

DESCRIPTIONS OF NEW SPECIES OF ICHNEUMON FLIES.

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The following species promise to become important economically inasmuch as they are parasitic on injurious insects. The new names are proposed at this time in order that they may be used in economic bulletins about to be published.

In the endeavor to translate habitus into word descriptions it is necessary to originate additional technical terms. Such technical terms as are used for the first time in this paper are: The *lateral ocellar line*, or the shortest line between lateral and anterior ocelli, the *post-ocellar line*, or the shortest line between the posterior ocelli, the *clypeo-ocular line*, or the shortest line between clypeus and eye, and the *antennocular line*, or the shortest distance between edge of antennal fossa and eye.

In this paper the term *notauli*, which is in common use among European systematists, is used instead of parapsidal furrows.

APANTELES (PROTAPANTELES) HYSLOPI, new species.

Description.—Female and male, 2 mm. long. Related to *limenitidis* from which it differs as follows: The almost rectangular oblong second dorsal plate of the gaster bounded laterally by rather deep arcuate, crenulate furrows, especially in the female; propodeum more coarsely reticulate; tegulae, membranous edge of first dorsal segment and posterior tarsi, black or blackish; color generally darker.

This may prove to be only the Upper Sonoran representative of *Apanteles limenitidis* Riley.

Type.—Female and male, Cat. No. 13053, U.S.N.M.

Type-locality.—Pullman, Washington. Bred from *Autographa gamma*, var. *californica*, August 29, 1909. Webster No. 5903, J. A. Hyslop, collector.

Named for J. A. Hyslop.

APANTELES (PROTAPANTELES) FISKEI, new species.

Description.—Female and male, 2.5 mm. long. In size and in the shape of the first dorsal plate this resembles *Apanteles limenitidis* Riley. In the sculpture of the third dorsal plate it mostly agrees

with *Apanteles junoniæ* Riley in having the longitudinal middle third mostly longitudinally, finely rugoso-striate.

Mouth parts and legs mostly honey color, mandibles blackish at base castaneous at apex, claws dark brown, posterior tibiæ apically tinted with brown, their tarsi brownish, hind coxæ mostly black, membranous edge of first and second dorsal segments honey color, infuscated, tegulæ honey color, wings brownish.

Type.—Female and male, Cat. No. 13052, U.S.N.M.

Type-locality.—Massachusetts. Bred from *Parorgyia*, Gip. Moth Lab. No. 2620 I.

Named for W. F. Fiske.

BRACON (HABROBRACON) HOPKINSI, new species.

Description.—Female, 3 to 4 mm. long; mostly black and shining, sculptured, pubescent, the pubescence white and nowhere obscuring the sculpture. Flagel 22-jointed, mostly black like the scape and pedicel, orbits nearly completely margined with yellow, the yellow orbital band prolonged (except for a brownish break) toward the middle of the face on each side and tangent to the lower edge of the antennal fossa, another prolongation of the yellow of the orbits extending to the lower edge of the malar space and bordering the same throughout, mandibles mostly yellow, tipped with brown; posterior corner of prothorax, tegulæ, wing bases and most of legs testaceous to honey yellow, coxæ and first joint of trochanters blackish, femora basally and tibiæ apically infuscated, tarsal joints fuscous except at apices, wings transparent brownish, veins and stigma very dark brown; dorsal plate of first segment about as long as wide at apex, with an equilaterally triangular area with its apex anterior and defined laterally by foveate impressions, black, rest of dorsum of first segment yellow, second dorsal plate nearly three times as wide at apex as long down the middle, largely tectaceous medially, with an inverted U-shaped medial foveate impression, subemarginate apically, each of the following dorsal segments shorter than the one preceding, the third and fourth with a median longitudinal brownish or testaceous line, exerted portion of ovipositor apparently a little longer than the second dorsal segment.

Male.—Somewhat smaller than the female, rather slender, parallel sided; second dorsal segment mostly yellow, brown laterally and medially.

Type.—Cat. No. 12284, U.S.N.M.

Type-locality.—Summerdale, California, Hopkins No. 449c, reared September 3, 1906. (H. E. Burke.) Thirteen female paratopotypes and two male paratopotypes show only slight departures from the type. In structure and in the color of the head this species is very like *Bracon (Habrobracon) stabilis* Wesmael from England and Continental Europe.

Named for A. D. Hopkins.

RHOGAS AUTOGRAPHÆ, new species.

Description.—Female and male, 4 mm. long: compared with a specimen of *R. canadensis* Cresson, from Ottawa, this differs as follows: Face below antennæ black only medially; mesopleura and mesosternum mostly black or blackish, the lower edge of mesopleura with a border of a testaceous or ferruginous color; median longitudinal carina of first and second dorsal segments not so prominent in the female as in the male, being nearly lost among the adjoining striæ.

Type.—Female and male, Cat. No. 13054, U.S.N.M.

Type-locality.—Easton, Washington (A. Koebele).

Other locality: Pullman, Washington. Bred from *Autographa gamma*, var. *californica*, July 27, 1909, Webster No. 4595, A. J. Hyslop, collector.

HETEROSPILUS PROSOPIDIS, new species.

Description.—Very robust, thorax and abdomen each about one and one-half times as long as wide, as seen from above, brownish to yellowish in color.

Female, 4 mm. long; ovipositor 0.75 mm.; antennæ 29-jointed; notauli virtually wanting, nearly all of petiole of first discoidal cell swollen and blackish, recurrent vein received by the cubitus distinctly beyond the first transverse cubitus, propodeum coarsely reticulated, with an acute angle at base formed by raised lines starting together in the middle but terminating almost immediately beyond in the rough sculpture; first and second dorsal segments entirely longitudinally striated, the former in addition with a recurved elevated ridge on each side, the latter with a faint transverse impressed line near the apex, third dorsal segment basally longitudinally striated, only half the segment being so sculptured in the middle, more laterally, rest of the segment smooth and polished, fourth dorsal segment in the middle with the basal third longitudinally striate, laterally with more, rest of the segment smooth and polished, as are the remaining segments.

Male very like the female; antennæ 28-jointed; pseudostigma longer than wide or high and longer than the portion of the costa basad thereto.

Type.—Cat. No. 12587, U.S.N.M.

Type-locality.—Kingsville, Texas. Reared from *Bruchus* in *Prosopis juliflora*, June 6, 1909; one female and one male paratopotypes with same data as type female and male; thirty-five paratypes females, from Dallas, Texas (Hunter No. 1451, parasite of *Bruchus exiguus*), Victoria, Texas (Hunter No. 1410, parasite of *Bruchus prosopis*), (Hunter No. 1454), Forbing, Louisiana (Hunter No. 1455). These paratypes range from typical to between 1 and 2 mm. in length and in color from almost entirely castaneous to almost entirely yellowish; thirty-seven male paratypes with the same data as the female paratypes and varying in the same degree,

LIMNERIUM (ANGITIA) WEBSTERI, new species.

Description.—Clypeocular line a little longer than the antennocular line, face rather lengthened.

Female.—4.5 mm. long; head narrowed posteriorly, lateral ocellar line about equal to the diameter of lateral ocellus, distinctly shorter or nearly half as long as the postocellar line, which latter is about one and one-half times as long as the lateral ocellar line, head black, antennæ black to blackish, mandibles mostly yellow, palpi buff; thorax, including coxæ mostly black, tegulæ, wing base, anterior and middle proximal trochanters on basal half, all distal trochanters, anterior tibiæ in front and basal sixth of middle tibiæ, all more or less yellow, apical half of anterior and middle proximal trochanters more or less brownish or fuscous,

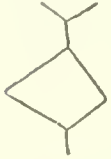


FIG. 1.—AREOLET IN LIMNERIUM WEBSTERI.

rest of anterior tibiæ rather testaceous, their tarsi testaceous to brownish, two middle fourths of middle and posterior tibiæ whitish on outer side, basal seventh of posterior tibiæ buff, rest of middle and hind tibiæ dark brown or fuscous, middle and posterior tarsi fuscous excepting a basal band of buff on basal joint, femora ferruginous, the hind pair brownish at base and apex, thorax hunched, speculum dull, costula complete; (figs. 1, 2) segments mostly black, postpetiole behind spiracles as long as wide and with a narrow apical honey-colored band, plica yellowish, second dorsal segment with a narrow subapical honey-colored band, its thyridia indistinct, a little more removed from the lateral edge of the pigmented plate than the spiracles, third, fourth, and fifth dorsal segments apically and laterally with a more or less testaceous patch, exerted portion of ovipositor about as long as the second dorsal segment.

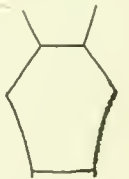


FIG. 2.—AREOLA IN LIMNERIUM WEBSTERI.

Type.—Cat. No. 13055, U.S.N.M.

Type-locality.—Pullman, Washington, August 14, 1909. Bred from *Autographa gamma*, var. *californica*, Webster No. 4595, J. A. Hyslop, collector.

Named for F. M. Webster.

LIMNERIUM (HYPOSOTER) PARORGYIÆ, new species.

Description.—Clypeocular line equal to the antennocular line; face rather transverse not appearing lengthened; abdomen club-shaped or thickened in the middle, not slender; other subgeneric characters very as in *Anilastus* (Førster) Thomson.

Female.—7 mm. long; head and thorax black excepting the appendages, abdomen mostly reddish; lateral ocellus as far from the eye as from the anterior ocellus, the lateral ocelli one and one-half times as far from each other as from the anterior ocellus, clypeus

subtruncate, almost arcuate, the lateral suture represented only by a slight difference in sculpture, the spiracle indistinct, almost obsolete, mandibles yellow excepting the teeth, which are castaneous, palpi yellow, scape dark brown with pale edge at apex, rest of antennae blackish, second joint of flagel two-thirds as long as the first; tegulae, base of wings, trochanters of anterior and middle legs, anterior femora at tip, anterior tibiae externally, middle tibiae externally, and anterior and middle metatarsi yellow or yellowish, rest of anterior and middle legs honey color, more or less tinted with brownish, excepting the femora, which are inclined to reddish, anterior coxae yellow, brownish at base, middle coxae brownish, posterior coxae mostly blackish, partly reddish brown, posterior trochanters blackish, their femora reddish, their tibiae testaceous with a subbasal fuscous band as wide as the tibia is thick at base, their tarsi testaceous, paler than the tibiae, spurs whitish or honey color, claws brown, areolet petiolate; (fig. 3) abdomen reddish except the narrow portion of petiole which is blackish, second dorsal segment with indistinct thyridia that adjoin the lateral edge and are one-eighth the distance from the base and are nearly one-fourth as wide as the segment is at base, spiracles of this segment nearly adjoining the lateral margin and a little beyond the middle, plica honey color to testaceous, sheaths of the ovipositor blackish, clavate, ovipositor hidden when at rest, narrow portion of dorsum of petiole not grooved on the sides.

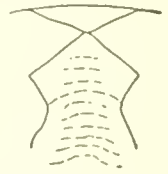


FIG. 3. AREOPETIOLAREA IN LIMNERIUM PARORGYLE.

Male.—Very like the female; middle coxae honey color, hind trochanters more or less testaceous, clypeus anteriorly testaceous, areopetiolarea not distinctly transversely rugose.

Type.—Cat. No. 13035, U.S.N.M.

Type-locality.—Massachusetts. (Gip. Moth Lab. 1471 A., 1471 B., 2619 A.)

As shown by a paratopotype, the middle coxae may be blackish, the basal fuscous band of hind tibiae almost missing, and the rugae of areopetiolarea not be arranged so as to make it appear that the areola is separated from the petiolarea.

Subgenus **HYPOSOTER** Færster.

Type.—*Limnerium (Hyposoter) parorgyia* Viereck.

Subgenus **ANILASTUS** Færster.

Type.—*Campoplex rapax* Gravenhorst.

ICHNEUMON (CRATICHNEUMON) BURKEI, new species.

Description.—In color this agrees with the description given for *I. sublatus*, var.^a excepting in the metathorax which in our species is entirely black behind.

^a Trans. Amer. Ent. Soc., vol. 6, 1877, p. 137.

Malc.—Twelve to thirteen mm. long. Stature and pubescence such as to remind one of *Arenetra ventralis* Cresson. Metapleura separated into two parts by an arcuate carina, juxta-coxal area therefore defined. Scape rather discus shaped. Areola in outline nearly as in *Barichneumon* as figured by Morley,^a but more rounded anteriorly. Ninth to fourteenth joints of flagel more or less yellowish on one side, meso and meta pleura maculated with yellow.

Type.—Cat. No. 12701, U.S.N.M.

Type-locality.—Wisconsin. Reared by H. E. Burke from a Liparid on *Pinus* (Hopkins U. S. 8389 d¹).

This may prove to be the presumably undescribed male of *I. otiosus* Say.

Named for H. E. Burke.

^a Ich. Brit. Ichneumoninae, 1903, p. 41.