

DESCRIPTIONS OF NEW GENERA AND SPECIES, WITH  
NOTES ON PARASITIC HYMENOPTERA

By A. B. GAHAN,

*Of the Bureau of Entomology, United States Department of Agriculture.*

In this paper will be found descriptions of three species of Ichneumonoidea, and two genera and ten species of Chalcidoidea believed to be new to science. Some synonymical and other notes on described species are also included.

Superfamily ICHNEUMONOIDEA.

Family ICHNEUMONIDAE.

Subfamily OPHIONINAE.

Genus CASINARIA Holmgren.

*Amorphota orgyiae* Howard, type of the genus *Amorphota*, agrees with the characterization of *Casinaria* given by Szepligeti. Specimens of the genotype species of *Casinaria* are not available for comparison, but descriptions of that species, *Casinaria tenuiventris* Gravenhorst, leave no doubt that *Amorphota* is a synonym of *Casinaria*.

CASINARIA INFESTA Cresson.

*Limneria infesta* CRESSON, Trans. Amer. Ent. Soc., vol. 4, 1872, p. 172.

*Limnerium sessilis* ASHMEAD, Proc. U. S. Nat. Mus., vol. 12, 1890, p. 433.

*Limnerium erythrogaster* ASHMEAD, Proc. U. S. Nat. Mus., vol. 13, 1890, p. 434.

*Limnerium ashmeadi* DALLE TORRE, Cat. Hym., vol. 3, 1901, p. 90.

*Anempheres diaphaniae* VIERECK, Proc. U. S. Nat. Mus., vol. 40, 1912, p. 188.

After comparison of the types, the writer is convinced that all of the above names represent the same species.

SAGARITIS DUBITATUS Cresson.

*Mesoleptus dubitatus* CRESSON, Proc. Ent. Soc. Phila., vol. 3, 1864, p. 259.

*Limnerium provancheri* DALLE TORRE, Cat. Hym., vol. 3, 1901, p. 102.

*Limnerium (Campoletis) prodeniae* VIERECK, Proc. U. S. Nat. Mus., vol. 40, p. 190.

Cresson's species undoubtedly belongs in *Sagaritis*, so that Dalle Torre's name is unnecessary. Viereck's types are in every way typical specimens of *dubitatus*.

Genus *HYPOSOTER* Foerster.

It is the opinion of the writer that the genotypes of the following genera as established by H. L. Viereck<sup>1</sup> are all congeneric:

*Hyposoter* Foerster, *Hypothereutes* Foerster, *Ischnoscopus* Foerster, *Ameloclonus* Foerster, and *Anilastus* Foerster. *Hyposoter*, being the oldest name by page preference, becomes the name to be used.

*HYPOSOTER INTERJECTUS*, new species.

*Female*.—Length approximately 5.5 mm. Black with close white pubescence on the head, thorax, and abdomen; scape and pedicel reddish-yellow; flagellum black; palpi, mandibles except their apices, tegulae, front coxae and all trochanters, except the first joint of the posterior pair, pale yellow or whitish; median coxae, fore and median femorae and tibiae and the hind femorae reddish-yellow; hind coxae black, the hind tibiae blackish at base and apex with the middle paler; front and middle tarsi yellowish, their apices brown; hind tarsi very dark brown or blackish, the base of first joint pale; abdomen with the first segment, basal two-thirds and a narrow apical band of second black; following segments more or less blackish on the median dorsal portion; sides and venter reddish-yellow.

Head and thorax closely punctate and opaque; antennae 36-jointed in the type; anterior margin of the clypeus slightly rounded; eyes distinctly but not deeply emarginate just above the antennae; ocelli distant from the eye-margin a little more than the greatest diameter of an ocellus, postocellar line not twice the lateral ocellar line; propodeum in the type with a rather poorly defined areola which is longer than wide and open behind; areolet of the front wings with a short petiole, the recurrent nervure joining cubitus behind the middle of the areolet; first abscissa of radius nearly half as long as the second; subdiscoidal vein arising from the middle of the second discoidal cell; nervellus of the hind wing slightly curved but not at all angularly broken; first joint of the hind tarsi more than twice as long as the second; last joint of the tarsi, not including the claw, about equal to the fourth joint, claw distinctly pectinate; longer of the hind tibial spurs very nearly two-thirds the length of the first tarsal joint; abdomen dilated below from the third segment, not strongly compressed, the ovipositor scarcely exerted beyond the apex of the abdomen; spiracles of the second segment at the middle; petiole with a distinct fossa laterally before the spiracle.

*Male*.—Unknown.

*Type-locality*.—Arcola, Mississippi.

*Host*.—*Prodenia ornithogalli*.

*Type*.—Cat. No. 18327, U.S.N.M.

<sup>1</sup> Bulletin 83, U. S. National Museum, 1914.

One specimen from the type-locality reared by W. R. McConnell, June 1, 1913, and recorded in the Bureau of Entomology, United States Department of Agriculture, under Webster No. 9627. A paratype female from Lakeland, Florida, G. G. Ainslie, collector, and recorded under Webster No. 9402C, was reared from a larva on corn.

The paratype has the median areola of the propodeum more poorly defined than in the type, the parallel carinae behind the costulae being almost wholly obsolete.

The present chaotic condition of the North American Campopleginae as regards both genera and species make it practically impossible to determine species of this group. A thorough revision may show the foregoing as well as the following species to be already described.

**NEPIERA BENEVOLA**, new species.

*Female*.—Length, 4.5 mm. Head and thorax very finely closely punctate and covered with short white pile; antennae slender, 27-jointed in the type, the first flagellar joint fully four times as long as broad, following joints gradually decreasing in length; inner eye-margins straight or very nearly so; clypeus indistinctly separated from the face by a slight depression, the lateral grooves not deep; ocellular line about one and one-half times the diameter of an ocellus and shorter than the postocellar line; mesopleurae with a smooth area beneath the posterior wing, otherwise sculptured like the mesoscutum; propodeum sculptured like the mesoscutum, scarcely projecting over the base of the hind coxae, not or very slightly hollowed out behind and distinctly areolated, the areola confluent with the petiolar area and appearing nearly twice as long as broad, the median basal area nearly parallel-sided and longer than broad, propodeal spiracles touching the marginal carina of the propodeum; areolet of the front wings sessile and receiving the recurrent nervure slightly before the middle; nervulus oblique; subdiscoidal nervure joining the second discoidal cell at the middle; nervellus of the hind wing curved but not angularly broken; longer of the hind tibial spurs a little less than half the length of the first tarsal joint; abdomen pilose, longer than the head and thorax, only slightly compressed; spiracles of the first tergite a little farther from the apex of the segment than from each other, postpetiole nearly parallel-sided, second tergite distinctly longer than the third and not compressed, its spiracles slightly behind the middle; following segments successively shorter; ovipositor exerted about one-fifth the length of the abdomen. Head and thorax black; antennae entirely black; mandibles, except at apex, tegulae, and trochanters, except the basal joint of the posterior pair, yellow; palpi almost white; anterior and median coxae and femorae and the anterior tibiae pale ferruginous, median tibiae brownish, posterior coxae and first joint of trochanters black, posterior

femora dark ferruginous and tinged with blackish at base and apex, their tibiae dark brown or blackish with an obscure yellowish stripe on each side medially, anterior and median tarsi brownish, the posterior pair black; wings hyaline, the veins and stigma usually blackish; abdomen black, the dorsal tergites beyond the first each with a complete apical yellowish-ferruginous band which broadens out laterally on the segments beyond the second; ovipositor sheaths black.

*Male*.—Essentially the same as the female.

*Type-locality*.—Salt Lake, Utah.

*Host*.—*Eurymus eurytheme*.

*Type*.—Cat. No. 18328, U.S.N.M.

Five females and eight males from the type-locality, L. P. Lockwood, collector, and recorded in the Bureau of Entomology under Webster No. 6664.

### Family ALYSIIDAE.

#### Subfamily ALYSIINAE.

#### APHAERETA SARCOPHAGAE, new species.

*Female*.—Length, about 2 mm. Black, polished; the antennal scape, pedicel, palpi, mandibles, legs including all coxae, and the first abdominal segment testaceous; wing veins and stigma dark brown, the second cubital cross vein pale. Antennae 23-jointed in the type; first flagellar joint not longer than the scape and pedicel combined, about two-thirds the length of the second flagellar joint, slightly shorter than the third, about equal to the fourth, and a trifle longer than the fifth; head about twice as wide as long antero-posteriorly, occiput concave and polished; frons and vertex polished, the latter without a median groove or with only a trace of one between the ocelli; face smooth with a few indistinct scattered punctures, more distinct on the clypeus; mandibles tridentate, the median tooth acute, the two lateral obtuse and not produced. Mesoscutum smooth and polished, without furrows; mesopleurae with a foveolate furrow below which does not extend to the posterior margin; propodeum mostly smooth, with a sharp median carina which splits about midway of the propodeum, the two branches inclosing a narrow wedge-shaped petiolar area, transverse carina present, the posterior face of the propodeum more or less wrinkled. Wings subhyaline, the stigma rather broader than usual for the genus; first abscissa of radius about equal to the width of stigma and half as long as the first transverse cubitus; second abscissa of radius nearly twice the length of the first transverse cubitus, second transverse cubitus one-half the length of the first; second discoidal cell effaced below. Abdomen about as long as the thorax; first segment bicarinate at base, convex and rugulose medially on the apical half, the lateral margins nearly smooth; segments

beyond the first smooth and polished; ovipositor exerted nearly the length of the abdomen.

*Male*.—Essentially like the female; antennae 22-jointed in the type; abdomen spatulate.

*Type-locality*.—Wellington, Kansas.

*Host*.—*Sarcophaga, kellyi*.

*Type*.—Cat. No. 18329, U.S.N.M.

Five females and five males from the type locality reared by E. O. G. Kelly and recorded under Webster No. 7398, Bureau of Entomology, United States Department of Agriculture.

In C. T. Brues's key to the species of this genus<sup>1</sup> this runs to section 7, but is apparently separable from all three species in that category by the areolation of the propodeum and the different length of the second flagellar joint.

## Superfamily CHALCIDOIDEA.

### Family CALLIMOMIDAE.

#### Subfamily MONODONTOMERINAE.

#### LIODONTOMERUS, new genus.

Antennae 13-jointed, with two ring-joints; funicle 6-jointed; face rather long and very slightly narrowed above; occipital foraminal depression immargined; pronotum shorter than the mesonotum; propodeum without carinae and also without spiracular sulci; marginal vein shorter than the submarginal, the stigmal shorter than the postmarginal; front femorae not or only slightly swollen, posterior femorae with very slight indications of teeth on the lower apical margin or without any teeth; first dorsal abdominal segment incised medially.

*Type of the genus*.—*Liodontomerus perplexus*, new species.

*Plesiostigmodes*, Ashmead *Dimeromicrus*, and *Idiomacromerus*, Crawford have two ring-joints in the antennae. This new genus can be separated from the first by the short pronotum and the unswollen front femora, while from the others it differs in the immargined occiput.

#### LIODONTOMERUS PERPLEXUS, new species.

*Female*.—Length, 1.6 to 1.8 mm. Antennae clavate; funicle joints all broader than long and broadening slightly toward the club; club broader than the funicle and about equal in length to the three last funicle joints combined. Head and thorax closely punctate; the propodeum less strongly sculptured than the rest of the thorax, only faintly lineolated medially, the sculpture more evident laterally;

<sup>1</sup> Twelfth Rept. State Entomologist of Minnesota, 1907, p. 212.

marginal vein slightly less than half the length of the submarginal and not quite twice the length of the postmarginal; abdomen lineolated, not longer than the head and thorax; ovipositor about two-thirds the length of the abdomen. Head and thorax brassy-green, the abdomen entirely bronze above, its sides slightly darker; antennae black, slightly tinged with bronze; all coxae, trochanters, and femorae bronzy; median and hind tibiae usually dark brown except at base and apex; front tibiae, base and apex of hind and median tibiae, and all tarsi yellowish; the apical tarsal joint brown.

*Male*.—Similar to the female except that the head and thorax are brighter blue-green and the femorae less tinged with bronze; the third flagellar joint (first funicle joint) is often so reduced as to give the appearance of three ring-joints. The same is true to a less extent with the female.

*Type-locality*.—Yuma, Arizona.

*Type*.—Cat. No. 18330, U.S.N.M.

Described from 40 specimens from the type-locality reared by T. D. Urbahns from alfalfa seed pods infested with *Brucophagus funebris*, and recorded in the Bureau of Entomology under Webster No. 7202.

### Family ENCYRTIDAE.

#### Subfamily EUPELMINAE.

#### ANASTATUS SEMIFLAVIDUS, new species.

*Female*.—Length, 2.3 to 2.5 mm. Head strongly punctate; eyes elliptical; antennal pedicel about two-thirds the length of the first funicle joint; ring-joint transverse; first, second, and third funicle joints subequal, following joints shorter; mesoscutum with the median and lateral lobes alike faintly scaly-punctate and hairy; the median lobes more distinctly sculptured bordering the lateral margins; scutellum and axillae very finely and closely punctured, the former precipitous posteriorly and the posterior face smooth; propodeum smooth; mesopleurae mostly smooth, but with the anterior portion above scaly-punctate; postmarginal vein twice as long as the stigmal, the marginal a little more than twice the postmarginal; abdomen faintly lineolate, about as long as the thorax. Scape reddish-yellow, flagellum black; head brassy-green; mesoscutum, punctate area on the mesopleurae, posterior face of the scutellum, propodeum, hind coxae, and underside of the thorax metallic blue-green; scutellum and axillae varying from wholly pale orange-yellow to dark brown, with only the bases yellowish; remainder of the thorax reddish yellow; legs yellowish within and along the margins, blackish or brownish outwardly, the femora often tinged with metallic; wings fuscous, the base hyaline to the beginning of the marginal vein and a broad hyaline transverse band before the stigmal vein; abdomen yellowish

above except the three apical segments, which are darker and somewhat metallic; venter pale at base, brownish medially and metallic apically.

*Male*.—Head strongly punctate; antennal scape compressed and expanded beneath, pedicel very short, flagellum tapering slightly from base to apex; first funicle joint about twice as long as wide; following joints successively shortening; club scarcely as long as the two last funicle joints combined; mesoscutum and scutellum alike scaly-punctate, mesopleurae mostly smooth; propodeum smooth; postmarginal vein nearly as long as the marginal and a little more than twice the length of the stigmal; abdomen reticulately lineolate. Color dark blue-green; antennae black, the expansion of scape pale; abdomen beyond the first segment brownish-black; all trochanters, a line above and the apices of front and middle femorae, front tibiae outwardly for its whole length, basal third of middle and hind tibiae and the three basal joints of the middle and hind tarsi yellowish-white; front tarsi and apical two joints of the other tarsi fuscous; remainder of the legs blue-green or blackish.

*Type-locality*.—Koehler, New Mexico.

*Host*.—*Hemileuca oliviae*.

*Type*.—Cat. No. 18331, U.S.N.M.

Six females and eight male specimens reared by W. F. Schlupp from the eggs of the above named host and recorded under Webster No. 5054, Bureau of Entomology.

## Family PTEROMALIDAE.

### Subfamily PTEROMALINAE.

#### TRIMEROMICRUS, new genus.

Runs to *Neocatolaccus* in Ashmead's key and also in that of Nickolas Kourdumoff, but may be readily separated from that genus by the venation and the lack of appressed hairs on the thorax.

Antennae inserted on the middle of the face, with three ring-joints and a distinctly jointed club; pedicel about as long as the first funicle joint; joints of the funicle subequal and subquadrate; mandibles each with four very short teeth; eyes ovate and practically bare; head from in front not longer than broad, the clypeocular line a little longer than half the height of the eyes, cheeks rounded; seen from above the head is narrow antero-posteriorly, the occiput only slightly concave and immargined, ocellocular line about equal to the lateral ocellar line, the postocellar line fully twice the length of the ocellocular line; face below the antennae not curved under; pronotum short and as wide as the mesonotum; scutellum without a cross furrow; propodeum short, without a neck, the spiracular sulci and lateral folds distinct, spiracles distinctly elliptical; wings bare at base, the marginal and postmarginal veins nearly equal, the stigmal about two-thirds the

length of the postmarginal; legs normal; abdomen conic-ovate, not wider than the thorax, its first dorsal segment comprising about one-fourth of its total length.

*Type of the genus.*—*Trimeromicrus maculatus*, new species.

TRIMEROMICRUS MACULATUS, new species.

*Female.*—Length, 1.25 to 1.8 mm. Head and thorax closely punctate, the punctures of the vertex finer than those of the face, punctures on the mesoscutum before the base of the scutellum larger than elsewhere on the thorax; propodeum shining, with very faint reticulations, the median carina distinct and the lateral folds terminating basally in a broad deep fovea; abdomen with the first dorsal segment smooth, segments 2, 3, and 4 laterally and nearly all of 5 and 6 with faint reticulate lines. Head aeneous, the face more or less purplish or blackish in some lights; antennal scape pale, the pedicel and flagellum brownish testaceous, thorax black, tinged with aeneous, with four metallic blue-green or bright aeneous spots on the mesoscutum, one anteriorly on each side of the median line and another on the scapulae; base of the scutellum and axillae also often tinged with metallic; propodeum green or brassy; wings hyaline, the venation pale, apex of the submarginal vein and the stigmal knob usually darker; all coxae, trochanters, and femorae black; tibiae variable, brownish to black with the bases and apices yellow, the front tibiae often wholly yellow; all tarsi except the apical joint yellow; first dorsal abdominal segment brassy-green, the following segments green, broadly bordered apically with purplish black.

*Male.*—Antennal pedicel a little shorter than the first funicle joint; head and thorax aeneous, the latter without differentiated spots on the mesoscutum; marginal vein slightly shorter than the postmarginal; legs variable in color, sometimes entirely reddish-yellow except the coxae but more frequently with the femorae more or less brownish, and often with all the femorae brown and the tibiae brownish, the apices of tibiae and the tarsi always reddish-yellow; abdomen ovate, the dorsal segments beyond the first greenish-black without black apical bands. Otherwise like the female.

*Type-locality.*—Yuma, Arizona.

*Type.*—Cat. No. 18332, U.S.N.M.

Many specimens from the type-locality reared by T. D. Urbahns from alfalfa seed-pods infested with *Brucophagus funebris*, and recorded under Webster No. 7202, Bureau of Entomology, United States Department of Agriculture.

EUPTEROMALUS SARCOPHAGAE, new species.

*Female.*—Length, 1.9 mm. Dark green to somewhat aeneous; scape and legs excepting coxae reddish-yellow, apical tarsal joint brown; head and thorax with close thimble-like punctures; abdomen smooth conic-ovate.



Very similar to *Eupteromalus nidulans* Foerster, from which it differs principally as follows: Antennal flagellum black, the pedicel not longer than the two ring-joints and the first joint of funicle combined; apex of scutellum usually more faintly sculptured than the remainder of the scutellum, often slightly shining with shallow reticulate punctures, never with the three or four transverse rows of punctures at the apex larger and deeper than the others; propodeal median carina incomplete or wanting, never distinct and complete; stigmal vein very nearly as long as the marginal.

*Male*.—Similar to the female but with the antennal flagellum brownish-yellow, the abdomen scarcely longer than broad, its first segment wider at apex than the base of the second, segments beyond the first together scarcely longer than the first.

*Type-locality*.—Dodge City, Kansas.

*Host*.—*Sarcophaga kellyi*.

*Type*.—Cat. No. 18333, U.S.N.M.

Six females and one male from the type-locality, reared by E. O. G. Kelly and recorded under Webster No. 9946, Bureau of Entomology, United States Department of Agriculture.

HABROCYTUS MEDICAGINIS, new species.

*Female*.—Length about 1.7 mm. Head and thorax closely punctate, the punctures on the medial portion of the mesoscutum slightly larger than those on the scapulae and scutellum; antennae with two ring-joints; pedicel and first funicle joint, excluding the ring-joints, about equal; following funicle joints a little longer than the first and a trifle longer than broad; viewed from in front the head is broader than long, the clypeal region with converging striae and a deep median sinus on the anterior margin; viewed from above the head is slightly broader than the thorax, narrow antero-posteriorly, the occiput slightly concave, the ocellular line longer than the lateral ocellar line, the lateral ocellar line not equal to half the postocellar line; pronotum strongly transverse with a sharp margin anteriorly; propodeum short, without a neck, with a median carina and lateral folds, the region between the lateral folds more or less distinctly wrinkled and with a fovea-like depression at the base and another at the apex of the fold; the region outside the lateral folds is usually more faintly sculptured with indistinct lines; propodeal spiracles elliptical; marginal and postmarginal veins subequal, the stigmal one-third shorter; abdomen conic-ovate, about as long as the head and thorax and nearly smooth, the dorsal segments beyond the first with very faint transverse lines. Head and thorax aeneous; antennae brown, the scape slightly paler beneath; wings hyaline; all coxae aeneous like the thorax, all trochanters and femorae black with an aeneous tinge; tibiae and tarsi usually reddish yellow, the

former often brownish except at apex; apical joint of all tarsi dark; abdomen polished aeneous.

*Male*.—Unknown.

*Type-locality*.—Glendale, California.

*Type*.—Cat. No. 18334, U.S.N.M.

Twenty-five specimens from the type-locality, reared by T. D. Urbahns from alfalfa seed pods infested with *Brucophagus funebris*, and recorded in the Bureau of Entomology under Webster No. 6044.

## Family EULOPHIDAE.

### Subfamily ENTODONINAE.

#### DEROSTENUS FULLOWAYI Crawford.

Several specimens which are believed to be this species have been reared by C. N. Ainslie from *Agromyza parvicornis* at Elkpoint, South Dakota, and are recorded under Webster No. 8870, Bureau of Entomology. The stigmal cloud in these specimens as well as in the type series of *D. fullowayi* in the United States National Museum varies all the way from very distinct to entirely absent, and it is doubtful whether the species is distinct from *D. variipes* Crawford, which was described from a single specimen.

### Subfamily ELACHERTINAE.

#### EUPLECTRUS INSUETUS, new species.

*Female*.—Length about 2 mm. Black; face slightly aeneous; scape, mandibles, legs except middle and hind coxae, and the first abdominal segment above and below pale yellow; antennal flagellum brownish. Eyes distinctly hairy; occiput rugulose; vertex more or less wrinkled; frons and face faintly reticulated, shining, with scattering large round punctures on the frons; first funicle joint distinctly longer than the pedicel; joints 2, 3, and 4 of the funicle shorter, the fourth about as long as wide; club shorter than the two preceding funicle joints combined. Pronotum and mesoscutum scaly punctate, the latter without a median carina, the parapsidal grooves distinct but not deeply impressed; scutellum and axillae very distinctly and closely striated; metanotum polished; propodeum polished with a strong median carina and deep lateral folds, the spiracles placed almost in the folds; pleurae mostly smooth or very faintly sculptured, the prepectus distinctly punctate; hind coxae with fine reticulate lines; first joint of the hind tarsi much shorter than the second and shorter also than the third; longer of the hind tibial spurs a little longer than the first tarsal joint; wings hyaline the venation normal; abdomen short ovate, much shorter than the thorax and perfectly smooth.

*Male*.—Unknown.

*Type-locality*.—Lakeland, Florida.

*Host.*—*Lorema accius*.

*Type.*—Cat. No. 18335, U.S.N.M.

Five females from the type-locality, reared from the above-named host by G. G. Ainslie and recorded in the Bureau of Entomology, United States Department of Agriculture, under Webster No. 9498.

This species is easily separated from the other American forms by the short first joint of the tarsi and the short tibial spurs in which it resembles certain oriental species.

Subfamily EULOPHINAE.

DIAULINUS INSULARIS, new species.

*Female.*—Length about 1.1 mm. Similar to *Diaulinus pulchripes* Crawford, from which it may be separated by the stronger and deeper punctation of the mesoscutum and scutellum, by the furrows of the scutellum not being nearly as far apart as the length of the scutellum, by the propodeum being obviously reticulated, though very finely so, by the marginal vein being slender, the postmarginal a little longer than the stigmal, and by the narrower bands of black on the tibiae, these rarely extending much beyond the middle of the tibiae. Readily distinguished from *begini* Ashmead by the stronger sculpture and the broader bands on the tibiae.

Blue-green with brassy reflections, the latter strongest on the propodeum and base of the abdomen; antennal scape pale except at extreme apex, the pedicel and flagellum brown; punctures of the scutellum slightly finer than those of the mesoscutum but very distinct, parallel furrows of the scutellum about as far apart as half the length of the scutellum; wings hyaline; all femorae blackish at base, their apices broadly white or whitish; all tibiae banded with black, the black band extending to or a very little beyond the middle, a narrow band at the extreme base and the apical half whitish; two apical joints of the tarsi dark; abdomen mostly smooth.

*Male.*—Essentially like the female.

*Type-locality.*—Rio Pedras, Porto Rico.

*Host.*—*Agromyza inaequalis* Malloch.

*Type.*—Cat. No. 18336, U.S.N.M.

Described from nine females and four males from the type-locality reared by T. H. Jones.

Subfamily TETRASTICHINAE.

CERATONEURA PRETIOSA, new species.

Agrees with the description of the genus except that the scutellum shows two faint longitudinal grooves similar to those in species of *Tetrastichus* but less distinct than in that genus.

*Female.*—Length about 2.25 mm. Antennal pedicel about two-thirds the length of the first funicle joint; ring joints each nearly as long as thick; first joint of funicle the longest of the funicle joints, about twice as long as thick, third joint the shortest and scarcely one

and one-half times as long as thick; face below with prominent striae converging toward the clypeus; upper part of face, vertex, temples and occiput with very fine reticulate-punctate sculpture; thorax sculptured like the head, only more distinctly; propodeum with a well defined median carina and sculptured like the scutellum, only somewhat less distinctly; wings hyaline, the postmarginal vein absent, marginal vein of the hind wing ending in a small rounded knob; abdomen shorter than the head and thorax, ovate, mostly smooth but with the apical segments faintly reticulate above, petiole short. General color pale yellow, tinged with greenish on the dorsum and spotted with black as follows: A spot on the occiput, median lobe of the mesoscutum except lateral margins and apex, basal spot on each scapula, basal spot on each axilla, propodeum basally, spot on the mesosternum, abdominal petiole, and dorsal tergites 2, 3, and 4 for the most part. A blotch medially on the scutellum and most of the propodeum usually brownish.

*Male*.—Funicle appearing 5-jointed, the club 2-jointed; first funicle joint about one and one-half times as long as thick; following joints subequal and nearly three times as long as thick; abdomen spatulate and mostly black, the extreme apex yellow. The funicle is really but 3-jointed, the first ring-joint being greatly elongate and the basal joint of the club resembling the funicle joints.

*Type-locality*.—Brownsville, Texas.

*Type*.—Cat. No. 18337, U.S.N.M.

Twenty specimens reared by E. G. Smyth from galls on *Mimosa* and recorded under Webster No. 6480, Bureau of Entomology.

#### Genus TETRASTICHUS Haliday.

According to Kourдумoff, typical species of *Tetrastichus* have only a single stiff bristle on the upper side of the submarginal vein. Those having more than one such bristle he places in the genus *Geniocerus*. In *Geniocerus* as thus constituted will fall species having two, three, four, five, six, or even a greater number of such bristles and which otherwise can scarcely be separated from species having but one bristle. The writer can furnish no evidence that the number of these bristles varies within any given species, but it is evident that the division is by no means a natural one. Acceptance of *Geniocerus* as a good genus would necessitate changing the generic name of the majority of the American species, which under the circumstances does not seem advisable. It is the intention of the writer, therefore, to treat *Geniocerus* as a synonym of *Tetrastichus*, at least until some more satisfactory character can be found to separate them. The presence of but one bristle in some of the species does afford a convenient means of separating the species of *Tetrastichus* into two groups and is therefore welcome.

The following key is believed to include all of the known species of *Tetrastichus* from the United States having only one bristle on the dorsal side of the submarginal vein.

*Key to some North American species of Tetrastichus.*

1. Legs all pale; antennae unusually long, the flagellum twice the length of the face  
..... *euplectri*, new species  
Femora, at least, black or blackish; antennae shorter..... 2
2. Antennal club short, scarcely longer than the last funicle joint and distinctly wider;  
first funicle joint nearly twice as long as the pedicel; propodeum strongly punctate..... *scolyti* Ashmead.  
Club much longer than the last funicle joint and scarcely wider..... 3
3. Abdomen slender, narrower than the thorax and produced apically, longer than the  
head and thorax..... *productus* Riley.  
Abdomen as broad as the thorax, not especially produced apically and rarely longer  
than the head and thorax..... 4
4. Lineolation of the thorax indistinct, very fine and shallow; first funicle joint appar-  
ently not much longer than the pedicel..... *theclae* Packard.  
Lineolation of the thorax deeper and more distinct; first funicle joint distinctly  
longer than the pedicel..... 5
5. Face obscurely sculptured, nearly smooth; body black, femorae dull brownish  
..... *johnsoni* Ashmead.  
Face distinctly finely sculptured and with a number of large shallow round punctures  
on the frons and along the inner orbits; body metallic blue or green;  
femorae black or tinged with metallic ..... 6
6. Third funicle joint not much longer than wide; scape and pedicel metallic blue-  
black; body deep blue; marginal vein somewhat thickened.  
*asparagi* Crawford.  
Third funicle joint nearly twice as long as broad and equal to the second;  
scape and pedicel yellowish; body color green; marginal vein scarcely  
thickened..... *hylotomae* Ashmead.

TETRASTICHUS EUPLECTRI, new species.

*Female*.—Length, 1.5 mm. Antennae elongate, cylindrical, the club not enlarged; ring-joint minute; pedicel about half as long as the first funicle joint; funicle 3-jointed, the first joint about three times as long as wide, second a little longer than the first, third shorter than the first; club 3-jointed, the first joint about twice as long as wide, second a little shorter, third small. Head obscurely lineolate; mesoscutum and scutellum with fine shallow lineolation, more apparent than on the face, parapsidal grooves deeply impressed, median groove of mesoscutum distinct; propodeum strongly and closely punctate with a median carina, the lateral folds present but not deep; submarginal vein with a single stiff bristle above, postmarginal vein obsolete; abdomen smooth, conic-ovate, about as long as the head and thorax. Head, thorax, and abdomen blue-green; antennae dark brown or black, the scape a little paler below; all coxae concolorous with the thorax, remainder of the legs pale yellow, the apical tarsal joint dark.

*Male*.—Similar to the female except that the antennal club is more elongate, being about as long as the funicle, its last joint as long and

as wide as the second and terminating in a spine; the first dorsal segment of the abdomen is pale yellowish except at base.

*Type-locality*.—Tullulah, Louisiana.

*Host*.—*Euplectrus platyhypenae* Howard.

*Type*.—Cat. No. 18338, U.S.N.M.

Two female and two male specimens reared by R. A. Vickery and recorded in the Bureau of Entomology under Webster No. 6439.

The long antennae, punctate propodeum, and pale legs distinguish this species from any of the other American species, having only one bristle on the upper side of the submarginal vein.

**TETRASTICHUS HAGENOWI** Ratzeburg.

*Tetrastichodes floridanus* ASHMEAD.

In the United States National Museum are specimens of the above-named species reared from the eggs of *Blatta* species, at Baton Rouge, Louisiana. Comparison of the types of *Tetrastichodes floridanus* Ashmead with these specimens shows them to be identical. The latter species is therefore a synonym of Ratzeburg's species.

**TETRASTICHUS VENUSTUS**, new species.

*Female*.—Length, 1.5 mm. Head and thorax obscurely lineolated; funicle joints subequal, the first slightly longer than the pedicel; club a little broader than the funicle, 3-jointed, and about as long as the two preceding funicle joints; median groove of the mesonotum very fine; parallel grooves of the scutellum distinct; propodeum obscurely sculptured; wings hyaline, the submarginal nervure with several bristles on the upper side; abdomen not longer than the head and thorax, thick dorso-ventrally at base and slightly conical. Body color pale orange-yellow variegated with black; vertex yellow; face, cheeks, occiput and spot surrounding the ocelli black; prothorax except laterally, large spot on the median lobe of the mesoscutum, basal spot on scapulae, basal spot on axillae, propodeum entirely, underside of the thorax, mesopleurae except the prepectus, and the abdomen, except the first and second dorsal tergites, black; all coxae and the basal half of the hind femorae black, the median and front femorae also blackish basally; rest of the head and thorax pale orange-yellow.

The color of this species is evidently quite variable. In paratype (a) the head, except the cheeks and occiput, is entirely yellow and the propodeum yellowish laterally. Paratype (b) is like the type, except that the median and front femorae are deep black on the basal half like the hind femorae.

*Type-locality*.—Corcoran, California.

*Type*.—Cat. No. 18339, U.S.N.M.

Three female specimens from the type-locality, reared by T. D. Urbahns from alfalfa seed-pods infested with *Brucophagus funebris* and recorded in the Bureau of Entomology under Webster No. 6712.