

NEW SERPHIDOID CYNIPOID, AND CHALCIDOID HYMENOPTERA.

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The following descriptions and notes are based upon material in the collections of the U. S. National Museum. North America forms make up most of the matter.

SERPHIDOIDEA.

POLYMECUS SEMIGLABER, new species.

Female.—Length, 1.05 mm.

Differs from *compressiventris* Ashmead in not having the distinct deep parapsidal furrows nor the distinct scaly sculpture on the mesonotum nor the convex rounded caudal margin of the abdominal segments and in being very much smaller and so on. From *insularis* Ashmead in having the upper occiput finely cross-lined instead of densely reticulato-punctate, the parapsidal furrows obsolete or nearly and as indicated, farther apart distad (separated by the width of the base of the scutellum but very indistinct, obsolete or nearly), the scutellum is much less armed at apex and so on. From *canadensis* Ashmead, in being very much smaller, in lacking the deep parapsidal furrows and distinct scaliness of the scutum, segment 3 of the abdomen is not striated so distinctly at base and so on. Cephalic aspect of head very delicately scaly, also cephalic scutum. Base of scape, segment 2 of abdomen (counting the first body segment as such) often and the legs reddish yellow. Club 5-jointed, all the joints subequal or a little longer than wide except the last which is the longest flagellar joint except the pedicel. Funicle 2 distinctly shorter than the pedicel but a little longer than wide, 1 and 3 shorter than 2. Segment 3 of abdomen reaching nearly to the middle, much the longest, 4, 5, and 6 subequal, each somewhat wider than long, 7 conical and somewhat longer than wide. Ovipositor extruded for a length equal to over half that of the abdomen. Scutellum glabrous. Propodeum with a strong carina on each side of the meson. Segment 2 of the abdomen with about six striae along its meson, 3 finely striate

at basal third on each side of the meson but not densely so. Lateral ocelli far from the eyes, somewhat nearer the middle ocellus. Abdomen glabrous except as noted. Mandibles acutely bidentate. Scutellum with carinated lateral margins and a tubercle at apex.

The male is similar but the abdomen is more ovate, segment 4 and 5 more transverse, the antennae are filiform, the club 1-jointed and a little longer than the pedicel, the distal five funicle joints are moniliform, the first very small and cupshaped, 2 is large and crescentic, longer than the club. In the male, the first three antennal joints are yellow. The species *americanus* is nearly entirely black (three of its types, the fourth type a different species); moreover its scutellum is densely scaly, its parapsidal furrows very distinct and complete and so on.

From several pairs reared from the galls of *Rhopalomyia hirtipes* in New York State (Albany, E. P. Felt).

Types.—Cat. No. 20610, U.S.N.M. two males, three females on a tag, and a slide bearing a male head and four females.

TRICHOPRIA POPENOEI Ashmead **ILLINOISENSIS**, new variety.

Female.—Very similar to *popenoei popenoei* Ashmead but the basal third of the club, the pedicel and the funicle joints are usually reddish while club 1 is distinctly larger than the last funicle joint, nearly as large as 2 (in the other, club 1 is but a little larger than the last funicle joint and about half the size of 2). Otherwise the same. Scutellum with carinated lateral margins "parapsidal furrows" present, thorax caudad of scutellum tricarinate at the meson in both forms. Types compared. The "parapsidal furrows" are far laterad (not the real furrows but the suture separating pleurum and notum). From three females, Urbana, Illinois.

In the supposed male, it is similar to the male of the typical form except that funicle 1 is somewhat shorter. The legs may be less black than usual.

Types.—Cat. No. 20842, U.S.N.M. two females on tags.

TELENOMUS POETA, new species.

Female.—Of the same stature and so forth as *hakonensis* Ashmead but the antennae and legs are entirely black, the entire head except the cheeks is scaly except at the clypeus (the entire mesal face glabrous in the other), funicle 1 is no longer than the elongate pedicel (distinctly longer in the other) and so on. Also segment 3 of the abdomen extends nearer to the apex in the other species, the striae on segment 2 extend the entire length (only half way here) while the postscutellum is rugoso-punctate but here finely long-striate. Scutellum glabrous in both as is also the base of segment 3 of the abdomen along extreme base in this new species, along proximal fourth in *hakonensis*. Scutum finely rugose-scaly and pubescent in

both. Differs markedly from the Indian *colemanni* in that the latter has segment 3 of the abdomen a little wider than long and striate along meson for over half its length, the scutellum is finely scaly in that species and the fore wings narrow (here broad). Tarsi reddish-yellow also each end of the tibiae narrowly; segments 4-7 with numerous very minute punctures. Scutum with a granulate appearance. Funicle 3 oval, 4 globular; club 5-jointed, 2 largest, 3 and 4 subequal, each a little shorter than 2 and subquadrate. Eyes hairy.

Three females from the eggs of *Caligula japonica*, Central Japan, (J. H. Watson and A. D. Imms).

Types.—Cat. No. 20604, U.S.N.M., the females on a tag.

ANTERIS VIRGINIENSIS Ashmead.

The females agree in sculpture with the male type; funicle 4 is smallest; the base of segment 3 of the abdomen is also yellowish; (in the male nearly the whole of 3) rest of abdomen (except 2 and 3) finely scaly. In the male, the collar is but obscurely yellow; segment 4 of the abdomen longest, subglabrous, 3 striated along its basal two thirds.

CERAPHRON CARLYLEI, new species.

Female.—Very similar indeed to *basalis* Ashmead but differing in having only the scape (except rather broadly at apex) brownish-yellow, the abdomen is a half less broadly yellow at base above (nearly proximal half in *basalis*) the thorax is scaly reticulate not glabrous, the striae at base of the long segment 2 of the abdomen are longer. Closer to *pallidiventris* Ashmead but at once distinguished from that species in bearing just distad of the apex of the scutellum a short, curved horn while in the other species there is at this place only a mucronate spot; moreover the antennae are more slender, the size a third smaller, the striae at base of abdomen somewhat longer, funicles 2-4 subquadrate, 5 not plainly wider than long but subquadrate, three-fourths the length of 6 (the club appearing 4-jointed, in the other 3-jointed), not half the length in the other. Otherwise as in *basalis*. Both species bear a sulcus between the lateral ocelli on the vertex.

Compared with the types of *basalis* and the evident type of *pallidiventris* (labeled as that species but without "type," in Ashmead's handwriting and "Fort Pendleton, West Virginia, July 7").

Type.—Cat. No. 20843, U.S.N.M., the female on a tag, a pair of wings and an antenna on a slide.

Described from one female, Urbana, Illinois.

MACROTELEIA RUSKINI, new species.

Female.—A half smaller than *floridana* Ashmead and differing from it in a number of characters as follows: At base of abdomen there is a distinct hump (a less noticeable horn than is usual for

Calotelea), segment 2 (except this hump) and base of segment 3, prothorax, sides and venter of thorax, legs, scape (except above at apex) and the pedicel (except above) honey yellow; the parapsidal furrows are represented by less distinct carinae which are along distal half only; abdomen finely long striate to a little distad of the middle of segment 4, thence subglabrous, with numerous scattered, setigerous, pin-punctures, especially dorso-laterad; the thorax is finely scaly, the propodeum a half shorter at the meson; the vertex is densely scabrous, the lower cheeks and middle face glabrous; lower and upper face and cheeks near the suture and caudo-laterad with numerous pin-punctures, the vertex also with these but the dense surface sculpture obscures them; the marginal vein is only twice longer than wide, half the length of the stigmal, the latter slightly shorter than the postmarginal. One mandible with at least three teeth. Funicle 2 is only a little longer than wide, not quite half the length of 1, somewhat longer than 3 and 4. From one female. Illinois.

Type.—Cat. No. 20844, U.S.N.M., the female on a tag, fore wing on a slide. An anomalous species.

MACROTELEIA FLORIDANA Ashmead **GOLDSMITHI**, new variety.

Female.—A fifth smaller than *floridana floridana* and similar to it but differing as follows: Funicle 3 is over twice longer than wide (only a little longer than wide in the other), the vertex is subglabrous but caudad more and more punctate, with scattered punctures in front of the lateral ocelli (in the other densely scaly the punctures smaller and less dense), the abdomen is strongly uniformly striated, the striae somewhat anastomosing in places, punctures on segments 6-7 (in the other there is a distinct but very delicate median carina on segments 3 and 4 and the striae are finer, but otherwise the same); the propodeum bears four carinae, the inner two paired along the meson, the others, one on each side of the meson (the same in the other). Thorax downy, subglabrous and with numerous scattered pin-punctures (both varieties). Abdomen about twice the length of the thorax and first two pairs of coxae reddish (both forms). Postmarginal vein longer than the marginal. The difference in the length of funicle 3, is the characteristic. Types compared. Club 6-jointed.

From one female received from the Illinois State Laboratory of Natural History. (Accession No. 39995.)

Type.—Cat. No. 20845 U.S.N.M., the female on a tag.

PHANURUS EMERSONI Girault.

The vertex is finely scaly but in front of the anterior ocellus the face is glabrous. Eyes practically naked yet with a few minute hairs. Mandibles tridentate. Segment 2 of the abdomen (the first body segment) is not a fourth the length of 3 which occupies about

half of the surface. The ovipositor is often extruded a little. No parapsidal furrows. Club 5-jointed.

PHANURUS TABANIVORUS Ashmead.

The second segment of the body of the abdomen (segment 3) occupies a third of the surface; the abdomen is a half longer than the rest of the body. The eyes are hairy, the vertex scaly, the face in front of the cephalic ocellus, subglabrous.

TRISSOLCUS TRINIDADENSIS Crawford.

Four females from pentatomid eggs, Port of Spain, April 1913, (F. W. Ulrich). The scutellum bears a median carina. Mr. J. C. Crawford has called my attention to the fact that the median of the three "sulci" on the thorax in this genus is a narrow carina, not a sulcus; this is quite true. The club is 6-jointed in this species.

HADRONOTUS AJAX, new species.

Of the stature of the larger species.

Differs from *insularis* Ashmead in having but the coxae black, the puncturation of segment 3 of the abdomen is much finer, the form less robust, the abdomen less pubescent and the antennal club less stout. From *anasae*, besides the color of the legs, notably in the sculpture of the abdomen, body segment 2 not strongly striate but densely punctate. From *rugiceps* in having the fore femur black, the flagellum black, the marginal vein only a little more than half the length of the stigmal; also the head and thorax are uniformly sculptured. From *carinatifrons* in that the face is cross-striate only in the scrobes. Agrees with the description of the last-named species except as noted and the second body segment of the abdomen has a row of deep punctures along its proximal margin from which short striae proceed; also the coxae are black and the marginal vein not as long as described for the West Indian species. Sometimes the cephalic femur is black and the scape is often dark. Puncturation of the abdomen much finer than that of the thorax. There are two rather large irregular areas just caudad of the anterior ocellus and bounded by a carina. Apex of pedicel and funicle 1-4 may be reddish like the scape. Legs reddish, not honey yellow. The male is similar but the antennae filiform; the flagellum black, moniliform except the club and funicle 1 which are subequal and a third longer than wide, the other joints a little wider than long.

A common species in the United States. There are specimens in the United States National Museum from Kirkwood, Missouri (Murtfeldt), and from Paris, Texas.¹

Described from a series reared at Baton Rouge, Louisiana, from the eggs of *Anasa tristis* (T. H. Jones), September, 1915.

¹ Ent. News, 1904, p. 337; and 1913, p. 57.

Types.—Cat. No. 20463, U.S.N.M., three males on a tag and eight females on tags.

CYNIPOIDEA.

PSILODORA CULTRA, new species.

Female.—Length, 3.6 mm., excluding the ovipositor, which is nakedly extruded for the length of the abdomen. Runs to this genus in Kieffer's (1902) table to the Cynipoidea.

Differs from labeled specimens of *Eucoila impatiens* Say mainly in having the extruded ovipositor and hardly otherwise. "Cup" of scutellum melon-seed shaped (like this kind of a seed balanced broad side up upon a short stalk), its distal, obtuse end with a large excavation, two round punctures on its lateral margin at middle; surrounding part of scutellum rugulose. Body glabrous. A line of several punctures distad on each side of scutum; no sutures or furrows on scutum. Head (cephalic aspect) longer than wide, the moniliform 13-jointed antennae inserted near the vertex, above the middle. Legs and first 6 joints of the antennae reddish brown. Funicles distinctly $\frac{1}{2}$ longer than wide, the pedicel globular, smallest; other flagellum joints rounded, ovate to ovate, the club about 8-jointed, gradually widening distad, the distal joint as long as funicle 1. Fore wings naked except for exceedingly minute, sparse setae on the disk. Meson of propodeum oval, concaved, the concavity bounded by a stout, obtuse carina along each side.

Described from one female, Urbana, Illinois.

Type.—Cat. No. 20846, U.S.N.M., the female on a tag.

(ALLOTRIA) KLEIDOTOMA AVENAE Fitch.

Two males, three females reared from dipterous larvae, Urbana, Illinois. Compared with male type. The scutellum is long-striate, the cuplike elevation small, oval near apex but connected with base by an attenuation like a median carina; just at its broader end (distad), it bears a round fovea; meson of propodeum glabrous, concaved, the area broad, limited by a ridge down each side. Vertex finely cross-lined. Flagellar joints of the male long-striate, over twice longer than wide.

MICROSTILBA AMERICANA, new species.

Female.—Length, 0.8 mm. Piceous, the wings hyaline, the venation piceous. Antennae subfiliform, the club however, distinct, 5-jointed, the joints oval, joint 5 longest nearly twice longer than wide; funicle 1 twice longer than wide, shorter than the club joints a half the width of the club, 2-5 subequal, each a little longer than wide at apex. Polished, parapsidal furrows cariniform, diverging nearly to apex, then converging, widely separated laterad. Pedicel subequal to club 1. Petiole short, rugulose; base of abdomen dorsad cari-

nated across (an acute edge) and with very short long-carinae. Propodeum with a pair of stout median carinae, which are a short distance apart and diverge slightly distad; also a lateral ruga, which divides like a Y distad. Cup of scutellum rimmed, reaching to about middle, oval, connected narrowly with base along the meson; scutellum with acute lateral margins and along the distal half more or less long-striate. Two foveae at base of scutellum, one on each side of the narrow pedicel of the cup. Marginal cilia of fore wing moderate.

One female, Urbana, Illinois.

Type.—Cat. No. 20847, U.S.N.M., one female on a tag.

CHALCIDOIDEA.

Family ENCYRTIDAE.

PENTELICUS ALDRICHI Howard.

Genotype.

Head slightly wider than long, the scrobes forming a short triangle whose apex is nearly half way to the anterior ocellus, the cavity scaly; rest of cephalic face above antennae coarsely punctate; frons broad. Scape very slender but with a small foliaceous expansion from before middle to apex. Flagellum subfiliform, the club 3-jointed, obliquely truncate from near base of joint 3, the pedicel longer than any funicle joint. Eyes somewhat longer than the cheeks. Mandibles acutely tridentate, the middle tooth longest. Postmarginal vein nearly as long as the moderately long stigmal, the marginal at costa, punctiform. The type is apparently a female, the ovipositor inclosed to tip by the hypopygium. Scutellum with an obscure median carina. Sculpture of thorax nearly like that of the head but the coarse punctures shallower and the reticulation more plain. Club about half the length of the funicle. From the type in the United States National Museum.

HEMAENASIUS CONFUSUS Ashmead.

Genotype.

Head as in *Pentelicus* but a little more rounded, the punctures are pin-punctures and scattered; the frons not quite so broad (between moderate and broad); the postmarginal vein is somewhat shorter; the scape is dilated from base and somewhat more broadly; the median carina on the large scutellum more distinct. Distal thorax sculptured like the frons. From the type in United States National Museum, but sex unknown, marked "female."

The club is somewhat shorter than that of *Pentelicus*.

HOWARDIELLA PECKHAMI Ashmead.

Genotype.

This species is an *Eucomys*. The cluster of hairs at the apex of the scutellum is present (though rubbed off in the type specimen) as

evidenced by the dense area of setigerous dots in the place where the hair clusters ordinarily occur. The mandibles not seen. From the type in the United States National Museum. The head and frons bear numerous, scattered punctures. There is a ridge across the face, from the ventral eye-ends somewhat as in *Taftia*. Later, the mandibles were seen. They are as in *Eucomys* subacute at their extreme ventro-distal apex, the apex broadly convexed (and usually called truncate).

HOWARDIELLA TARSATA Ashmead.

This is not a species of *Eucomys*. The scape and cephalic femur are foliaceously dilated, the cephalic tibiae compressed strongly. The scrobes are long, deep, long-triangular. Frons narrow yet but moderately so. Marginal vein punctiform, not quite at the cephalic wing margin, the postmarginal about twice longer than wide, the stigmal long and somewhat curved. Pedicel elongate, over twice longer than wide, nearly half the length of the funicle, the club pointed conic-ovate, nearly twice the length of the funicle; funicle 1 quadrate, the others nearly twice wider than long. Fore wings with an ovate blotch from the stigmal vein. Mandibles not seen. Scutellum simple. The dilated scape and cephalic femora are characteristic.

From the type in the United States National Museum.

RHOPUS TESTACEUS Ratzeburg.

The submarginal vein terminates in a quadrate marginal, the latter reaching the costal margin and giving off a very short postmarginal; submarginal vein terminating at the caudo-proximal angle of the marginal, far away from the costal margin, since the marginal vein is quadrate. Stigmal vein not long, but about as long as the diameter of the marginal. Corrected description. The venation is very faint. From an European specimen in the United States National Museum.

RHOPOIDEUS FUSCUS Girault.

This is a species of *Rhopus*. The type of *R. fuscus* has been reëxamined; its marginal vein is not so quadrate as in *Rhopus testaceus*. It bears a large thoracic phragma and the ovipositor is inserted near apex.

PARACERAPTOCERUS, new genus.

Like *Ceraptocerus* Westwood but non-metallic, the free ovipositor is extruded for a third the length of the abdomen, the abrupt, acute end of the frons forms a more prominent, overhanging arch, the mandibles are bidentate, the second tooth broadly truncate, the scutellum somewhat larger. Like *Chrysoplatycerus* Ashmead but that genus is metallic and besides other characters differs notably in having the ovipositor inclosed to apex of the abdomen by the hypopygium. In *Epanusia*, there is no prominent arch on the face. Maxillary palpi 3-jointed. Hind tibial spurs double.

PARACERAPTRICERUS AFRICANUS, new species.

Genotype.

Female.—Length, 1.80 mm., excluding the ovipositor. Robust.

Orange yellow, the following parts purple. Club, a narrow line across the face through the antennae, face of prothorax centrally, venter of thorax at the base of each coxa, scutellum except narrowly at apex, dorsal thorax on each side of same, meson of propodeum, dorsal abdomen except a broad cross-stripe, middle and apex and meson of abdominal venter. Fore wings embrowned except apical end; venation dark. Clypeus hairy. Frons densely finely punctate, the thorax very finely scaly with small punctures scattered over the surface, numerous, each bearing a moderately short black seta. Tarsi white except last joint. Axillae somewhat separated.

One female in the United States National Museum, reared from a *Ceroplastes* on *Elytropappus rhinoceratis*, Cape of Good Hope, Africa (C. P. Lounsbury), October, 1898.

Type.—Cat. No. 20600, U.S.N.M., part of female on a tag, head, fore wing and hind leg on a slide.

APTERENCYRTUS PULCHRICORNIS Ashmead.

Genotype.

Form small, usual; mandibles tridentate the teeth not large, 3 obtuse, shortest. Head (cephalic aspect) rounded, the vertex flat, the frons prominent, moderately narrow, the inflation of the face great; eyes dorsal. Pedicel as long as funicles 5 and 6 combined, the latter largest, each somewhat wider than long, 3 and 4 shortest, twice wider than long, 1 subquadrate, narrower than 6, club 3-jointed, as long as the funicle and two-thirds or more wider. Whole body very finely scaly. Cephalic ocellus advanced. Axillae separated some little distance. The scape is black at base and ventrad, the pedicel above except at apex; funicles 1-4 dusky above. Bulla of scape black. The cephalic tibia has the black cinctus dorsad while the caudal tibia bears a broad cinctus below the knee; the cinctus on the middle tibia is ventrad.

Type examined. Description otherwise correct but the ovipositor is shortly extruded.

The roots of both wings are distinct and it seems as though they may have been torn off close to base. The species may be a *Cheilonurus*.

HABROLEPOIDEA PERPLEXA, new species.

Female.—Of usual form. Head thin, rounded, inflexed; the antennae inserted at the mouth, the scrobes forming a triangle, the scape slender the flagellum clavate, the club 3-jointed, wider than the funicle, cylindrical, four-fifths the length of the funicle, obtuse at apex; mandibles with three subsequel acute teeth. Frons moderate in width, not prominent (face shrunken in death). Eyes longer than

the rather long cheeks. Pronotum transverse, the scutellum triangular, obtuse at apex, the axillae joined. Abdomen pointed conic-ovate, longer than the thorax, the ovipositor inserted at base, not extruded. Legs simple, the caudal tibial spurs double. Fore wings abbreviated, extending a short distance distad of the thorax, narrow ovate at apex; the submarginal vein long, forming a longer than wide marginal not far from apex, then a shorter stigmal which is more or less parallel with the apico-distal margin; costal cell wide, especially proximad; submarginal vein concaved and thickened along its apical third; fore wings lightly, variably dusky, with a more or less distinct hairless line from the apex of the venation, the marginal cilia practically absent, the discal ciliation moderately dense, coarser and sparse under the thickened part of the submarginal vein which bears still larger setae. Caudal wing minute, truncate obliquely, its venation extending to the apex.

Length, 0.65 mm.

Dark metallic green suffused with brownish on the mesopleurum, the legs (except the black distal tarsal joint) and the antennae golden yellow. Scutum and scutellum (at least) rather coarsely scaly. Bulla of scape black, the pedicel above and the funicle more or less, dusky. Pedicel nearly twice longer than wide, much longer than any funicle joint; funicles 1-4 subequal, small subquadrate; 5 larger, 6 largest, a little longer than wide, twice the size of 1. Club joints subquadrate, each twice the size of funicle 6.

Described from a single female on a slide from Meadville, Pennsylvania (W. J. Phillips, Webster No. 9353).

Types.—Cat. No. 20848, U.S.N.M., the wingless specimen on a slide, a male on a tag (see below) and winged female on another slide with appendages and male wings and antennae.

The ordinary appearance of this species made me suspect that it had been mutilated but since both of the abbreviated fore wings were equal in shape and size and showed no signs of having been torn, it would be almost impossible for mutilation to have occurred.

Later, two other specimens were obtained same data, one of each sex and both fully winged. Thus, in spite of the foregoing remarks the species must be considered fully winged (the other specimen mutilated miraculously). The marginal vein is twice longer than wide, slightly longer than the stigmal, the postmarginal half the length of the marginal. Marginal fringes of fore wing longer than usual (not long). Fore wing with a conspicuous mid-longitudinal fuscous stripe from apex to the middle nearly (or opposite to the stigmal vein.) Resembles the Australian *Zarhopaloides gracilis* very much. The male fore wings are hyaline, the antennae black except the scape, the long cylindrical club solid, the funicle joints distad with long scraggly hairs and elongate (1 nearly four times longer than wide, somewhat shorter than the club, 6 over twice longer than wide).

The genus *Zarhopaloides* Girault is the same as *Habrolepoidea* Howard.

ACHRYSOPOPHAGUS IO, new species.

Female.—Agrees with the description of *Achrysozophagus* Girault (the genotype) except as follows: The marginal vein is longer, the postmarginal three-fourths the length of the short stigmal; the face but feebly inflexed, the frons somewhat narrower; scape rather moderately dilated the club not much enlarged, wider and longer than the funicle; cephalic femur enlarged. Hind tibial spurs double very unequal.

Length, 1.5 mm. excluding the extruded portion of the ovipositor which is white and about three-fourths the length of the abdomen. Dark metallic green, the following parts white. Funicle, apex of scape broadly, distal two-thirds or less of the pedicel, trochanters, tarsi entirely, proximal half of cephalic femur, tips of cephalic and caudal tibiae (or caudal tibiae, distal half dorsad), proximal two-thirds of middle femur and distal two-thirds of middle tibiae. Fore wings infuscated as in *Cheiloneurus* the apex broadly hyaline; base of fore wing also infuscated. Many lines of dense cilia proximad of the narrow long hairless line of the fore wing.

Axillae with coarse scattered hairs nearly enough to form the scanty tuft on scutellum but more scattered.

Caudal wings short and broad. Head and thorax very finely densely sculptured. Funicle 6 largest much wider than long, all the funicle joints wider than long and much shorter than the pedicel which is a half longer than wide at apex.

Described from a female on a slide in the United States National Museum, labeled "No. 21. Reared from *Pseudococcus citri* on Bamboo, Manila, Compere 7-09."

Type.—Cat. No. 20849, U.S.N.M., the above specimen.

ACHRYSOPOPHAGUS NIGRICORNIS, new species.

Female.—Length, 1.45 mm., excluding the exerted portion of the valves of the ovipositor which are nearly two-thirds the length of the abdomen. Dark metallic green, the fore wings about as in the preceding species but the apex is much less broadly hyaline. Colored like the preceding except as follows: The antennae are black except pale dusky distal half or more of the scape; the legs are also concolorous except the distal three tarsal joints of the middle legs which are silvery. Scape not dilated. Cephalic coxa, femur and tibia conspicuously enlarged, compressed, distinctly more enlarged than in the preceding. Fore wings broader than in the preceding. Mandibles with three equal acute teeth as in the other. Scape scaly reticulate.

From one female labeled as the preceding but numbered "20."

Type.—Cat. No. 20850, U.S.N.M., the female on a slide.

ACHRYSOPOPHAGUS REX, new species.

Female.—Same stature as the preceding. Golden yellow, the wings infuscated as in *io*; the following metallic parts. The abdomen, valves of ovipositor and a little over the distal third of the scutum. The following black parts: Pedicel, club, funicle 6 and the dorsal half of the middle tibia, except broadly at apex. The following silvery parts: Apex of the scape, pedicel dorsad at apex not broadly; funicles 1-5, first two pairs of femora base of caudal femur, tip of middle tibia and the tarsi. Otherwise same as *io*.

Described from one female on a slide labeled "From *Pseudococcus citri* on Bamboo, Manila, Philippine Islands, Compere, July, 1909."

Type.—Cat. No. 20851, U.S.N.M., the above specimen.

HABROLEPIS ZETTERSTEDTH Westwood.

A female of this European species from *Lepidosaphes ulmi*, April 22, 1914, Monmouth, Maine, (E. H. Siegler).

COPIDOSOMA GELECHIAE Howard SAGA, new variety.

Female.—Length, 1.35 mm., excluding the ovipositor which is extruded from a fourth the length of the abdomen.

Dark metallic green, the axillae, scutellum and abdomen purplish, the body with a velvety sheen, the legs except the coxae, reddish yellow, the wings subhyaline; ventral aspect of body purple; venation dusky black, the stigmal vein with a dusky line down its proximal side. Distal tarsal joint black; basal part of hind femur purplish. Body coarsely scaly, including abdomen, the latter compressed distad, depressed above the base. Axillae just separated by a very short carina. Pedicel yellow at apex. Scape extending a little beyond the vertex, long and slender, the pedicel somewhat longer than wide, slightly longer than funicle 1 which is subequal to 2 and somewhat longer than wide; 6 a little wider than long. Club long, conic-ovate, two-thirds the length of the funicle, obliquely truncate from the base of joint 2, its joint 1 subquadrate, obliquely truncate at apex, 2 distinctly longer than wide but somewhat shorter than 3. Mandibular teeth distinct, 1 somewhat shorter than the other two. Marginal vein a little longer than wide, the postmarginal vein distinct but very short, the stigmal normal. Frons moderately broad. Head longer than wide, truncate at apex, the scrobes short, joined above. Checks somewhat shorter than the eyes.

Very closely allied with typical *C. gelechiae* Howard but that form has the third tooth of the mandible distinctly much shorter (evidently worn or broken) than the other, subequal two which are acute; the stigmal vein is slightly shorter; the venation yellowish; funicles 1-2 slightly longer; the pedicel not always yellow at apex; the caudal femora are all purple except at end; the caudal tibiae bear a broad purplish band a short distance below the knees.

The male antennae are filiform, the club solid, funicle 1 over twice longer than wide but shorter than the club. This form apparently the variety *b* of Howard. The funicle 6 is distinctly shorter than the solid club.

Encyrtus solus Howard resembles the species but its head is not longer than wide, its marginal vein is longer.

The Copidosomae of Australia differ notably from the above species in having the abdomen large and much compressed, the ovipositor much extruded. Some specimens of both sexes (*E. gelechiae*) reared from the larvae of *Gelechia gallaesolidaginis*, Tallahassee, Florida, had the abdomen compressed somewhat as in the Australian species but the ovipositor very short.

Type locality.—Ottawa, Canada.

Types—Cat. No. 21019, U.S.N.M., five pairs on two cards and a slide with a female head.

TYNDARICHOIDES, new genus (Encyrtini).

The characteristics of the genus are essentially those of the genotype, a description of which follows:

Genotype.—*Tyndarichoides mexicanus*, new species.

TYNDARICHOIDES MEXICANUS, new species.

Female—Length, 1.00 mm.

Dark metallic green, the wings hyaline but with a complete, slightly bowed fuscous cross-stripe from the stigmal veins apex to the distal fourth of the submarginal vein, the base infuscated slightly; the cross-stripe is somewhat over twice longer than wide; venation black; funicles 5 and 6 the club, cephalic knee tip of cephalic tibia, the tarsi, the middle femur at apex broadly, middle knee, the middle tibiae (except for three distinct black cincti, the middle longest, the third at apex, narrowest) caudal femur at apex and base narrowly (the knee capped with metallic) and caudal tibiae except for two longer cincti, the second longest (crossing at middle and extending over half way to apex) silvery white; distal tarsal joint black (also the proximal of the caudal legs), Cephalic frons (between the cephalic ocellus and the apex of the scrobes) orange yellow. A silvery lunula cephalad of the tegula (dorso-laterad). Head and thorax densely, minutely scaly and with scattered, distinct, stiff, short, normal silvery pubescence. Cephalic tarsi dusky. Head locustiform (longer than wide, narrowed ventrad and truncate there); frons moderate, not prominent, the scrobes long and straight, not quite joined above forming a long concave triangle, reaching nearly three fourths the way to the cephalic ocellus. Antennae widely separated, inserted near the mouth, capitate, the club obliquely truncate from the base of joint 3, nearly as long as the funicle and wider but not en-

larged especially; scape with its dilation distinct, moderate, foliaceous. Pedicel twice longer than wide at apex, as long as funicles 1-4 united, the latter subequal, like ring-joints, slightly enlarging distad, thrice wider than long; 5 and 6 each distinctly larger but still wider than long; a small ring-joint. Mandibles tolerably long, its three teeth acute, rather strong, subequal. Marginal vein twice longer than wide, subequal to the postmarginal, the stigmal nearly thrice longer. Hairless line narrow, closed near caudal margin. Eyes rounded-ovate, somewhat shorter than the checks. The male is the same but the club is solid.

Described from one male, two females in the collection of the United States National Museum from Oaxaca, Mexico (Koebele).

Types.—Cat. No. 20852, U.S.N.M., the three specimens on tags, the heads of both sexes, a female fore wing, fore and middle leg on a slide.

The locustiform head (short and rounded in *Tyndarichus*), the tridentate mandibles (bidentate, the second tooth broadly truncate in the other), the somewhat smaller club and the distinctly longer stigmal vein (marginal vein two and a half times longer than wide, slightly longer than the stigmal or postmarginal in the other) distinguishes the above species from *Tyndarichus* genotype. *Tyndarichus* has the scape dilated, the club enlarged but not greatly. Types compared.

LITOMASTIX AURICOLLIS Thomson.

A species of *Berecynthus* hence, the latter is probably a synonym of *Litomastix*. Differs from *B. bakeri* in having the solid club somewhat longer but otherwise I can not distinguish between them. Synonyms very likely. One female of the European species in the United States National Museum labeled in Thomson's hand.

EXORISTOBIA PHILIPPINENSIS Ashmead.

Genotype.

Head slightly longer than wide, broadly subtruncate and narrower ventrad, the face inflexed, the scrobes forming a deep, long triangle but which does not reach the anterior ocellus, the frons moderate in width with numerous scattered large pin-punctures. Cheeks about as long as the eyes, the latter ovate. Antennae well separated, inserted below the line of the eyes. Scape with a moderate, foliaceous expansion ventrad, this broadly convex and distinct; flagellum clavate, the funicle joints all much wider than long, not annular, 6 widest, the club obliquely truncate at joint 3, the latter cross-linear or very short; club not quite as long as the funicle, wider. Marginal vein three and a half times longer than wide, the postmarginal and stigmal subequal, the latter curved each a little longer than the marginal, oblique hairless line present. Mandibles with three equal, acute teeth of moderate size. Scape yellow brown except at base.

Male flagellum filiform (club not seen), the funicle joints subquadrate, shorter than the pedicel. Sculpture (female) very fine scaliness, the thorax with punctures like those of the frons.

BLASTOTHRIX BRITANNICA, new species.¹

In Mayr's table to *Encyrtus* runs also to *meges* Walker and allies but bears no punctures; to *sericea* Dalman but the antennae are wholly concolorous as are the legs (the middle tibiae concolorous except at each end).

Females.—Length, 1.20 mm. Dark metallic green and densely pin-punctate. Wings hyaline the venation dusky. Knees broadly, tips of the tibiae and the tarsi dull yellow to white. Proximal half of tegula silvery white. Propodeum and abdomen scaly. Scape but moderately dilated ventrad, yet distinctly so; pedicel nearly a half longer than wide at apex, longer than any funicle joint: funicle 1 a little longer than wide, subequal to 2, 3 and 4 subequal, a half more longer than wide, 5 and 6 subquadrate, widest. Club a little over half the length of the funicle, wider than it, ovate. Second tooth of mandibles broadly truncate. Marginal vein twice longer than wide, a third or more shorter than the stigmal, the latter long but somewhat shorter than the subelongate postmarginal, the latter tapering. Axillae with a short carina between them. Cheeks longer than the eyes, the frons moderately broad. Male, the same but the antennae paler, the club solid, longest, the scape short and dilated, the pedicel globular, shortest; funicle joints as in male *Eurytoma*, longer distad. In the male, the three distal veins of the fore wing are subequal, the stigmal a little the longer. Hairless line fore wing complete. Three pairs from *Lecanium capreae*, Cheshire, of England, (A. D. Imms).

Type.—Cat. No. 20853, U.S.N.M., two males, one female on a tag, appendages on a slide.

PARASTENOTERYS NIVEICLAVA Girault.

Parastenoterys niveiclava GIRAULT, Chalc. Nova Marilandensis, II, 1917, p. 1.

Female.—Length, 1.00 mm.

Dark metallic green, the scutellum bronze and lighter, the legs (except the coxae) and the scape reddish yellow, the wings hyaline, the venation yellowish. Club snow-white except the dusky basal half of the first joint. Body scaly, the abdomen subglabrous, the scutellum densely, finely punctate, a double row of punctures on the vertex, along each eye, the scutum and axillae with many, scattered setigerous punctures. Axillae barely separated or not at all. Scutellum nearly as hairy as the scutum, the hairs soft, prostrate or

¹The description for this species was published by Imms (Quart. Journ. Mic. Sci., vol. 63, 1918, p. 295, 341, 24 text figs.) but the name accredited to Girault. Since then Silvestri (Boll. S. Z. A. Portici vol. 13, 1919, p. 164) has synonymized the name with *Blastothrix sericea* (Dalman).—S. A. ROHWER.

nearly. Propodeum glabrous, with a long, narrow median carina and a longer than wide area on each side of it which is rugulose. Tegulae concolorous. Scape subclavate. Pedicel twice longer than wide at apex. Funicle joints 3-6 subequal, each little wider than long, 1 a third longer than wide, 2 intermediate. Club ovate, equal to funicles 4-6. Mandibles reddish brown at apex, the acute second tooth twice the size of the first. Head (cephalic aspect), a little longer than wide, the scrobes forming a semicircle. Frons moderate. Postmarginal vein slightly longer than the stigmal, the latter a little over half the length of the marginal. Scutellum obtuse at apex.

One female collected in the woods at Glendale, Maryland, July 16, 1916.

Type.—Cat. No. 20854, U.S.N.M., the female on a tag, the head and a fore wing on a slide.

Differs from the genotype in having the axillae united, also the scrobes, while the teeth of the mandibles are much unequal.

Family CHALCIDIDAE

SPILOCHALCIS ALBIFRONS (Walsh).

There is a male specimen in the United States National Museum placed beside the types (two males) and labeled as this species (reared from *Apanteles militaris*, Nashville, Tennessee) but which has the face below the antennae and the first two pairs of femora entirely yellow; there is a distinct dot on the vertex near the lateral ocellus; the upper occipital margin of the eye is yellow; the pronotum bears on its cephalic margin three dots on each side of the meson; smaller in succession laterad; the spot on the scutum and scutellum is distinct while the abdomen is variegated. This is a well-marked variety.

SPILOCHALCIS TORVINA (Cresson) ANCYLAE, new variety.

Female.—Runs in Cresson's analysis to *torvina torvina* but has no head or thoracic markings except the following: Mandibles, a small round spot on each side near (not at) the clypeus, a dot between the antennae, a dot against the eye at middle of face, occipital margin of eye above, a minute transverse dot between eye and lateral ocellus, a dot on each side of meson of punctures (well separated) and one at cephal-laterad corner of pronotum, spot (oval) near parapsidal furrows on scutum near cephal-laterad corner, a dot on the parapside against the furrow, tibiae middle and caudal end; a small spot on lateral margin of scutellum at middle; abdomen as originally described (the four marks are wider than long, the distal two very much wider than long). The caudal femora differ in bearing a dot on dorsal margin at middle (showing more distinctly outwardly) and a larger than wide spot near apex beneath; outwardly a dot a little above the apex, one centrally at distal two thirds and one below further proximad.

The male differs in having a distinct inverted V-shaped marking on the lower face (as in *albifrons*); the apex of the V between the antennae and the latter embraces the black clypeus; no other head markings except the upper occipital margin of the eye; the mark on the scutum is very faint, that on parapside absent, as is also the first mark on the abdomen; apex ventral aspect of antennae reddish; the first two pairs of tibiae are lemon yellow; the hind femora has (outwardly) the basal margin yellow and the two distal dots inserted longitudinally, while the middle dot on dorsal margin has been enlarged to include nearly the proximal two-thirds of that margin (more visible from without than from within). Scape yellow. Antennae 13-jointed, one ring joint, funicle joints subquadrate, the scape compressed (in the female slender and funicle 1 is somewhat longer than wide).

Propodeum (female) very finely punctate, with a strong median carina with a tendency to branch; branched once strongly a little beyond middle; caudal margin of propodeum strongly carinated; in the male, about the same. Then the male resembles *albifrons* (types) but that species has the thorax not punctate but rugulose, while on the thorax only the dot on each side of the pronotum is present, the abdomen unmarked. A "type" of *torvina* from Texas in United States National Museum has about a dozen of the transverse markings on the abdomen and the entire venter yellow; it thus does not agree with the description and was very probably identified later; its middle tibiae bear the spurs.

A pair from Whitesboro, New Jersey, associated with *Ancyliis* new species (H. B. Scammell).

Types.—Cat. No. 20749, U.S.N.M., the pair on tags, and antennae of each sex on a slide.

ACANTHOCHALCIS NIGRICANS Cameron.

Genotype.

What appears to be a small specimen of this species (the ovipositor, too, is broken off close to the base) was reared from the flat-headed apple tree-borer at Phoenix, Arizona, September 21, 1915. (A. W. Morrill.) The ovipositor valves are red, black at apex (*teste* specimens in the United States National Museum), while the antennae are 12-jointed, the last joint smallest except the pedicel, conical; pedicel hardly larger than the ring joint. Antennae inserted slightly below the ends of the eyes, the scrobes reaching the anterior ocellus, deep. The generic characters are the unclubbed 12-jointed antennae, the long ovipositor and the propodeum which has a short horn at meson near base (*unispinosa*) from which it is declivous but laterad, is plane and depressed, which from the lateral aspect forms a projection over the pleurum; this projection resembles a stout coxa.

ACANTHOCHALCIS UNISPINOSA, new species.

Female.—Length, 18.00 mm.

The same as the genotype but the propodeum bears a short, stout tooth at meson near base while from lateral aspect the flattened lateral part of the propodeum does not project over the caudal metapleurum. Funicle 1 thrice longer than wide (nearly thrice longer than wide in the other); the propodeum bears a median carina (three rugae in the other at meson). Forewings smoky in both, the venation black, the postmarginal vein longer than the marginal. Hind wings clouded distad. Femoral furrows deep (for first and second legs). Abdomen with no conspicuous patches of pubescence, nor the hind coxae nor the subdued prominence on the propodeum while the scutellum at distal half is obtusely biparted by a deep, obtuse median "valley."

One female in the United States National Museum, Texas (Belfrage).

Type.—Cat. No. 20752, U.S.N.M., the female on a pin and antennae on a slide.

DIPLODONTIA SECUNDA, new species.

Female.—Length, 6.50 mm.

Yellow, the wings infuscated but lighter toward the tip, the body marked with black as follows: Antennae except the bulla and ventral aspect of scape (also lower sides near base), upper half of occiput except eye margin, the black continuing over the vertex and down the face to the antennae (the eye margin more broadly yellow on the face, the ocelli lined with yellow mesal) the upper face of pronotum, pronotum except cephalic margin and broadly mesad (where it is a mere line), the propleurum except cephalic margin and ventral half, scutum except lateral margins narrowly except at each end, parapsides except lateral margin (more broadly cephalad), mesal half of axillae, a broad median stripe two-thirds of the way down the scutellum, propodeum except the spines and the convex protuberance and plate near the hind wings, mesopleurum, ventral half of metapleurum, meso- and meta-venter, hind coxae except a large fusiform area from base (basal dorso-laterad, a large hooklike marking on hind femur, inner aspect, from apex to beyond middle (along the lower side) a large comma-shaped marking on same, lateral aspect, about middle, its pointed end not reaching tooth 4; base of hind tibia; a dot, each side, apex of petiole; a V-shaped marking base of segment 2 nearly to its apex; five narrow cross stripes, 1-2 most distinct, 1 near apex of segment 2, 2 about the middle. Postmarginal vein somewhat shorter than the marginal. Tooth 6 of hind femur broadest, serrulate. Antennae 13-jointed. Funicle 1 a half longer than wide; propodeum foveate. Pubescence fuzzy. Abdomen normal, the pedicel nearly twice longer than wide.

One female, Long Island, New York.

Type.—Cat. No. 20750, U.S.N.M., the female on a pin, an antenna on slide.

Family EULOPHIDAE.

CHRYSOCHARODES MAJORIANA Girault.

Chrysocharodes majoriana GIRAULT, Descr. Hym. Chalc. Var. cum Observ., 1917, p. 10.

Female.—Length, 0.70 mm.

The club is 3-jointed while the male scape is merely compressed. Differs from all the North American species of *Omphalchrysocharis* in having the legs and scape entirely white except the first pair of coxae. Third ring-joint larger, colored; funicle 2 twice longer than wide, a little longer than 1 which is subequal to club 1 and a little longer than the pedicel; other club joints shorter. Postmarginal vein elongate. Mandibles with two equal teeth and a very minute third one at base of the second within. Petiole quadrate. Propodeum with narrow lateral carina but no median, the spiracle very minute and round. Parapsidal furrows incomplete but caudad represented by a long depression. Scaly.

The male is the same but the coxae are metallic, the scape also at extreme apex, while the flagellum bears long hairs (in the genotype male, the funicle joints are narrowed distad and the club 2-jointed).

Three males, one female reared from a leaf miner on *Commelina virginica*, St. Vincent, British West Indies, F. Watts.

Types.—Cat. No. 20839, U.S.N.M., the specimens on tags, a head of each sex on a slide. Also male from a leaf-miner on Cassia, same place.

PSEUDIGLYPHOMYIA PULCHERIA, new species.

Female.—Length, 1.55 mm. Rather elongate.

Bright yellow, the wings hyaline, the following parts dark metallic green: Upper half of occiput except the margins, ocellar area, a stripe from apex of each eye to apex of head along the genal suture and broad, scape and pedicel except apex of each beneath, hind coxae, prothorax, over cephalic half scutum except the lateral margin narrowly, a dot on apex (cephalad) of the axillae, apex of tegulae, rest of thorax (caudad of scutum and the axillae) except the mesopleurum just under the tegula; meson of ventral abdomen broadly nearly to apex, same more broadly dorsad from a broad basal stripe whose length is equal to the space from apex of the mesal green to abdomen's apex; the dorsal green swells laterally and nearly reaches the margins to which from it run our narrow arms (as of the ends of cross-stripes), one on each side of the center being prominent. Like the other species. Mandibles 4-dentate, the teeth nearly equal. Postmarginal vein subequal to the stigmal.

One female, Wellington, Kansas, E. G. Kelly.

Type.—Cat. No. 20837, U.S.N.M., the female on a tag, a hind leg and a fore wing on a slide.

EMERSONELLA FUSCIPENNIS, new species.

Female.—Similar to the genotype but the abdomen is more depressed and bears a short petiole, the lateral carina is a little more mesad, only the cephalic tibia is entirely pale, the fore wing is dusky to apex from the distal half of the marginal vein, the hind wings are lightly dusky, the mandibles are 4-dentate, the club is subequal to each of the other flagellar joints (excluding pedicel), not distinctly longer, the funicle joints a half longer than wide. Also, the pronotum is distinct. Head finely sculptured beneath the antennae.

One female, Turrialba, Costa Rica (Schild and Burgdorf).

Type.—Cat. No. 20838, U.S.N.M., the thorax on a tag, the head, a pair of wings, and a hind leg on a slide.

ACHRYSOCHARIS CAMILLI, new species.

Female.—Length, 0.85 mm.

Agrees with the description of (*Derostenus*) *Achrysocharis fullowayi* (Crawford) but the fore wings bear a distinct substigmal cross-stripe and the proximal two thirds of the scape is pale. Mandibles tridentate. Flagellar joints more or less subquadrate. Densely, finely punctate (glazed). Parapsidal furrows complete. Postmarginal vein shorter than the stigmal, the marginal fringes very short. Ring-joint very short.

Five females reared from an *Agromyza* on alfalfa, Elkpoint, South Dakota, July 27, 1916, C. N. Ainslie.

Types.—Cat. No. 20826, U.S.N.M. The females on a tag and a slide.

Mr. Gahan has identified these specimens as *fullowayi* of Hawaii but because of the differences pointed out and the different localities, it is wiser, I think, to keep the two separate. But I have only seen the description of *fullowayi* not the type. It should have a concolorous scape and a substigmal spot.

RHICNOPELTOMYIA MARYLANDI, new species^F

Female.—Length, 1.00 mm.

Differs from *marylandensis* in that there is but the suostigmal spot on the fore wing, the postmarginal vein is subequal to the stigmal, the coxae are metallic except at apex and the hind femur so laterad between base and middle but not along the margins; the mandibles bear larger teeth, are bidentate only, the first tooth largest. From *Achrysocharoides* in having the third ring-joint large, the two funicle joints are twice longer than wide, longer than the pedicel, the club

is acuminate, the substigmal spot small and so on. Differs from *Achrysocharis camilli* in the fore wings, mandibles and so on. Scape white at proximal half. (Head as in *Pleurotropis*.)

One female, Glenddale, Maryland, woods in August.

Type.—Cat. No. 20828, U.S.N.M., the female on a tag, a head on a slide.

RHICNOPELTOMYIA CARLYLEI POETA, new variety.

Female.—The same as *carlylei carlyei* but of the head only the clypeus is yellow, the abdomen is dark brown, the legs are dusky black except the knees, tips of tibiae and the tarsi, and the antennae are dusky except apex of scape and pedicel, more or less. Types compared.

From one female, Chevy Chase Lake, Maryland, April 24, 1915.

Type.—Cat. No. 20856, U.S.N.M. The female on a tag, the head on a slide.

ACHRYSOCHARELLA SILVIA Girault.

Achrysocharella silvia GIRAULT, Two New Achrysocharellae, 1917, p. 1.

Female.—Length, 1.20 mm.

Differs from *Derostenus punctiventris* Crawford, in that there are two ring-joints (funicle 1 is subquadrate and a little shorter than 2), the scape is white at proximal half and the substigmal spot is much more distinct, reaching nearly to the caudal wing margin. The body is stouter and the cephalic tibia is black ventrad. Annulus near base of middle and caudal tibiae, distinct. Parapsidal furrows complete. Mandibles tridentate. Types compared.

From one female, Glenddale, Maryland, April, in the woods.

Type.—Cat. No. 20827, U.S.N.M., the specimen on a tag, the head on a slide.

ACHRYSOCHARELLA PARTIAENEICEPS Girault.

Achrysocharella partiaeneiceps GIRAULT, New Eulophidae, 1917, p. 1.

Female.—A little smaller than *Rhichnopeltomyia carlylei* and differing from it as follows: The abdomen as in the variety *poeta* of that species; the ocellar area and the upper half of the occiput are bright metallic green (the ocellar area large, so that the vertex is metallic except a narrow cross-stripe along the occipital margin and which connects with a similar yellow line along the occipital edge of the eye); the legs are golden yellow except the caudal coxa; the propleurum is all metallic; the antennae are yellow except the scape above and the pedicel at base broadly; the two ring-joints are large, the pedicel only slightly longer than wide; the funicle joints are subequal, subquadrate; the terminal nipple of the club is minute and like a "bud," not spine-like and distinct; and the post-marginal vein is distinctly longer than the stigmal, *subelongate* (both veins short in *carlylei*, the postmarginal very short). Parapsidal furrows complete. Mandibles tridentate, apparently not finely serrate within as in *carlylei*.

From two females, Hillmead, Prince Georges County, Maryland, woods.

Type.—Cat. No. 20834, U. S. N.M. The females on a tag, a head on a slide.

SYMPIESOMORPHELLEUS MEDIOLINEATUS, new species.

Female.—Similar to *nigriprothorax* Girault but of the prothorax only the meson very broadly dorsad and the upper edge of the cephalic face is black, there is a black area at meson of cephalic margin of scutum, longer than wide, irregular one on the axilla from a little laterad of the middle of its cephalic margin, the dorsal thorax laterad of the postscutellum is black; the propodeum is black except rather broadly along the meson (more broadly distad), leaving the median carina entirely free of black; and the abdominal markings are more distinct. Thus very similar to *californicus* but aside from the entirely black prothorax in that species, here the distal fourth of the abdomen above is black (there is a narrow cross-stripe just preceding this black, too, but in *californicus* this stripe is absent, the median stripe not quite reaching the apex), the median stripe of the abdomen is complete and more robust, the head (except the granulate clypeus) is glabrous (not scaly) as is also the entire dorsal thorax. Otherwise very much like *californicus*. Mandibles 8-dentate. Scape more or less pale at extreme base.

From the woods, one female, Glenndale, Maryland, October 6, 1916.

Type.—Cat. No. 20640, U.S.N.M., the female on a tag, the hind tibiae and the head on a slide.

CHRYSONOTOMYIA AURIPUNCTATUS Ashmead.

Genotype.

The head is missing but the body is like the Australian *Achrysocharis grandis* Girault and the species is undoubtedly an Omphaline. The generic description does not apply at all. Type examined.

HOPLOCREPIS ALBICLAVUS Ashmead.

Genotype.

Head (cephalic aspect) elliptical (the axis transverse), the round eyes forming the poles, the head about twice wider than long (excluding the clypeus which projects, the antennae inserted a little below the middle but much above the ventral ends of the eyes, the cheeks distinct, their aspect nearly ventral; scrobes short. Ocelli in a triangle. One short ring-joint, funicle 4-jointed (club not seen). Parapsidal furrows complete, distinct, not reaching pronotum, the parapsides shortened and rather humped cephalad. Scutum with a sharp median carina, abbreviated at each end. Scutellum with its disk or dorsal aspect sharply margined except at base and with a Y-shaped carina along the meson formed by two elbowed carinae, the prong distad, no grooves, the space between the carinated margins and the central carina honeycombed. Propodeum glabrous,

with a pair of very narrow, long median carinae and a lateral carina. Petiole a little over twice longer than wide, with the carinae longwise (dorsal aspect). Segment 2 of abdomen occupying a little over a third of the surface, 3 half its length (that of 2), the others short. A tuft of black hairs at the distinct break of the submarginal vein, the latter as long as the long marginal, the stigmal of moderate length, long for the tribe, not sessile, a little shorter than the postmarginal.

The male is similar but has a very slender flagellum, its funicle joints (4) nodular at base, their slender portions not twice the length of the more or less ovate nodules, the club solid but apparently 2-jointed by a constriction a little before its middle, its terminal spine distinct, the club somewhat longer than the funicle joints, its two parts and the funicular nodules clothed with long silky hairs. Ring-joint in the male obsolete, the pedicel smallest. Male antennae 7-jointed.

From a pair from the West Indies and identified by Ashmead. Description of female thorax, abdomen, wing and caudal leg from the type of *H. grenadensis* Howard.

NEOMPHALOIDELLA FUMIPENNIS Girault.

Neomphaloidella fumipennis GIRAULT, Chalc. Nov. Marilandensis, 1917, p. 2.

Female.—Length, 1.25 mm.

Dark metallic green, the knees, tibiae, tarsi (except last joint) and antennal scape (except above), golden yellow; fore wing distinctly infuscated from near the base of the marginal vein distad to the length of the stigmal vein distad of the apex of the latter, the infuscation fading caudad. Head and body with the usual uniform sculpture, the propodeum with a flat median carina and no others, the spiracle moderately small, rounded; a sparse line of setae along the lateral margin of the scutum. Stigmal vein elongate. Mandibles tridentate. Abdomen usual. Second two ring-joints very short, the pedicel nearly twice longer than wide, shorter than funicle 3; funicle 1 longest, over twice longer than wide, 2 and 3 subequal, each about twice longer than wide, longer than any club joint; club with a distinct terminal spicule.

One female. Swept from woody fields, Glenndale, Maryland, June 14, 1916.

Type.—Cat. No. 20444, U.S.N.M., the female on a tag, the head and a fore wing on a slide.

NEOMPHALOIDELLA IXTLILXOCHITLI, new species.

Female.—Length, 0.90 mm.

Black and scaly, the scape and coxae white, the distal two club joints suffused with white, the following parts yellow: A narrow loop from antenna to antenna, ventrad legs (the middle and caudal femora

and tibiae more or less dusky) and a little over basal fourth of the abdomen, except the lateral margins. Fore wings hyaline but bearing a conspicuous, moderately larger, round fuscous spot in the middle of its blade, suspended from the apex of the stigmal vein. Pedicel and funicle 1 elongate, the former about thrice longer than wide at apex, clavate, a little longer than funicle 1 which is thrice longer than wide; 2 elliptical oval, a half longer than wide, wider than 1; 3 oval, a little shorter than 2. Club ovate, about as long as the pedicel excluding the distinct terminal spines which is as long as its third joint. Propodeum rugulose yet with a distinct median carina, the spiracle moderately small round, its own diameter from the cephalic margin. Mandibles tridentate. No noticeable punctures on thorax but scattered minute ones occur.

From one female, Cordoba, Vera Cruz, Mexico (Dr. A. Fenyes).

Type.—Cat. No. 20857, U.S.N.M., the female on a tag, the head and a fore wing on a slide.

TETRASTICHUS FASCIATUS Ashmead.

The color is golden yellow with five narrow cross-stripes on the abdomen; the few punctures along lateral margin of scutum very minute, setigerous. Propodeum with no lateral carina, very short, more so at the meson, the spiracle oval. Scutellum with two, long black setae along the lateral side of the first or mesal groove distad of middle. Funicle 1 twice longer than wide, 3 somewhat shorter, subequal to the pedicel. Short "stylus" of abdomen black. Forewings broad. A well-marked species, the club bearing a spicule at apex. There are three ring-joints, the third short.

Seven females compared with the types and reared in the type locality from *Cecidomyia manihot* (F. Watts).

OPHELINOIDEUS JAPONICUS Ashmead.

Genotype.

Antennae inserted somewhat below the middle of the face but above the ventral ends of the eyes, 9-jointed with two ring-joints, the club 2-jointed, funicle 1 elongate. Mandibles stout, 5-dentate, the inner three teeth feeble. Caudal tibial spurs double, stout. Club with a minute terminal nipple, about equally divided. Marginal vein distinctly shorter than the broken submarginal, over twice the length of the large stigmal, the postmarginal longer than the stigmal. Form as in *Secodella* but ciliation of the forewing normal. Parapsidal furrows deep, complete. Scutellum simple, rectangular. Propodeum with a strong, acute median carina only, the spiracle elliptical, large, cephalad. Body strongly scaly. Original description otherwise correct but the tibiae and scape are reddish and the forewing bears a fuscous spot, oblique and small, from the base of the marginal vein and besides are lightly stained centrally, especially cephalad.

From the types in the United States National Museum.

COMEDO NEOMEXICANUS, new species.

Female.—Similar to *orgyiae* Fitch but the orange marking on the base of the abdomen is very much larger, occupying half of the dorsal surface except for a small triangle at meson at base. In *orgyiae*, it is a cross-stripe (not very broad) a little out from base. Median carina of propodeum distinct in both, no lateral carina. In *neomexicanus*, the abdomen ventrad is orange only for basal fourth except along each margin (ventral aspect). Funicle 1 over $2\frac{1}{2}$ times longer than wide, much longer than the pedicel. Wings hyaline.

Many females from foliage of cottonwood, Roswell, New Mexico, (R. J. Fiske), August 14, 1916.

Types.—Cat. No. 20603, U.S.N.M., four females on tags, a head on a slide.

In this genus the mandibles are weak, edentate, subacute at apex, somewhat as in *Euplectrus*. In the analysis of the species printed in Proceedings U. S. National Museum, (vol. 43, 1912, p. 186, at 5,) the words "Lateral carina" in both paragraphs should read "Median carina."

COMEDO SMERINTHI Ashmead.

One female, September 24, 1916, Glenndale, Maryland.

EPITETRASTICHUS VARICORNIS Girault.

Epitetrastichus varicornis GIRAULT, Descr. Hym. Chalc. Var. cum Observ., 1917, p. 4.

Female.—Length, 1.00 mm. Stout, the abdomen short, larger than the thorax aeneous black, the wings hyaline, the venation black; tips of tibiae (all of cephalic tibiae nearly), knees and tarsi dull yellow. Club of antennae silvery white, the funicle joints pale ventrad, also the pedicel except above at base. Sculpture usual; a line of weak punctures along the lateral margin of the scutum. Propodeum and abdomen scaly, the former with a strong median carina and no others, the spiracle small, round. Scape compressed. Pedicel subequal to funicle 2, funicle 1 about twice longer than wide, 3 quadrate; club short, ovate, its terminal nipple slight; club 1 hemispherical, twice the width of funicle 1. Mandibles tridentate. A very short post-marginal vein, the stigmal of moderate length.

From one female taken in open woods, May 15, 1916. Prince Georges County, Maryland.

Types.—Cat. No. 20858, U.S.N.M., the female on a tag, the head on a slide.

EULOPHUS BORROWI Girault.

Eulophus borrowi GIRAULT, Descr. Hym. Chalc. Var. cum Observ., 1917, p. 9.

Female.—Length, 2.00 mm.

Dark metallic green, the wings hyaline, the scape, tegulae and legs (except the coxae, caudal femora lightly, other femora more or less and apex of caudal tibiae), pale yellowish. Head and thorax densely,

scaly punctate (the head very finely so), the propodeum scaly, also the abdomen except segment 2. Scutellum with a thin carina on each side in the site of the usual lateral groove. Propodeum tricarinate, the spiracle large, round cephalic. Marginal vein a little over twice the length of the stigmal, the postmarginal distinctly longer than the stigmal. Pedicel somewhat longer than wide at apex. Funicle 1 over twice longer than wide, 2 and 3 large, subquadrate; club ovate, its three joints distinct, also a small terminal spine. First ring-joint very short. Mandibles 5-dentate.

Two females Placer County, California, August.

Types.—Cat. No. 20860, U.S.N.M., the specimens minutien-mounted, a head and caudal legs on a slide.

DIMMOCKIA MARYLANDICA, new species.

Female.—Length, 1.05 mm., rather small.

Very dark metallic green, the wings hyaline, the venation dusky, the legs black except the white knees and the yellowish trochanters, proximal three tarsal joints, apex of tibiae broadly and distal two-thirds of cephalic tibiae; base of body of the scape pale. Pedicel somewhat longer than funicle 1 which is cupshaped and as long as wide, the other three joints subequal, nearly twice wider than long; club nippleless, divided a little before middle. Mandibles 8-dentate. Antennae inserted on a level with the ventral end of the eyes. Clypeus with a convex distal margin. Head and thorax scaly-punctate, the propodeum glabrous, with a strong median carina and smooth lateral sulcus, the spiracle moderate, elliptical-oval. Propodeum with a short neck. Parapsidal furrows complete, five lines. Pronotum subtransverse-quadrate, half the length of the scutum, the latter more coarsely sculptured than the scutellum. Abdomen sessile, flat above, oval, segment 2 occupying half of the surface, glabrous, the other segments scaly. Abdomen a little wider but no longer than the thorax. Marginal vein nearly thrice the length of the long stigmal, the latter distinctly shorter than the postmarginal.

One female, Glenndale, Maryland, October 4, 1916.

Type.—Cat. No. 20861, U.S.N.M., the female on a tag, hind tibiae and head on a slide.

Genus ASTICHOMYIA Girault.

Astichomyia GIRAULT, Descr. Chalc. Var. cum Observ., 1917, p. 4.

Female.—Like *Achrysocharis* Girault except that the scape is greatly flattened, the middle of its lower margin being the summit of the convexity. Club with a terminal spine nearly as long as the joint bearing it. Postmarginal vein subequal to the stigmal. Mandibles bidentate, the second tooth much shorter. Parapsidal furrows represented by impressed areas caudad. Propodeum noncarinate.

ASTICHOMYIIA LATISCAPUS Girault.

Astichomyiia latiscapus GIRAULT, Descr. Chalc. Var. cum Observ., 1917, p. 4.

Genotype.

Length.—1.00 mm.

Dark metallic green, the wings hyaline, the knees, tibiae (except middle tibiae shortly at base) the tarsi white, also the pedicel; rest of antennae black. Scaly punctate, the propodeum glabrous. Funicles 1-2 subequal, somewhat longer than wide and the pedicel, the club joints shorter, 2 quadrate. Ring-joint minute.

One female reared with some tetrastichines from small spherical galls on avocado leaves, Tampico, Mexico, January, 1914 (D. L. Crawford).

Types.—Cat. No. 20835, U.S.N.M., the female on tag; the head, a pair of wings, a cephalic leg, and a middle tibia on a slide.

DIAULINOPSIS CARLYLEI (Girault).

Diaulinopsis carlylei GIRAULT, Descr. Hym. Chalc. Var. cum Observ., 1917, p. 6.

Female.—Length, 1.30 mm.

Dark metallic green, the wings hyaline; apex of femora rather broadly, knees cephalic tibiae excepting for a narrow cinctus just out from base about as long as its distance from base, basal half of middle tibiae excepting for a similar basal cinctus, apex very narrowly of middle and caudal tibiae and a little less than proximal half of caudal tibiae (except from the narrow cinctus near base), yellowish white; tarsi dusky, whitish at base. Body finely scaly reticulate. Trace of a very delicate median carina on the propodeum, the spiracle round, not at cephalic margin. Postmarginal vein nearly two-thirds the length of the marginal, longer than the rather long stigmal. Funicle 1 twice longer than wide, 2 somewhat shorter; club quadrate, the others a little shorter, 3 with a distinct nipple whose proximal half is thicker than the other and which is distinctly shorter than joint. Pedicel a little smaller than joint 3. Mandibles 5-dentate. Scape cylindrical, not long. Agreeing with the generic description.

Described from one female in the United States National Museum from Alameda County, California. (Coquillett).

Types.—Cat. No. 20862, U.S.N.M., the specimens on tags and a slide bearing a caudal leg and a head.

Family EUCHARIDAE.

ISOMERALIA AZTECA, new species.

Female.—About half the size of *coronata* Westwood (a specimen in the United States National Museum from Brazil) and agreeing with that species except as follows: The distal third of the abdomen is rufous; the scutum is more coarsely cross-striate; the vertex and

scrobes are less uniformly densely pin-punctulate, the face also, the latter with fine cross-striation. Otherwise the same. Thorax with a median sulcus from about the center of the scutum to apex of scutellum, thinner on the scutellum. Axillae rectangular and face to face (forming a rectangular sclerite between scutum and scutellum). Upper frons with a conspicuous obtuse tubercle on each side of the scrobes; the eyes conical or like mammae. Petiole about thrice longer than wide, coriaceous, its lateral margin carinated. Antennae 16-jointed, the club long solid, no ring-joints; funicle joints all wider than long except 1, which is slightly longer than wide; pedicel small, club ovate. Male antennae 11-jointed, the eight funicle joints subequal, twice wider than long, each with a long branch of equal length from the same side, the club quadrate, with a smaller branch from its side and another from its apex. Pedicel cup-shaped, longer than any following joint.

From two males and two females on tags. Tampico, Mexico, June; and a male from Guatemala (Schwarz and Barber).

Types.—Cat. No. 20863, U.S.N.M., the first four specimens.

Family EURYTOMIDAE.

EURYTOMA PHOEBUS, new species.

Female.—Like *vagabunda* but the propodeum on each side of the median channel is densely silvery pubescent and the median basin at about distal half is distinctly carinated at lateral margin but this carina is straight not curved at its distal fourth as in *vagabunda*. Also the tegula is reddish yellow only at apex. Types compared.

From two females reared from *Elymus canadensis* May, Elk Point, South Dakota (C. N. Ainslie).

Types.—Cat. No. 20864, U.S.N.M., the specimens on tags.

EURYTOMA PHOENIX, new species.

Female.—Like *stigma* Ashmead but at once distinguished in having a distinct abdominal petiole which is over twice longer than wide, as long as the caudal coxae (in *stigma*, wider than long) and the median channel of the propodeum is double except at apex (distad) where it terminates in a large, quadrate fovea; also a fourth longer than *stigma*. Tibiae yellow, the caudal tibiae nearly so, more or less dark. Abdomen above polished, the petiole densely scaly-punctate. Compared with type of *stigma*. Funicle 1 nearly twice longer than wide. The male has the caudal tibiae entirely black, the abdominal petiole much longer than the caudal coxa, densely, finely punctate; funicle 5-jointed.

Described from several males and females taken from an orchid, San Mateo, California (F. Maskew).

Types.—Cat. No. 20630, U.S.N.M., two males, three females on tags.

EURYTOMA NEOMEXICANA, new species.

Female.—Like *succinipedis* Ashmead but a half smaller and differing in the following particulars: All the coxae are reddish yellow (but may be more or less blackish), the caudal and middle tibiae are black except at tips, the caudal femur may be black laterad and the middle are so above more or less; the tegulae are blackish; the head and thorax is not umbilicately punctate but only densely scaly (hence *Xanthosoma*) but the scutellum is reticulated, the lines raised, the propodeum rugulose, the median channel of the propodeum is double from a little over proximal third and no distinct basin is present (limited by a large V-shaped carina in *succinipedis*). Venation pale, the stigmal vein a little over half the length of the marginal, distinctly shorter than the submarginal; segment 5 of abdomen longest, not as long as 2-4 combined, the abdomen polished above, not much convexed, its petiole a little wider than long. Funicle 1 somewhat longer than wide. Funicle 1 nearly twice longer than wide, 5 wider than long; scape red at proximal half. Two caudal tibial spurs.

The male has the legs all reddish yellow but otherwise the same; scape with a convex hump ventrad a little distad of middle, the club solid and a little longer than funicle 1 which is nearly thrice longer than wide, 5 nearly twice longer than wide.

One male, three females, Koebele, New Mexico, in connection with *Isosoma* (V. L. Wildermuth).

Types.—Cat. No. 20627, U.S.N.M., the specimens on tags, antennae on a slide.

EURYTOMA POLONI, new species.¹

Female.—About half the size of *sysiolooides* Crawford and differing from that species notably in having segment 4 of the abdomen much longer than 5 of the other, as long as the preceding two segments united, the first segment 2, from dorsad rectangular (longer than wide), its lateral margins distinctly carinated; also the cephalic tibiae are more distinctly wholly reddish yellow while the flat, large propodeal basin has no paired channel at base in the other species and is not finely punctate but instead bears a median ruga and several radiating rugae from the apex of the median one, is scaly and laterad bounded by a distinct, straight lateral carina (it is somewhat wider than long). Differs from *browni* Crawford similarly as to size and has not the markedly compressed abdomen present in that species and the propodeal basin is not limited laterad by the marked ridge as in *browni* and bears the longitudinal rugae (not present in that species). Differs from *banksi* Ashmead in having the caudal tibia black to tip

¹ A detailed description of this species is given by Otones y Quesales in Phil. Agric., vol. 7, 1918, p. 24. In this publication the species is accredited to Girault, but the description is based on specimens in the Philippine Agricultural collections, and the type should be selected from these. S. A. ROHWER.

or nearly; *browni* also has segment 4 longest but much shorter than in *poloni* and wholly polished-direct dorsal aspect, *banksi* has a paired median channel on the propodeum and segment 5 of the abdomen is longest.

Black except the bulla of scape, knees, tips of tibiae and the tarsi, the latter whitish. Umbilicately punctate. Venation pale, the stigmal vein slightly shorter than the marginal, the latter subequal to the postmarginal. Abdominal petiole very short, the abdomen usual in shape. Body as in *Bruchophagus funebris*. Abdomen glabrous dorsad except the proximal third of segment 4 and all of the small segment 5. A button-like tubercle at base of abdomen on each side of the petiole. Pedicel globular; funicle 1 a half longer than wide, the others moniliform; club 2-jointed, 1 a little wider than long. Types compared.

The male is similar except for sexual characters. Its antennae are similar in segmentation but the funicle joints are exercised and with whorls of long hairs, the club about equally divided.

Described from numerous pairs reared from the larvae of an *Agromyza* in bean roots. Los Baños, Luzon, Philippines (C. F. Baker). February, 1916.

Types.—Cat. No. 20865, U.S.N.M. Two males, five females on tags, male and female antennae, female caudal legs and fore wings on a slide.

The species is respectfully dedicated to Marco Polo.

EURYTOMA ILLINOIENSIS, new species.

Female.—Differs from *maculipes* in having the scape black except at base, the caudal tibiae are less broadly reddish at apex, the postmarginal vein is subequal to the stigmal, segment 5 of the abdomen somewhat shorter, funicle 1 is somewhat longer, while the propodeum on each side of the meson is coarsely rugulose, has no distinct basin and the median channel is deep, simple, not distinctly bifoveate at base. From *stigni* Ashmead in that the median channel of the propodeum does not enlarge at base and is but feebly bifoveate there, and the stigmal and postmarginal veins are shorter, the venation paler. Closely allied with *stigni* Ashmead. Funicle 1 over twice longer than wide at apex; club 2-jointed, 2 is long as funicle 1.

Described from two females, Urbana, Illinois. Reared in connection with *Isosoma*. (R. D. Glasgow).

Types.—Cat. No. 20629, U.S.N.M. Two females on tags, caudal tibiae and an antenna on a slide.

Also, females reared from *Elymus*, Taber, South Dakota (C. N. Ainslie); in one of these the middle tibia was black dorsad only.

EURYTOMA PATER, new species.

Female.—Length, 1.80 mm.

Black, the wings hyaline, the venation dark brown, proximal third of scape yellow; cephalic legs, middle legs except most of the coxae and the dorsal aspect of middle tibia, caudal knees, tips of tibiae and the tarsi reddish. Entire ventral aspect of scape more or less reddish. Face with a silvery pile; of the usual sculpture. Postmarginal vein distinctly shorter than the marginal, somewhat longer than the stigmal. Petiole of abdomen wider than long, the abdomen shaped somewhat as in *Isosoma*, polished, segment 5 as long as 2-4 combined or nearly; scaly sculpture sparse and light. Propodeum coarsely rugulose, the median basin indefinitely limited, finely punctate in a small area centrally against the distinct median channel (but this area is often much coarser), the latter double for nearly half its length. Flagellum slender; funicle 1 somewhat over thrice longer than wide, 2 over twice longer than wide, 5 a half longer than wide. Club 2 as long as funicle 1. Allied with *auriceps*.

Described from two females reared in connection with *Isosoma*, Youngstown, Ohio (type) and Penn Yan, New York, (W. J. Phillips). Also at Auburn and Waterloo, New York; and Tulsa, Oklahoma.

Type.—Cat. No. 20628, U.S.N.M. A female, from Ohio, on a tag with a slide bearing a caudal leg and an antenna.

Also a female from Charlottesville, Virginia (W. T. Emery). In this specimen the caudal femur was red except above centrally, the coxa and tibia black.

EURYTOMA HEGELI, Variety MAGA, new variety.

Female.—Of the same stature and so forth as *hegeli* but somewhat smaller and differing as follows: The marginal vein is longer and more slender, the median black of the pronotum does not spread distad to any extent, the parapsides are black except laterad, the lateral and distal margins of the scutellum are narrowly black (sometimes broadly), the black median line of segment 5 of the abdomen is of uniform width nearly, that of 6 is thicker at apex while 7 has also the meson black. Types compared.

From several females (only one type) in the United States National Museum on tags labeled "2972° June 14, 1883."

Type.—Cat. No. 20866, U.S.N.M. One female on a tag.

EURYTOMA BOLTERI Riley PARVA Phillips.

Eurytoma bolteri, var. *parva* PHILLIPS, U. S. Dept. Agr. Farm Bull., 1006, 1913, pp. 11, 14, fig. 17. [Variety here accredited to Girault.]

Both sexes from Youngstown, Ohio. Three specimens were very much smaller than the typical form and the scape was sometimes wholly black, also the marginal vein was slightly longer. Otherwise,

however, they agreed with the types of the typical form but may be distinguished by having the median channel of the propodeum single at distal fourth. But this varies somewhat in the typical form. Of the latter, three females, Falls Church, Virginia (R. A. Cushman), from lepidopteron galls on *Solidago*.

Also the variety at Front Royal, Virginia, Holliday, Utah, and Waterloo, New York.

NEORILEYA FLAVIPES Ashmead.

The parapsidal furrows are complete. From the type.

DECATOMA FLAMMINNEIVENTRIS, new species.

Female.—Length, 2.45 mm.

Reddish yellow, the head and legs honey yellow; ocellar area narrowly, occiput circularly above the center, a triangular spot at meson of caudal margin of pronotum, median line of scutum broadly, scutellum except the lateral and caudal margins narrowly, cephalic margin of propodeum except laterad, median channel of same to the neck and petiole at apex, black. Substigmatal blotch of fore wing round or ovate, reaching only about a third of the way across. Funicle and club dark brown (in one specimen). Umbilicately punctate, moderately coarsely so, the propodeum rugose with a distinct median channel. Abdomen shining, somewhat compressed, segments 2, 4 and 5 subequal. Pedicel a little longer than funicle 1, over twice longer than wide at apex. Eyes naked.

The male has the spot on the pronotum larger and connected along the meson with the black cephalic face of prothorax, the axillae are tipped with black mesad, the much longer petiole is black above except marginally, while the caudal coxa bears an elongate spot from base, lateral aspect.

Two pairs, parasitic upon *Prodoxus decipiens*, Fort Collins, Colorado, September 19, 1893 (C. F. Baker).

Types.—Cat. No. 20867, U.S.N.M. The above specimen on tags.

DECATOMA FLORIDA, new species.

Female.—Similar to *marilandica* but the mouth is narrowly yellow, the coxae black, the legs lemon yellow and the propodeum has only the dorso-cephalic corner widely yellow; also the tegula is yellow. Segment 3 of abdomen distinctly shorter than 2 or 4, the abdomen glabrous, otherwise as in the named species but the median channel of the propodeum has a large round fovea at base, the basin less rugulose.

Two females, Jacksonville, Florida (W. H. Ashmead).

Types.—Cat. No. 26868, U.S.N.M. Two females on tag.

DECATOMA MICHIGANICA, new species.

Female.—Length, 2.10 mm.

Honey yellow, the fore wings with but a minute substigmal spot, the body marked with black as follows: Ocellar area, upper occiput (in the shape of a crescent at the vertex only), cephalic face of pronotum except laterad, a minute dot (one specimen) at meson of pronotum, cephalad; a triangular area from cephalic margin of scutum (except far laterad) to middle, thence acuminate to distal margin, caudal margin of pronotum across the meson, disk of scutellum in the form of a miter (clavate and near its widest part-distad with acute, toothlike lateral projections (one from each side); cephalic margin, medial basin and spiracular line of propodeum, petiole and median line of abdomen to middle of segment 6, very narrowly on 6, terminating in a dot, more broadly elsewhere and spreading transversely at the end of each segment (notably, the first three); pedicel above at base black. Umbilicately punctate. Abdomen compressed, the petiole twice longer than wide, segment 4 longest, 5 and 2 subequal; abdomen glabrous.

Basin of propodeum not large, with a single, foveate median channel through it. Pedicel twice longer than wide at apex, somewhat longer than funicle 1. An elongate black spot from base, mesad, caudal coxae.

From two females, Agricultural College, Michigan.

Type.—Cat. No. 20869, U.S.N.M. The specimens on tags.

DECATOMA AUTUMNALIS, new species.

Female.—Length, 1.45 mm.

Honey yellow, the wings hyaline, the head brownish, upper scrobes the ocellar area, upper occiput, cephalic margin mesad and median channel of propodeum, caudal tibiae dorsad except at apex, petiole meson of segment 2 of abdomen to middle and caudal margin of segments 2-4, dorsal aspect, black. Abdomen compressed, segment 5 longest. Antennae brown. Otherwise as in *michiganica*.

From one female, Mountain View, California (E. H. Ehrhorn), September.

Type.—Cat. No. 20870, U.S.N.M. The female on a tag.

DECATOMA COMPRESSA, new species.

Female.—Length, 2.45 mm.

Dull honey yellow, the substigmal blotch subobsolete (*Eudecatoma*), the following parts black: Scape dorsad narrowly, pedicel above (except at apex), ocellar area, upper occiput, face of pronotum, small triangle at center, cephalic margin of the scutum, narrowly connected with scutellum along the meson, cephalic margin and the median

channel (save at apex) of propodeum, petiole, median line narrowly and acuminately of segment 2 of abdomen (but capitate at apex), same of 3 rather broadly (but with a pair of lateral projections from each side), of 4 uniformly to middle where there is a tooth from each side, thence triangularly to apex; and of 5 narrowly and acuminately to middle or more; a minute dot mesad, base of scutellum. An elongate spot mesad from base, caudal coxa. Abdomen ovate (lateral aspect), compressed strongly, segment 5 largest, the petiole twice longer than wide. Propodeum with its median channel widening much distad.

A female, Placer County, California.

Type.—Cat. No. 20871, U.S.N.M. The female minutien-mounted.

BRUCHOPHAGUS NOCTUA Girault.

Bruchophagus noctua GIRAULT, New Chalcid Flies, 1917, p. 1a.

Female.—Similar to *functris* (Howard) but the funicle and club are bright yellow (the scape and pedicel black), the segments of the abdomen are longer, 4 is as long as 2 (not distinctly shorter). Otherwise the same. Types compared.

One female associated with *Languria mozaridi*, Tempe, Arizona, August 1912. (V. L. Wildermuth.)

Type.—Cat. No. 20841, U.S.N.M. The female on a tag, a hind leg, antennae and a fore wing on a slide.

Family PTEROMALIDAE.

PARATRIGONOGASTRA STELLA, new species.¹

Female.—Length, 1.50 mm.

Differs from the genotype in bearing on the propodeum a narrow but distinct "lateral carina" directly from the spiracle and with an equally narrow sulcus along its mesal side; parapsidal furrows are about half complete and segment 2 of the abdomen somewhat longer than 3 (in one female four segments after the long segment 4, the middle of these very transverse). The club is solid. Abdominal petiole about twice the length of the caudal coxae.

Like the genotype in coloration but the pedicel is concolorous with the scape yet darker above, the ring-joints yellow. Funicle 1 is about twice longer than wide, 6 quadrate, caudal coxae polished, shining dorsad. Propodeal spiracle slit-like, much longer than wide. Otherwise as in genotype with which it is closely allied. Clypeus with a distinct, rather stout tooth on each side of the meson, delicately striate (radiately).

Described from four females reared from *Agromyza* larva on bean roots, Los Baños, Luzon, Philippines (C. F. Baker), February, 1916.

¹This species is described in detail, but accredited to Girault, by Otones y Quesales (Phil. Agric., vol. 7, 1918, p. 24) and the type should be selected from the specimens in Philippine College of Agriculture.—S. A. ROHWER.

Types.—Cat. No. 20872, U.S.N.M. Three females on tags, a head, fore wing and caudal legs on a slide.

TRIPOLYCYSTUS CRYPTOGNATHAE, new species.

Female—Length, 1.05 mm. Short, rather stout.

Dark metallic green, the wings hyaline, the venation dusky, the tibiae, tarsi, knees, scape, pedicel, ring-joints, and funicles 1-3 brownish yellow; femora washed with metallic, coxae concolorous. Differs from the genotype structurally in that the head is wider than the thorax but only a little so; the scutellum bears a distinct cross-carina before apex; the propodeum is conical, short at the small round, cephalic spiracle and with no spiracular sulcus; segment 2 of the abdomen is somewhat longer, occupying nearly half the surface. Clypeus projected somewhat as in *Tridymus* but its apical margin is concaved across the meson.

Head and thorax reticulate-punctate. Propodeum punctate. Caudal tibial spur long and slender. Pedicel a little longer than funicle 1 which is subquadrate. Flagellar joints with scored white marks running their length from near base (like flattened white setae). Club with no terminal nipple, no wider than the thorax. Ring-joints subequal, scape slender, long. Male the same but smaller.

From numerous pairs reared from pupa of *Cryptognatha nodiceps* Mskl., July, 1914 (F. W. Urich). Trinidad.

Types—Cat. No. 20873, U.S.N.M. One male, three females on tags and a slide bearing male and female head and female caudal legs.

Genus ARTHROLYTUS Thomson.

KEY TO NORTH AMERICAN SPECIES.

Based on the female types. The species *apatelae* (*pinplae*) Ashmead belongs rather to *Dibrachys*; it bears no spiracular sulcus. The genus *Arthrolytus* is characterized by the short postmarginal vein and insertion of the antennae (as regard *Pteromalus*).

Scape concolorous: apex of pedicel, funicle and club fulvous. Ring-joints unequal.

Coxae, femora and tibiae (except at apex) metallic. Clypeus produced, sinuate at apex, barely striate. Spiracular sulcus deep, distinct, elbowed, nonfoveate. Antennae inserted slightly above the ventral ends of the eyes, a little below the middle of the face. Propodeum with a short neck, tricarinate, the spiracle elliptical. Scutellum simple. A distinct sulcus on dorso-lateral aspect of the propodeum. Postmarginal vein subequal to the stigmal. Segment 2 of abdomen short, entire. Pedicel shorter than funicle 1. Mandibles 4-dentate.

.....*aeneoviridis* Girault.

The same exactly but more robust, the postmarginal vein slightly longer than the stigmal, the propodeal spiracle more linear and curved (reniform), the median carina of propodeum absent, the lateral carina distinct at the neck only, separated at base by a round fovea. Mandibles 3 and 4 dentate, the second tooth of the 4-dentate one, minute. Pedicel slightly longer than funicle 1. Legs entirely concolorous except tips of tibiae, knees, tarsi, and most of cephalic tibiae.

.....*kansensis*, new species.

ARTHROLYTUS KANSENSIS Girault.

One female reared from an apple leaf-skeletonizer or from a lacewing fly associated with the same. Riley County, Kansas, August (C. L. Marlatt).

Type—Cat. No. 20874 U.S.N.M., the female on a tag, a caudal leg on a slide.

DIBRACHYS METEORI Gahan.

This is a synonym of *Arthrolytus aeneoviridis* Girault. Types examined.

EURYDINOTA RUFIVENTRIS, new species.

Female—Length, 1.40 mm.

Like *Pteromalus* species but the clypeus hardly produced, its distal margin concave and less advanced than the obtuse projections on each side. Also the cheeks are distinctly shorter than the eyes. Abdominal petiole no longer than wide, reddish.

Dark metallic green, the wings hyaline, the venation dusky yellow, the legs except the concolorous lateral aspect of the coxae and the scape, pedicel and ring-joints, bright reddish yellow, the abdomen dark red except the base and apex and more narrowly, the lateral margins. Propodeum punctate, without a median carina nor spiracular sulci, the lateral carinae distinct. Like *Pteromalus archippi* Howard. Pedicel barely longer than wide, the funicle joints elongate, 1 nearly thrice longer than wide, 6 twice longer than wide. Post-marginal vein a little longer than the marginal, the long stigmal shortest of the three. Segment 2 of abdomen occupying over a third of the surface, twice the length of 3, the others transverse-linear, all segments entire; segments 2 and 3 glabrous. Neck of propodeum not abrupt. Mandibles spreading 4-dentate.

One female in the United States National Museum, Tifton, Georgia.

Type—Cat. No. 20875, U.S.N.M., the female on a tag, the head and caudal leg on a slide.

ENDOMYCHOBIOUS FLAVIPES Ashmead.

Genotype.

This species bears a distinctly petiolate abdomen, the petiole subquadrate.

POLYCYSTUS GIBBUS, new species.

Female.—Length, 1.15 mm.

Dark metallic green, the wings hyaline, the scape, apex and under sides of pedicel, pale yellow, the venation, tibiae, and tarsi white. Clypeus and lower face radiate-striate, the head and thorax reticulated, the lines raised, the propodeum scaly, distinctly tricarinate, the spiracular sulcus distinct, foveate, a short neck present. Propodeal spiracle moderate in size, oval. Petiole quadrate. Abdomen ovate, depressed, keeled beneath, as long as the thorax, segment 2

occupying somewhat over a third of the surface, its caudal margin straight, 3-6 subequal, short, Scutellum much convexed, as seen from the side, protuberant. Axillae large, a little separated. Clypeal sutures obsolete, the distal margin of the clypeus concave. Cheeks nearly as long as the eyes. Pronotum transverse-linear, the cephalic margin acute. Antennae inserted a little below the middle of the face, 13-jointed with two equal ring-joints, the pedicel subequal to funicle 1 which is somewhat longer than wide, 2 quadrate, 6 wider than long. Marginal vein a little longer than the postmarginal, a third longer than the stigmal. Mandibles 4-dentate. Club no wider than the funicle. Head (cephalic aspect), somewhat wider than long, distinctly wider than the thorax.

Three females, Algonquin, Illinois. (W. A. Nason.) These are the types of "*Epipteromalus algonquinensis* Ashmead."

Types.—Cat. No. 12726, U.S.N.M., the specimens on tags, a head and caudal leg on a slide.

SPALANGIA MUSCIDARUM STOMOXYSIAE Girault.

Differs from *muscidarum muscidarum* in having in this variety the central part of the caudal scutum laterad of the meson impunctate and the male has funicle 7 subquadrate; the pronotum is glabrous mesad only from caudad to near the cephalic margin.

SPALANGIA MUSCIDARUM TEXENSIS, new variety.

Male.—The same as *muscidarum stomoxysiae* Girault except that the vertex is glabrous and also the caudal scutum nearly, the punctures there absent excepting three in a triangle on each side against the parapsides caudad and the median lines which are very faint. There are no punctures cephalad of the cross-line on the scutellum. The axillae are practically impunctate in both forms.

Described from two males labeled "Hunter No. 2970 B. 18, Dallas, Texas, December 24, 1912. Parasite of *Stomoxys calcitrans*."

Type.—Cat. No. 20876, U.S.N.M. The above specimen on tags.

SPALANGIA RUGOSICOLLIS Ashmead.

Gainesville and Dallas, Texas, on *Stomoxys calcitrans* (W. D. Hunter.)

This is the *Spalangia muscae* MS. name of authors. I have the original specimen of *muscae* from Washington, District of Columbia, *Spalangia muscidarum* Richardson. Dallas, Texas, with the variety. There may be a few isolated punctures in the disk of the scutellum cephalad of the cross-line of punctures.

SPALANGIA MUSCARUM, new species.

Female.—Length, 3.00 mm.

Like *rugosicollis* Ashmead but the distal three fourths of the scutum (instead of distal half) is rugoso-punctate; also the cross-line of

punctures (the latter longer than wide) on the scutellum is distinctly farther cephalad from apex of the scutellum.

Described from one female (Accession No. 39589, Illinois State Laboratory of Natural History) reared from muscid puparia, Urbana, Illinois.

Type.—Cat. No. 20877, U.S.N.M., the specimen on a tag.

NASONIA BREVICORNIS Ashmead.

Often has the base of all femora concolorous.

Dallas, Texas.

Family **MISCOGASTERIDAE**.

TRIDYMUS CLAVICORNIS, new species.

Length, 1.70 mm.

Female.—Head (cephalic aspect) a little wider than long, the antennae inserted near the clypeus, strongly clavate and short, 12-jointed with two ring-joints, the first very short. Clypeus produced distinctly, highly convex, entire. Mandibles 4-dentate. Pronotum extremely short. Parapsidal furrows complete, deep. Scutellum with a distinct cross-suture before apex. Propodeum of nearly uniform length, distinct, moderately long, noncarinate, with five foveae between the round spiracles along cephalic margin. Abdomen conic-ovate, depressed above. Marginal vein a fourth longer than the submarginal which is somewhat longer than the long stigmal. Habitus of *Systasis*.

Dark metallic green, the wings hyaline, the legs except the last two pairs of coxae, the apex of the pedicel and the scape except along upper and lower margins, red. Flagellum fuscous. Funicle 5 over twice wider than long, a third wider than 1 and somewhat longer, 1 twice wider than long, much longer than the second ring-joint. Pedicel short but longer than any funicle joint. Scrobicular cavity obtuse, subglabrous, toward the sides with cross-striae. Club short ovate, without a nipple. Head and thorax densely scaly, the scutum with scattered thimble punctures (less distinct elsewhere).

From one female, Oxbow, Saskatchewan, Canada (F. Knab.).

Type.—Cat. No. 20829, U.S.N.M., the female on a tag, the head, hind legs, and a fore wing on a slide.

TRIDYMUS NIGRICLAVUS Girault.

Tridymus nigriclavus GIRAULT, Chalc. Nova Marilandensis, 1917, p. 2.

Female.—Length, 0.90 mm.

Dark metallic green, the wings hyaline, the knees slightly and the antennae (except the metallic scape, pedicel at immediate base above and the dusky club) light yellow. Funicle 5 a little the largest, quadrate, a little smaller than the pedicel; club at least three-fourths the length of the funicle. Antennae inserted near the clypeus, below

the eyes. Mandibles 4-dentate. Head and thorax reticulated uniformly, nonpunctate (a single small puncture middle of scutellum, laterad). Propodeum distinct, noncarinate, the minute round spiracle cephalad. Foveae along the cephalic margin of the propodeum minute, confluent. Cross-suture of scutellum, faint, delicate. Postmarginal vein subequal to the stigmal. Clypeus subtruncate, advanced. Ring-joints short, subequal.

A female, open woods, May, Glenndale, Maryland.

Type.—Cat. No. 20878, U.S.N.M. The specimens on a tag, the head and caudal tibiae on a slide.

Genus PARASYNTOMOCERA Girault .

Parasyntomocera GIRAULT, Chalc. Nova Marilandensis, II, 1917, p. 2.

Belongs to the Tridymini. Antennae inserted a little below the middle of the face, a little above the ventral ends of the eyes, 12-jointed with one ring-joint, the club 4-jointed, the last joint distinct, nipple-like. Mandibles 4-dentate. Marginal cilia of fore wing distinct, short. Postmarginal vein distinctly longer than the short stigmal, the latter about a third the length of the marginal, the angle between stigmal and postmarginal at base somewhat thickened. Parapsidal furrows well defined, complete. Propodeum with a median carina only, the spiracle very minute, round cephalad (about its own diameter from the cephalic margin). Abdomen ovate, not compressed, slightly larger than the thorax. Scape not long. Resembles a *Systasis*. Strigil present.

PARASYNTOMOCERA HILLMEADIA Girault.

Parasyntomocera hillmeadia GIRAULT, Chalc. Nova Marilandensis, II, 1917, p. 2.

Genotype.

Female.—Dark metallic green, the wings hyaline, the venation dark; base and tips of tibiae and the tarsi (except the last joint) white. Apex of scape pallid. Body scaly reticulate, the propodeum subglabrous. Scape compressed. Pedicel a little longer than wide, longer than any funicle joint; ring-joint narrowest, short; funicle 1 next shortest and narrowest, thrice the size of the ring-joint, twice wider than long; 2 cupshaped, nearly twice longer than 1, 3-5 subequal, no longer than 2 but somewhat wider. Club large, two-thirds the length of the funicle. Scutellum long, with four minute bristles in a square on about distal half. A pair of foveae (the lateral one laterad) at cephalic margin of propodeum between meson and spiracle.

Described from one female captured by sweeping in the forest, Hillmead, Prince Georges County, Maryland, May, 1916.

Type.—Cat. No. 20879, U.S.N.M. The specimen on a tag, the head and one of each leg on a slide.

TEROBIA FLORA, new species.

Female.—Length, 1.85 mm.

Metallic coppery (the legs except the coxae laterad and the antennae reddish yellow) and like the species of *Habrocytus* but the antennae are inserted in the middle of the face, the scrobes distinct, the propodeum with a median carina and a cross-carina distad of middle (laterad to a point opposite a basal fovea which represents the lateral carina) and rugae from the cephalic and caudal margin toward the cross-carina out as far from the meson as the site of the lateral carina (absent) and this space otherwise glabrous, no propodeal neck. Head and thorax with pubescence as in *Catolaccus*, the parapsidal furrows complete. Head and thorax evenly finely punctate, the scutellum simple. Segment 2 of the abdomen occupying about a fifth of the surface, its caudal margin deeply concaved and at meson slit in a straight line to base or nearly (like a suture). Rest of abdomen scaly except distal margins broadly of each segment. Venation very pale. Clypeus striate, sharply incised at meson. Funicle 1 quadrate, half the length of the pedicel. The male has the coxa also yellow, the postmarginal vein only a little longer than the stigmal (as in the female), while the abdomen has a yellow stripe across it a little out from base and the marginal vein is short.

From one female, many males reared from fig, Cocoanut Grove, Florida, May 16, 1887.

Types.—Cat. No. 20880, U.S.N.M. One female, two males on tags and a slide with the appendages.