

CONTRIBUTIONS TO OUR KNOWLEDGE OF BEES AND
ICHNEUMON-FLIES, INCLUDING THE DESCRIPTIONS OF
TWENTY-ONE NEW GENERA AND FIFTY-SEVEN NEW
SPECIES OF ICHNEUMON-FLIES.

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The present paper is the result of recent investigations conducted chiefly to ascertain the names of economic species to be used in forthcoming papers on their biology.

In this paper species transferred from one genus to another are given as headings in which the former genus in parentheses precedes the later genus. These species are arranged alphabetically according to the later genus, as for example (*Ephialtes*) *Callisphialtes comstocki* (Cresson), p. 633.

Superfamily APOIDEA.

Family ANDRENIDÆ.

Genus ANDRENA Fabricius.

Andrena FABRICIUS, Syst. Ent., 1775, p. 376.

Many species originally included.

Type.—*Apis helvola* Linneus, by present designation.

ANDRENA SAUNDERSI, new name.

Andrena nigriventris SAUNDERS, Trans. Ent. Soc. Lond., 1908, p. 208, not of Perez, Proces Verbaux Seances Soc. Linn. Bordeaux, vol. 57, p. 176 (p. 21 in reprint), 1902.

Named for the late Edward Saunders, of England, as a slight token of appreciation of his kindness toward his colleagues.

Superfamily ICHNEUMONOIDEA.

Family BRACONIDÆ.

APANTELES (APANTELES) ARISTOTELLÆ, new species.

Male.—Length, 2.5 mm.; head apparently wider than long, black, antennæ blackish or dark brown throughout, palpi stramineous; thorax, including tegulæ and coxæ, black or blackish, fore femora mostly blackish, pale at apex, mid and hind femora entirely blackish, fore tibiæ and tarsi rather pale, mid and hind tibiæ and tarsi mostly blackish or dark brown, the tibiæ pale basally, wings, including most

veins, mostly faintly whitish, stigma brownish; propodeum mostly almost smooth, with a complete areola and transverse striæ where the costulæ would be; abdomen black or blackish throughout, first plate apparently more than twice as long as wide at apex, narrower at apex than at base, with a median longitudinal fovea on the apical half, second plate rather smooth medially and basally, rather roughened apically and laterally, nearly twice as wide at base as long down the middle, and nearly twice as wide at apex as at base.

Type-locality.—Anglesea, New Jersey.

Type.—Cat. No. 14700, U.S.N.M.

Labeled, "reared from *Aristotelia fungivorella*, July 5, and collected June 13. Kearfott No. 240."

APANTELES (APANTELES) BRAUNÆ, new species.

Male.—Length, 1.5 mm.; agrees with the original description of *Apanteles prodeniæ* Viereck, except in the hind tibiæ being infuscated except at base, in the tegulæ being stramineous, in the scutel being polished, in the poorly areolated propodeum with its areola not circumscribed and apparently confluent with the basal area and basal lateral areas, costulæ developed but not trenchant, in the first abdominal plate being at least twice as long as wide at apex and mostly roughened, in the second plate being a little narrower at base than long down the middle, straight and nearly twice as wide at apex as at base, and roughened shining.

Type-locality.—United States of America.

Type.—Cat. No. 14701, U.S.N.M.

The type came from Miss Braun through W. D. Kearfott, under Kearfott No. 12.

APANTELES (APANTELES) EPINOTIÆ, new species.

Male.—Length, 2 mm.; agrees with the original description of *Apanteles prodeniæ* Viereck, except in the legs being mostly black or blackish, hind tibiæ blackish except at base, hind tarsi stramineous beneath, brownish above, in the scutel being polished and virtually impunctate; propodeum with only the lower half of the areola defined by carinæ, other carinæ entirely wanting or poorly suggested; first abdominal plate at least twice as long as wide at apex, apparently a little narrower at apex than at base, mostly roughened and with a median longitudinal fovea; second plate smooth and shining and at least twice as wide at base as long down the middle; wings whitish, including the veins and stigma excepting the costa and bounding veins of the stigma, which are rather stramineous.

Type-locality.—Anglesea, New Jersey.

Type.—Cat. No. 14702, U.S.N.M.

Labeled, "collected June 15 and reared June 29 from *Epinotia saliciana*, W. D. Kearfott, Kearfott No. 247."

APANTELES (APANTELES) GELECHLÆ, new species.

Female.—Length, 2.5 mm.; agrees with the original description of *A. fumiferanzæ* Viereck, to which it is related, except in the rather oblique, curved sides of the second plate, which are apparently as long as the plate is long down the middle, in the black femora the anterior pair of which is mostly stramineous on its apical half, in the hind tibiæ, which are mostly blackish on the apical half and mostly reddish on the basal half, with the extreme base rather stramineous and in the exerted portion of the ovipositor, which is at least as long as the abdomen.

Type-locality.—East River, Connecticut.

Type.—Cat. No. 14703, U.S.N.M.

Labeled, "reared from *Gelechia trialbamaculilla*, August, 1910, Dr. Chas. R. Ely, No. 156."

APANTELES (APANTELES) LITHOCOLLETIDIS, new species.

Male.—Length, 1.5 mm.; compared with the original description of *A. aristotelizæ* Viereck, this differs as follows: Palpi dark; wings, including stigma and veins brownish; propodeum without an areola, the latter barely suggested at apex by faint striæ, otherwise almost sculptureless; first plate distinctly more than twice as long as wide at apex and at least twice as long as wide at base, without a median fovea; second plate more or less finely sculptured throughout, nearly twice as long down the middle as wide at base and at least twice as wide at apex as at base, its apex straight and its sides arcuate.

Type-locality.—Warren, Massachusetts.

Type.—Cat. No. 14704, U.S.N.M.

Labeled, "reared from *Lithocolletes* on sweet fern, W. D. Kearfott."

APANTELES (APANTELES) PLESIUS, new species.

Female.—Length, 3.5 mm.; related to *Apanteles* (*Apanteles*) *edwardsii* Riley from which it can be distinguished by the second plate being more nearly three than four times as wide at apex as long down the middle, by the third segment being regulose to beyond the middle, by the first plate being apparently wider at apex than at base, and by the hind femora being reddish with the apical third more or less blackish. As in *A. edwardsii* Riley the head is not longer than wide, the thorax not depressed, the tegulæ stramineous, and all coxæ more or less black.

Type-locality.—Essex County, New Jersey.

Type.—Cat. No. 14705, U.S.N.M.

Labeled, "from larva on white oak, June 29, Kearfott No. 223."

APANTELES (APANTELES) POLYCHROSIDIS, new species.

Female.—Length, 2.5 mm.; closely related to *A. edwardsii* Riley from which it can be distinguished by the finely sculptured propodeum

which is partly polished and by the hind femora in the female being reddish with the apical third more or less brownish or dark. Stigma and its boundaries stramineous.

Type-locality.—Washington, District of Columbia.

Type.—Cat. No. 14706, U.S.N.M.

Allotype.—With the first segment apparently a little narrower at apex than at base, second plate approximately as long down the middle as wide at base and apparently two and one-half times as wide at apex as at base; antennæ a little longer than the body; hind femora blackish throughout, hind tibiæ blackish except at base, where they are stramineous. Otherwise essentially as in the female.

Labeled, "from *Polychrosis liriodendrana*, August 1, Kearfott No. 672. Reared by W. D. Kearfott."

APANTELES (APANTELES) TRACHYNOTUS, new species.

Male.—Length 3.5 mm.; head apparently wider than long, including the antennæ, mandibles and labrum black, palpi mostly pale, antennæ longer than the body; thorax not depressed, including the tubercles, black; wings with a brownish tinge, stigma and costa blackish, radius, transverse cubitus, third abscissa of cubitus, second abscissa of media, nervulus and first abscissa of discoidal vein brownish, rest of veins stramineous; dorsulum dull with adjoining or almost adjoining punctures, scutel shining, not so closely and more distinctly punctured than the dorsulum; coxæ and femora, except fore femora, mostly black, fore femora black basally, apically reddish, tibiæ mostly reddish, tarsi mostly blackish; propodeum coarsely rugose, with costulæ, with the areola, basal area, and other areas before the costulæ more or less confluent; abdomen mostly black or blackish, first plate at least twice as long as wide at base, nearly parallel sided but somewhat narrower at apex than at base, its apical three-fourths rugose; second plate rugulose, rather striate apically, about one and one-half times as wide at base as long down the middle, its apical edge which is straight approximately twice as wide as the basal edge, its sides diverging on the basal half, parallel on the apical half; remaining segments smooth, indistinctly punctured, the third segment at least one and one-half times as long as the second.

Type-locality.—Little Silver, New Jersey.

Type.—Cat. No. 14707, U.S.N.M.

Labeled, "bred June 13 from *Pegomyia vicina* Lintner infesting *Chenopodium*" on authority of Prof. John B. Smith.

Paratypes from New Haven, Connecticut, May 26, 1904 (H. L. Viereck); July 20, 1904, and July 19, 1905 (B. H. Walden).

Colebrook, Connecticut, July 21, 1905, on flowers of *Cicuta maculata* (H. L. Viereck); West Haven, Connecticut, June 27, 1905 (H. L. Viereck).

ASCOGASTER OLETHREUTI, new species.

Female.—Length, 4.5 mm.; related to (*Chelonus*) *Ascogaster carpocapsæ* Viereck from which it may be distinguished by the black mandibles; the more pointed clypeus; by the antennæ being black or blackish throughout; by the acute lateral projections of the propodeum, by the intermediate projections being reduced to a carina and by the uniformly black or blackish legs, excepting apex of fore femora and all of fore tibiæ, which are more or less dark stramineous; carapace, as in *Ascogaster carpocapsæ*, nearly twice as long as wide in the middle.

Type-locality.—Pullman, Washington.

Type.—Cat. No. 14708, U.S.N.M.

The allotype is from the same locality and essentially the same as the type. The type was reared May 11, 1910, the allotype June 22, 1910, and the two male paratopotypes June 11, 1910, and May 11, 1910. All of the preceding specimens were labeled, "reared from *Olethreutes rubipunctarea* under temporary Webster No. H. 139," Bureau of Entomology, U. S. Department of Agriculture. One female paratype No. 31 bears a label indicating that it is from Colorado and referable to the Baker note No. 633.

ATANYCOLIDEA, new genus.

Related to *Atanycolus* Foerster from which it differs chiefly in having a thorax as in *Platybracon* Szepligetii.

Type.—*Bracon rugosiventris* Ashmead.

CANTHAROCTONUS, new genus.

Related to *Spathius* Nees from which it differs chiefly in the non-cubical head, the temples not nearly produced as far as the outside line of the eyes, in the well-defined notauli, in the recurrent vein being received by the first submarginal cell, in the nonangulate hind coxæ and in the abdomen being poorly chitinized beyond the first segment.

Type.—*Cantharoctonus stramineus*, new species.

CANTHAROCTONUS STRAMINEUS, new species.

Female.—Length, 2.25 mm.; stramineous; head and thorax mostly polished; head darker than thorax; face, including clypeus and mandibles, mostly yellowish; front and vertex almost bare, with a few whitish hairs; ocelli almost equidistant and inclosing a triangular blackish area, the hind ocelli nearer to each other than to the eye margin; flagel 24-jointed, all joints at least twice as long as thick; wings almost colorless, except for the veins which are infuscated and the stigma which is pale stramineous; coxæ, trochanters and base of

femora rather whitish, rest of legs rather pale whitish stramineous; propodeum finely sculptured, with the third lateral area and with a petiolarea from which latter a median longitudinal carina extends to the base of the propodeum; first dorsal segment finely sculptured, nearly parallel sided, apparently at least three times as long as wide at base; second dorsal segment laterally chitinized like the first, rest of abdomen rather membranous, much paler than the first segment; ovipositor hardly exerted.

Type-locality.—Department of Piura, Peru.

Type.—Cat. No. 14709, U.S.N.M.

Reared by Mr. C. H. T. Townsend, who writes that this species is evidently from the square-weevil, *Anthonomus vestitus*.

CHELONUS (CHELONELLA) BUSCKI, new species.

Female.—Length, 3.5 mm.; mandibles blackish at base, dark stramineous tipped with castaneous, scape dark stramineous; pedicel more or less concolorous with the scape; flagel 14-jointed, all joints distinctly longer than wide, the first joint largely brownish stramineous, the remaining joints dark brownish to black or blackish; fore and mid coxæ and trochanters mostly stramineous, rest of fore legs dark stramineous, with the tarsi more or less dark brown, rest of mid legs mostly blackish; hind coxæ black, their trochanters with the proximal joint stramineous, their distal joint stramineous beneath, brownish above; hind femora black, hind tibiæ with the basal fifth blackish, as are the apical three-fifths, the remaining fifth whitish, spurs yellowish, tarsi dark brown; basal half of wings with the membranous portion mostly colorless, the membranous portion of the apical half brownish, veins brownish except the costa and media, which are whitish at base, the submedia, somewhat more than the basal half of which is whitish and the apices of which are pale yellowish or whitish, stigma blackish, tegulæ black; propodeum with its apical transverse carina slightly quadrangulate; basal fifth of carapace with a median longitudinal carina in addition to the lateral carinæ, the second fifth mostly stramineous with a brownish band down the middle, remainder of the carapace black.

Type-locality.—Montserrat, Trinidad.

Type.—Cat. No. 14710, U.S.N.M.

Judging from one paratopotype, this is a fairly constant species. The above-mentioned specimens were collected by Mr. August Busck, June 29, 1905.

Named for Mr. August Busck.

CHELONUS (CHELONELLA) RUFICOLLIS, new species.

Female.—Length, 3.5 mm.; head typical, black and sculptured, the malor space not separated from the face by a difference in sculp-

ture but confluent in every way; mandibles mostly stramineous, blackish at base, castaneous at apex; scape stramineous tinged with brown, rest of antennæ dark brown to blackish; flagel 14-jointed, most of the joints distinctly longer than thick, the tenth and eleventh apparently thicker than long; palpi pale; most of pronotum, all of mesonotum, and most of mesopleuræ rather reddish stramineous; rest of thorax mostly black; tegulæ including the veins rather stramineous, the rest of the fore wings brownish, with brownish veins and blackish stigma; fore legs mostly stramineous, mid legs similarly colored to the fore legs but with their femora tinged with brown, hind legs with their coxæ brownish, their trochanters yellowish, their femora mostly dark brownish, their tibiæ with the apical half mostly dark brown, the rest yellowish except for a sub-basal brownish macula, their tarsi mostly yellowish except the apical joint, which is dark brown; propodeum black with its apical carina quadrangular, the lateral processes not prominent; carapace black, with a dotlike area just below the apex.

Type-locality.—Pernambuco, Bonito Province, Brazil.

Type.—Cat. No. 14713, U.S.N.M.

Allotopotype.—Essentially as in the type except the flagel, which is 18-jointed, with all the joints longer than thick; thorax black except the mesonotum, which is reddish anteriorly and laterally on the anterior half; carapace with a transversely oval foramen at apex.

Labeled, No. 576. A. Koebele, February, 1883.

CHELONUS (CHELONELLA) TOWNSENDI, new species.

Female.—Length, 2.5 mm.; black and shining; sides of the front with arcuate striæ, the striated portion bounded above by a carina; a well-marked furrow between the upper edge of the clypeus and the face; front with a prominent almost carina like, longitudinal, median welt extending upward from a little below a point on a line with the lower edge of the antennal scrobes; scape castaneous, nearly as long as the first and second flagellar joints combined; pedicel brownish; flagel 14-jointed, first five joints mostly brownish, the remaining joints blackish to black, all joints longer than thick; tegulæ rather stramineous; forewings brownish, with blackish veins, stigma and parastigma, the basal third of the forewings, however, are rather yellowish or stramineous with the veins of the same portion stramineous; legs and apical foramen of the carapace essentially as in *Chelonus zepligetii* Viereck; carapace rather cylindrical.

Type-locality.—Department of Piura, Peru.

Type.—Cat. No. 14714, U.S.N.M.

Collected by C. H. T. Townsend and labeled, No. 795°3q.

Named for Mr. C. H. T. Townsend.

CHELONUS (CHELONUS) CHILENSIS, new species.

Male.—Length, 5 mm.; agrees with the original description of *Chelonus bipunctulatus* Viereck, except in the apical edge of the clypeus which is truncate, in the first joint of the flagel, being apparently as long as the scape, and in the carapace, which is black throughout.

Type-locality.—Chile.

Type.—Cat. No. 14711, U.S.N.M.

Presumably collected by E. C. Reed. This may prove to be the male of *Chelonus bipunctulatus* Viereck.

CHELONUS (CHELONUS) GOSSYPII, new species.

Female.—Length, 2.5 mm.; otherwise agrees with the original description of *Chelonus buscki* Viereck except as follows: Mandibles pale stramineous between base and apex; scape and pedicel pale, stramineous; flagel 23-jointed, the seventh to twelfth joints apparently a little thicker than long, the first joint yellowish, the remaining joints more or less brownish; all coxæ rather castaneous, mid femora stramineous tinged with castaneous, mid tibiæ and tarsi more or less brownish; hind trochanters mostly stramineous, hind femora castaneous, hind tibiæ mostly brownish, yellowish at extreme base, hind spurs pale, hind tarsi brownish; wings uniformly almost colorless, tinged with brown, tegulæ rather castaneous, veins almost concolorous, brownish, media pale at base, stigma brownish; carapace blackish throughout, without a median longitudinal carina.

Type-locality.—Pernambuco, Bonito Province, Brazil.

Type.—Cat. No. 14712, U.S.N.M.

Allotopotype.—Essentially as in the type but with the seventh to twelfth joints of the flagel distinctly longer than thick.

Labeled, "No. 285, on cotton worm, February 11, 1883."

CHELONUS SZEPLIGETII, new name.

Chelonus sobrinus SZEPLIGETI, Ann. Hist. Nat. Mus. Nat. Hung., vol. 2, p. 194, 1904, not of Haldeman, Proc. Acad. Nat. Sci. Phila., vol. 4, p. 203, 1849.

CYANOPTERUS DEPRESSI, new species.

Female.—Length, 13 mm.; judging from the original description of *Ipobracon persimilis* Szeplogeti this would appear to be a closely related species; *C. depressi* can be distinguished from the former by the head, thorax, abdomen, antennæ, and legs being black throughout except the first four dorsal segments which are reddish black.

Type-locality.—Port of Spain, Trinidad.

Type.—Cat. No. 14715, U.S.N.M.

Labeled, "from larva of *Steirastoma depressum*, P. L. Guppy, Coll. No. 77."

CYANOPTERUS PECILIARIS, new species.

Female.—Length, 12.5 mm.; apparently agrees best with *Ipobracon bonacrensis* (Schrottky) as originally described, but differs especially as follows: Cheeks reddish; antennæ distinctly shorter than the body, thorax rather castaneous; fore coxæ and trochanters concolorous with the femora; mid-coxæ and femora blackish brown, their trochanters rather testaceous; hind legs blackish throughout excepting base of tibiæ and the trochanters which are pale; wings almost uniformly dark brown; the radial cell at base and along the lower edge, first cubital cell and base of third discoidal cell, yellowish; first discoidal cell rather blackish, second transverse cubitus bisinuate; propodeum without furrows; abdomen uniformly dark reddish; second dorsal segment mostly smooth, laterally elevated along the margins, medially rather triangularly intumescens, the swollen median area at base on each side with a sharp edge; third dorsal segment with the anterior, lateral area barely indicated; ovipositor 12 mm. long.

Type-locality.—San Bernardino, Paraguay.

Type.—Cat. No. 14716, U.S.N.M.

Labeled, "No. 814, K. Fiebrig, collector, October 20."

CYANOPTERUS STEIRASTOMÆ, new species.

Female.—Length, 11 mm.; appears to have characters in common with those mentioned in the original description of *Bracon nigripes* Brulle, from which it may be distinguished by not having the pale portions of thorax and abdomen concolorous, the former being reddish and the latter yellowish, and the proportionally shorter ovipositor; differs from *Ipobracon grandiceps* Szepilgeti, with the original description of which it agrees, except in the first abscissa of the cubitus not being broken, in the pronotum being reddish and in the pale portion of the abdomen being yellowish. Ovipositor 7 mm. long.

Type-locality.—Port of Spain, Trinidad.

Type.—Cat. No. 14717, U.S.N.M.

Allotopotype.—Essentially as in the type except in the attenuated portion of the median area of second segment which is more carinate than in the type.

Labeled, "from larva of *Steirastoma depressum*, P. L. Guppy, collector; No. 76."

DIGONOASTRA, new genus.

This name is proposed for a group of species having characters in common with *Cyanopterus* Haliday but with an area or keel on the third dorsal segment.

Type.—*Bracon epicus* Cresson.

EUBADIZON LITHOCOLLETIDIS, new species.

Female.—Length, 2 mm.; mostly stramineous and finely sculptured; face rather yellowish; interocellar space blackish; mesopleuræ without a furrow, finely sculptured; propodeum delicately sculptured, virtually without carinæ, blackish at apex; cubital vein with only two abscissæ; dorsal abdominal segments rather granular excepting third and fourth segments apically and most of remaining segments which are polished; onychii blackish; exerted portion of ovipositor at least three-fifths as long as the abdomen.

Type-locality.—Auburndale, Massachusetts.

Type.—Cat. No. 14718, U.S.N.M.

Labeled, "bred from leaves of the swamp whiteoak mined by *Lithocolletes hamadryadella* Clemens, July 25, 1911."

Received from Mr. C. W. Johnson.

EUTRICHOPSIS AGROMYZÆ, new species.

Female.—Length, 1.25 mm.; mostly black and polished; clypeus yellowish, its anterior edge arcuated so as to form a transversely elliptical opening with the mandibles when the latter are in the flexed position; mandibles mostly yellowish, with brownish to blackish tips; other mouth parts rather whitish yellow; scape and pedicel rather brownish; flagel 17-jointed, brown, all the joints at least twice as long as thick; mesopleuræ with an oblique, foveolate furrow extending downward and backward; tegulæ brownish, wing base rather stramineous; legs mostly yellowish excepting hind tibiæ and tarsi which are mostly fuscous; wings with a brownish tinge; propodeum mostly indefinitely sculptured; first dorsal segment distinctly longer than wide at apex, rather reticulated and yellowish; second segment smooth and yellow, approximately as long as wide at base and nearly twice as wide at apex as at base; ovipositor hardly exerted.

Type-locality.—Lafayette, Indiana.

Type.—Cat. No. 14719, U.S.N.M.

Labeled, "Webster No. 6395, August 7, 1911, P. Luginbill collector, reared from *Agromyza*."

Allotopotype.—Essentially as in the type, but scape and pedicel rather stramineous; flagel 19-jointed.

Data as in the type.

HABROBRACON JOHANNSENI, new species.

Female.—Length, 2 mm.; related to *Habrobracon stabilis* Wesmael from which it may be distinguished by the 22-jointed antennæ, in the almost entirely blackish head, the yellow border along the eye being greatly reduced; legs mostly blackish, the hind tibiæ pale at base, and beneath on the basal half; abdomen mostly black or blackish except the ventral fold which is stramineous.

Type-locality.—Orono, Maine.

Type.—Cat. No. 14720, U.S.N.M.

A paratopotype has the antennæ 21-jointed.

This is the species referred to as *Bracon* sp.¹

HABROBRACON TETRALOPHÆ, new species.

Female.—Length, 2 mm.; antennæ 23-jointed; related to *H. johannseni* Viereck from which it can be distinguished by the stramineous hind femora.

Type-locality.—Lafayette, Indiana.

Type.—Cat. No. 14720, U.S.N.M.

Female paratopotype.—Essentially as in the type, the abdomen mostly black. Labeled, "Webster No. 6344, issued September 19, 1911, P. Luginbill, collector."

HELCON CASTANÆ, new species.

Female.—Length, 8.5 mm.; related to *H. dentipes* Brulle from which it can be distinguished by the black antennæ, thorax, propodeum and fourth and following abdominal segments, and in the almost impunctate second dorsal segment.

Type-locality.—Tryon, North Carolina.

Type.—Cat. No. 14722, U.S.N.M.

Allotype characters essentially as in the type. Specimens examined are from the type-locality and labeled, "*Castanea dentata*, W. F. Fiske, collector, with the following Hopk. U. S. numbers: 3015*h.*, 3075*g.*, 3055*g.*, 3014*b.*, 3033*j.*, and 1407*b.*"

The pupa case is translucent testaceous, 11 mm. long, nearly three times as long as wide in the middle, and membranous with some free strands of silk.

MACROCENTRUS CERASIVORANÆ, new species.

Female.—Length, 8 mm.; mostly uniformly reddish; ocellar region blackish; antennæ mostly brownish, becoming blackish toward the end, flagel 51-jointed; third joint of the maxillary palpi somewhat shorter than the first joint of the flagel but more than half the length of that joint; palpi, mouth and clypeus rather stramineous; head a little wider than long; tegulæ stramineous; wings almost colorless, with a brownish cast, stigma brownish stramineous, veins brownish; nervulus virtually interstitial or a little beyond the basal vein; legs mostly reddish, the trochanters rather stramineous; abdomen shining, with minute setigerous punctures; the first, second, and third segments striate, the first segment rather sculptureless down the middle on the basal half, the second depressed along the lateral margin, the depression rather clavate in outline, the apical third

¹ Bull. No. 195, Maine Agr. Exp. Station, Orono, Maine.

of the segment smooth and without striæ; exerted portion of the ovipositor 9 mm. long.

Type-locality.—Ithaca, New York.

Type.—Cat. No. 14723, U.S.N.M.

Allotype.—Essentially as in the type.

Labeled, "reared June, 1911, from *Archips cerasivorana*, Glenn W. Herrick." A female paratype studied is labeled, "Pullman, Washington, No. 6618°, on *Cacoccia cerasivorana*, C. V. Piper, collector."

METEORUS NIPPONENSIS, new species.

Female.—Length, 4.5 mm. long; related to *M. pulchricornis* Wesmael in structure but with the fossæ of the petiole so inconspicuous as to be easily taken for the starting points of striæ unless magnified 35 times, also the recurrent vein is clearly received by the first cubital cell; color very as in *M. japonicus* Ashmead.

Type-locality.—Japan.

Type.—Cat. No. 13082, U.S.N.M.

Labeled, "Gip. Moth Lab. No. 1075, Jn. 30."

MICROBRACON VESTITICIDA, new species.

Female.—Length, 3 mm.; judging from descriptions this is related to *Bracon bimaculatus* Szepligetî and *B. binotatus* Szepligetî; from the former it may be known, by the smooth not wrinkled face, by the subcylindrical scape, by a suggestion of parapsidal furrows, by the cubital vein being straight at base, by the rather oval abdomen, by the reddish head and thorax with black stains and black mesosternum, by the yellowish metathorax and blackish propodeum, by the more or less stramineous legs excepting the hind tibiæ and tarsi which are mostly infuscated, the basal fourth of the hind tibiæ being pale, rather whitish stramineous, by the mostly yellowish abdomen with a blackish or dark stain down the middle on the apical half and in the ovipositor which is not much longer than the abdomen, resembling in this particular the latter species to which it seems to be related. Wings brownish; flagel 25-jointed; median carina of propodeum not reaching up to the middle but prolonged almost to the base as a median welt; second segment with an acutely triangular median intumescence, the apex of which is prolonged as a median welt almost to the apex of the segment.

Type-locality.—Department of Piura, Peru.

Type.—Cat. No. 14724, U.S.N.M.

Allotopotype.—Antennæ 24-jointed; essentially as in the type.

Labeled, "reared from *Anthonomus vestitus*, dept. Piura, Peru, July, 1911, C. H. T. Townsend, No. 795°3i; from infested squares and new bolls, dept. Piura, Peru, No. 795; and from square-weevil larvæ north Peru, October 23, 1910, No. 795°3a."

A series of paratopotypes shows this to be a variable species in color and size, ranging paler or darker than the type and smaller; structurally, however, it is quite fixed. The paratypes from north Peru average somewhat larger than the type and are better developed, with the intumescence ending in a carina and with the false suture distinctly foveolate.

MONOGONOASTRA, new genus.

Proposed to cover a group of species distinguishable from *Campyloneurus Szepligeti* by the absence of a median area or carina on the third dorsal abdominal segment.

Type.—*Bracon atripectus* Ashmead.

PERILITUS EPITRICIS, new species.

Female.—Length, 1.5 mm.; labial palpi apparently two-jointed; stramineous, smooth and polished, black around the ocelli, mandibles with castaneous tips, flagel mostly brownish, 18-jointed, the joints longer than thick; notauli rather foveolate and meeting at the hind margin of the mesonotum which is somewhat brownish; venation virtually as in *Perilitus mellinus* Provancher, the membrane practically colorless, veins and stigma brownish stramineous; legs rather uniformly stramineous, except the apical joint of the tarsi which is rather brownish; propodeum impressed posteriorly, poorly reticulated; petiole well differentiated, smooth, almost parallel sided, post-petiole, longitudinally striated, a little shorter than the petiole, wider at apex than at base and longer than wide at apex; first segment a little longer than half of the rest of the abdomen, sheaths of the ovipositor at least as long as the first segment.

Type-locality.—Clarksville, Tennessee.

Type.—Cat. No. 14725, U.S.N.M.

Allotopotype.—Differs from the type chiefly in the 21-jointed flagel, blackish front, vertex, and dorsum of apical third of abdomen, rest of head, thorax, and propodeum rather castaneous.

The type is labeled "reared May 28, 1911, the allotopotype June 9, 1911, and two female paratopotypes May 25, 30, 1911, from adults of *Epitrix paroula*, S. E. Crumb." The cocoon is pure white and wooly.

APANTELES (PROTAPANTELES) FELTIÆ, new species.

Female.—Length, 2.5 mm.; related to *Apanteles (Protapanteles) cassianus* Riley from which it differs in the shining face, in the wings being colorless with stramineous veins between the base of wing and base of stigma, and with brownish tinge and brownish veins beyond, in the blackish stigma, in the black tegulae, and blackish wing base; in the first segment being truncate and indistinctly sculptured at apex, in the second plate being nearly as wide at base as long down

the middle, and in the hind tibiæ being almost entirely testaceous. As in *A. cassianus* Riley the facial line is apparently shorter than the transfacial line, the first dorsal plate is distinctly narrower at apex than at base and less than twice as long as wide at base; the first and second plates are mostly smooth; the propodeum smooth and without a median longitudinal carina and the hind coxæ and their femora black.

Type-locality.—Knox, Indiana.

Type.—Cat. No. 14726, U.S.N.M.

Labeled, "bred from *Feltia* sp. June 4, 1911, M. M. High, Chittenden No. 1850," Bureau of Entomology, United States Department of Agriculture.

APANTELES (PROTAPANTELES) HESPERIDIVORUS, new species.

Female.—Length, 1.75 mm.; related to *Apanteles* (*Protapanteles*) *crambi* Weed, with which it agrees in the head being apparently wider than long, in the vertical diameter of the thorax being apparently equal to the horizontal diameter, in the absence of a carinate fold between mesopleuræ and mesosternum, in the first plate being wider at apex than at base and wider at apex than the second plate is long down the middle, in the third dorsal segment being virtually sculptureless at base, in the stramineous or at least pale, tegulæ, in the hind coxæ being mostly black or blackish tipped with stramineous, and in the second plate being sculptured all over. It differs most tangibly in the uniformly dark brown to blackish antennæ, in the almost impunctate, polished scutel, in the black or blackish dorsal segments of the abdomen, and the presence of a median welt on the second plate.

Type-locality.—East River, Connecticut.

Type.—Cat. No. 14727, U.S.N.M.

The specimens examined are labeled, "reared from a skipper larva on oak, August 5, 1910, Chas. R. Ely."

The characters in the male paratopotype are essentially as in the female.

The cocoons are white, covered with loose silk and loosely grouped.

APANTELES (PROTAPANTELES) PYRAUSTÆ, new species.

Female.—Length, 2.5 mm.; head apparently wider than long, flagel wholly dark brown, and in this respect agreeing with *Apanteles* (*Protapanteles*) *læviceps* Ashmead, from which it may be distinguished by the second plate not being sculptured throughout but partly smooth and mostly shining; thorax not depressed, hind femora mostly stramineous, with blackish tips; second plate without deep foveolate oblique furrows on basal half. In *P. læviceps* Ashmead, as in this species, the first plate is wider at apex than the second plate is long down the middle; the pleuræ are not separated from the

mesosternum by a carinate fold; the third dorsal segment is perfectly smooth at base, and the tegulae are dark brownish or blackish.

Type-locality.—East River, Connecticut.

Type.—Cat. No. 14728, U.S.N.M.

Labeled, "reared August 7, 1909, from *Pyrausta futilalis*, Chas. R. Ely, No. 113."

The allotype agrees fairly well with the description of the type.

APANTELES (PSEUDAPANTELES) CHOREUTI, new species.

Female.—Length, 2.5 mm.; related to *Pseudapanteles eticellæ* Viereck from which it differs in the yellowish scape; in the legs including coxæ being stramineous, except for the hind tibiae, which are reddish and the hind tarsi which are brownish; in the brownish wings with darker, brownish stigma and veins, with the radius about half as long as the transverse cubitus; in the rather reticulately rugose propodeum; in the rugulose first dorsal plate which is apparently a little narrower at apex than at base, at least twice as long as wide at base, and apparently wider in the middle than at base or apex; second plate a little shorter down the middle than the first plate is wide at apex, nearly four times as wide at apex as long down the middle, rather spindle shaped, and longitudinally striate; third, dorsal segment dullish and brownish except for a yellowish spot on each side and a little longer than the second plate; first, second, and most of third ventral segments as well as the prominent hypopygium more or less stramineous.

Type-locality.—Anglesea, New Jersey.

Type.—Cat. No. 14729, U.S.N.M.

The allotype agrees fairly well with the type except in the second plate which is about as long as the first is wide at apex, trapezoidal not spindle shaped and about three times as wide along its straight apical edge as long down the middle; in the apex of the first plate being distinctly narrower than the base and in the hypopygium being dark brown to blackish while the rest of the venter is mostly stramineous.

Both specimens are labeled, "reared in July from *Choreutis cardinella*, W. D. Kearfoot, No. 60."

SPATHIUS BRUNNERI, new species.

Female.—Length, 2.75 mm.; superficially similar to *Spathius unifasciatus* Ashmead from which it may readily be distinguished by the better impressed sternauli which are not bounded below by a carina; prothorax blackish throughout; first dorsal segment apically and disk of second dorsal segment mostly reddish brown; pale portions of legs mostly rather stramineous, the tarsi rather reddish stramineous, except tip of onychium, claws and empodium which are

blackish, annulus at base of tibiæ almost colorless, rather smoky whitish; flagel 24-jointed, first and second joints pale and almost concolorous with the testaceous scape and pedicel; face and mandibles mostly brownish; ovipositor somewhat longer than the abdomen; otherwise agreeing essentially with the original description of *Spathius unifasciatus* Ashmead.

Type-locality.—Columbia Falls, Montana.

Type.—Cat. No. 14730, U.S.N.M.

Labeled, "No. 8574 Hopk. U. S., from *Pissodes* species, Josef Brunner, collector."

Named for Mr. Josef Brunner.

Genus TRIASPIS, Haliday.

Triaspis HALIDAY, Ent. Mag., vol. 3, 1835, pp. 123-124.

Many species originally included.

Type.—*Sigalphus caudatus* Nees, by present designation.

This is the same as *Sigalphus* of authors not of Latreille which latter is isogenotypic with *Sphaeropyx* Illiger.

TRIASPIS PISSODIS, new species.

Female.—Length, 2 mm.; black and shining or polished; clypeus rather coarsely indefinitely punctured; mandibles reddish, blackish at base and apex; palpi blackish; antennæ blackish; flagel 18-jointed, its joints all longer than thick; tegulæ blackish; notauli foveolate; wings almost colorless, with a dark tinge; stigma and costa blackish, veins blackish stramineous; second abscissa of the cubitus nearly twice as long as the first abscissa of the radius; all coxæ black, fore and mid trochanters blackish; fore femora atramineous, with blackish stains, fore tibiæ stramineous; mid femora reddish, blackish above, mid tibiæ reddish; hind femora and tibiæ reddish, the latter blackish above; all tarsi mostly blackish; propodeum vaguely areolated; abdomen with two distinct, curved, transverse furrows dividing the dorsum into three almost equally long segments, all of which are longitudinally striated, the striæ of the third segment converging toward a median longitudinal smooth or punctured or roughened area, the third segment with its apical edge reflexed so as to form an apical bounding channel to the segment; exerted portion of ovipositor approximately two-thirds as long as the abdomen.

Type-locality.—Columbia Falls, Montana.

Type.—Cat. No. 14731, U.S.N.M.

Allotype.—Essentially as in the type even to the number of joints in the flagel.

The specimens are labeled, "No. 8573, Hopk. U. S., ex *Pissodes* species, bred specimens, June 1-7, 1911, Josef Brunner, collector."

TRIASPIS VESTITICIDA, new species.

Female.—Length, 2 mm.; black, clypeus rather coarsely but indefinitely sculptured; mandibles testaceous, tipped with castaneous; scape somewhat darker than the mandibles but similarly colored; pedicel brownish, flagel with its first three joints mostly brownish the remaining joints black or blackish, the joints near the apex almost as short as thick; tegulæ blackish; basal two-thirds of the costa yellowish, rest of costa brownish as is the stigma, remaining veins pale stramineous, almost colorless; second abscissa of the cubitus virtually as long as the first abscissa of the radius; legs, including fore coxæ mostly stramineous, mid and hind coxæ mostly brownish; propodeum mostly smooth and almost polished, the dorsal aspect separated from the posterior aspect by a transverse angulated carina; posterior aspect more or less divided into areolæ by oblique carinæ; anterior aspect of first segment with a prominent, rather transverse carina on each side between the anterior aspect and the rest of the segment, the same carina being continued down the segment to the apex as one of the striæ; first and second segments striate, most of the striæ extending to the apex of the segments; third striate laterally, smooth and highly polished medially; apical edge of third segment sinuate and bordered by a furrow; ovipositor prominent, the exerted portion longer than the abdomen; otherwise quite as in the genotype.

Type-locality.—Department of Piura, Peru.

Type.—Cat. No. 14732, U.S.N.M.

Allotopotype.—Differs from the type chiefly in the 18-jointed flagel which is blackish throughout; in the blackish scape and pedicel, in the joints near the apex being distinctly longer than thick; in the basal two-thirds of the costa being brownish; in the darker legs, the fore coxæ being brownish and the hind tibiæ and tarsi infuscated.

Paratopotypes show that the costa in the female may be more or less yellowish basally, that the male antennæ may be colored as in the female, and that the males may be only 1.5 mm. long.

Labeled, "reared from *Anthonomus vestitus*, October and November, 1910, June, 1911, No. 795°3b; reared from infested squares and new bolls, No. 795." All from the type locality.

TRIASPIS VESTITICIDA var. MINUTISSIMUS, new variety.

Female.—Length, 1.25 mm.; differs from *Triaspis vestitica* Viereck apparently only in the sculptureless third segment in the mostly blackish legs, and smaller average size.

Type-locality.—Department of Piura, Peru.

Type.—Cat. No. 14733, U.S.N.M.

Allotype.—Essentially as in the type.

Labeled, "reared from *Anthonomus vestitus*, July 1911, C. H. T. Townsend, No. 795^o3j."

Paratopotypes labeled, "from infested squares and new bolls, C. H. T. Townsend, No. 795."

ZELOMORPHIDEA, new subgenus.

This is a subgenus of *Zelomorpha* Ashmead from which it differs chiefly in the absence of a more or less sinuous foveolate furrow on the mesopleuræ and by the second dorsal segment being longer than wide. Probably will include all South American species at present included under *Disophrys* Foerster.

Type.—*Zelomorpha* (*Zelomorphidea*) *melanota*, new species.

Female.—Length, 10 mm.; agrees with the original description of *Disophrys ophthalmica* Szepligeti in the lower half of the face including the malar space being mostly stramineous; in the dorsulum, scutel and post scutel being mostly black or blackish; in the hind wings being almost completely and uniformly brownish; in the hind femora and tibiæ being more or less reddish and in the areola receiving the costulæ before the middle.

Type-locality.—Sapucay, Paraguay.

Type.—Cat. No. 14734, U.S.N.M.

Labeled, "collected August 29, 1901."

ZAMICRODUS, new genus.

Malar line nearly two-thirds the length of the eye, malar space prolonged downward and backward into an angulate process that has its edges reflexed and its angle lower than the lower edge of the clypens, episternum of the prothorax with a tubercle on each side, pronotum produced on each side into a flattened angular crista, pronotum with its sulcus separated into four parts, each of which is bounded by strong carinæ, first dorsal abdominal segment virtually twice as long as wide at apex. Otherwise practically as in *Bassus* Fabricius as represented by (*Microdus*) *Bassus tumidulus* (Nees).

Type.—*Zamicrodus sensilis*, new species.

ZAMICRODUS SENSILIS, new species.

Male.—Length, 10.5 mm.; apparently related to *Microdus ochrosus* Szepligeti from the original description of which it differs in the fore and mid legs, excepting onychium of mid legs which is blackish, being stramineous throughout, in the hind coxæ and hind trochanters being concolorous with the thorax, in the uniformly reddish hind femora, in the basal two-thirds of hind tibiæ which is brownish, with the apical third blackish, in the mostly yellowish wings with the fourth sixth and apical sixth of the fore wings fuscous as is the apical third and a large part of the margin of the hind wings; and in the second, third,

fourth, and base of fifth segments being reddish and more or less stained with black, the first segment rather concolorous with the propodeum and the rest of the abdomen black.

Type-locality.—Manaos, Brazil.

Type.—Cat. No. 14735, U.S.N.M.

Labeled, "collected by Miss H. B. Merrill."

Family ICHNEUMONIDÆ.

Genus AMORPHOTA (Foerster) Howard.

Amorphota FOERSTER, Verh. Naturh. Ver. Preuss. Rheinland, vol. 25, 1868, p. 151, no species; Bull. No. 5, Tech. Ser. Div. Ent., U. S. Dept. Agric., 1897, p. 20, 52, fig. 7, one species.

Type.—*Amorphota orgyix* Howard, first species included.

Congeneric with *Anempheres* (Foerster) Viereck.

Genus ANEMPHERES (Foerster) Viereck.

Anempheres FOERSTER, Verh. Naturh. Ver. Preuss. Rheinland, vol. 25, 1868, p. 154, no species; Proc. U. S. Nat. Mus., vol. 39, 1911, p. 736, one species.

Type.—*Anempheres diaphanix* Viereck. First species included.

Congeneric with *Amorphota* (Foerster) Howard and therefore a synonym of the latter genus.

CAMPOPLEX (ANGITIA) HELLULÆ, new species.

Female.—Length, 4 mm.; related to (*Limneria*) *Campoplex* (*Angitia*) *pterophoræ* Ashmead from which it may be distinguished by the malar line being virtually as long as the mandibles are wide at base, by the entirely blackish scape and pedicel, by all coxæ being mostly black, by the fore trochanters being stramineous, by the mid coxæ being reddish, by the areola being distinctly longer than wide, and by the third, fourth, and fifth, dorsal segments being reddish in part laterally.

Type-locality.—Santa Ana, California.

Type.—Cat. No. 14736, U.S.N.M.

Labeled, "bred from *Hellula undalis*, Nov. 10, 1908, H. O. Marsh, collector, Chittenden No. 1447^{c1}." Received from the Bureau of Entomology, U. S. Department of Agriculture.

Since describing the above the writer has received a specimen of the same species labeled, "bred from *Plutella omissa?* May 13, 1911; Chittenden No. 2184^o; H. O. Marsh, collector;" Rocky Ford, Colorado. Compared with a homotype of (*Limneria*) *Angitia obscura* (Cresson) this specimen differs in the scape being blackish beneath, in the longer malar space, which is approximately as long as the mandibles are wide at base, in the hind ocelli being apparently a little nearer to each other than to the occipital carina, in the almost vertical

nervellus, in the blackish hind tibiæ with whitish annulus at base and in the middle and in the abdomen being black or blackish above except for reddish stains on the sides of the third, fourth, and fifth segments.

ANISITSIA, new genus.

Carinal line or shortest line from hind ocelli to occipital carina approximately twice as long as the postocellar line; nervellus vertical, angulate below the middle; propodeum not attaining apex of hind coxæ but surpassing the middle of the same, its spiracles slit like; second dorsal segment shorter than the first. Related to *Amorphota* (Foerster) Howard.

Type.—*Campoplex villosus* Norton.

Named for Mr. J. D. Anisits, who discovered this genus in South America.

(CAMPOPLEX) ANISITSIA BELLULUS var. a. (Dalla Torre).

(ZACHRESTA) ANISITSIA KUKAKENSIS (Ashmead).

(CAMPOPLEX) ANISITSIA VITICOLLIS (Norton).

ASTERNAULAX, new genus.

Apparently related to (Gabunia) *Coccygodes* Saussure as described in Schmiedeknecht's classification in Genera Insectorum. Compared with the genotype of *Echthrus* Gravenhorst the principal differences are as follows: Sternauli wanting; areolet pentagonal in position, with its outer side merely represented by a streak; nervulus almost as far beyond the basal vein as the second abscissa of the discoidal vein is long, the latter distinctly shorter than the third; nervellus antifurcal, broken distinctly below the middle.

Type.—*Asternaulax fiskei*, new species.

ASTERNAULAX FISKEI, new species.

Female.—Length, 8 mm.; black; first and second joints of palpi whitish, the remaining joints dark, slaty; flagel 19-jointed, fifth, sixth, and seventh joints more or less yellowish, all joints distinctly at least twice as long as thick, the end joint truncated; fore legs stramineous, excepting the onychium which is blackish, inflated portion of fore tibiæ rather cylindrical; mid legs mostly pale, the tibiæ and tarsi more or less darkened; hind coxæ, hind trochanters, and hind femora reddish, the latter with a blackish band before the whitish apex; hind tibiæ and tarsi blackish, the former whitish at base, as are the hind metatarsi; notauli merely suggested by a slight impression and difference in sculpture; tubercles stramineous, tegulæ and wing base whitish, costa whitish basally, rest of veins brownish, stigma blackish except at extreme base where it is whitish, membranous portion of the wings with a brownish tinge, almost colorless;

propodeum rather finely reticulated, with an arcuate basal transverse carina, the basal area suggested, the second pleural area and angular area partly defined, otherwise exareolate; first segment almost as wide at apex as long down the middle, all dorsal segments but the apical dorsal segment, whitish along the apical edge; exerted portion of ovipositor hardly longer than the second segment.

Type-locality.—Tryon, North Carolina.

Type.—Cat. No. 14737, U.S.N.M.

Labeled, "No. 3033c. Hopk. U. S.; *Castanea dentata*; W. F. Fiske, collector."

Named for W. F. Fiske.

Genus BATHYPLECTES¹ (Foerster) Szepligeti.

For remarks on this genus, see *Paracanidia*, page 642.

BENJAMINIA, new genus.

Propodeum apparently not extending to end of or beyond the basal third of the hind coxæ; hind edge of mesosternum without a process on each side of mesolcus; propodeal spiracles elongate; petiole with a furrow on each side; second abscissa of discoidal vein as long as or longer than the third, nervellus almost vertical, curved, not broken; head not lenticular, not receding vertically from the hind ocelli; distance between hind ocelli and occipital carina distinctly greater than distance between hind ocelli; areolet wanting; spiracles of first dorsal segment as near or nearer to the apex than to each other.

Type.—*Charops fuscipennis* Provancher.

Named in honor of Dr. Marcus Benjamin.

Genus CALLIDORA (Foerster) Thomson.

Callidora FOERSTER, Verh. Naturh. Ver. Preuss. Rheinland, vol. 25, 1868, p. 157, no species; Opusc. Ent., 1887, pt. 11, p. 1136, two species.

Type.—*Callidora annellata* Thompson, by present designation.

(EPHIALTES) CALLIEPHIALTES COMSTOCKI (Cresson).

CAMPOCTONUS, new genus.

Related to *Campoplegidea* Viereck, see below, from which it may be known by the interstitial nervulus, the neither broken nor angulated nervellus, by the recurrent vein being received by the areolet at or beyond the middle, by the presence of a foramin in the hind edge of the sides of the mesonotum and by the depressed second segment.

Type.—*Limneria corrupta* Cresson.

CAMPOPLEGIDEA, new genus.

Proposed for *Campoplex* Authors, not Gravenhorst.

Type.—*Campoplex oxyacanthæ* Boie.

CAMPOLETIDEA, new subgenus.

Related to *Callidora* (Foerster) Thomson from which it may be distinguished by the depressed first segment, with the apical half of the petiole distinctly wider than thick dorso-ventrally and the post petiole not bulbous. Agrees with *Campoletis* Foerster as described in the original except in the shape of the abdomen.

Type.—*Campoplex* (*Campoletidea*) *caradrinæ*, new species.

CAMPOPLEX (CAMPOLETIDEA) CARADRINÆ, new species.

Male.—Length, 8 mm; areolet quadrangular, rather rhomboidal; fore and mid femora brownish stramineous, tibiæ and tarsi of fore and mid legs mostly stramineous, tarsi of mid legs apically with a fuscous annulus, the onychium mostly fuscous, hind femora reddish with blackish stains, hind tibiæ yellowish except an incomplete brownish annulus near the base, a brown longitudinal band down the inner edge, and the apical third, which latter is mostly blackish, hind tarsi colored similarly to the middle tarsi except that the dark annulations are more extensive, involving most of the joints. Otherwise agreeing well with the original description of (*Limneria*) *Campoplex montanus* (Cresson).

Type-locality.—Rocky Ford, Colorado.

Type.—Cat. No. 14958, U.S.N.M.

Labeled, "bred from *Caradrina exigua*, June 12, 1910, H. O. Marsh, collector; Chittenden No. 1563."

Genus CAMPOLETIS (Foerster) Viereck.

Campoletis FOERSTER, Verh. Naturh. Ver. Preuss. Rheinland, vol. 25, 1868, p. 157, no species; Proc. U. S. Nat. Mus., vol. 40, 1911, p. 190, one species.

Type.—*Limnerium* (*Campoletis*) *prodeniæ* Viereck, first species included and congeneric with *Sagaritis varians* Thomson. Thus *Campoletis* (Foerster) Viereck becomes synonymous with *Sagaritis* Holmgren. In the American representatives of *Sagaritis* Holmgren the characteristic production of the clypeus is so poorly developed at times as to suggest a gradual transition to the type of clypeus found in most Campoplegini and aside from the clypeus agree best with Foerster's definition of *Campoletis*.

Genus CAMPOPLEX Gravenhorst=[OMORGUS (Foerster) Dalla Torre.]

Campoplex GRAVENHORST, Ich. Eur., vol. 3, 1829, p. 453; many species.

Type.—(*Ichneumon*) *Campoplex difformis* Gmelin, Gravenhorst, by designation of Westwood.¹

¹ Intr. Mod. Class Ins., vol. 2, Gen. Syn., 1840, p. 69.

CASINARIA SCABRIFORMIS, new species.

Female.—Length, 6 mm.; apparently related to *C. scabra* Thomson; black; scape and pedicel yellow beneath, brownish above; flagel 24-jointed, the joints as long as or longer than thick, excepting thirteenth to nineteenth joints, which are thicker than long; flagel blackish, becoming reddish brown toward the tip; labrum yellow; mandibles yellow except the castaneous tips; palpi whitish; tegulae, wing base, fore and mid trochanters yellow; fore and mid coxae reddish stramineous, rest of fore legs mostly yellowish or stramineous; hind coxae blackish, proximal trochanter of hind legs brownish, distal trochanter of hind legs yellowish, hind femora reddish, hind tibiae mostly whitish or pale yellow, infuscated near the base and at apex, the apical half reddish beneath, hind tarsi pale basally, dark apically; wings tinged with brown, costa and stigma dark brown, veins brownish stramineous; nervellus angulate far below the middle; propodeum with median and lateral carinae, with transverse carinae virtually wanting; second dorsal segment apically with a reddish margin, third dorsal segment with the apical half reddish, remaining dorsal segments reddish, ventral fold yellowish; sheaths blackish; ovipositor hardly exerted.

Type-locality.—Castle Rock, Delaware County, Pennsylvania.

Type.—Cat. No. 14738, U.S.N.M.

Labeled, "collected June 1, 1902, V. A. E. Daecke."

CHAROPSIMORPHA, new genus.

Habitus as in *Charops* Holmgren, but related to *Eriborus* (Foerster) Schmiedeknecht, from which it may be distinguished by the head receding vertically from the hind ocelli, by the lenticular head, by the antifurcal or vertical nervellus, by the petiole being without a fossa on each side near the post petiole, and by the laterally carinate, bifossulate scutel.

Type.—*Charops tibialis* Cresson.

(CHAROPS) CHAROPSIMORPHA TIBIALIS APATURÆ (Ashmead).

Charops apaturæ Ashmead shows no tangible difference other than in color and should, at most, be treated as a race.

Genus CYMATONEURA Kriechbaumer.

Cymatoneura KRIECHBAUMER, Zeitschr. Hym. Dip., vol. 1, 1901, p. 22. Two species.

Type.—*Ophion undulatus* Gravenhorst, by present designation. Isogenotypic and synonymous with *Allocamptus* (Foerster) Thomson.

DAICTIMORPHA, new genus.

Agrees with Foerster's description of *Daictes* Foerster, but, unlike *Daictes* (Foerster) Viereck, this genus belongs to the Hemitelini. Propodeum with the longitudinal carina wanting or represented at most by striæ, basal and apical transverse carinæ salient and complete as in some Mesostenini.

Type.—*Daictimorpha peruviana*, new species.

DAICTIMORPHA PERUVIANA, new species.

Female.—Length, 4 mm.; mostly black and shining; face finely sculptured, in certain lights showing appressed silvery pubescence; clypeus mostly smooth and polished; mandibles yellow, with the apical half mostly dark; palpi yellowish; scape stramineous, faceted internally, hardly longer than thick, pedicel and first and second joints of the flagel yellowish; flagel 22-jointed, the joints not before mentioned brownish, nineteenth to twenty-first joints thicker than long, the remaining joints longer than thick; thorax black, shining and mostly finely sculptured; notauli poorly developed, not extending to the middle of the mesonotum; sternauli extending apparently three-fourths the way back on the mesopleuræ; tubercles, tegulæ, and wing base whitish; wings with a brownish tinge, veins and stigma brownish to blackish; trochanters whitish; fore and middle coxæ stramineous and whitish, rest of fore and mid legs stramineous; hind coxæ blackish, hind femora brownish, stramineous at apex; hind tibiæ and tarsi pale stramineous, with a subbasal and subapical brownish stain or rudimentary annulus; propodeum more or less finely sculptured and shining, with poorly developed plicæ and striæ; abdomen, finely sculptured, blackish and shining; first segment wider at base than thick, the sides of the petiole vertical and carinate above and below; spiracles of first segment nearer the apex than to each other; second, third, and fourth, dorsal segments with the apical edge translucent brownish; exerted portion of ovipositor approximately as long as the first segment.

Type-locality.—Department of Piura, Peru.

Type.—Cat. No. 14739, U.S.N.M.

Labeled, "reared from cotton squares July 11, C. H. T. Townsend, No. 795° 3h."

CAMPOPLEX (DIADEGMA) JAPONICUS, new species.

Answers the description for *Hyposoter chrysorrhoeae* Viereck, excepting as follows:

Male.—Length 5.5 mm.; malar line about as long as the mandibles are wide at base, anterior margin of clypeus rather arcuate outwardly, scape and pedicel blackish, edged with brown or castaneous, greatest diameter of lateral ocellus a little longer than the ocellocular line,

lateral ocellar line a little longer than greatest diameter of lateral ocellus, postocellar line a little more than one and one-half times as long as the lateral ocellar line; tegulae black, hind tibiae mostly honey color, with a subbasal and apical brownish stain, fore and mid coxae honey color, proximal trochanters of fore and mid legs yellowish, of hind legs mostly blackish, all femora mostly reddish, hind coxae black, hind tarsi almost entirely brownish, scutel rugulose, dull, costula complete, areolet trapezoidal, its petiole almost wanting, shorter than its shortest side or the side between recurrent vein and second transverse cubitus, discocubital vein with the merest trace of a branch before the middle (see fig. 1); narrowest part of petiole about one-third as wide as the postpetiole, second segment longer than wide at apex, thyridia hardly farther from the lateral edge than spiracles of the same segment and nearly again as far from the base as from the lateral edge, their greatest diameter about one-fourth as long as the second segment is wide at base, spiracle hardly as far as its own width from the lateral edge of the pigmented plate, third segment about two-thirds as long as the preceding segment, abdomen almost entirely black, plica transparent honey color to translucent brownish.

Type-locality.—Japan.

Type.—Cat. No. 7258, U.S.N.M.

Labeled "Gip. Moth Laboratory 1071, June 21."



FIG. 1.—MEDIAN AREOLAE OF PROPODEUM OF CAMPOPLEX (DIAEGMA) JAPONICUS.

EPHIALTES DOLICHOSOMA, new species.

Female.—Length, 13.5 mm.; related to *Ephialtes planifrons* Thomson, from which it can be distinguished by the triangular, emarginate, anterior, edge of the pronotum, by the yellow margin along the upper edge of the sides of the prothorax, by the yellowish stramineous fore coxae and fore trochanters, by the reddish upper swelling of the mesopleuræ, by the reddish scutel, by the absence of medial longitudinal carinæ on the propodeum and by the second dorsal segment being distinctly longer down the middle than wide at apex and provided with well impressed oblique furrows.

Type-locality.—Tryon, North Carolina.

Type.—Cat. No. 14740, U.S.N.M.

Labeled, "No. 3075E, Hopk. U. S., *Castanea dentata*, W. F. Fiske collector."

Genus EREMOTYLUS (Foerster) Thomson.

Eremotylus FOERSTER, Verh. Naturh. Ver. Preuss. Rheinland, vol. 25, 1868, p. 150, no species; Opusc. Ent. P. 12, p. 1193, 1888, one species.

Type.—(*Anomalon*) *Eremotylus marginatus* (Jurine) Thomson. First species included.

(ATELEUTI) ERIPTERNUS ELONGATUS (Davis).

EXERISTES NUBILIPENNIS, new species.

Female.—Length, 9.5 mm.; agrees with *Exeristes hyalinipennis* Viereck, from which it may be separated by the darker wings, the nervellus which is broken above the middle, and the smooth, highly polished lateral aspects of the pronotum.

Type locality.—Columbia Falls, Montana.

Type.—Cat. No. 14741, U.S.N.M.

Labeled in the same way as *Exeristes hyalinipennis* Viereck.

EXERISTES HYALINIPENNIS, new species.

Female.—Length, 9 mm.; of the European species of *Exeristes* and allied genera or subgenera this apparently agrees best with *Exeristes roborator* Fabricius, from the typical form of which it may be distinguished by the smooth, poorly punctured head, thorax and propodeum; by the nervellus being broken below the middle; by the reddish and blackish hind femora; by the blackish hind tibiæ with stramineous base; by the blackish hind tarsi with the base of the first segment or metatarsus stramineous; by the black vaguely punctured abdomen and by the first, dorsal segment being apparently longer down the middle than wide at apex.

Type-locality.—Columbia Falls, Montana.

Type.—Cat. No. 14742, U.S.N.M.

Labeled, "No. 8582 Hopk. U. S., from *Pissodes* species, May 10–15, 1911, Josef Brunner collector."

This species may prove to be only a mutant of *Exeristes nubilipennis* Viereck.

FIEBRIGIA, new genus.

Head lenticular; temples along the upper fourth of the eye, as seen in profile, not extending beyond the hind edge of the eye; mesopleuræ with a distinct concavity extending obliquely from the anterior, superior edge backward and downward. Related to *Zacharops* Viereck and *Amorphota* (Foerster) Howard.

Type.—*Campoplex texanus* Ashmead.

CAMPOPLEX (HYPOTHEREUTES) EXIGUAE, new species.

Female.—Length, 5.5 mm.; related to *Hypothereutes geometræ* Ashmead, from which it may be distinguished as follows: Malar line nearly as long as mandibles are wide at base; scape and pedicel blackish; fore and mid coxæ brownish; femora reddish brown; fore and mid tarsi brownish stramineous, hind tarsi dark brown, only the basal joint pale at base, hind, proximal trochanter blackish; areola wider than long; the areopetiolarea similar in outline to the same in *Hyposoter parorgyæ* Viereck, planate, at least not appreciably con-

cave; abdomen with the apical half reddish throughout, second, dorsal segment blackish at apex.

Type-locality.—Davis, California.

Type.—Cat. No. 14743, U.S.N.M.

Labeled, "bred from *Caradrina exigua* Oct. 26, 1908, Dr. Shaw, Chittenden No. 2108°." Received from the Bureau of Entomology, United States Department of Agriculture.

Allotype.—Essentially as in the type, apical transverse carina of propodeum more developed especially between the areola and petiolarea; areola apparently longer than wide; abdomen with blackish stains dorsally on ultimate and penultimate segments.

Labeled, "Santa Ana, Calif., issued Sept. 30, 1908, bred from larva of *Caradrina exigua*, Chittenden No. 1418°1." Bureau of Entomology, United States Department of Agriculture.

Genus IDECHTHIS (Foerster) Ashmead.

As represented by *Idechthis patulus*, new species, this genus is apparently related to *Nothanomalon Szepligeti* from the original description of which it differs especially in the rather cubical *Olesicampe* like head, in the noncarinate scutel, in the propodeum not being deeply furrowed and in the second dorsal segment being little shorter than the first. In this genus as represented by *I. patulus* Viereck, the second abscissa of the discoidal vein is shorter than the third, the nervellus is angulated below the middle and antifurcal, the recurrent vein almost interstitial with the second transverse cubitus, and the propodeum areolated, with well developed costulae, and extending beyond the middle of hind coxae but not to the apex of the same.

IDECHTHIS PATULUS, new species.

Male.—Length, 11 mm.; black and shining; face rather rugulose; clypeus with its anterior edge rounded, convex, separated from the face only by the clypeal foramina, punctured; mandibles yellow, with reddish teeth and stramineous margins; palpi stramineous; scape and pedicel yellowish beneath, dark above; flagel 42-jointed, blackish; dorsulum punctured; fore and mid legs mostly yellowish or yellow; hind coxae mostly black, tipped with yellow, hind trochanters yellow, rest of hind legs dark brown, hind femora rather stramineous beneath; tegulae and wing bases yellow; wings with a brownish tinge, veins and stigma dark brown to blackish; propodeum coarsely sculptured; areola and petiolarea confluent, the latter transversely ribbed, spiracularea and second pleural area confluent, the angular area, third pleural area, and terminal half of petiolarea more or less confluent; petiole nearly cylindrical; post petiole reddish at apex, its spiracles about one-third as far from each other as from the apical margin; petiole smooth and shining, feebly punctured; post petiole

granular and with scattered punctures; second segment granular, its apical fourth reddish, the thyridia brownish; remaining segments mostly reddish, blackish down the back.

Type-locality.—San Bernardino, Paraguay.

Type.—Cat. No. 14744, U.S.N.M.

Collected by K. Fiebrig.

Genus **MACROPHION** Szepligeti.

Macrophion SZEPLIGETI, Gen. Ins., Fasc. 34, 1905, p. 32, two species.

Type.—*Macrophion ornatus* Szepligeti; by present designation.

MESOCHORUS PALLIPES Brischke. var?

Male.—Length, 3.5 mm.; occiput stramineous; third segment testaceous or stramineous except apically and laterally where it is more or less brownish, fourth and succeeding segments blackish above testaceous laterally. Otherwise as in *M. pallipes* as originally described.

Labeled, "Europe, Gip. Moth Lab. 1446, 1446 Jn."

MESOCHORUS GRACILIS Brischke. var?

Male.—Length, 2.5 mm.; predominating color blackish or stramineous; head stramineous, face sometimes tinged with reddish, stemmaticum always blackish; petiole above entirely or almost entirely black or blackish, segments beyond the second, blackish above, testaceous laterally.

Labeled, "Europe, Gip. Moth Lab. 1216 C. Ap. 25, 28, 29, May 6, from *E. chrysorrhæa*."

MESOCHORUS TRISULCATUS, new species.

Female.—Length, 4 mm.; head mostly blackish, orbits, a line across the face involving the antennal fossæ and clypeus stramineous, malar space and most of mandibles almost colorless, whitish, palpi whitish, antennæ brownish diversified with stramineous; thorax mostly black, tubercles, tegulæ, lower edge of pronotum, base of wings and nearly all of legs, stramineous, other edges of pronotum and scutellum more or less, castaneous, claws and apex of apical tarsal joint more or less fuscous, hind femora testaceous apically their tibiæ with a fuscous band at base and apex, propodeum mostly black or blackish, first and second pleural areas confluent, castaneous, the important areolation is best shown in the accompanying figure; petiole mostly black above its lateral edge, emarginate at the spiracles, postpetiole beyond the spiracles shorter than rest of petiole, nearly parallel sided and trisulcate, the dorsum and two sides each being mostly occupied by a



FIG. 2.—MEDIAN AREOLAE OF PROPODEUM IN *MESOCHORUS TRISULCATUS*.

longitudinal sulcus none of which is bounded by sharp carinæ, postpetiole entirely smooth and polished, apically with a lunate yellowish margin, second, dorsal segment trapezoidal, narrower at base than long down the middle, with a median, longitudinal, depressed area, the lateral edge of the segment elevated over the spiracle so as to form a kind of hood for the spiracles, basally with a yellowish spot on each side, otherwise mostly black except for an apical margin and a triangular, apical area which are stramineous, rest of dorsal segments stramineous with an apical fuscous band, venter stramineous, plica whitish, petiole beneath variegated, exerted portion of ovipositor shorter than the petiole.

Type-locality.—Japan.

Type.—Cat. No. 13088, U.S.N.M.

Labeled, "Gip. Moth Lab. 3056 Je. 24, Ex. (*Glyptapantles*)."

MESOSTENUS (MESOSTENUS) VERSICOLOR, new species.

Appears to be related to *M. funebris*, *M. nubeculator*, and *M. ater*, of which later it may prove to be the female.

Female.—Length, 8.5 mm.; differs from *M. nubeculator* Giraud as originally described, as follows: Ninth joint above tipped with whitish, the next three joints entirely whitish above, head black or blackish except for the inner orbits which have a narrow pale line adjoining the eyes; tegulæ anteriorly yellow, scutellum with a yellow median spot behind the middle, posterior carina of propodeum at lateral edge produced into a rounded flange, wings uniformly clear, tinged with fuscous, the veins black or blackish, fourth joint of hind tarsi yellowish at base, elsewhere brownish.

Type-locality.—Europe.

Type.—Cat. No. 13079, U.S.N.M.

Labeled, "Gip. Moth Lab. No. 1684 A."

NEOGREENEIA, new genus.

Closely related to *Nototrachys* Marshall from which it may be distinguished by the obliteration of the transverse cubitus, by the subdiscoidal vein being virtually interstitial with the median, the discoidal vein having but two abscissæ, the first and third, the second being crowded out, by the occipital carina being totally effaced in the middle and by the different habitus.

Type.—*Neogreeneia picticornis*, new species.

NEOGREENEIA PICTICORNIS, new species.

Female.—Length, 6.5 mm.; head including the occiput mostly black, smooth and polished, front medially produced into a rounded elevation near the anterior ocellus and with a short, linear, yellow, orbital mark on each side; face, except laterally, punctured, clypeus

with indistinct scattered punctures; anterior edge of the clypeus truncate, the truncature practically as long as the adjoining sides; mandibles stramineous, except the tips which are rather castaneous; scape stramineous, pedicel and first two joints of flagel brownish, rest of flagel blackish, excepting the eleventh, twelfth, and thirteenth joints, which are whitish; flagel 20-jointed, the joints longer than thick; pronotum mostly smooth, polished and castaneous, its dorsal aspect rather stramineous; prosternum stramineous with a blackish stain laterally; rest of thorax more sculptured and mostly black except the metanotum which is reddish; mesonotum finely, indistinctly punctured, the notauli represented by rather foveolate impressions; fore and mid legs mostly stramineous, hind legs mostly brownish to blackish, their coxæ with the basal half blackish, and the apical half reddish; all spurs stramineous; tegulæ stramineous; wings virtually colorless with a dark cast, stigma and veins brownish to blackish; propodeum reticulated, black except at extreme apex where it is reddish; abdomen blackish except base and apex of first segment and the membranous portions which are more or less stramineous; fourth, dorsal segment blackish at base, elsewhere rather ochreous; apex of abdomen broadly truncated, the ovipositor virtually twice as long as the truncature and rather stramineous, the sheaths blackish.

Type-locality.—Roxborough, Pennsylvania.

Type.—Cat. No. 14745, U.S.N.M.

Labeled, "collected June 19, 1909, Chas. T. Greene."

Named for Mr. Charles T. Greene.

Genus OMORGUS (Foerster), Dalla Torre.

Omorgus FOERSTER Verh. Naturh. Ver. Preuss. Rheinland, vol. 25, 1868, p. 154, no species; Cat. Hym. vol. 3, 1901, p. 114, many species.

Type.—*Limneria mutabilis* Holmgren, by present designation.

Congeneric with *Campoplex* Gravenhorst.

(GLYPTA) OXYRRHEXIS PARVUS (Cresson).

PARACANIDIA, new genus.

Related to *Bathyplectes* (Foerster) Szepligeti, from which it differs, especially in the tryphonine habitus, in the laterally carinate scutel, and in the nervellus being broken, the break existing distinctly below the middle, being very near the lower end.

Szepligeti in his gruppe Mesochoroidæ in the genera Insectorum, fasc. 114, 1911, makes *Bathyplectes* Foerster synonymous with the preoccupied *Canidia* Holmgren. Of the many species included in the place just cited, I choose *Canidia exigua* Gravenhorst as the type for *Bathyplectes* Foerster, making the latter genus isogenotypic with the former. As *Bathyplectes* Foerster is now definitely established and

synonymous with *Canidia* Holmgren, it will replace the latter pre-occupied name, in place of *Canidiella* Ashmead.

Regarded as a *Mesoleptine* this would be allied to *Euryproctus* Holmgren.

Type.—*Paracania elyi*, new species.

PARACANIA ELYI, new species.

Female.—Length, 8 mm.; superficially this recalls *Callidora annellata* Thomson, compared with which it differs chiefly in the better developed head, which is somewhat intermediate between transverse and cubical, the distance between the hind ocelli being apparently half the distance between the lateral ocelli and the occipital carina, in the clypeus, which is nearly three times as wide as long down the middle, highly polished, and truncated anteriorly, the truncature apparently as wide as the clypeus is long down the middle; in the annulus of the flagel, which completely involves joints 10, 11, 12, and 13, partly involves joint 9, and almost entirely covers joint 14; in the clypeus, which is dark brown, becoming castaneous along the apical edge; in the mandibles, which are brownish stramineous with tips and base blackish; in each of the third, fourth, and fifth joints of the maxillary palpi being longer than the longest joint of the maxillary palpi in *C. annellata* Thomson, cylindrical and equal or nearly equal to each other in length; in the mesopleuræ showing a better suggestion of sternauli at the prepectal carina; in the more completely carinated, rather compressed scutel; in the interstitial nervulus, in the broken nervellus, in the sessile areolet; in the rather elongate hind coxæ, which are obviously longer than the greatest length of the metapleuræ; in the brownish stramineous wing base and tegulæ, in the brownish stramineous, brownish and blackish fore and mid coxæ, in the blackish hind coxæ, which are streaked with reddish, in the mostly whitish proximal trochanters, in the stramineous to brownish distal trochanters, in the blackish femora, hind tibiæ and hind tarsi, in the brownish stramineous to brownish fore and mid-tibiæ, in the brownish fore and mid-tarsi; in the propodeum not extending apparently as far as the end of the basal third of the hind coxæ, not being channelled nor so coarsely sculptured, with an acute-angled basal area with rather weak circumscribing carinæ, the basal area apparently two-thirds the length of the open areola, the areola apparently two-thirds the length of the petiolarea, middle and lateral longitudinal areas mostly completely separated from each other and the median longitudinal areas, the apical transverse carina developed on each side at the middle of the petiolarea into a rather prominent lamella; in the mostly polished abdomen with petiole not bulbous at apex, but gradually dilated, the spiracles a little beyond the middle, hardly carinate, with a median longitudinal furrow on the apical half

of the dorsum; in the spiracles of the second segment being before the middle and at the end of a lateral furrow, apical fourth of second, dorsal segment reddish, third, dorsal segment, with nearly all of apical two-thirds reddish, abdomen from the end of the third segment sub-cylindrical and blackish with pale margins, hypopygium apparently a little longer than the pygidium, ovipositor barely exerted from between two sheet-like sheaths that are apparently as broad as half of the vertical diameter of the sixth segment, rounded at apex and translucent brown.

Type-locality.—East River, Connecticut.

Type.—Cat. No. 14746, U. S. N. M.

Labeled, "collected July, 1910, by Dr. Chas. B. Ely."

(MESOCHORUS) PLECTISCUS PATULUS (Viereck).

(MESOSTENUS) POLYCYRTUS ALBOMACULATUS (Cresson).

(PHYGADEUON) POLYRHEMBIA POLITA (Viereck).

PSEUDOCASINARIA, new genus.

Related to *Amorphota* (Foerster) Howard, from which it may be distinguished by the slit-like propodeal spiracles, the apparent absence of clypeal foramina, and in having the second abscissa of the discoidal vein distinctly shorter than the third.

Type.—*Casinaria americana* Ashmead.

(ANGITIA) SAGARITIS WEBSTERI (Viereck).

SESIOPLEX, new subgenus.

Related to *Campoplex* Gravenhorst, from which it may be distinguished by the depressed first abdominal segment, the petiole of which is distinctly wider than thick dorso-ventrally, while the post-petiole is flattened, not at all bulbous.

Type.—*Campoplex (Sesioplex) depressus*, new species.

Female.—Length, 5.5 mm.; scape black throughout; tibiae mostly yellowish, the hind pair colored after the same pattern as in *Campoplex caradrinæ* Viereck, hind tarsi fuscous, first, second, and third joints yellowish at base, otherwise agreeing closely with the original description of (*Limneria*) *Campoplex dimidiatus* (Cresson).

Type-locality.—Louisiana.

Labeled, "parasite on *Gelechia gallacolidaginis*, March 25, 1887, F. M. Webster." Cocoon 7 by 2 mm., rather cylindrical, rounded off at the ends, parchment-like in texture, with some loose silk over the cocoon proper, which is brownish in color.

STILPUS ANTHOMYIDIPERDA, new species.

Female.—Length, 3.5 mm.; flagel 14-jointed; closely resembles *Stilpnus gagates* Gravenhorst, from which it may be distinguished by the first three joints of the antennæ being dark brown, the remain-

ing joints blackish, by the dark castaneous tegulæ, by the faint outer vein of the areolet, by the inner carinæ of the postpetiole converging toward the apex and by the bulbous abdomen.

Type-locality.—Clarksville, Tennessee.

Type.—Cat. No. 14747, U.S.N.M.

In the allotopotype the flagel is 17-jointed and the abdomen depressed, otherwise essentially as in the type.

A male paratopotype has the tegulæ rather stramineous.

Labeled, "reared April 26, 29, 1911, from Anthomyids on tobacco, S. E. Crumb."

(MESOLEPTUS?) *THYSIOTORUS PEREGRINUS* (Cresson).

Type-locality.—New Jersey.

(GLYPTA) *TOXOPHOROIDES ALBOMARGINATA* (Cresson).

TRACHICHNEUMON, new genus.

Related to *Stenichneumon* Thomson, from which it can be distinguished by the hypopygium, being as long as or longer than the preceding segment, in the rounded nonangulate junction between the petiole and postpetiole, in the prominently exerted sheaths of the ovipositor and in the *Hoplismenus* like habitus.

Type.—*Ichneumon confirmatus* Cresson.

TRICHOMMA EPISCHNIÆ, new species.

Nervellus broken distinctly below the middle.

Female.—Length, 11.5 mm.; differs from the original description of *T. reticulatum* Davis, as follows: Ferruginous; interocellar area, middle of pronotum and anterior edge of dorsulum blackish; notauli represented by a rather wrinkled area; scutel convex, with a carina on each side; apical third of hind tibiæ blackish; wings yellowish with a dark tinge; abdomen paler than the thorax, the second, dorsal segment blackish above; ovipositor 4 mm. long.

Type-locality.—Crows Landing, California.

Type.—Cat. No. 14748, U.S.N.M.

Labeled, "bred from No. 2109⁰³ *Epischnia granitella* Rag., Dec. 21, 1911, F. A. Hyde collector." Received through the Bureau of Entomology, United States Department of Agriculture, from F. H. Chittenden.

TRICHOMMA GRANITELLÆ, new species.

Nervellus broken distinctly below the middle.

Male.—Length, 12.5 mm.; differs from the original description of *T. reticulatum* Davis, as follows: Black; face, most of orbits and mouth parts, reddish; legs more or less reddish, the fore and mid legs pale, coxæ more or less black, hind tibiæ with apical third blackish; abdomen reddish, except dorsum of second, dorsal segment, apical

third of fifth, dorsal segment and all of the following, dorsal segments mostly blackish; otherwise virtually as in the preceding species.

Type-locality.—Crows Landing, California.

Type.—Cat. No. 14749, U.S.N.M.

Labeled the same as *T. epischniæ* Viereck and received through the same channels.

This may prove to be the male of the preceding species.

XYLOPHRURIDEA, new genus.

Agrees with Schmiedeknecht's definition of *Xylophrurus* (Foerster) Schmiedeknecht as given in *Genera Insectorum*, except that the mandibles are not gibbose at base, in the short parapsidal furrows which are indicated only anteriorly, and in the round propodeal spiracles. The sternauli in this genus are very poorly defined so that this might be taken to be a *Pimpline* were it not for the traces of *Cryptine* sternauli and the *Cryptine* habitus.

Type.—*Xylophruridea agrili*, new species.

Female.—Length, 8 mm.; flagel 20-jointed; body including most appendages black or blackish, wings mostly, almost colorless, tinged with brown, with a brownish, substigmal band and brownish tips, veins brownish and blackish, stigma blackish; basal, transverse carina present, other carinæ virtually wanting, the median, longitudinal carinæ somewhat represented between the basal, transverse carina and base of propodeum, making an ill circumscribed basal area; exerted portion of ovipositor hardly half as long as the abdomen.

Type-locality.—French Creek, West Virginia.

Type.—Cat. No. 14750, U.S.N.M.

The allotype is essentially as in the type except in the 25-jointed flagel.

Labeled, "reared from *Agribius vittaticollis*, Quaintance No. 7518; 7524, issued April, 1912;" Bureau of Entomology, United States Department of Agriculture; F. E. Brooks, collector. A female paratopotype has a whitish annulus to the antennæ.

ZACHAROPS, new genus.

Propodeum extending beyond the middle but not to the end of hind coxæ; second segment not longer than the first; distance between hind ocelli and occipital carina greater than the distance between hind ocelli; hind edge of mesosternum without a process on each side of mesolcus; areolet wanting; nervellus postfurcal, not broken but angulate nearly in or above the middle; second abscissa of discoidal vein as long as or shorter than the third; head lenticular, vertically receding behind lateral ocelli.

Related to *Amorphota* (Foerster) Howard.

Type.—*Charops annulipes* Ashmead.

Genus ZACHRESTA (Foerster) Woldstedt.

Zachresta FOERSTER, Verh. Naturh. Ver. Preuss Rheinland, vol. 25, 1868, p. 151, no species.; Bull. Acad. Sci. St. Petersburg, vol. 23, 1877, p. 436 (separate), one species.

Type.—*Zachresta insignis* Woldstedt. First species included.

As represented by *Zachresta popoffensis* Ashmead, this genus agrees with characters in bold face type in the description of *Benjaminia* Viereck given on page 633 of this paper, but differs in the distance between hind ocelli and occipital carina, being equal to or distinctly less than the distance between the hind ocelli; in having an areolet which receives the recurrent vein beyond the middle and in the spiracles of the first dorsal segment being nearer to each other than to the apex.

ZAMANSA, new genus.

In having the radial side of the areolet longer than the cubital side this genus may be said to resemble *Mansa* Tosquinet, the propodeum is not sulcate however as in *Mansa* and has a basal transverse carina as well as a lamella on each side representing the apical transverse carina; spiracles of first abdominal segment nearer to each other than to the apex, postpetiole with a smooth, shallow furrow on its anterior half; frontal basin bounded laterally by a prominent carina that terminates above nearly as far from a lateral ocellus as the latter is to its fellow; thirteenth and most following joints of antennæ broader than long.

Type.—*Cryptus aztecus* Cresson.

ZASTERNAULAX, new genus.

Apparently related to *Idioxenus* Foerster, from which as represented by *I. variator* Foerster it can readily be distinguished by the complete sternauli, by the propodeum being longer than the hind coxæ and by the simple antennæ in the male.

Type.—*Zasternaulax simplicicornis*, new species.

ZASTERNAULAX SIMPLICICORNIS, new species.

Male.—Length, 4.25 mm.; black; clypeus blackish at base, transversely impressed and brownish beyond; mandibles and palpi stramineous, the former with blackish tips to the teeth; malar line approximately half as long as the mandibles are wide at base; antennæ brownish; flagel 26-jointed, all joints longer than thick and cylindrical, excepting the apical joint, which is conical, the first joint a little shorter than the second; tegulæ stramineous; wing base yellowish; wings almost colorless, stigma blackish, most veins dark brown to blackish; legs yellowish, onychium and penultimate tarsal joint brownish, hind coxæ mostly blackish; areola extending nearly two-

thirds the length of the propodeum, almost from the base to the petiolarea as a parallel sided area apparently eight times as long as wide; petiolarea nearly as wide as long and circumscribed by a distinct carina; petiole parallel sided, planate, aciculate and apparently twice as long as the smooth postpetiole; second, dorsal segment rather stramineous and compressed apically, third, dorsal segment compressed basally and rather stramineous apically, fourth segment somewhat stramineous apically; ventral segments stramineous along the sutures.

Type-locality.—Columbia Falls, Montana.

Type.—Cat. No. 14751, U.S.N.M

Labeled, "No. 8574 Hopk. U. S., from *Pissodes* species; Josef Brunner, collector."