

ARTICLE XII.—DESCRIPTIONS OF NEW PARASITIC HYMEOPTERA BRED BY PROF. F. M. WEBSTER.

BY WM. H. ASHMEAD.

Family CYNIPIDÆ. Genus HEPTAMERIS FÖRSTER.

(1) *Heptameris oscinidis* sp. n. ♀ Length 1^{mm}. Black, highly polished impunctate; legs and the six basal antennal joints reddish yellow wings hyaline, strongly fringed. The antennæ are as long as the body, 13-jointed, the seven terminal joints stouter than the preceding, about three times as long as thick, the last being slightly the longest, the four funicular joints very slender, nearly of an equal length, the first being very slightly the longest. Thorax very slightly shorter than the abdomen, the mesonotum highly convex without furrows and a little longer than wide; scutellum foveated at base, the small oval cup on disk surrounded by striæ, the cup itself smooth and polished with a small fovea at apex. Marginal cell of anterior wing large; the first abscissa of the radius slightly curved and a little shorter than the second, the latter straight.

Described from 2 ♂ specimens reared by Prof. F. M. Webster, at Wooster, Ohio, from the larva of *Oscinis variabilis* living in the stems of wheat.

Family BRACONIDÆ. Genus APANTELES FÖRSTER.

(2) *A. orgyia* sp. n. ♀ Length 2.2^{mm}. Black, shining, finely sparsely pubescent; mandibles, palpi and legs, except hind coxæ, reddish-yellow, or yellowish; scape black; flagellum brown-black or dark brown; wings hyaline; tegulæ, costæ and stigma, pale brownish-yellow, the internal nervures pale or hyaline.

Head transverse much narrower than the thorax, a little more than twice as wide as long, the vertex convex, smooth, with occipital margin rounded and feebly, sparsely punctate; ocelli prominent, red; face below antennæ slightly prominent, with a median carina but not sharply defined, the surface shining but feebly rugulose or alutaceous; clypeus with a distinct, small, rounded fovea on each side at the basal lateral angles; cheeks rounded, feebly sparsely punctate, the punctures more distinct and confluent near the malar furrow. Antennæ as long as or a little longer than the whole insect, slender and very gradually acuminate toward tips; scape about 2½ times as long as thick, black, except at juncture with the head; annulus minute, yellowish; flagellum dark brown, covered with a short fine pubescence, the first three joints about equal in length, nearly four times as long as thick, the following joints very gradually subequal to the last, the last very slender, conic, and only a little longer than the preceding.

Thorax shining, punctate, the punctures confluent only anteriorly, sparser and feebly defined towards the scutellum; scutellum smooth,

shining, impunctate with a crenulate furrow across its base; metepisternum triangular, punctate along the margins; mesopleura with a long deep femoral furrow, smooth and shining except anteriorly and beneath the tegulæ, the surface here being punctate; metathorax coarsely rugose, impressed on each side of the middle posteriorly and without a distinct median carina, although the pleural carinæ are more or less distinctly defined; metepisterna smooth, polished, the pleura being coarsely rugose and between these two sclerites there is a large deep fovea.

Legs, except the hind coxæ, uniformly reddish-yellow, rarely with a faint dot at tip of posterior femora above; tibial spurs scarcely half the length of first tarsal joint.

Abdomen not longer than the thorax, flat above, carinate and compressed towards apex beneath, the hypopygium being prominent and plow-share shaped, the ovipositor hidden or with only the tip exposed. The abdomen appears entirely black, but in the coxal furrow or the depression caused by the large hind coxæ, (being the sides of the first, second and third ventral segments) it is reddish piceous. Shield of first dorsal segment trapezoidal, as wide as the segment and as long as the second and third segments united, the latter sub-equal; the first and second segments are rugose, the following all smooth, polished.

Hab.—Ohio.

Approaches apparently nearest to *A. Koebelei* Riley, but differs in color of the legs, sculpture and in the structure of the dorsal abdominal segments, the second being without the oblique furrows.

Bred by Prof. F. M. Webster from the hibernating chrysalis of *Orgyia leucostigma*.

Family CHALCIDIDÆ. Subfamily PTEROMALINÆ. Genus MEGORISMUS
Walker.

(3) *M. lasioptera* sp. n. ♂ Length 2.8^{mm}. Golden green, closely punctate; sides of thorax, except the posterior part of the mesopleura, and the metathorax, bluish-green; scape, pedicel, mandibles, and legs, pale ferruginous.

The head is transverse wider than the thorax with a broad vertex, the lateral ocelli a little closer to the margin of the eye than to each other. Antennæ subfiliform, 13-jointed, the pedicel small, the first funicular joint the longest and about twice as long as the pedicel, the following joints very gradually becoming shorter, the last being a little wider than long; club a little longer than the last two funicular joints united. Pronotum transverse, quadrate, narrower than the mesothorax and anteriorly triangularly contracted at junction with the head; mesonotum with furrows entire but delicately indicated posteriorly; scutellum with no cross-furrow; metanotum long, rugose, and with 3 carinæ. Wings hyaline, the tegulæ and venation pale ferruginous, the marginal vein slightly shorter

than the postmarginal, stigmal oblique, subclavate, and nearly as long as the marginal. Abdomen oblong-oval, bronzy-green, petiolated, the petiole stout, about twice as long as thick, rugose, with a delicate longitudinal carina above; first body segment the longest, almost as long as the following united, smooth, the following segments subequal and under a strong lens exhibiting a finely reticulate sculpture.

Hab.—Westerville, Ohio.

Described from a single male, bred from a Cecidomyiid larva, *Lasioptera muhlenbergiae*.

Genus MERAPORUS Walker.

(4) *M. bruchivorus* sp. n. ♂ ♀. Length 2 to 2.5^{mm}. Black, sometimes approaching blue-black, closely punctate or granulate and covered with sparse, short, white hairs, the head behind the ocelli with fine, transverse, grooved lines; knees, tips of tibiae and the tarsi, except the terminal joint, white or light honey-yellow; abdomen aeneous.

The head is transverse, a little wider than the thorax, with the cheeks and lower part of the face smooth. Antennae, except extreme base of the scape, or at its origin, brown-black, subclavate, pubescent, the first funicular joint small, shorter than pedicel or the following funicular joints, the others very slightly longer than wide. Metathorax with a prominent neck. Wings hyaline, the venation yellowish, the marginal vein nearly twice as long as the stigmal, the postmarginal only one-third longer than the stigmal. Abdomen conic-ovate, about as long as the head and thorax united, or very slightly longer. The male has all the tibiae, except sometimes the anterior pair, brownish; the marginal vein is only a little longer than the stigmal; the abdomen is oblong-oval; while the antennae are covered with a denser pubescence.

Hab.—Manhattan, Kansas, Lafayette, Indiana, Spirit Lake, Iowa.

This species was first sent to me several years ago, by Mr. C. L. Marlatt, of Manhattan, Kansas, who reared it from a *Bruchus*, living in the seed pods of some plant in that state. Prof. F. M. Webster has recently reared it from *Bruchus exiguus*, living in the seeds of *Amorpha fruticosa* collected at Spirit Lake, Iowa, by Dr. J. C. Arthur.

Genus CATOLACCUS Thompson.

(5) *C. tyloderma* sp. n. ♂ ♀. Length 3 to 3.6^{mm}. Dull brownish to bluish-black, closely punctate and covered with exceedingly short, sparse white hairs; abdomen, in ♀, conic-ovate, longer than the head and thorax united, metallic, at base above cupreous, towards apex and beneath bluish; scape and legs pale ferruginous or brownish-yellow, the coxae and femora, except distal ends, brown-black or submetallic, the tibiae at the middle more or less brownish or obfuscated; flagellum brown, subfiliform, the first funicular joint the longest, about 2½ times as long as thick,

the following joints gradually subequal. Metathorax very short. Wings hyaline, the venation yellowish, the marginal vein long, about three times as long as the stigmal, or one-half longer than the postmarginal.

The male is the smaller and differs in having the tibiæ usually pale, or exhibiting only a dusky spot toward the base, the abdomen being long-oval, about two-thirds the length of the thorax, much depressed, bluish, but ferruginous or brownish above and beneath towards base.

Hab.—Indiana, and Ithaca, New York.

This species has been reared in Indiana by Prof. Webster, and at Ithaca, New York by Mr. F. H. Chittenden, from the larva of a Coleopteron, *Tyloderma foveolatum*.

Genus ARTHROLYTUS Thompson.

(6) *A. apatelæ* sp. n. ♀. Length 1.5^{mm}. Black, shining, although exhibiting a fine scaly punctation; scape and legs, honey-yellow, or pale ferruginous; all femora, and the posterior tibiæ broadly at the middle, brown; flagellum subclavate, brown. The head is broad, much wider than the thorax; the vertex being broad and rounded. The antennæ are inserted a little below the middle of the face, the funicular joints being short, not or scarcely longer than wide, the club somewhat large, fusiform. Thorax short, the mesonotum being about twice as wide as long, with the parapsides indicated only anteriorly; collar distinct but narrowed medially; scutellum convex; metathorax short. Wings hyaline, the marginal vein twice as long as the stigmal, the postmarginal not longer than the stigmal. Abdomen conic-ovate, a little longer than the head and thorax united.

Hab.—Wooster, Ohio.

Bred by Prof. Webster, from the larva of *Apatela populi* Riley.

Genus ERICYDNUS Walker.

(7) *Ericydnus maculipennis* sp. n. ♂.—Length 3 to 3.1^{mm}. Brownish-yellow; eyes, scutellum and mesopleura posteriorly dark brown; metathorax and abdomen, except at base, blue-black; triangular piece before the tegulæ and the legs except sometimes the middle tibiæ outwardly and the hind femora and tibiæ, except the basal one-third, which are fuscous, honey-yellow; anterior wings with the apical two-thirds, except two triangular nearly confluent spots at the middle, fuscous, the basal one-third and the two triangular spots hyaline. The head is wider than the thorax, the surface microscopically shagreened with a few scattered punctures; ocell 3 in a triangle, all the same distance apart but the laterals almost touching the eye. Antennæ 11-jointed, subfiliform. Thorax convex, shining with a sparse microscopic pubescence, pronotum sub-triangular, the posterior margin triangularly emarginated; scutellum convex, twice as long as wide at base, the axillæ meeting at the base.

Middle legs the longest, the tibial spurs as long as the first tarsal joint. Abdomen oblong-ovate, as long as the thorax.

Described from several males reared by Prof. Webster from *Chlorops ingrata*.

Subfamily ENCYRTINÆ. Genus ENCYRTUS Dalman.

(8) *E. clisiocampæ* sp. n. ♀.—Length 0.8^{mm}. Æneous or dark bronzy-green; the mesopleura blue-black; tip of scutellum violaceous; antennæ, coxæ, femora, and tibiæ toward base outwardly, pale brown; rest of legs light honey-yellow. The whole surface is smooth, shining; the axillæ do not quite meet at the base of the scutellum; the eyes slightly converge toward the mouth; the vertex not especially widened; the lateral ocelli close to the eye, while the anterior ocellus is on the extreme margin of the facial impression. Antennæ 11-jointed, subclavate, the funicular joints scarcely longer than thick, the first two united being only as long as the pedicel, while the club is fusiform not obliquely truncate. Wings hyaline, the margins not fringed, the marginal vein punctiform, the postmarginal scarcely longer, while the stigmal is subclavate about twice as long as the marginal. Abdomen sessile, short, subtriangular, not quite as long as the thorax, æneous, the membranous attachment to the metathorax, which is visible as a narrow fold, being whitish or carneous.

In the male the legs are pale, the femora and tibiæ being only slightly dusky, the abdomen being smaller and much depressed, while the antennæ are subfiliform, paler brown, with a long pubescence, the funicular joints being from 1½ to 2 times as long as thick. Hab.—Franklin, Indiana.

Bred from the eggs of *Clisiocampa distria* Hbn.

(9) *E. pleuralis* sp. n. ♀.—Length 1.5^{mm}. Æneous black or submetallic; tip of scutellum somewhat cupreous; head black; scape, mesopleura and legs, ferruginous, the posterior femora obfuscated; thorax smooth, impunctured. The head, on vertex, is distinctly punctate, the lateral ocelli almost touch the eye while the eyes are large, rounded, pubescent. Antennæ 11-jointed, clavate, the flagellum brown-black, with the funicular joints wider than long. Wings hyaline, pubescent, and with a short cilia at margins, the marginal vein about 2½ times as long as thick, (or as long as the stigmal with its club), brown, post-marginal scarcely longer. Abdomen sessile, ovate, about as long as the thorax. Hab.—Wooster, Ohio.

Described from a single specimen, bred by Prof. F. M. Webster from a bracket-like fungus found on a stump, infested with the larvæ of Atomaria and other fungus beetles.

The funicular joints in this species closely resemble those to be found in the genus Aphyucus, but otherwise it resembles Encyrtus.

Family, TORYMINÆ. WEBSTERELLUS gen. nov.

Stature and general appearance of *Monodontomerus* Westwood, with a similar venation and with the hind femora armed with a single tooth beneath toward apex; but the prothorax, although large, is more rounded anteriorly, the scutellum has no transverse furrow behind the middle, the metathorax with oval spiracles, the hind coxæ very long, while the abdomen is sessile, in female conically produced with a long ovipositor, in male oblong oval. In both sexes the first segment is the longest with the posterior margin incised at the middle.

The genera in the Toryminæ with the posterior femora toothed Plate I. Fig. 3, are: (1) *Monodontomerus* Westwood; (2) *Diamorus* Walker; (3) *Holcaspis* May; (4) *Oligosthenus* Förster; and (5) *Cryptopristus* Förster, all of which except the last are represented in my collection.

Websterellus is at once separated from the first two by the absence of a cross-furrow on the scutellum and by the incised first abdominal segment; from the third by a longer more oblique stigmal vein, shorter metathorax, longer posterior coxæ, the much longer conically produced abdomen and the incised first abdominal segment; and from the fourth and fifth by the shape of the abdomen, venation, and the incision of the first abdominal segment. In *Oligosthenus* the posterior margin of the first abdominal segment is straight in both sexes, while in *Cryptopristus* it is straight only in the male.

It has given me great pleasure to be able to dedicate this interesting new genus to my friend Prof. F. M. Webster, the discoverer, who is so well known for his valuable contributions to economic entomology.

(10) *Websterellus tritici* sp. n. (Plate II, Figs. 1, 2. Plate III. Figs. 3, 4). ♀.—Length 3 to 3.2^{mm}. ovip. 1.8 to 2^{mm}. Bluish green, confluent punctate, the upper part of head, the mesonotum and scutellum bronzed-green; the face, cheeks, sides of pronotum and abdomen, especially at sides, with a moderately dense white pubescence, the pubescence elsewhere sparse; all tibiæ and tarsi honey-yellow; wings hyaline, the female with a faint cloud beneath the stigmal vein; the venation brown, the marginal vein long, two-thirds the length of the submarginal, the post-marginal about two-thirds the length of the marginal, the stigmal a little shorter than the post-marginal at an oblique angle of about 20 degrees, and with a short vein at the tip which is directed towards the margin. Plate I. Fig. 1.

In the ♀ the antennæ are subclavate, 13-jointed, with the scape and club honey-yellow, while the abdomen is sessile, conically produced, nearly twice the length of the head and thorax united, the first segment being one-third its whole length, and the ovipositor is almost as long as the abdomen and thorax united,

The antennæ in the male are entirely black, with the flagellum filiform, stout, covered with a short dense pubescence, the pedicel being

very small, while the abdomen is oblong-oval not quite as long as the thorax, the first segment only as long as the 2d., 3d, and 4th, segments united. Plate I, Fig. 2.

Described from several specimens reared by Prof. F. M. Webster, at Wooster, Ohio, from galls on the stems of wheat.
