2. Same label. Exp. 186. 1909. 1 female. 3. Same label. Exp. 187, 20 August, 1909. 1 female. 4. Same label. Exp. 188. 1909. 1 male. 5. Same label. Exp. 189. 1909. 2 females.

In sending these specimens which were reared in company with *Pentarthron minutum* (Riley), Mr. Webster wrote: „The species was solitary, only a single parasite to an egg." *P. minutum* was the more common of the two.

In my personal collection I have found two females of this species labelled „No. 84. From eggs of *Selandria cerasi* Peck. A. A. Girault, Coll." Reference to the number 84 in my notebook showed that originally three females were reared June 10, 1905 from pear leaves collected at Washington, D. C., and containing eggs of the *Eriocampoides*. At first the specimens were recorded there as having come from the eggs of that host, but subsequently the record was changed to read that the host was perhaps some minute lepidopterous leaf-miner living in the leaves and unnoticed. It seems that a mistake was made here and that the host was the *Eriocampoides* in its egg-stage.

Habitat. United States — Missouri (St. Louis); Iowa (Ames); District of Columbia.

2. *Closterocerus trifasciatus* Westwood.

I have a single female specimen of this species recorded as having been reared as a secondary parasite of *Tischeria malifoliella* Clemens, the host on apple leaves collected in the District of Columbia. The parasite emerged August 7, 1905. This European species, thus, is probably common in the United States. The specimen bears the characteristic three stripes of black across the fore wings; its body is

uniformly deep blue, the legs concolorous and the antennae typical for the genus. More recently (April 30, 1911) I captured a specimen by sweeping in a wood at Oakwood, Illinois; in life, this specimen showed more lustre, especially of aeneous green and coppery tints in bright lights, on the head and thorax; the abdomen is distinctly polygonally reticulated, the dorsum of the thorax densely, rather finely punctured, the scutellum large, rounded. This specimen was a male. The tarsi are white, the posterior wings hyaline, the fore wings with short marginal fringes. The antennae in both sexes are similar, the club joints strongly compressed and much wider than long, excepting the distal one which is rounded conical, ending in a prominent seta.

Subfamily *Aphelininae.*

Tribe *Aphelinini.*

Genus *Aspidiotiphagus* Howard.

1. *Aspidiotiphagus citrinus* (Craw).

I have numerous specimens of this undoubtedly widespread coccid parasite mounted on a slide with *Polynema albicoxa* (which see) and labelled „1127 = 1221. *Diaspis amygdali.* Allamanda Gard. hybrid. Suva, Fiji. 21, 10, '99. A. Koebele." Both the host and the locality appear to be unrecorded.

Genus *Coccophagus* Westwood.

1. *Coccophagus lecanii* (Fitch).

Professor T. D. A. Cockerell has sent me specimens of this species reared from *Pulvinaria bigeloviae* Cockerell at Boulder, Colorado (U. S. A.). The host is new to the species. The species occurs in Hawaii, as has been recorded in the literature. The Colorado rearing record may be somewhat doubtful becauce of the presence of some aphids but it is hardly probable that *lecanii* came from them.

Subfamily *Elachertinae.*

Tribe *Elachertini.*

Genus *Zagrammosoma* Ashmead.

1. *Zagrammosoma multilineata* (Ashmead), variety *punicea* nova.

Like the typical form in markings but the whole body is pink instead of yellow with gradating forms between: thus the abdomen may be ochraceous with the rest of the body pink.

Described from four female specimens reared as a primary parasite from the larva of *Tischeria malifoliella* Clemens, August 7, 1905, the host on apple, District of Columbia (U. S. A.). The species and variety have three dusky lines across the fore wings which vary somewhat but the apical one is usually complete; otherwise the wings are hyaline.

Types: Accessi on No. 44,261, Illinois State Laboratory of Natural History, Urbana, Illinois, three females on tags (Washington, D. C.).

Family **Trichogrammatidae.**
Subfamily *Oligositinae.*
Tumidifemur genus novum.

Normal position.

Female: — Head normal, the vertex wide, bearing the three ocelli in a curved line across the vertex, the lateral ocelli not touching the eye margin, the antennae inserted slightly below (ventrad) the middle of the face but slightly dorsad of an imaginary line drawn between the ventral ends of the eyes, 6-jointed — scape, pedicel, 1 ring-joint and a 3-jointed club, the latter with scattered stiff pubescence which is not very long; scape not reaching to the cephalic ocellus, straight, cylindrical, distinctly longer than the pedicel; the latter rather stout, obconic, not much longer than wide; ring-joint usually hidden, shallow; club rather stout ovate, short, composed of three rather indistinct, unequal joints, subequal in length to the scape. Mandibles tridentate, all of the teeth acute. Parapsidal furrows complete; abdomen short, obtusely conical, not longer than the thorax, the ovipositor and its valves concealed beneath the venter, not exserted or projecting slightly at tip. Legs normal but the caudal femora enlarged and longitudinally striated, twice the width of the others, elliptical oval and shorter than their tibiae, about twice longer than broad; tarsi 3-jointed, the joints all short, lengthening slightly distad; tibial spurs single, absent on the cephalic tibia, consequently the strigils absent, elsewhere short and straight, acute. Trochanters 2-jointed.

Fore wings moderately broad, pyriform in general outline, enlarging regularly distad, the apex rather oblately rounded, broadest at the distal eighth, densely normally ciliate discally, the marginal cilia all very short, barely longer than the discal cilia which are short and fine; marginal cilia around wing apex nearly uniform, exceedingly short along each margin, there closer and barely visible; a conspicuous oblique hairless line dividing the discal ciliation and running proximo-caudad from the stigmal vein as in *Aphelinus* Dalman, but no oblique line of discal cilia. Proximad of this line the discal ciliation is absent excepting a small triangular area of about four or five lines against the marginal vein and two isolated cilia against the submarginal vein proximad of its break; two thirds the way down a short spur is given off from the hairless line, entering the discal ciliation. Fore wing uniformly slightly fumated proximad out as far as the end of the stigmal vein and the discal ciliation included by the fumated area is about twice coarser than the main part of the ciliation distad. Venation straight; submarginal vein very narrow, breaking distad and then as wide as the marginal, slightly longer than the marginal; the latter long, somewhat over a fourth the wing length, not broad; postmarginal vein absent; stigmal vein distinct, normal, with a distinct, short neck and a slender uncus, its knob rounded-oval. Venation bearing six or seven large setae. Posterior wings broad, their blade knife-shaped, the cephalic margin straight, the caudal margin curved

convexly, both meeting in a point; the venation long and slender, ending in a small knob; the discal ciliation consisting of three principal lines, two along the cephalic margin, one along the caudal margin, the latter line shorter, the former two separated and attaining the venation; in the apex of the blade is a fourth short line of about six cilia, more or less, between the other lines and somewhat confused with the inner ones. Cephalic marginal cilia short, similar to those along the apical margin of the fore wing but nearly twice longer, lenthening gradually distad, noticeably at the apex, along the caudal margin becoming moderately long, there equal in length to the greatest width of the posterior wings or slightly longer, about equal to a fourth of the greatest width of the fore wings.

Male: — Unknown.

Type: *Tumidifemur pulchrum* species nova, described beyond.

This genus is an unique one because of its antennal structure, because of the venation, the oblique hairless line of the fore wing and the form of its posterior wings. Like *Aphelinoidea* Girault, it again shows marked similarity to certain Aphelinines and Encyrtines.

1. *Tumidifemur pulchrum* species nova.

Normal position.

Female: — Length, 0,50 mm. Moderate in size for the family.

General color deep black, most of the thorax, the lower part of face, venation, antennae, knees, tips of tibiae and the tarsi dusky yellow, the legs dusky; posterior wings hyaline. Eyes and ocelli ruby red. Mandibles fuscous. Tegulae black. Fumation of fore wing slightly variable in density, its distal margin convex.

Knob of stigmal vein with a rather long, slender uncus which points distad; distal club joint longest of the three. Marginal fringes of fore wing around apex slightly variable, sometimes as long as the cephalic marginal fringes of the posterior wing.

From six specimens, 2/3-inch objective, 1-inch optic, Bausch and Lomb.

Male: — Unknown.

Described from six female specimens received for identification from Mr. F. W. Urich through Dr. L. O. Howard, all mounted in balsam with specimens of *Trichogrammatella tristis* Girault (see beyond); three slides, each labelled „From eggs of *Horiola arquata*. *Tunapuna*. F. W. Urich. Feb. 1911" and bearing respectively three females, two females and one female.

Habitat: Trinidad (Tunapunta).

Types: Type No. 13,826, United States National Museum, Washington, D. C., two females in balsam (1 slide; mounted with four homotype females of *Trichogrammatella tristis* Girault). Cotypes — Accession No. 44,256, Illinois State Laboratory of Natural History, Urbana, Illinois, three females in balsam (1 slide, mounted with cotypes, three males, four females of *Trichogrammatella tristis* Girault).

Genus *Westwoodella* Ashmead.

1. *Westwoodella sanguinea* Girault.

There is very little doubt but that *Westwoodella clarimaculosa* Girault (1911) is a color variety of this species and should therefore be designated as *Westwoodella sanguinea clarimaculosa* Girault. It agrees in all structural details with *sanguinea* but resembles somewhat the male described for that species. With *sanguinea*, thus, there are two colorational forms for the female while the males so far seen resemble *clarimaculosa*. Very recently (April 30, 1911) I captured a male by sweeping clover in grass at Oakwood, Illinois. From this specimen, the vertex was seen to be minutely, densely punctulate, the metanotum ending in an acute point. It was pale green in color, the substigmal spot very conspicuous, as usual.

Subfamily *Trichogrammatinae.*

Trichogrammatella genus novum.

A genus resembling *Trichogramma* Westwood in the form of the fore wing and its venation, but differing in antennal structure (the funicle absent, the many-jointed club), in the structure and shape of the posterior wings, in the shape of the abdomen and in the long slender tibial spur of the intermediate legs. Also, the fore wings resemble those of *Trichogrammatoidea* but the oblique line of discal cilia is present. The genus may be recognized at once by means of its 5-jointed antennal club, its curved venation and the short and broad posterior wings.

Male, female: — Head normal, the eyes large, the ocelli normal, in a triangular curve in the center of the vertex, the antennae inserted slightly below the middle of the face, 8-jointed — scape, pedicel, 1 minute ring-joint and a 5-jointed club; scape moderate in length, cylindrical, about twice the length of the pedicel; the latter obconic, narrow proximad, longer than any of the club joints, rather long; ring-joint shallow and narrow; club long, nearly as long as the scape and pedicel combined, long-acuminate, its five joints unequal but none very long, the second and fourth joints longest, the first joint shortest, transverse, not always distinctly separated from the second, the first incision straight, the others oblique or obliquely curved. Pubescence of antennae sparse, in the male slightly less so. Mandibles tridentate. Parapsidal furrows complete, distinct, oblique, straight. Abdomen slightly longer than the thorax, with parallel sides and subtruncate or blunt apex somewhat as in the males of *Lathromeris* Foerster but not so long, shorter and conical in the male with the genitalia exserted; ovipositor and its valves as in *Tumidifemur*. Legs normal but the posterior femora swollen somewhat as in *Tumidifemur* but not as much; trochanters 2-jointed; tarsi 3-jointed, the joints rather long in the intermediate legs, the proximal joint there twice the length of the same joints in the other legs where all the joints are short but longer than wide; tibial spurs single, short, straight, acute, those of the cephalic tibiae closely

applied to the first tarsal joint, not forked and not forming a strigil; but the intermediate tibial spurs are comparatively very long and slender, thrice or more the length of the others. Posterior tibiae obclavate.

Fore wings as in *Trichogramma* Westwood; discal ciliation arranged in regular rows (about from ten to fourteen), the rows arranged in more or less distinct pairs with the exception of a straight line leading directly distad from the apex of the stigmal vein, consequently from the cephalic margin, three pairs, then a single line, then four pairs; ciliation moderately sparse, two central lines projecting irregularly beneath the venation as far as the tip of the submarginal vein and from thence proximad, absent; absent near the venation; an oblique line of five or six cilia leads proximo-caudad from the end of the stigmal vein; it nearly joins the end of the three or four smaller cilia. Discal ciliation distinct but not long or coarse. Several isolated cilia proximad bordering either side of the venation[1]). Marginal cilia short, slightly longer than normal for *Trichogramma*, but not more than an eighth of the greatest wing width, longest around the apex; in the male, the cilia are somewhat longer. Venation of fore wing forming a bow but the marginal vein is only slightly curved, slightly shorter than the rather long, slender, curved stigmal vein, only a third of the length of the submarginal; stigmal vein with a long neck, ending in an ovate knob which bears a nipple-like uncus pointing disto-cephalad. Posterior wings short, reaching only about to the end of the stigmal vein of the fore wing, the blade knife-shaped from the apex of the venation only about twice wider than long, its apex obtusely pointed; three complete lines of discal ciliation, the posterior line faint, the longest marginal cilia about equal to the wings greatest width, or slightly shorter; venation long and slender, slightly enlarged at the end. There may be a single discal cilium caudad of the second line of cilia of the caudal wing near its proximal end; it is usually missing.

T y p e: *Trichogrammatella tristis* species nova, described herewith.

1. *Trichogrammatella tristis* species nova.

Normal position.

F e m a l e: Length 0,40 to 0,55 mm. Moderate in size for the family.

General color sooty black, the scutellum pale cadmium yellow; scape and pedicel yellowish; club dusky yellowish; knees, trochanters, tips of tibiae and all tarsal joints pallid; venation dusky; fore wings slightly fumated proximad under the submarginal vein; posterior wings hyaline. Mandibles fuscous. Eyes dark.

Pedicel of antenna dorsad with a ridged sculpture, in outline along the edge appearing like serration; the caudal femora with longitudinal striation.

From 12 specimens, 2/3-inch objective, 1-inch optic, Bausch and Lomb.

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[1]) For instance two in the rather broad costal cell.

Male: — Length, 0,50 mm. The same; club of antenna slightly more hairy.

From 4 specimens, the same objective and eye piece.

Described from male and twelve female specimens received from Dr. L. O. Howard for identification, mounted on three slides with *Tumidifemur pulchrum* Girault — one male, four females; four females; and three males, four females, respectively — labelled „From eggs of *Horiola arquata*. Tunapunta. F. W. Urich, Feb. 1911."

Habitat: Island of Trinidad (Tunapunta).

Types: Type No. 13,827, United States National Museum, Washington, D. C. one male, four females in balsam (1 slide; mounted with 1 homotype female of *Tumidifemus pulchrum* Girault). Cotypes — Accession No. 44,254, Illinois State Laboratory of Natural History, Urbana, Illinois, three males, four females in balsam (1 slide; mounted with the cotypes — three females — of *Tumidifemur pulchrum* Girault).

Uscanella genus novum.

This genus is closely allied with *Uscana* in antennal structures but differs in that the club is only 2-joited and there are two ring-joints; furthermore the fore wings bear long marginal cilia and their discal ciliation is arranged differently; the venation is also different.

Normal position.

Female: — With the general build and appearance and with all of the structural characteristics of *Uscana* Girault. Differing as follows: Antenna 6-jointed — scape, pedicel, two minute ring-joints and a short, stout 2-jointed club which is conic-ovate. Fore wings shaped as in *Trichogrammatoidea* Girault but the marginal fringes are longer, moderately long, somewhat over a third as long as the greatest wing width, proximad on both margins abruptly becoming very short. Discal ciliation very short like dots, sparse, rather faint, arranged in very regular lines (about twelve in all), some of which are curved, absent in all of the middle of the wing from the distal fifth to base with the exception of several isolated cilia (not always visible) and a short longitudinal group of about eight exceedingly minute cilia situated close together at the first break of the submarginal vein; no oblique line of cilia running back from the stigmal vein. Venation straight, the submarginal vein about one and three quarters times longer than the marginal, broken twice, beyond its middle where it thickens to the width of the marginal vein and at its tip where it is discontinuous, actually separated from the marginal vein by a space of the wing membrane; its thicker portion is slightly shorter than the marginal vein and is nearly straight; marginal vein straight, moderately long, its cephalic edge with two emarginations, its distal end projected slightly beyond the origin of the stigmal vein indicating a postmarginal vein; stigmal vein distinct, oblique, about two thirds the length of the marginal, rather long, gourd-shaped, its neck merely a prolongation of the knob which is dart-shaped; the stigmal vein points more distad

than caudad. Its uncus disto-cephalad. Posterior wings lanceolate, small, with three complete lines of discal cilia, the cephalic one of which is less conspicuous and shortest, the blade at apex of the venation acute and proximad with a rather slender petiole. Marginal cilia (caudad) of posterior wing slightly shorter than those of the fore wing (distad) but nearly twice longer than the wing is wide (across apex of the venation); posterior wing usual in length. Legs normal, the tarsi 3-jointed, the joints short, the tibial spurs single, short (cephalic tibiae and tarsi not seen). Ovipositor barely projecting beyond tip of abdomen, not conspicouus. Claws curved.

Male: — Unknown.

A genus characterized by the short antennae bearing a conic-ovate 2-jointed club and two ring-joints, by the venation and ciliation of the fore wings and the short blunt abdomen. Among others, it is nearly similar in antennal structure to *Tumidiclava* Girault, but the club is only 2-jointed, the stigmal vein long and the marginal fringes long.

Type: *Uscanella bicolor* species nova, described herewith.

1. *Uscanella bicolor* species nova.

Female: — Length 0,45 mm. Moderately small for the subfamily.

General color brownish yellow, the abdomen black; legs, antennae and venation concolorous; eyes and ocelli red; fore wings slightly fumated, more noticeable under the venation; a very small fuscous blotch along the caudal (proximal) edge of the stigmal vein; metathorax paler. Tegulae dusky.

Antennae with the two club joints unequal, obliquely divided, the distal one nearly twice longer, cone-shaped, the proximal one subhemispherical; pedicel oval, not quite as long as the distal club joint and not as wide; scape not lang.

From five specimens, 2/3-inch objective, 1-inch optic, Bausch and Lomb.

Described from five female specimens mounted in balsam received from Mr. F. W. Urich through the courtesy of Dr. L. O. Howard and labelled „From eggs of *Horiola arquata*. Tunapunta, F. W. Urich, Feb. 1911."

Habitat: Trinidad (Tunapunta).

Types: Type No. 13,828, United States National Museum, Washington, D. C., four females in balsam (1 slide). Cotype: — Accession No. 44,255, Illinois State Laboratory of Natural History, Urbana, Illinois, one female in balsam. Type locality. — Trinidad.

Uscanoidea genus novum.

A genus allied with and resembling both *Uscana* Girault and *Uscanella* Girault but differing from the former in having a pointed conic-ovate abdomen which is longer than the thorax, in bearing a shorter, soi ewhat swollen and compact 2-jointed antennal club and in lacking a ring-joint in the antennae; from the latter genus it is

practically similar in the form of the antennae, but differs in the absence of the ring-joint, in the short marginal cilia of the fore wing, the more distinct and denser discal ciliation, the shorter marginal and stigmal veins and the longer, more pointed abdomen. Normal position.

Female: — Head normal, the ocelli normal, rather large, the lateral ocelli rather close to the eye margin, the eyes large, the antennae 4-jointed — scape, pedicel and a short, rather stout, conic, 2-jointed club, the scape slender, cylindrical, only moderate in length, the pedicel rounded oval, the club somewhat longer than the scape, broadest, its proximal joint much wider than long, a flat hemisphere, the distal joint a cone, four or more times longer than the proximal joint, wrinkled longitudinally and not terminating in a spine-like seta. Parapsidal furrows complete, the mesoscutum longer than wide, its caudal margin emarginate at the meson; mesophragma absent. Abdomen about as long as the head and thorax combined, conic-ovate, pointed caudad, the valves of the ovipositor projecting slightly beyond its tip. Legs as in the type species of *Uscana*, the strigils absent.

Fore wings as in the type of *Uscana* but the discal ciliation is more distinct and arranged in more regular line, the oblique line of cilia leading back from the stigmal vein present, curved. The venation differs from that of *Uscana* in the somewhat shorter stigmal vein which is merely an ovate knob separated from the marginal vein by a constriction (the very short, narrow neck) and appearing nearly as if suspended from the edge of the marginal vein; the latter short, about twice the length of the stigmal vein but not more than three and a half times longer than broad; the uncus as in the other genus. Posterior wings as in *Uscana* as regards discal ciliation[1]) but broader, shaped nearly as in *Uscanagrammatella* but the marginal cilia are shorter than with the type species of that genus, the longest (caudad) not quite as long as the blade's greatest width, yet about twice the length of the longest marginal cilia of the fore wing.

Mandibles tridentate, the teeth small, the two outer ones more acute than the inner.

Male: — The same; this sex differs from the other only in the usual abdominal characters with the exception of coloration; the abdomen is smaller, shorter and more blunt caudad, nearly rectangular, the genitalia prominent but exserted.

Type: *Uscanoidea nigriventris* species nova, described herewith.

1. *Uscanoidea nigriventris* species nova.

Normal position.

Female: — Length, 0,60 mm, mean. Moderate in size for the subfamily; visible to the naked eye.

General color dull honey yellow (pale clay yellow) suffused with dusky, the abdomen deep velvety black marked with transverse stripes

[1]) But there is apparently a fourth, less conspicuous line at the caudal edge of the blade, in reality the bases of the marginal cilia.

of the same yellow; parapsides, pleura, sometimes the mesoscutum excepting a central triangular portion at base, the legs excepting the trochanters, knees, tips of tibiae and sometimes much of the whole joint and the tarsi all of which are pallid, the submarginal vein and portions of the head dusky greyish; marginal and stigmal veins black, the latter often suffused with pallid, its short neck pallid; fore wings hyaline with the exception of a light smoke-colored round area under the marginal and stigmal veins, bounded by them and the oblique line of discal cilia (distad); in many cases suffused across the wing to the caudal margin; distal end of submarginal vein pallid. Posterior wings hyaline. Antennae honey yellow. Mandibles fuscous. Eyes and ocelli carmine, the former darker, bearing short stiff hairs; the scutellum bears about four short, stiff setae which are black; they are arranged nearly in a square; sculpture inconspicuous, the surface of the mesonotum opaque, in certain lights shiny; pubescence sparse.

Fore wings bearing about eighteen longitudinal lines of discal cilia, all the lines regular and distinct but alternately a line is somewhat fainter, its cilia shorter; the discal ciliation projects proximad beneath the venation in the caudal half of the wing blade and is absent directly beneath the venation; the oblique line of cilia running back from the apex of the stigmal vein is complete and contains about from six to eight cilia; the marginal vein bears about eight moderate sized black setae from its surface. Antennae moderately clothed with slender, moderately long hairs.

From 60 specimens, 2/3-inch, objective 1-inch optic, Bausch and Lomb.

M a l e: — Length, 0,47 mm, mean. Smaller, more compact. The same as the female but the abdomen is wholly black, excepting the extreme base.

From 32 specimens, the same optic and objective.

Described from many specimens of both sexes received for identification from Dr. L. O. Howard. They were reared by Mr. E. A. Schwarz from a froth-like egg-mass on the upper surface of a leaf of wild *Solanum*, collected January 20, 1911 at Paraiso, Ishmaian Canal Zone, Panama. The specimens were enclosed loosely in a vial bearing the data „No. 11. Paraiso. Jan. 20. ? Leaf-hoppers on Solanum"; the host egg-masses looked not unlike certain unarmored coccids with ribbed bodies; they were found to contain (April 24, 1911) yellowish eggs containing apparently healthy embryos and as has been implied are apparently jassids.

H a b i t a t: Isthmus of Panama (Paraiso).

T y p e s: Type No. 13,836, United States National Museum, Washington, D. C., 7 males, 12 females in xylol-balsam (1 slide). C o - t y p e s — Accession No. 44,266, Illinois State Laboratory of Natural History, Urbana, Illinois, 7 males, 15 females, in xylol-balsam (1 slide).

Genus *Pentarthron* Riley.

1. *Penthartron euproctidis* Girault.

Dr. L. O. Howard has sent me two trichogrammatids mounted on a single slide which can not be separated from this species. The slide bore the label „From eggs of *Odonestes superanus*. Tokio, Japan, C. Sasaki. (32)." I have previously recorded this species from Japan but the host is new.

Genus *Abbella* Girault.

1. *Abbella acuminata* (Ashmead).

A single female of this species has been found in the collections of the Illinois State Laboratory of Natural History, Urbana, bearing the accession No. 5871 and reared from corn, Mt. Pulaski, Illinois, June 6, 1885. It occurred incidentally.

Family **Mymaridae.**

Subfamily *Gonatocerinae.*

Tribe *Gonatocerini.*

Genus *Leimacis* Foerster.

1. *Leimacis aspidioticola* (Ashmead).

Unless the types of this species can be found, it will be extremely difficult to identify it again with any amount of certainty, owing to the obvious discrepancies occurring in its original description.

Genus *Alaptus.*

1. *Alaptus globosicornis* Girault.

I have an undoubted specimen of this species, described in 1908 from Florida (United States of America), which was collected in an office at Honolulu, Hawaii, August 3, 1900 by Albert Koebele. As the species is recorded as a parasite of coccids, it is not unlikely that it was imported into Hawaii in shipments of fruit trees. The original habitat of this species, hence, is problematical but perhaps it is a tropical form. The longest marginal cilia of the fore wing are plainly three and a half times longer than those wings' greatest width. The proximal funicle joint is not as small as shown in the figure accompanying the original description.

Genus *Litus* Haliday.

1. *Litus enocki* Howard.

Proc. U. S. Nat. Mus., XVIII, 1896, pp. 643—644.

This species was described in 1896 from Ceylon and it has not been taken since. Its author has very kindly loaned me the types for study and I add here the following supplementary descriptive notes from them:

Generic position and original description correct. With the habitus of an Alaptus, especially in antennal and wing structures. As described but the scape and pedicel are normal and as in *Alaptus* the pedicel

stout, yet not abnormally swollen; first and second funicle joints over thrice longer than wide; joints 3 and 4 each a fourth shorter; joints 5 and 6 each about a fourth shorter than either 3 or 4 but 5 is slightly longer and less broad than 6, club slender, long, much longer than the scape; pubescence of funicle in whorls as in *Alaptus*, two rings of setae on joints 3 to 6, each at basal and apical third, and on joints 1 and 2 the same but each whorl less conspicuous on these joints, its setae less numerous. Tibial suprs single, short, straight, but the cephalic ones forming a strigil, curved and forked, the tines distinct. Flagellum about as long as the body. Parapsidal furrows distinct, complete, curved. Ovipositor not exserted. Tarsal joints short; legs normal. Fore wings slender and curved as in *Alaptus*, the caudal dilatation present, not acute; marginal vein of fore wing about six times longer than wide, moderate in length; discal ciliation of fore wing consisting of a paired line along each margin and an incomplete single midlongitudinal line which is nearer the cephalic margin, and shorter proximad by several cilia, than the bounding lines. Marginal cilia of fore wing long and slender, the longest about from four and a half to five times the greatest wing width, slightly longer than the longest cilia of the posterior wings. Fore wing with a handle-like curve distad but this is not pronounced. Posterior wings equal in length to the fore wings, their discal ciliation consisting of a paired line of cilia along one margin and a single line along the other, the latter line somewhat less distinct; in shape, slender and curved, their marginal cilia moderately long at both margins.

The above notes taken from the two type females which are mounted together on a balsam slide. The male remains unknown.

Genus *Gonatocerus* Nees.

1. *Gonatocerus ater* Foerster.

I have the fragments of two female specimens labelled as this species which were mounted on minutien pins in the collections of the United States National Museum and which bore no data. Their bodies are wholly jet-black, the fore wings very broad, the ovipositor distinctly exserted. Comparison of the fore wings with Enock's (*Oophilus*) *Gonatocerus longicauda* shows marked similarity as does also the abdomen. The two species are undoubtedly the same. However, I could not compare the antennae as they are missing in the specimens before me. I treat of *longicauda* more at length elsewhere, showing that it is a true *Gonatocerus* and not the type of a new segregate. The wing and abdominal characters are characteristic as is also the mournful black of the body.

Subfamily *Mymarinae.*

Tribe *Anaphini.*

Genus *Anthemus* Howard.

1. *Anthemus chionaspidis* Howard.

Howard, Proc. U. S. Nat. Mus., XVIII, 1896, p. 643.

This is the only species of *Anthemus*. I have been loaned the types of the species by Doctor Howard and fill in here a number of supplementary descriptive detailes:

♀ Female: — The antennae are as described but a peculiarity of them should be pointed out; they are compact, the club for instance fitted closely to the last funicle joint, the funicle clavate, the flagellum clavate, enlarging uniformly from the third funicle joint, noticeably at the fourth funicle joint, the joints, however, all somewhat longer than wide. Scape cylindrical, slightly convexed; pedicel obconic, distinctly much longer than any of the funicle joints; last funicle joint scarcely longer than the first. Mesophragma long, conic, reaching to the middle of the abdomen. Legs normal, not long and slender nor especially short; the four tarsal joints all short, the proximal joint longest, somewhat shorter in the cephalic legs than elsewhere; tibial spurs single, short, the cephalic ones longer, curved and free, forming the usual strigil. Mandibles apparently broad, with five or six minute teeth. In the original description the fore wings are stated to be „as with *Anagyrus*", evidently a misprint for *Anagrus*; they resemble fore wings in the latter genus but they are peculiar in that their margins are not well-defined and the discal ciliation is uniform to the edges of the blade. They are broadest across the venation at the caudal dilatation which is rather prominent and long, the blade from thence uniform in width, straight and rather narrow, bearing only about from seven to nine longitudinal lines of discal ciliation and at apex obtusely rounded from the caudal edge, the cephalic edge remaining straight; the discal ciliation is conspicuous, uniform, moderately dense, not short, moderate in length and extending proximad under the venation. The venation is usual, not conspicuous, the marginal vein, however, short, only about twice longer than wide. Marginal cilia of fore wings very long, especially caudo-distad where they are at least three and a half times longer than the width of the distal portion of the blade, distinctly longer than the longest marginal cilia of the posterior wing. Proximal portion of fore wing from base to apex of caudal dilatation triangular, the caudal dilatation then by an obtuse, short curve, ending in the main part of the caudal wing margin; fore wing fumated out as far as the end of the venation. Posterior wings rather short, ending in an obtuse point, conic-cylindrical, moderate in width, not very narrow or slender, apparently naked or without discal ciliation with the exception of a distinct short line of about seven, somewhat irregularly placed, cilia proximad just distad from the venation and a single line of inconspicuous cilia along the caudal margin beneath the venation; marginal cilia of posterior wing long and slender. Mesoscutum wider than long. Lateral ocelli not touching the eye margins.. Color as described but the antennae (excepting club) and the legs (excepting caudal femora and proximal portions of other femora) yellow, both often pallid yellowish; the exceptions are concolorous with the body as is also the venation. Mandibles fuscous. The male club bears at least two whorls of the

long hairs; it is nodular, acutely pointed. Male scape longer than male antennal club, shorter without its bulla. Vertexal carina present.

The above notes taken from the slides of the type specimens, bearing in all nine males and fifteen females, all in excellent condition.

Genus *Anaphes* Haliday.

1. *Anaphes pratensis* Foerster.

I have found four females of a mymarid species in the United States National Museum collections labelled as this species and bearing the locality label „France"; the identification was evidently made by Ashmead as the name of the species was in his handwriting. The specimens are different from any species of the genus known to me but of the American species so far described they are most similar to the species *iole* and *nigrellus*. They resemble *iole* rather closely in the structure of the fore wings, which are larger, however; but the antennae are entirely different agreeing somewhat with those of *nigrellus* in general form but differing in that the second funicle joint is elongate and distinctly longer than distal funicle joint. The antennae of this European species are characteristic and I make the following notes concerning their structure: The funicle joints are all cylindrical and much longer than wide, excepting the proximal joint; the latter very short, barely longer than wide; second funicle joint abruptly lengthened, nearly twice the length of the distal joint of the funicle; joints 3 and 4 subequal, a fourth shorter than the second but both long; joint 5 a fourth shorter than joint 4 and somewhat wider; the distal joint still shorter and broader (joints 5 and 6 may be subequal and sometimes joints 4 and 5); pedicel very much larger than the first funicle joint. The species is a typical *Anaphes*. The posterior wings are long and curved, with a row of white dots along the caudal margin and two complete lines of discal cilia down the middle of the blade, a single row along each edge. The fore wings are moderately broad, bearing about from fifteen to seventeen lines of moderately fine discal cilia; their longest marginal cilia are three-fourths the greatest width of the blade; the latter is slightly fuscous in places. The general color is black, the legs brownish, the knees, tips of tibiae and tarsi pallid yellowish. The specimens have been remounted in balsam and placed in the collection from which they came. The species is about the same size as *nigrellus*.

Genus *Anagrus* Haliday.

1. *Anagrus lutulentus* species nova.

Normal position.

M a l e: — Length, 0,50 mm. Moderately large in size for the genus.

Resembling in the appearance of the fore wings *Anaphes cinctiventris* Girault.

General color brown pink, the legs, venation and antennae pallid dusky yellowish, distal tarsal joint not darker; fore and posterior wings distinctly, not very deeply, fumated, fore wings lighter caudad

of the submarginal vein and near the apex, caudad; posterior wings lighter toward apex and in most of the fumated area, mottled with clear spots. Eyes red.

Fore wing moderately broad for the genus, but considered apart, moderately narrow, clavate, its shape normal to the genus, about six times longer than its greatest width, its discal ciliation sparse, consisting of but two lines near the cephalic margin; the first or cephalic of these is finer, running distad from the venation at the wing edge to the apex, commencing to leave the edge at little over halfway out and following the margin of the wing around the apex to the beginning of the caudal margin, hence encircling the distal and of the second line; proximad its cilia are farther apart from each other in the line; the second line is somewhat coarser, its cilia separated farther in the line proximad and also increasing in length proximad, the line being just cephalad of the midlongitudinal line of the wing blade and disappearing at a distance distad of the apex of the marginal vein as the latter is long. There is also a short line of three or four minute discal cilia near the caudal margin just distad of the dilatation. Marginal vein shorter than the submarginal but moderately long, about eigth times longer than broad, its distal end curved cauda-distad, ending in a rounded knob like a sessile stigmal vein. Marginal cilia of fore wing very long and fine along both margins, the longest (caudo-distad) somewhat twice longer than the greatest wing width and distinctly longer than the longest cilia of the posterior wing. The latter instead of narrowing distad, broadens gradually and is slenderly clavate; it is also curved at the distal fifth; its marginal vein is strong, moderate in length, clavate, obliquely truncate distad. Marginal cilia of posterior wing where longest, about three times longer than the greatest wing width, the shorter ones of the cephalic margin about a fourth longer than the wings greatest width. Discal cilia of posterior wing consisting of a distinct line along the whole of each wing margin, away from the wing edge, both rounding the apex to meet; extremely proximad, the caudal line is paired, several cilia of the usual line at the wing edge there appearing; no cilia in the midlongitudinal line excepting one (or maybe several) in the extreme apex, inclosed by the marginal lines.

Parapsidal furrows complete, distinct; mesoscutum cuneate, broader cephalad, all margins straight but the lateral ones oblique. Abdomen sessile, oval, only about two thirds the length of the thorax. The four tarsal joints short; tibial spurs single; strigils present; the proximal tarsal joint of the cephalic legs longer than the same joint of the other legs.

Antennae 13-jointed; scape long, rather deeply curved, longer than the pedicel and first two funicle joints combined; pedicel short, obconic; flagellar joints all short, but all longer than the pedicel, longitudinally striate, each little over twice longer than wide, the proximal joint somewhat shorter.

From a single specimen, 2/3-inch objective, 1-inch optic, Bausch and Lomb.

Female: — Unknown.

Described from a single male specimen received through the kindness of Dr. L. O. Howard, mounted on a slide labelled „998. Perth, W. Austr. G. Compere."

Habitat: West Australia (Perth).

Type: Type No. 13,835, United States National Museum, Washington, D. C., one male in balsam.

2. *Anagrus armatus* (Ashmead).

This species when mounted in balsam stains it a pinkish. It varies considerably in general body color, sometimes being wholly pinkish in color, this fading out, when mounted in balsam, to yellow. A female of the variety *nigriventris* Girault captured in a greenhouse at Urbana, Illinois, April 20, 1911, had the thorax nearly orange in color and twenty-four hours after being mounted alive in balsam its body was surrounded by a pink cloud originating from the thorax; the color of the latter, consequently, fading toward yellow.

In the collections of the United States National Museum I have found another female specimen of the variety *nigriventris*, preserved dry in a small vial and bearing no data other than the number 7. It was colored as described in the original description, having very probably faded out from its natural color as noted above. However, the colors in nature are frequently not pink on the thorax and when yellow fade but little.

3. *Anagrus brocheri* Schulz.

Brocher, 1910, pp. 177—180, pl. XI, fig. 8; Schulz, ib., pp. 192—193, figs. 3 and 4.

Dr. E. F. Weber, Musée d'Histoire Naturelle de Genève, has very kindly loaned to me for study, at my request, one male and three female specimens of this species which were transmitted to him for that purpose by Dr. Frank Brocher of Vandoeuvres près Genève. I make herewith a comparison of it with those American species so far described and with such European species known to me personally. At first, however, it should be stated that it is a typical *Anagrus* characterized by being somewhat larger than normal. As concerns the American species, it is most similar to *armatus* Ashmead in structural characteristics but differs markedly in coloration from the usual bright yellow of that species, being brown[1]), its color uniform. The antennae differ from those of *armatus* not very much, on the average being similar; however, the scape is somewhat longer[2]), the pedicel less stout. The fore wings of *brocheri* differ from those of *armatus* in being somewhat more regular in outline, in being more distinctly but uniformly and lightly fumated throughout and in having the marginal vein stouter and somewhat shorter. Otherwise both pairs of wings

[1]) One of the females nearly olive.

[2]) Also very finely serrulate along its ventral margin; but further examination shows that this is also true of *armatus*. The serrulation is due to a fine ridged sculpture or a sculpture like overlapping plates.

are similar. The mesoscutum in *brocheri* is narrower than that in *armatus*, about twice longer in proportion to its width caudad, in *armatus* distinctly not twice longer than broad at its caudal margin. Also on the scape, there are usually several more conspicuous setae in the case of *brocheri*. Thus it is not an easy matter to separate the females of these two species structurally and it is not certain but that coloration mary vary in *brocheri* as it does in *armatus* (mostly, however, to the pattern of its variety *nigriventris* Girault which still has a bright yellow thorax). The males of booth species are similar in antennal structure and thus no aid is given by this sex.

The European species certainly will average in size but little above *armatus*, if at all. Individuals of the latter vary considerably in this respect.

From the only European Species of *Anagrus* known to me — *incarnatus*[1]) Haliday — *brocheri* may be distinguished at once from the fact that in the female antenna of the latter, the second funicle joint is distinctly much longer than the sixth, whereas in *incarnatus* the opposite is true, the second funicle joint distinctly shorter than the sixth joint of the funicle. Otherwise, the two species nearly agree, especially in coloration; the Englisch species is lighter brown, however. The fore wings are more pronouncedly curved in *incarnatus*. The antennae of the male are similar in both species.

Anagrus brocheri is aquatic but shows no structural adaptations for such a habit.

Tribe *Mymarini*.

Genus *Polynema* Haliday.

1. *Polynema albicoxa* Ashmead.

What appears to be a male of this species was sent to me by Dr. L. O. Howard, mounted on a slide with *Aspidiotiphagus citrinus* (Craw.) from Fiji. However, this identification is based entirely on the fact that the specimen has a distinct fuscous band across about the middle of the wing (but much nearer to the venation than to the wing apex); only the female of the species is known. This male specimen differs from the description of the female in having most of the flagellum black (excepting the somewhat lighter proximal funicle joint), its coxae are all black and only the cephalic legs yellow, the others dusky. Its fore wings bear about twenty longitudinal lines of discal cilia and are moderate in width, like those of *enchenopae*; their marginal ciliation is moderately long, the longest about two-thirds the wings greatest width; discal ciliation moderate. The first funicle joint is thrice the length of the pedicel and about a fourth shorter than the following joints which are long, about six times longer than wide, gradually shortening distad, the distal joint subequal as usual to the proximal joint. The proximal tarsal joint of posterior legs is very

[1]) Mounted on a slide by Mr. Fred Enock of London and presented to Dr. L. O. Howard as examples of that species.

long, thin and slender, the posterior tarsi longer than their femora. The posterior wings are narrow, linear, without discal ciliation excepting a paired line along the cephalic edge and a single line along the posterior edge. For the data on this species, see *Aspidiotiphagus citrinus*. This species by having a fascia on the fore wings is allied with *bifasciatipenne* and *bimaculatipenne*.

2. *Polynema striaticorne* Girault.

A single male specimen of this species was found in an alcoholic collection of Chalcidoidea turned over to me for identification by a member of the Department of Zoology, University of Chicago; the vial containing it bore the labels „University of Chicago. Allen. 554." and „Geo. D. Allen. 8. 10. 09. Stony Is. 554."

3. *Polynema fumipenne* Walker.

Mr. C. O. Waterhouse of England has sent me two female specimens of a *Polynema* which he identifies as the forementioned species of Walker's. The specimens differ from any American species known to me but are most closely allied with *maculipes* Ashmead (in having coarse discal ciliation) on the one hand, and *enchenopae* Girault on the other. From the former they differ in having much broader, differently shaped fore wings (about twenty longitudinal lines across the widest portion of the fore wing) and in being much more robust. From *enchenopae* they also differ in having broader fore wings and in robustness; moreover from the latter they differ in having longer marginal cilia on the fore wing, which are not quite as long as the wings greatest width. Altough in *fumipenne* the antennae are nearly similar to those of *enchenopae*, yet the second funicle joint is relatively longer. The legs are wholly orange yellow. The discal cilia are long and hairlike, giving the fore wings a slight clouded appearance. The line of foveae across the distal end of the scutellum is present, the parapsidal furrows are complete; the ovipositor is slightly exserted as in *striaticorne* Girault. The general body color is black, the thorax suffused with brownish.

The two specimens were labelled „*Cosmocoma fumipennis* Walker. Eng. Richmond. ♀. 24. 9. 09. Whitehouse Plantations. C. Waterhouse."

4. *Polynema flavipes* Walker.

A pair of this British species was found mounted on separate cards in the collections of the United States National Museum, each card labelled „Polynema flavipes. Am. Ent. Soc. To be returned." No other data were present. The specimens were remounted together on a slide in xylol-balsam and studied. The species is distinct from any known to me but resembles in color wings *Polynema enockii* (Girault) another British species forming the type of Enock's *Stephanodes* (= *Polynema*). As concens the known American forms of the genus, it is allied closely with *striaticorne* Girault but differs in being more highly colored (the yellow being chrome yellow or chrome orange) in having the first and third funicle joints of the antennae relatively longer in proportion to the second, in lacking the serrulation of the scape and in lacking the slightly exserted ovipositor. Otherwise the

two species are identical. In *flavipes*, the legs (including coxae), abdominal petiole and three proximal antennal joints are uniformly chrome orange in color, the distal tarsal joint, the head and body and the rest of the antennae black, the second funicle joint with some brownish. From the preceding species (*fumipenne*), this species is very distinct in morphological characters but nearly identical in color excepting for the chrome yellow antennal funicle and distal tarsal joints of *fumipenne*. The antennae are nearly similar structurally in both species, but the fore wings differ remarkably in discal ciliation being fine in the one and coarse in the other. The antennae of the males of *flavipes* and *striaticorne* are identical excepting in the relative size of the pedicel; in *striaticorne* this joint is larger, being at least half as long as the proximal funicle joint whereas in *flavipes* it is smaller, being barely a third the length of the proximal joint.

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