

DESCRIPTIONES STELLARUM NOVARUM.

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Descriptions based on females. Measurements in mm. Types in U. S. National Museum.

Coccophagus saintebeauvei new species.

Robust. Black; caudal femora, caudal margin of scutellum (more or less narrowly) and the minute, triangular postscutellum, lemon yellow; knees, cephalic tibiae, the tarsi and the occipital margin of vertex, dull yellow. Fore wings dusky to apex from a little proximad of middle of marginal vein, the venation black; the infuscation is accentuated for three fourths the way across under the veins. Scape yellow dusky; funicle 1 over twice longer than wide, 3 slightly wider than long, longer than any club joint. Mandibles with one minute first tooth and a very broad, truncate second one. Pedicel somewhat longer than wide at apex. Caudal wing with about 15 lines of discal cilia where broadest. Propodeum scaly, plane, with a median carina. Scutellum with a pair of long bristles at apex; its black portion (and also the scutum) with numerous short black setae from very minute punctures. Caudal tibial spurs double. A minute ring-joint. Head and thorax finely scaly. From *Saissetia oleae*, Nagunga, Uganda, South Africa, September 20, 1915 (C. C. Gowdey).

Types.—Catalogue No. 20074.

The yellow caudal femora are characteristic. Habitus of *lecanii*.

Coccophagus cowperi new species.

Length, 1.05. Like *flavoscutellum* Ashmead but the fore wings lightly dusky, the cephalic margin of the scutellum narrowly black, while the legs are yellowish white except caudal femora and all coxae. Antennae black. Joints of antennae as in the preceding species, nearly, but the pedicel a little shorter. Second tooth of mandible not so broad as in the other species. The middle femur may be a little dusky centrally. Reared from *Stictococcus gowdeyi* Newstead, September 20, 1915, Nagunga, Uganda, South Africa (C. C. Gowdey).

Types.—Catalogue No. 20075.

Coccophagus nigropleurum new species.

Length, 1.20. Robust. Deep orange yellow, the wings hyaline; abdomen (except sides and venter at base) and the following parts jet: Center of occiput, pronotum, cephalic margin of scutum, the large axillae except at extreme distal end, a dot at extreme cephalo-mesal apex of each parapside, a somewhat longer one at mesal margin of same at apex of proximal fourth; caudal half of parapsidal furrows except at distal end; a large, more or less obscure, oval area center at base of

scutellum and the mesopleurum except a path through the middle or thereabouts (dorsum to venter). Caudal tibia black just below the knee dorsad. Funicle 1 twice longer than wide; scape yellow, rest of antennæ black. Mandibles tridentate. Propodeum often dark. Stigmal vein globular, sessile. A minute ring-joint. Scutum with numerous black setæ, less numerous on the scutellum. Caudal wings with about a dozen lines of discal cilia where widest. Marginal cilia of the fore wing short. Habitus of the black species. Reared from *Tachardia decorella*, October 4, 1915, Kampala, Uganda, South Africa (C. C. Gowley).

Types.—Catalogue No. 20076.

Coccophagus coccidis new species.

Similar to *lunulatus* Howard but the caudal tibiæ are black except rather broadly at tip and all femora and coxæ. Also, there is no black at apex of scutellum and the postscutellum is lemon yellow. Differs from *lecanii* in having most of the caudal tibiæ black and less of the scutellum black. Scape and pedicel black; rest of antennæ pallid dusky. Funicle 1 twice longer than wide, 2 and 3 subequal, somewhat shorter, longer than the pedicel. Third tooth of mandibles broadly truncate. Body with only a scaly sculpture. Reared from *Coccus hesperidum* on orange, New Orleans, La., September 1, 1914 (J. R. Horton).

Types.—Catalogue No. 20077.

Coccophagus mexicensis new species.

Like *immaculatus* Howard but all coxæ black (besides all femora), all tibiæ and tarsi lemon yellow, the antennæ black and dorsal thorax bears only scattered, very minute setigerous punctures. Scape yellow at distal third. Funicle 1 twice longer than wide, 3 shortest, somewhat longer than any club joint. Tarsi white. Mexico (A. Koebele).

Types.—Catalogue No. 20078.

Coccophagus quaestor new species.

Like *mexicensis* but the last two pairs of tibiæ black and the entire scape. Mexico.

Types.—Catalogue No. 20079.

Anagyrus greeni Howard. Genotype.

Synonym of *Epidinocarsis* Girault. *Blastothrix yuccæ* is congeneric.

Perissopterus punctaticorpus new species.

Somewhat larger than usual. Honey yellow, the vertex orange and with numerous blackish dots. Dorsum of abdomen (except six marginal spots, 2-5 dots, 1 wider than long, twice the size of 2, 6 triangular, large, on each side of the apex), propodeum, a distinct streak along each side of a narrow median sulcus on the scutellum, a somewhat narrower and similar one on the scutum but not quite complete cephalad, numerous dots on the scutum, two larger dots in a longitudinal line on each side of the scutellum, caudal margin (caudo-lateral border broader) of

scutellum and an obscure dot center of each axilla, blackish. Middle and cephalic tibiae with three cincti, the third at apex; caudal tibiae with four (at least from dorsal aspect but the first two dorsad only and irregular). Femora immaculate or nearly. Fore wings with the pattern of spots—proximad of the hairless line an ovate ring which nearly opens caudodistad onto the hairless line; a long, thick curved dash from the stigmal vein to about the middle of the wing and from the hairless line, proximad of this dash, a small, longer than wide area; caudad of this but not touching the hairless line, a large ovate area; caudo-distad of this and caudad of the apex (nearly) of the long stigmal dash, a small round area not half the size of the preceding; some distance distad (in a straight line) of the venation, a minute area or dot; then two "eye-spots" about half way to apex from the venation (the cephalic one may be connected very narrowly with the dot straight out from venation), one on each side of the middle line; these are smaller than the large area near the hairless line but larger than the small one opposite the stigmal dash. Stigmal vein with a small brown substigmal spot. Proximal half of first joint of caudal tibiae brown. Caudal femur with a spot at knee and another farther proximad but not distant from knee. First four antennal joints white, club 1 yellow, 2 black and the longest antennal joint, 1 subequal to the scape, over twice longer than wide. Pedicel barely longer than wide. Scape with a narrow blackish stripe along about the middle of its side. Mexico (A. Koebele).

Types.—Catalogue No. 20080.

Taneostigma flavicorpus new species.

Of the usual stature. Deep orange yellow, the abdomen, a median impressed line on scutum and scutellum, legs, antennae (except club) and the vertex centrally, brownish or darker. Wings transparent, the stigmal and postmarginal veins black. Face yellow ventrad, with two narrow, faint brownish bands across it (and about through the antennal insertion). Club and upper part of propleurum, yellow. Pubescence silvery, minute. Sculpture very dense scaliness. Mandibles strongly bidentate, 2 obliquely truncate, sometimes notched. Scape with a moderate ventral dilation (as if compressed); pedicel slightly longer than wide; first ring-joint smaller than 2; funicle 6 largest, quadrate, 1 somewhat wider than long, nearly as wide as 6. Stigmal vein somewhat longer than the postmarginal, its short knob nearly at half-rightangle to the short perpendicular neck. Axillae large, just meeting. Parapsidal furrows joining distinctly before apex of the scutum. Ovipositor not shortly extruded as in the genotype.

The male similar but the dorsal thorax darker and the proximal club joint. Scape shorter, also pedicel; funicle 1 no longer than the second ring-joint yet with the longest branch; branch of funicle 6 reduced to a mere prolonged distal corner; all rami from the same side and from a distal corner of each joint (from whole side of funicle 1 and nearly the same of funicle 2); funicle 2 a half wider than long, 3 a half longer than wide, 4 over twice longer than wide, 5 and 6 subequal, over four times longer than wide; club 3-jointed. Morelos, Mexico (A. Koebele).

Types.—Catalogue No. 20081.

Taneostigmodes albiclavus new species.

Of usual stature, stout. Black or nearly, the wings hyaline; venation yellow; club of the antennæ and scape (except bulb and at distal half above and at sides), yellowish white. Knees, tips of tibiæ and the tarsi, yellowish brown. Scutellum very finely lined longitudinally; head and thorax very finely alutaceous. Parapsidal furrows just separated distad (as in the genotype; in other species distinctly joined before their distal ends). Pubescence fine, silvery. Axillæ just meeting. Scape without a great exfoliation as in the genotype but only moderately (yet distinctly) dilated along distal half (the dilation expanding distad), long; pedicel somewhat longer than wide at apex, subequal to funicle 2, the latter longest, a little longer than wide (but subequal to 3); other funicle joints subquadrate. First ring-joint a little shorter than 2. Stigmal vein slightly longer than the postmarginal, long, over half the length of the marginal. Ovipositor valves slightly extruded. Catalina Springs ("Catal Springs"), Arizona, Hubbard and Schwarz.

Type.—Catalogue No. 20082.

Differs from *tychii* Ashmead, which has the club white, in having all the tibiæ black. Type examined.

PROAPHELINOIDES new genus.

Differs from *Aphelinus* genotype in being larger and more elongate (the body of *Zagrammosoma*), the scutum and scutellum bear a narrow median groove, the ovipositor is distinctly extruded, the *fore wings bear a distinct clump of coarse black hairs under the marginal vein at apex of its proximal third*. Otherwise the same. Caudal tibial spurs double. Abdomen somewhat longer than the rest of the slender body. Marginal vein much longer than the submarginal.

Proaphelinoides elongatiformis new species. Genotype.

Length, 2.15, excluding the ovipositor which is extruded for a fourth the length of the abdomen. Light orange yellow, the following black or dusky parts: Abdomen except broadly at base, mesopleurum ventrad, caudal femur at proximal half (mostly, especially dorsad), caudal tibia dorsad at proximal half, middle legs (except coxæ, articulations, tips of tibiæ and tarsi) and club. Coxæ and ovipositor valves yellowish white. Fore wings embrowned lightly but distinctly, with a hyaline cross-stripe at base of the marginal vein, a very broad one from most of the marginal vein distad of its proximal third and nearly to its apex; oblique hairless line guarded by but a single line of coarse cilia proximad; fore wings clearer toward apex, its hyaline areas naked or more sparsely ciliated; cephalic edge of marginal vein armed with numerous, uniform long bristles. Caudal wing very broad (about 18 lines of fine discal cilia where broadest), lightly infuscated along distal half and with a transverse dash of fuscous at the base of the marginal vein. Thorax subglabrous, delicately scaly, the upper occiput, scutum and scutellum with black

setæ, the propodeum plane. Marginal vein yellow, the submarginal dusky. Pedicel a half longer than wide at apex; funicles 1-2 subequal, like large ring-joints. Club 1 as long as the pedicel, longer than the funicle, somewhat less than half the length of 2. Middle tibial spur long and sub-slender. Mandibles bidentate, 2 broadly truncate. Proximal joint of caudal tarsi elongate. Eyes finely hairy. Prothorax rather large. Mesopleurum entire, divided transversely (dorso-ventrad) by a curved, narrow suture. Reared from *Aspidiotus secretus*, Ceylon, E. E. Green.

Types.—Catalogue No. 20084.

Hexacladia mexicana new species.

Length, 2.05. Differs from the description of genotype in that there is a quadrate reddish area on the head beneath the antennæ, the scape is metallic dorsad, funicles 1 and 2 and distal club are dark purplish, the head and thorax are finely scaly, the cephalic legs (except the coxa) and the middle coxæ are dark metallic and the fore wings are entirely different—the first cross-stripe is from the bend of the submarginal vein, is long-cuneate in shape and extends two thirds the way across; the second forms a marking somewhat like a fleur-de-lis (consisting of a thick stripe across from the stigmal vein, interrupted by hyaline just beyond middle and a longitudinal, mushroom-shaped stripe from the middle of the distal side of this and extending three fourths the way to apex); rest of the wing hyaline. Funicle 2 is distinctly twice longer than wide, subequal to 3, while 6 is somewhat longer than wide and wider.

Head somewhat wider than long (cephalic aspect), the mandibles edentate, obliquely truncate, eyes not large, about as long as the cheeks, round-oval, the genal suture absent; club solid, cylindrical, longer than funicles 5 and 6 combined; scape long, slender, curved, thickened distad; pedicel barely longer than wide. Scrobes obsolete. Axillæ meeting. Middle tibial spur shorter than usual. Strigil present. Hind tibial spur apparently single. Marginal vein twice longer than wide, ovate, the stigmal subelongate and slightly longer than the postmarginal. Otherwise like original description of genotype. Scutellum rounded, convex, the propodeum rather long, smooth, the spiracles not especially large as chalcids go.

In the mandibles there is a slight indication of a first, minute tooth as in *Blastothrix*. Oaxaca, Mexico.

Type.—Catalogue No. 20085.

Sophencyrtus is a synonym of *Hexacladia* (det. Crawford) and bears a longer marginal vein than *mexicana*, it being somewhat longer than the stigmal (in *mexicana* no more than half the length of stigmal). *S. townsendi* has the scutellum wholly black but the infuscation of fore wing is much as in *mexicana*.

Anagyrus alpinus new species.

Length, 2.00. Robust. Opaque black, the head lemon yellow with a broad black band across the mouth and up each cheek (more narrowly to the eye); also, another across between the eyes at the antennæ and a conspicuous moderately

broad median facial stripe from just below the antennæ up over the vertex to the occiput (this wider at the cephalic ocellus). A longer than wide marking on propleurum, an exclamationpoint-like marking at meson of cephalic scutum and a dot (or oblique dash from cephalad, on face of pronotum) on each side of this but on the pronotum, lemon yellow. All pairs of tibiæ with a whitish cinctus just below the knee. First joint of middle tarsi yellowish; tarsi black. Venation black except the submarginal vein at apex which is broadly silvery. Caudal wings with a sooty cross-stripe between apex of its dark venation and apex of its blade. Fore wings with the following remarkable and beautiful pattern: Irregularly, slightly dusky at extreme base; a small sooty triangle nearly against the submarginal vein at apex of the latter's proximal third; a conspicuous wavy stripe across from the base of the distal third of the same vein and which spreads proximad along the caudal wing margin and distad to join a second, broader, straighter cross-stripe from the marginal and postmarginal veins; at caudal margin this spreads some distance distad; then a conspicuous but narrower (than the second cross-stripe) V-shaped cross-stripe, the apex of the letter proximad not far from caudal margin (thus its cephalo-distal arm much the longer), the short caudo-distal arm giving off from its apex at right-angles (nearly) a fourth stripe obliquely across near apex and subparallel with the long arm of the third stripe (thus a parallelogram with one short side missing). Marginal vein twice longer than wide, somewhat shorter than postmarginal, the stigmal still longer. Dilation of scape moderately great; pedicel but somewhat longer than wide; funicle 1 longest, four times longer than wide, 2-4 subequal, two and a half times longer than wide, 5 and 6 subequal, a little shorter. Club 1 longest, somewhat shorter than funicle 6. Mesopleurum suffused with brownish. Body densely, minutely scaly.

Head (cephalic aspect) sublenticular, somewhat longer than wide, the mouth broadly truncate, narrower than the distance across the vertex, eyes bulging. Mandibles acutely bidentate. Axillæ barely separated a short distance. Reared from *Dactylopius glaciale*, Mouraine Courmageur, 4,000 feet, Switzerland (Robert Newstead).

Type.—Catalogue No. 20086.

Eupelmus brevicaudus Gahan.

Preoccupied by (*Cerambycobius*) *Eupelmus brevicaudus* (Crawford). I propose the new name *coccidis* for it.

Chalcis tachinæ Howard.

Synonym of *coloradensis* Cresson. Type female compared with original description of the Cressonian species.

Chalcis tegularis Cameron.

Preoccupied. Equals *Chalcis thymus* new name.

Chalcis louisiana new species.

Slightly smaller than *columbiana* Howard, from which it differs as follows: The abdomen is reddish only at sides of segments 2 and 3 and along the venter

for somewhat over proximal half; the middle femora and tibiæ are broadly blackish and the cephalic femur at base is blackish, the cephalic tibia with a black area dorsad between middle and knee; the propodeum is not at all reddish; the scape reddish yellow only just above bulb. More closely allied with *pedalis* Cresson which has the abdomen all black and the cephalic femur more broadly so. Moreover, the abdomen is more stylate in this new species and the cephalic ocellus is distinctly separated a slight distance from the apex of the scrobes (on its edge in the other species; both species have a narrow carina across vertex between lateral ocelli and the cephalic one; on each side, this is more or less obscurely continued down the face along the eye margin); the mesal space of the propodeum in *pedalis* is of a somewhat different shape and the sculpture of that region coarser. Post-marginal vein nearly twice the length of the minute stigmal in both species. Caudal femur with nine minute teeth, the middle ones largest. All funicle joints wider than long, shortening distad. Reared from *Pseudococcus citri* on fig. New Orleans La., July 18, 1915 (J. R. Horton).

Type.—Catalogue No. 20087.

Sympiesis agromyzæ Gahan **pennsylvanicus** new variety.

Like *agromyzæ typicus* but a median brownish yellow stripe along proximal third or somewhat more of abdomen dorsad. A little over distal half of scape black, also bulb. The mandibles 5- and 6-dentate. In *agromyzæ typicus* the scape is white only at extreme base (the bulb not seen) and the mandibles 5-dentate, the pedicel not so light below. Reared from *O. geminatella*, North East, Pa., July 20, 1915 (A. L. Quaintance). Types of *felti*, *flavipes* and *agromyzæ* compared; of *tischeriæ* only a female identified by Ashmead.

Type.—Catalogue No. 20088.

Sympiesis uroplatæ Howard.

Synonym: *unicarinata* Ashmead. The type specimen is female.

Paracalocerinus tertius new species.

Very similar to the genotype but differing thus: A white dot at the origin of the hairless line on fore wing (not present in the genotype); funicle 1 subquadrate, much narrower than 2 which is also subquadrate yet twice the size of 1 (both distinctly wider than long in the genotype); first two pairs of legs are reddish brown with the tarsi white while the hind tibiæ are white at base and apex; the ovipositor is somewhat longer. Scrobes distinct, very short. Propodeum glabrous. Club only a little over half the length of the funicle, longer in the genotype. Head scaly, the frons with a few scattered punctures which are not conspicuous. Reared with *Isosoma*, Glendale, California (T. D. Urbahns).

Type.—Catalogue No. 20240.

Closely resembles *Calocerinus floridanus* (Ashmead), only the male of which is known. It is half the size of that species, has a more inflexed face, the head less round, the frons much narrower

and scape all black. Inasmuch as *tertius* appears to be of usual size for its genus and that as a rule males are smaller than their females, these two are not likely the sexes of one species. The female of *floridanus* at least ought to be as robust as the male. The wings of *tertius* and *floridanus* are very similar but much less robust in the former. *Floridanus* has mandibles acutely bidentate but much stouter than in *tertius*. *Habrolepopteryx* female also must be considered as probably *Calocerinus*.

Cryptopristus americanus new species.

Length, 3.50, excluding the ovipositor which is a little longer than abdomen.

Differs notably from specimens of *caliginosus* Walk. in the U. S. N. M., in color of the legs. Æneus black; fore wing with a smoky, thick (over twice longer than wide), rectangular, oblique (caudo-proximad)—from apex of stigmal vein; tibiæ and caudal femur red; apex of the caudal tibia and the tarsi (except the reddish distal joint), pale yellowish; scape red except above slightly at apex. Lower face with rather sparse silvery pubescence, the scrobicular cavity rectangular, a carina to the clypeus from between the antennæ. Head and thorax scaly, the thorax densely, finely punctate, the propodeum and abdomen scaly, the propodeum planer, longer through the spiracle, the latter small, elliptical, over its longest diameter from the cephalic margin. Abdomen conic-ovate, somewhat longer than the rest of the body, its second segment not much longer than the others, deeply incised meso-caudad, 3 notched at the meson caudad. Caudal femur deeply excised at apex beneath, then with a 10-dentate ridge. Antennæ 12-jointed, the club 2-jointed; one ring-joint. Pedicel equals funicle 1, which is a little longer than wide, 7 distinctly wider than long. Stigmal vein rather long, shorter than the long postmarginal. Wellington, Kansas (E. O. G. Kelly). Parasite on *Isosoma*.

Type.—Catalogue No. 20242.

Amestocharis perdubius new species.

Length, 2.40. Robust; a short median sulcus at base of scutellum; funicle 1 much longer than the pedicel. Of the stature and habitus of *Pseudacriasoides utahensis* (Crawford) but that species bears one less antennal joint, segment 2 of abdomen is slightly longer here (a third of the surface) and is distinctly scaly mesad (glabrous in *utahensis* but the other segments as in this new species densely scaly) and the groove on the scutellum when present is longer in *perdubius*. There is a curved carina around (laterad) the minute round propodeal spiracle in both species; this runs nearly to base of the lateral carina and the spiracle is situated some distance out from the "junction" of the two. Tips of caudal tibiæ white, not so in *utahensis*. Moreover, in *perdubius* the scutum is wholly reticulate-punctate. Otherwise the same. Funicle 1 two and a half times longer than wide, 2 twice longer than wide; club 3-jointed, 1 and 2 subequal, each a half longer than wide, 3 short, conical, its nipple over half its length. Face densely scaly. Club 2 sometimes shorter than 1. Two large ring-joints. Mandibles bidentate. Pro-

podeum glabrous. Postmarginal vein somewhat longer than the short, non-sessile stigmal. Caudal tibial spur moderately large (not enlarged), nearly as long as the first tarsal joint. Proximal three tarsal joints white. Petiole of abdomen densely punctate, subquadrate, its lateral margin carinated. Holliday, Utah, 1915 (C. W. Creel), reared with *Isosoma* (Webster No. 1571). Compared types of *utahensis*, *wilderi* and *rugosithorax*.

Types.—Catalogue No. 20243.

PSEUDACRIASOIDES new genus.

Genotype: *Pleurotopis utahensis* Crawford. Antenna 9-jointed, three ring-joints, the club 2-jointed; male antenna 10-jointed, three ring-joints, the club 2-jointed, the scape dilated. Scutellum with a delicate median sulcus at base. Otherwise like *Pleurotopis*.

Neomphaloidella oklahoma new species.

Length, 2.10. Large, depressed and rather long.

Differs from *Epomphaloides lasioptera* (Ashmead) in the generic characters, the funicle joints are distinctly longer and the scutellum and postscutellum are wholly concolorous (the former at apex and much of the latter, in the other species, yellowish).

Black æneous, the venation, margins of mouth narrowly and legs brownish yellow (except the coxæ and usually the femora-proximal third of cephalic femur), the scape so only at basal third. Abdomen depressed, conic-ovate, as long as the rest of the body. Ring-joints large, subequal. Funicle 1 elongate, not quite so long as the club, four times longer than wide, 2 somewhat shorter, 3 twice longer than wide, a little longer than the pedicel; club 1 forming half the club, somewhat over twice longer than wide, 2 a third shorter, 3 small, conic, with its nipple nearly as long as itself; flagellum filiform, the scape a little longer than the club.

The male is similar. Antennæ 11-jointed with two large ring-joints, the funicle 4-jointed. Antennæ filiform (even narrowing distad). Scape with a blister-like exfoliation at apex ventrad; pedicel nearly twice longer than wide at apex; each funicle joint swollen at base, the swelling rimmed near its apex by a whorl of very long, silky hairs; funicles 1-4 subequal, elongate, nearly five times longer than their mean width; club 1 like the funicle joints; club 2 very slightly longer than 1, a little wider centrally, with no whorl of hairs; club 3 only somewhat over half the length of 2, its apical nipple very small. Reared in connection with *Isosoma*, Tulsa, Oklahoma (T. S. Wilson).

Types.—Catalogue No. 20244.

Also Salt Lake City, Utah (D. Bennion).

Epitetrastichus tricolor new species.

Length, 1.00. Abdomen flat, rounded, as large as the thorax as seen from above. Lemon yellow; caudal margin of the pronotum convexly and rather broadly (except laterad), the scutum except the lateral margins narrowly, axillæ (except its mesal margin narrowly), apex of the parapsides (brown), a small triangular spot on parapside near cephalo-mesal apex (brown), scutellum, post-

scutellum and the thorax laterad of it to the spiracle and the meson of the propodeum broadly, black. Venter and pleurum of thorax at caudal half also black. Abdomen orange yellow, brown at distal half and with a large, round, black spot dorsad in the middle of the distal half. Propodeum with a median carina only, the spiracle of moderate size, oval. Sculpture usual. Mandibles tridentate. Funicle joints nearly equal but 2 longest, over twice longer than wide, 1 subequal to the long pedicel, a little shorter than 2, 3 slightly shorter than 1; club with small nipple. Ocellar area dark.

Type.—Catalogue No. 20245.

Decatoma amsterdamensis new species.

Length, 1.35. Honey yellow, the abdomen reddish yellow; body marked with black thus: A line over center of the occiput, caudal margin of pronotum, abdominal petiole, dorsal aspect of pedicel except at apex; thorax dorso-laterad of scutellum; cephalic third or more of propodeum between the spiracles, apex of same broadly at meson, the two areas connected by the rather narrow black median channel, the yellow between them narrowest; and three large triangles on segments 2-4 of the abdomen, each triangle reaching from cephalic to caudal margin along the median line, the apex proximad and truncate, also their disto-lateral angles are truncate, all three connected. Each ocellus with a black dot against it; neck of pronotum black on each side. Venter of mesothorax black. Caudal tibiæ with a linear black marking laterad, reaching nearly to middle and originating some distance below knee. Substigmatal spot reaching to middle of the wing or slightly beyond. Head and thorax feebly umbilicately punctate; channel of propodeum consisting of a single line of wider than long foveæ, its lateral margins carinated; at the meson proximad this channel runs into the fork of a V-shaped carina whose arms are convexly curved toward the spiracle and not complete; otherwise propodeum foveolate-punctate but not densely. Petiole finely rugulose, with median and lateral long-carinæ, twice longer than wide. Abdomen glabrous, segment 5 longest but not very long. Pedicel somewhat longer than funicle 1 which is longest, a third longer than wide at apex, 2 slightly longer than wide, 5 slightly wider than long; club 2-jointed, the antennæ 10-jointed. A dark spot just cephalad of caudal coxa.

Male similar but scutellum bears a large ovate area from the apex to proximal third, the abdominal petiole is longer, the abdomen bears only a blackish area before the apex and the caudal tibia has no linear black marking. The funicle joints are more or less blackish above, there are but four of them, the antennæ 9-jointed, the second or distal club joint longer than in the female, funicle 1 over twice longer than wide, longer than the long pedicel, 4 somewhat longer than wide. Reared in connection with *Isosoma*, Penn Yan, N. Y., 1915 (W. J. Phillips).

Types.—Catalogue No. 20246.

Also Auburn, New York.

Decatoma isis new species.

Length, 2.55. Black, marked with dark reddish thus: Occiput at mouth and along eyes (with a linear dot opposite the upper part of the eyes); scrobicular

cavity and its lateral margins, mouth and clypeus, facial margins of eyes (over vertex to occiput, joining the red eye margin there, ventrad joining it also and going to the mouth, as a broad line down genal suture); prothorax except ventro-cephalic face, a round spot dorso-laterad, another more obscure one on the pleuron and a broad conical area down the meson, attenuate cephalad; tegulæ; mesopleurum; and base of abdomen ventrad rather broadly. Also the first two pairs of coxæ except caudad, cephalic femur and tibia except above apex of middle femur and middle and caudal tibiæ and the tarsi; also antennæ, the club darker. Stigmal blotch large, reaching to middle, a third longer than wide. Head and thorax more umbilicately punctate, the pubescence not conspicuous. Mesopleurum long-striate, the propodeum rugoso-punctate, its median channel not plainly limited but at base indicated by a large V-shaped median carina. Petiole somewhat longer than wide. Segment 5 of abdomen largest, the segments scaly after 3, the abdomen compressed, ovate from lateral aspect. Funicle 1 considerably longer than pedicel. The male similar, but the whole head reddish yellow except the venter nearly to eyes and the upper occiput except a transverse line at the dorsal edge; the cephalic legs all red except dorsal edge of femur; caudal coxa with a yellow line down its sides and the apex is yellow; the caudal femur bears a similar line down it while the base of the caudal tibia is reddish yellow. Funicle 1 thrice longer than wide, 4 twice so. Los Angeles, California, April (Coquillett).

Types.—Catalogue No. 20247.

Monodontomerus americanus new species.

Length, 4.00, excluding ovipositor which is as long as the abdomen. Dark metallic, wings hyaline, the venation brown; scape, tegulæ, pedicel, ring-joint, knees, tibiæ, base of abdomen beneath, middle coxæ and the tarsi reddish brown, the coxæ metallic, the femora washed with metallic. Head and thorax densely, finely reticulate-punctate, the face downy, the scutellum distad of the transverse line, propodeum and the abdomen except broadly at base, scaly. Segment 2 of abdomen straight along caudal margin; propodeum with a median carina and a semi-circular carina from base which crosses the median carina at about middle; propodeal spiracle large, reniform. Scutellum with a rimmed apex. Caudal femur at apex beneath excised and with one large tooth. Fore wing with a stain between the stigmal and postmarginal veins, the stigmal not sessile, much shorter than the postmarginal. Pedicel somewhat longer than funicle 1, which is slightly longer than wide, 7 wider than long; club 3-jointed. Los Angeles, California (Coquillett).

Type.—Catalogue No. 20248.

Diiters from *montivagus* in having the pedicel entirely reddish and the femora much less metallic. (Types compared.)

Perissocentrus bruchi new species.

Of the same stature and so on as the preceding species but the ovipositor distinctly longer, as long as abdomen and thorax combined; also coxæ and femora (except tips of the latter) are dark metallic, the pedicel also and scape except its

proximal third; funicle joints all somewhat longer, the propodeum has only the median carina and its spiracles are in depressions and stouter. Also segments 2 and 3 of abdomen are very narrowly, deeply incised caudad (along the median line, 2 more deeply). Caudal tibial spurs enormous, the longer nearly reaching the apex of the elongate first tarsal joint. Otherwise same but wings wholly clear. "From Bruchi, P. C. 55/5."

Type.—Catalogue No. 20240.

Microterys mazzinini new species.

Length 2. Resembles the following species: *tessellatus* Dalmen, *cincticornis* Ashmead and *speciosissimus* Girault. From the first differs (comparing with a French specimen in the U. S. N. M.) in having all the head and the entire under side of thorax reddish yellow and the scutum and scutellum merely tinged or marked lightly with metallic purplish and in having the narrow second stripe of the fore wing isolated and broken into about four spots (in the European species, nearly the entire body is very dark purple and the second stripe of the fore wing is solid and connected in two places with the third or apical stripe). From *cincticornis* Ashmead in having the second stripe of the fore wing more distinctly broken, the third stripe with its proximal margin distinctly notched a little cephalad of the middle, the pronotum, scutum and scutellum are not so purple, the eyes are wider apart. Also in *cincticornis*, the proximal four joints of the funicle are blacker, 5 and 6 pure white, while in the new species, 1-4 are merely dusky, 5 is yellowish, while 6 is black like the club. In *cincticornis*, funicles 1 and 2 are subequal and longest, while here 1 is longer than 2 and longest, subequal to the pedicel. The scape is well dilated in both species. From *speciosissimus*, this species differs in having the eyes more separated, funicles 5 and 6 are not white, the scape is not mostly purple but so only lightly along the dorsal edge, the dorsal thorax is only washed with purple lightly, the hind coxæ are more bluish and the distal stripe of the fore wing is much darker and slightly less narrowly separated from the middle stripe. Compared with type of *cincticornis* and two paratypes of *speciosissimus*. Stigmal vein somewhat longer than the marginal, the oblique hairless line with about eight lines of cilia proximad of it. Santa Maria, Calif., April 24, 1912. From *Physokermes insignicola*. R. C. Wylie."

Types.—Catalogue No. 19783.

The male is steel blue, wings hyaline, the antennæ and legs (except hind coxæ) pale straw yellow. Scape and pedicel black, the scape short and dilated, the club solid, slightly longer than funicle 1, which is over twice longer than wide. Funicle 6 somewhat longer than wide. Flagellum dotted with soft, not long, hairs. Pedicel wider than long. The venation black, the marginal vein somewhat shorter in relation to the stigmal than in the female. Head weak, the frons not prominent, the antennæ inserted on a level with the ventral ends of the eyes.

Microterys titiani new species.

Length, 2.10. Allied with these species—*lunatus* Dalman but the dorsal thorax is much darker, also the legs and the body is more robust; *sylvius* Dalman but the pronotum is all dark except the middle, the fore wings darker, the mesopleurum purple. Dark purple, the fore wings infuscated (embrowned) from base to apex and with a tolerably broad lunate cross-stripe of white at the apex of the postmarginal vein. The following parts orange: Head except the antennæ and across the clypeus, middle of pronotum transversely, tegulæ, propleura; proventer, cephalic half of mesopleura; knees broadly, tips of tibiæ and the tarsi. Funicles 5 and 6 white, contrasting. Venation black. Stigmal vein as long as the marginal. Scape foliaceously dilated. Pedicel distinctly longer than funicle 1 which is somewhat longer than wide, 5 and 6 quadrate. Hind tibial spurs double. Distal tarsal joint black. Thorax with many scattered, obscure punctures, otherwise finely scaly reticulated. Axillæ rather broadly joined; frons moderate in width. Ventral aspect of cephalic femur yellowish.

The male like that of *mazzinini* but the hind femora and tibiæ are also purplish. The stigmal vein is longer than the marginal. Scape dilated. Funicle 1 long but shorter than the club, about 3.75 times longer than wide, the antennæ as in the male of the first species. Scape and pedicel purple, rest pale yellow like the first two pairs of legs. Axillæ just touching. Funicle 1 nearly twice the length of 6, longer than body of the scape. Idyllwild, Calif., July 31, Aug. 2, 1912. From *Lecanium corni* Bouché, P. H. Timberlake.

Type.—Catalogue No. 19784.

Microterys equals *Encyrtus* of Latreille.

Eucomys mexicanus new species.

Length, 3.15. Normal but the flagellum filiform. Orange yellow; sclerites cephalad of propodeum (one on each side of the apex of the scutellum), a large quadrate spot at base of propodeum at meson, disk of abdomen dorsad, hind tibiæ above slightly, caudal tarsi and flagellum dusky black. Fore wings infuscated from the base of the marginal vein distad to the apex and there is a transverse dash from about the base of the bend of the submarginal vein two thirds the way across, the dash with a scanty clump of stiff black hairs; venation fuscus, pale at base and between the marginal vein and the clump of black setæ farther proximad. There is a subhyaline dash in front of the stigmal and postmarginal veins and another spot nearly opposite at caudal wing margin. Marginal vein a third longer than wide, the stigmal and postmarginal long and subequal. Costal cell between clump of black bristles and a spot some distance out from base, fuscous. Flagellum *subfiliform*, slightly compressed distad, the pedicel twice longer than wide, funicle 1 elongate, slightly shorter than 2, two and one half times longer than wide, 6 somewhat longer than wide. Club 1 equal to over half that region which is not long; club 1 longer than funicle 6. Frons punctate. Thorax very finely scaly, the scutellum with fine longitudinal striation, together with the scutum with white hairs. Axillæ with a distinct carina between them. San Rafael, Jicoltepec, Mexico.

Type.—Catalogue No. 19785.

METACOLUS Foerster.

Head (cephalic aspect) a little wider than long, without genal sulci, the vertex thick, the occipital margins obtuse, the clypeus unarmed, the antennæ inserted slightly below the middle of the face, 13-jointed with two ring-joints, the club normal, the scape long and slender, the pedicel elongate. Pronotum subconical, Parapsidal furrows only cephalad, short. Scutellum simple, also the propodeum, the spiracle of the latter round, small, cephalad. Abdomen conic-ovate, produced beneath, slightly longer than the rest of the body, none of the segments especially lengthened. Marginal vein very thick, somewhat over twice the length of the stigmal, the latter a little longer than the postmarginal. Discal cilia of the fore wing minute. Mandibles tridentate. Cephalic femur distinctly but not greatly swollen.

Metacolus fasciatus new species.

Length, 2.50. Reddish brown, abdomen dark purple, also coxæ, mesopleurum, scutum, scutellum and pronotum. Vertex and rest of the thorax washed lightly with purple. Flagellum black. Pedicel as long as the following three joints combined, nearly thrice longer than wide at apex; ring-joints large, 2 somewhat wider than long, 1 still wider; funicle 1 a half longer than wide, 6 distinctly wider than long; club 3 small, unarmed; club not much longer than the pedicel. Caudal femur swollen as much as the cephalic. Fore wing with two distinct cross-stripes of about equal width, the first from the bend of the submarginal vein, the second from the whole of the marginal vein. Venation concolorous with cross-stripes, brown. Head and thorax densely scaly, the propodeum subglabrous. Abdomen scaly, glabrous above at base. Propodeum without a distinct neck. Stigmal knob distinct, not large. Las Vegas, N. Mex., August 8. H. S. Barber.

Type.—Catalogue No. 19787.

Metacolus bifasciatus new species.

Like *fasciatus* but the abdomen more slender and suffused with reddish, the vertex washed with metallic, also the cheeks more lightly, the upper sides of the thorax are reddish, the parapsides and axillæ suffused with it while funicle 1 is a little shorter. Abdomen hardly produced ventrad.

The male has a more depressed and shorter abdomen and the second cross-stripe of the fore wing is converted into a round, very dark, large spot under the more slender but darker marginal vein. "486^d. Hopk. U. S."

Types.—Catalogue No. 19788.

Sympiesis stigmatipennis new species.

Length, 2.50. Dark green, the wings hyaline but with a distinct ovate, smoky spot from the stigmal knob, its long axis obliqued a little proximo-caudad and not reaching midwing. Venation dusky. The following parts lemon: Scape, knees, tibræ and tarsi (except the last joint) and caudal femora (reddish yellow) except at base and along dorsal edge; a large, subquadrate area on abdomen (dorsal and ventrad) at margin on each side a little proximad of middle (these are sepa-

rated rather broadly along the meson and are reddish). Mandibles 6-dentate. Bulb of scape short, metallic. Funicle *compressed*, joint 1 twice the length of the pedicel, twice longer than wide, 4 somewhat longer than wide. Joint 3 of club conical and ending in a stout spine which is short. Club 1 as long as funicle 4. Two ring-joints, the first very short, pale. Caudal femur rather stout. Propodeal spiracle round. Structure as in Ashmead's table otherwise. Abdomen depressed, conic-ovate, about as long as the rest of the body. Postmarginal vein over twice the length of stigmal, the latter a fourth the length of marginal. Propodeum without lateral carinae nor sulci but with a minute median carina at base and a deep, wider than long pocket or fovea cephalad just mesad of the spiracle. Head and thorax scaly punctate, scaly on the head and propodeum, longitudinal and rather coarse on the scutellum. Vertex thin. Pronotum large, conical. *Parapsidal furrows complete*, curved, meeting the small but obtusely advanced axillæ. Pedicel pale beneath. Scutum with the usual constriction cephalad. Habitus normal. A reddish dot sometimes on each side of the meson of abdomen, proximad and distad of the large marginal area (the latter longer than wide). Segment 2 of abdomen glabrous, rest finely scaly.

The male has the wings hyaline, the caudal femora all concolorous except distad while the antennæ are 10-jointed with one ring-joint, the first three funicle joints with a long branch from the same side at base, 4 as long as the club, nearly twice the length of 3. Club 3 minute, 1 long, subequal to funicle 3. Abdomen with a large, square white area at meson a little out from base, otherwise concolorous. Pasadena, Calif., January, 1915. J. E. Graf."

Types.—Catalogue No. 19789.

Dipachystigma secunda new species.

Length, 1.58. Distinctly larger than the genotype and differing from it as follows: Funicle 1 (there are two ring-joints and five funicle joints) is not like a ring-joint (much wider than long) but cupshaped-subquadrate; there is a distinct yet obtuse lateral groove on scutellum (faint in the genotype). Otherwise about the same. Club without a terminal spine. Propodeum without a median carina in either species. Second division of the club fainter than the first. Hind tibial spurs double. Forest, D. C., July 21, 1915.

Type.—Catalogue No. 19790.

Sympiesis guttatipennis new species.

Length, 2.50. Similar to *stigmatipennis* but the abdomen has two much wider than long, faint, marginal spots at between base and middle, the caudal femora are all concolorous and the propodeum is less shiny, finely scaly punctate and its minute median carina is absent. Antennal club not seen. Marshall Hall, Maryland. From *Polyhymno luteostrigella*."

Type.—Catalogue No. 19791.

Sympiesis stigmatus new species.

Length, 3.50. Parapsidal furrows only cephalad. Abdomen long, slender, a half longer than the thorax. Club as in *stigmatipennis* but 3 is not articulated.

Like *stigmatipennis* but more slender, the propodeum bears a complete median carina, the color is bright green, the stigmal spot is *round*, the scape concolorous, the following parts orange: Legs (except a spot above at base on caudal coxa), proximal two thirds of abdomen except rather broadly along the meson (narrowly ventrad) and base and narrowly along the margins; and the tegulæ, a minute dot on middle coxa at middle laterad or near middle. Whole thorax uniformly, finely punctate. Funicle 4 subequal to the club, the latter's terminal spine minute. Caudal tibiæ at apex and caudal tarsi dusky. Alameda Co., Calif., 16 Nov.

Types.—Catalogue No. 19792.

Elasmus zigzag new species.

Length, 1.50. Dark green, the wings hyaline, the abdomen orange yellow with the exception of a broad green band at base, another narrow one about the middle followed after a short interval by a broad one (as long as that at base); then after a rather narrow interval by a somewhat shorter band, then an obscure orange band, then from thence (apex) green. A band of lemon across base of postscutellum. Scape, apex of pedicel, tegulæ and legs (except the disto-dorsal edge of caudal coxæ), golden. Head with the usual punctures rather dense. Scutellum not hairy. Spines on caudal tibiæ dorsad in parallel wavy lines. Ovipositor valves black, projecting beyond abdomen for some distance. Funicle 3 slightly shorter than 1, the latter over twice longer than wide, the pedicel as long as club 2; club 1 shorter than the preceding joint. Mandibles 6-dentate. Biscayne Bay, Florida.

Type.—Catalogue No. 19793.

Isodromus pulcher new species.

Length, 2. Robust. Bright golden, the wings hyaline excepting a small brown area along and from the stigmal vein, the venation dusky. Following parts jet: Cephalic margin of scutum, axillæ, propodeum, somewhat more than the middle third of abdomen, an oblique, curved, pyriform spot from the convex distal margin of this black, one on each side, a round spot near the tegulæ, the dorsal edge of hind femur to the knee from proximal third, a spot dorsad on hind tibia at proximal fourth, a broad cinctus on same a short distance from apex and distal one or two tarsal joints. Suture between scutellum and postscutellum dusky. Axillæ broadly joined. Club obliquely truncate from base, solid. Marginal vein punctiform, the stigmal long, the postmarginal very short, acute. Face inflexed, the frons of moderate width. Mandibles tridentate. Funicle joints all somewhat wider than long, shorter than pedicel. Scape a little compressed. Sculpture scaly. Abdomen depressed, smaller than the thorax, round-oval. Funicle 6 widest. Club three fourths the length of funicle. Reared from *Saissetia oleæ*, Claremont, Calif., October, 1909. Baker.

Type.—Catalogue No. 19794.

Achrysopophagus americanus new species.

Length, 2.40, excluding the extruded wholly white (except tip) valves of the ovipositor which are two thirds the length of abdomen. Deep orange, the abdomen

purplish black, the extreme apex of the face of prothorax and a little more than the caudal half of the scutum, dark metallic blue; also a large triangle on propodeum with its base at the spiracle and its apex reaching caudal margin. Antennæ and distal tarsal joint black, the scape silvery except the short bulb, ventral edge (except broadly at apex) and dorsal edge (except just before apex where the black is rather broadly interrupted). Club obliquely truncate from near base of joint 2, not quite as long as funicle, enlarged. Legs silvery white except: Dorso-lateral edge of cephalic femur at distal third, dorsal edge of cephalic tibiæ at proximal three fourths, a quarter-ringlike spot at apex mesad of middle femur and which runs along the dorsal edge a short distance proximad and then ventrad forming a similar, reciprocal spot, middle tibia dorsad at proximal half, caudal femur dorsad just before knee and caudal tibia except ventrad and broadly and unevenly at apex. Pedicel twice longer than wide at apex, much longer than any of the funicle joints of which 1 is longest, a fourth longer than wide, 2 quadrate, 5 and 6 widening, 6 nearly as long (at one margin) as 1 and a half wider. Inflexion of face below the eyes, abrupt, almost bounded dorsad by the scrobes, semicircular. Head very finely sculptured, the face convex, the frons two and one half times wider than the cephalic ocellus. Cheeks not much shorter than eyes. Head ant-like. Hind tibial spurs *double, much unequal*. Fore wings blackened from base of marginal vein distad for somewhat over half way to apex from apex of venation, the infuscation's apex convex-rounded, the cephalic margin of the wing from venation distad narrowly clear (then more broadly and so on); the caudal wing margin broadly and similarly clear. Postmarginal vein about half the length of the short stigmal, terminating in a long bristle. Metallic area of scutum with short silvery pubescence; elsewhere, pubescence black, scanty. Axillæ slightly separated. Otherwise as in the genotype. Forest, District of Columbia, May 25, 1915.

Type.—Catalogue No. 19795.

Differs from *dactylopii* in having the flagellum entirely black.

Merisus texensis new species.

Length, 1.60. Smaller than usual. Like *flaviventris* but the terminal spine of club is distinct, the form slenderer, the antenna is uniformly golden except the black bulb of scape and proximal three fourths of pedicel. Also the abdomen bears a marginal stripe from base to a little distad of middle and the antenna differs markedly in that funicle 1 is quadrate, 2 longest, subequal to the pedicel, somewhat longer than wide, the rest a little wider than long; first ring-joint transverse-linear, the second thrice larger, half the length of funicle 1. Legs yellow except coxæ. Differs notably from *mordellistenæ* in having scape yellow, the quadrate and small funicle 1 and so on. Mandibles not seen. Texas, College Station, Banks.

Type.—Catalogue No. 19797.

Merisus febriculosus new species.

Length, 2.40. Of the same build as *flaviventris* but differs in having the femora concolorous, the base of abdomen margined with submetallic green and the funicle after 4 is yellow like the club; also the funicle joints are all somewhat longer, 6 for

instance longer than wide, not the other way round; scape yellow at proximal two thirds, rest of antennæ brown. Wooster, Ohio.

Type.—Catalogue No. 19798.

Polynema eutetexi new species.

Length, 0.90. Black, the wings hyaline, the abdominal petiole, tips of tibiæ and the first three tarsal joints pale yellow. Very similar to *consobrinus* but differing in the fore wings which are somewhat narrower and the first joint of caudal tarsi are shorter. The male differs from male *consobrinus* in having the funicle joints much shorter, the longest not more than two and a half times longer than wide. Reared from eggs of *Eutettix tenella*, Spreckels, California (C. F. Stahl).

Types.—Catalogue No. 19799.

Epitetrastichus cuneiformis new species.

Length, 2.75. Honey yellow, the wings hyaline. Dorsal edge and apex of scape, flagellum, center of occiput, tip of ovipositor valves, apex of abdomen narrowly, face of pronotum, a distinctly longer than wide area on the scutum, one on each side of the meson and extending a little distad of middle, apex of parapsides and axillæ and five cross-stripes on abdomen, blackish. First cross-stripe of abdomen well out from base (the stripes more or less fused dorsad, so in death). Dorsal sutures of thorax (or some of them), margins and meson (narrowly) of propodeum, an oblique stripe down caudal mesopleurum and base of caudal coxæ, black. Propodeum with a short, complete median carina only (carinated lateral and caudal margins). Funicle 1 about two thirds longer than wide, slightly longer than 2, 3 subequal to pedicel, nearly a third longer than wide; club with a short nipple. Mandibles tridentate. Venation dusky. Sculpture usual. Forest, D. C., July 21, 1915.

Type.—Catalogue No. 19800.

Aphelinus brevipennis new species.

Length, 0.75. Like *semiflavus* but the wings much narrower and shorter, not of full length and have only three lines of cilia proximad of the hairless line. Of the legs only the hind tibiæ are darkened, the coxæ black. Ohio.

Types.—Catalogue No. 19801.

Berecynthus bakeri Howard **euxoæ** new variety.

Male.—Similar to female *melanocera* Ashmead except: The scape is somewhat shorter, the club distinctly shorter (not a third longer than the pedicel); funicle 6 is quadrate, 2 longest. Colored as *bakeri*. The pedicel may be shorter, the wings more or less dusky. Reared from larval *Euxoa auxiliaris*, State College, New Mexico (D. E. Merrill).

Types.—Catalogue No. 20097.

The female similar. Later, both sexes from the same host, Lethbridge, Alberta, July, 1915 (E. H. Strickland).

Gonatocerus triguttatus atriclavus new variety.

Similar to typical form but the antenna concolorous except the club. Reared from leaf-hopper egg mass, Trinidad, British West Indies (F. W. Ulrich), January.

Types.—Catalogue No. 2009δ.

Chalcis ovata abiesæ new variety.

Like the typical form but caudal tibiæ black above at base and bear a broad middle black ring which is longer than either yellow end portion; the first two pairs of femora are black nearly to apex, the first two pairs of tibiæ are black ventrad (except at each end) and this black encircles the segment at middle rather broadly.

In the male, the middle band of the caudal tibia shorter dorsad and the black of the first two pairs of tibiæ does not cross the dorsum. Summerdale, California, associated with *Abies concolor* (H. E. Burke). Common.

Types.—Catalogue No. 2009♀.

Coccophagus malthusi new species.

Robust and similar to *saintebeauwei* but head lemon yellow (except occiput); also parapsides (except the middle of the mesal margin irregularly), the propleurum (or most of it) and the legs except middle and caudal coxæ and caudal tibiæ, the latter yellow at tip. Wings subhyaline. Funicle 1 two and a half times longer than wide. Second tooth of mandibles very broad, truncate. Apex of middle coxæ and scape yellow. From *Ceroplastes* on *Acacia horrida* and on *Elytropappus rhinocerotis*, Uitenhage and Cape Town, South Africa, C. P. Lounsbury.

Types.—Catalogue No. 20100.

Ænasiella africa new species.

Length, 2.00. Dark blue, the fore wings uniformly dusky to apex from bend of the submarginal vein. Following parts orange: Face to the clypeus, upper half of that portion of cheek behind eyes, occipital margin of vertex (sometimes), tarsi knees, tibiæ (except sometimes slightly below knee), scape, extreme apex of pedicel funicle 6 and apex of funicle 5. Scape slightly metallic proximad. Pedicel two thirds longer than wide, somewhat longer than funicle 1 which is nearly twice longer than wide, subequal to 2; funicle 6 somewhat wider than long. Club long nearly two thirds the length of funicle and much wider. Head and thorax velvety scaly. Dorsal thorax with black setæ in more or less distinct cross-rows from scattered minute punctures; these setæ lie flatly. About six lines of cilia proximad of hairless line of fore wing. Marginal vein twice longer than wide, over twice the length of postmarginal but a third shorter than the stigmal. Hairless line open caudad. Scrobes forming a long triangle. Frons of moderate width. Second and third teeth of mandibles distinct, the first subobsolete (so that the mandibles often appear bidentate), the first tooth broadly and obliquely truncate. Cheeks about two thirds length of the eyes. Like the Australian species. Axillæ joined

or somewhat separated. Fore femora compressed. Reared from *Tachardia decorella* Maskell, Kampala, Uganda, Africa, October 4, 1915 (C. C. Gowdey).

Types.—Catalogue No. 20101.

***Epitetrastichus ugandaensis* new species.**

Length, 0.80. Agrees with *E. gravans* (Silvestri) but the color is dark green and the first two pairs of femora are yellow from their distal third; also, in the male antenna funicle 1 is shorter, being distinctly wider than long and the blistered area on the ventral margin of scape is of but two areolas. From the species *stictococci* in having funicle 1 of male antenna wider than long, the concolorous femora and the somewhat shorter distal antennal joints. Female mandibles tridentate, the second two teeth weakly separated. Trochanters and scape (except bulb) golden like the tibiae. Reared from *Stictococcus gowdeyi* Newstead, Nagunda, Uganda, Africa, September 20, 1915 (C. C. Gowdey).

Types.—Catalogue No. 20102.

Differs from *Neomphaloidella ceroplastæ*, female, only in having one more ring-joint and the scape wholly yellow except bulb (yellowish only distad in the other).

***Chrysocharomyia splendidissima* new species.**

Like *elegantissima* but somewhat larger, the propodeum is plane, caudal femora white, the scape entirely metallic except at extreme base and funicle 4 is somewhat shorter than 3. A boomerang-shaped sulcus over the spiracle. Reared in connection with *Coptodisca splendiferella*, North East, Pennsylvania, May, 1915 (D. Isely).

Type.—Catalogue No. 20103.

***Chrysocharomyia elegantissima* new species.**

Length, 0.75. Differs from *occidentalis* in being coarsely scaly, in having the parapsidal furrows complete, the caudal femora metallic except at distal third, the propodeum bears a delicate median carina and the distal three fourths of the scape is dusky. From *Omphalchrysocharis orientalis* in that there is no abdominal petiole, the scape more broadly dusky at apex, the distal funicle joint is longer than wide and the propodeum bears only the weak carina laterad of the spiracle and a very weak median carina. Also the mandibles are but 5-dentate, the two outer teeth large as in *orientalis*. Cheeks very short. Reared from larva of *Dibolia borealis*, July 12, Ithaca, N. Y. (Robert Matheson).

Type.—Catalogue No. 20104.

***Pseudomphale atroscapus* new species.**

Of usual stature. Dark blue, the legs white except coxæ. Differs from *æneicollis* in having the dark scape and the femora wholly white; *bisulcus*, the genotype, *fraternus*, *violaceus*, *popenoi*, *productus*, *nitens*, *euplectri*, *flavipes* and *missouriensis*, have the scape white; *brasiliensis* has darkened femora at base and a longer segment 2 of abdomen. The West Indian *nigrocyanus* and *metallicus*

have the femora metallic. Pedicel somewhat longer than wide at apex, barely shorter than the funicle joints which are subequal and cylindrical oval. Mandibles with two large teeth and four comblike ones within. Segment 2 of abdomen occupying just not quite half the surface, its distal half (except at apex) distinctly scaly. Median carina of the propodeum distinctly wider than the sulcus along it, long-ovate in shape. Abdominal petiole somewhat wider than long. Lateral carina of the propodeum delicate, the propodeum polished except within the grooves. Sculpture usual. Reared from *Tischeria subcanalis* Walker, Monticello, Florida, August 31, 1915 (A. I. Fabis).

Types.—Catalogue No. 20105.

Amblymerus justicia new species.

Length, 1.00. Very dark metallic, the wings hyaline, the venation dusky yellow; tarsi (except distal joint), apex of tibiæ narrowly and the knees, also narrowly, honey yellow. Scape concolorous. Head and thorax delicately reticulated, the lines raised. Mandibles 4-dentate. Pedicel subelongate, over twice longer than wide at apex, very much longer than any funicle joint; four "ring-joints," the first two subequal, the third a half longer, the fourth twice the size of the third and half the length of funicle 1, the latter slightly wider than long, 2 subequal to it, 3 and 4 each a little wider; club distinctly wider, its joints distinct, as long as the four preceding joints combined, its larger joints (1 and 2) a little wider than long, 1 twice the size of funicle 4. Scape slender, longer than club. Proximal joint of caudal tarsus longest. Pubescence inconspicuous. Stigmal vein nearly three fourths as long as marginal and somewhat shorter than the post-marginal, slender. Parapsidal furrows obscure from cephalad. Propodeum scaly, with an obscure median carina, no others nor sulci, transverse, the spiracle small. Neck of propodeum weak. Segment 2 of abdomen occupying about a fourth of the surface, glabrous, its caudal margin straight; rest of dorsal abdomen more or less scaly. Abdomen conic-ovate, keeled beneath, a little longer than the rest of body. Reared from galls of *Diarthronomyia hypogaea* F. Loew on Chrysanthemum, Berkeley, California, September 20, 1915 (E. O. Essig.)

Types.—Catalogue No. 20106.

Male similar but ring-joint 4 quadrate and funicle 1 following is somewhat longer than wide, 2 a little longer than wide (thus three true ring-joints); the pedicel is somewhat shorter. Also at Las Cruces, New Mexico.

Coccidoxenus mexicanus new species.

From genotype differs: Antenna dark except yellow scape; legs concolorous except tips of tibiæ and the tarsi (middle femur yellowish). Morelos, Mexico (Koebele).

Type.—Catalogue No. 21037.

A line of punctures on frons along eye. Sculpture fine cross-scaliness; scutum with scattered, larger punctures.

Oenocyrtus californicus new species.

From *johnsoni* differs: Twice larger; base of abdomen encircled by a narrow golden band; funicle 1 twice longer than wide; frons moderate; distal third of scutellum smooth. Pedicel elongate, so the scape. Sacramento, California, from bug eggs on *Pinus sabiniana*, September.

Types.—Catalogue No. 20859.

Tetrastichus microcosmus new name.

For *T. granulatus* Ashmead, preoc.

Achrysocharis donna new species.

From *camilli* differs: Thorax not glazed but scaly; fore wings hyaline and less densely ciliate in the disk. Parapsidal furrows complete. With larval *Tephrocerus gracilis*, Ithaca, New York, August.

Types.—Catalogue No. 21018.

Habrolepoidea celia new species.

From *aphidiphagus* differs: Cinctus on middle femur is more obscure or ventral; apex of scape is broadly white and the funicle is dull white. From pupa of *Ocyptamus*, Rio Piedras, Porto Rico (R. T. Cotton), February.

Types.—Catalogue No. 21021.