

DESCRIPTIONS AND NOTES ON SOME ICHNEUMON-FLIES FROM JAVA.

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This paper, which is a contribution from the Branch of Forest Insects, Bureau of Entomology, contains the descriptions of 10 new species of Ichneumon-flies submitted for determination by Dr. K. W. Dammerman. All of the species have been reared. The types of all of them are in the United States National Museum.

In the descriptions the term "reclivous nervellus" is used in place of "nervellus postfurcal," as understood by Thomson and others.

Genus ERIPTERNIMORPHA Viereck.

The three species described below seem to belong to *Eripternimorpha* Viereck. This is especially true of the first species, which is closely allied to the genotype of Viereck's genus. They resemble each other in being black and in having the metathorax and legs (mostly) red, but they may be separated by the following key:

- Wings unicolorous; the third and apical half of the second tergite rufous
scirpophagae.
- Wings with a cloud below the stigma; second and third tergites black, the
second with the posterior margin white..... 1.
1. First tergite rufous..... *javensis*.
- First tergite black..... *dammermani*.

ERIPTERNIMORPHA SCIRPOPHAGAE, new species.

Closely allied to *Eripternimorpha schoenobii* Viereck, but the intermediate coxae are red instead of black, the postpetiole is broader and has a median longitudinal depression and the second tergite is much wider posteriorly than long (not with the length and apical width subequal).

Female.—Length, 9 mm. Body opaque, closely, finely granular; clypeus not separated from the face by a distinct suture, the apical margin truncate; the area between the eyes distinctly longer than wide; antennae filiform without an annulus, the third and fourth

joints subequal; notauli well defined, practically complete; scutellum flat, not margined, shining, sparsely punctured; propodeum long with a transverse carina before the middle and an irregular carina defining the petiolar area; propodeal spiracles slitlike; nervellus reclivous; nervulus interstitial; second intercubitus nearly obliterated; the areolet trapezoidal; recurrent somewhat before the first intercubitus; first tergite with the dorsal carina extending nearly to the middle, the lateral carinae complete but poorly defined basally; the first tergite shining, with irregular, scattered punctures along the posterior margin, twice as wide posteriorly as anteriorly; the second tergite gradually widening posteriorly so it is twice as wide on the posterior margin as on the anterior margin; legs robust; ovipositor a little less than one-half as long as abdomen. Black; propodeum, metapleurae, the posterior part of mesepisternum, the first tergite, apical half of the second and entire third tergite rufous; the apical half of the seventh tergite white; legs rufous; trochanters, anterior and intermediate tarsi black; posterior legs wanting beyond coxae; face and mesosternum with dense white hair; thorax above with sparser white hair; wings uniformly subhyaline, venation dark brown.

Type-locality.—Cheribon, Java.

Described from one female which was reared from a pupa of *Scirpophaga sericea*, February, 1913, by K. W. Dammerman.

Type.—Cat. No. 21494, U.S.N.M.

ERIPTERNIMORPHA JAVENSIS, new species.

Female.—Length, 9 mm. Body subopaque, finely, closely granular; apical margin of clypeus truncate; clypeus sharply defined laterally by elongate supra-clypeal foveae, not defined in the dorsal middle; face with close, well-defined punctures; antennal foveae deeply depressed, not carinate above, shining, transversely striate; area between the eyes much longer than wide; frons shining, with well-defined but close punctures; the posterior part of the propodeum striato-punctate; notauli well defined by feebly foveolate furrows; mesonotum shining, sparsely punctured; scutellum flat, not margined laterally; propodeum long with a transverse carina near the base and with only a feebly indicated carina defining the petiolar area; the area before the first transverse carina shining, propodeal spiracle short oval; first tergite shining sparsely punctured, lateral carinae complete, the dorsal carinae extending to the spiracle; second tergite distinctly longer than the posterior width, widening to the middle and then becoming parallel-sided; its posterior width twice as great as anterior width; ovipositor a little more than half as long as abdomen; nervulus slightly post-furcal; areolet large, pentagonal; second recurrent slightly beyond the middle; nervellus strongly reclivous,

broken above the middle. Black; antennae with a broad white dorsal semiannulus; thorax posterior to a line drawn tangent to the anterior margin of the scutellum, the propodeum and the first tergite rufous; legs rufous; apical margin of the second, sixth, and seventh tergites white; the trochanters, four anterior femora above, four anterior tibiae beneath, posterior tibiae entirely and all of the tarsi brown; wings hyaline, a large brownish spot below the stigma; venation dark brown.

Type-locality.—Pasoeröcan, Java.

Described from one female reared from the pupa of *Sciropophaga intacta* Snellen by J. van der Goot.

Type.—Cat. No. 21495, U.S.N.M.

ERIPTERNIMORPHA DAMMERMANI, new species.

Female.—Length, 10 mm. Anterior margin of the clypeus truncate sharply separated laterally by the supraclypeal foveae, but not separated on the dorsal middle, its surface shining, with distinct punctures basally but impunctate apically; face with close, well-defined punctures; frons sparsely punctured; area between the eyes longer than wide; antennal foveae deep, carinate above, shining, with the surface transversely striate; mesoscutum shining, with close punctures; notauli well defined, complete; posterior and lateral part of the pronotum irregularly striato-reticulate; upper part of mesepisternum sparsely coriaceous; scutellum flat, shining, almost without punctures, not margined laterally; propodeum long, basal carina poorly defined and with no carina defining the petiolar area; the area in the basal middle shining; spiracles short oval; first tergite shining, impunctate, lateral carina complete, the dorsal carinae extending half way beyond the spiracles; second tergite closely punctured on a dull surface, somewhat longer than the posterior width, oblique, anteriorly, parallel-sided beyond the middle, the posterior width a little more than half the basal width; ovipositor about half the length of the abdomen; nervellus reclivous, broken well above the middle; nervulus interstitial, areolet pentagonal; recurrent at about the middle. Black; antennae with a narrow, white, semiannulus beneath; the thorax beyond a line drawn tangent to the anterior margin of the scutellum and the propodeum rufous; abdomen black; the apical margin of the first, second, and seventh tergites and a lateral spot on the apical margin of the third white; legs rufous; the anterior pair mostly brownish; the intermediate trochanters, tibiae, and tarsi brown; posterior trochanters, tibiae, and tarsi black; calcaria white; wings hyaline, with a large brown cloud below the stigma; venation dark brown.

Type-locality.—Cheribon, Java.

Described from one female reared from the pupa of *Scirpophaga sericea*, July, 1912, by K. W. Dammerman, for whom this species is named.

Type.—Cat. No. 21496, U.S.N.M.

ECHTHROMORPHA NOTULATORIA (Fabricius).

One male from Poerwakarta, Java. Reared in May, 1911, from the pupa of *Ocinara signifera* by K. W. Dammerman.

Morley (Fauna Brit. India Hym., vol 3, p. 100) considers *Pimpla continua* Brullé a synonym of this.

THERONIA ZEBRA (Vollenhaven).

One female, Buitensong, Java. Reared from pupa of *Cricula trifenestrata*, May, 1911, by Dr. K. W. Dammerman.

APANTELES (PROTAPANTELES) BATAVIENSIS, new species.

Female and male.—Compared with the type of *Protapanteles colemani* Viereck, the following are the only differences noted: The vertex is shining; the scape and flagellum are yellowish-brown beneath. The black abdomen and coxae readily distinguish it from *creatonoti* Viereck.

Type-locality.—Batavia, Java.

Described from many specimens reared from the larva of *Odonestis plagifera* by S. Leefmans and presented to the United States National Museum by K. W. Dammerman.

Type.—Cat. No. 21492, U.S.N.M.

Were it not for the difference in host and locality I would hesitate to consider this different from *colemani*, as the differences are so minute. These differences are constant for the series examined.

APANTELES BELIPPÆ, new species.

The smooth shining thorax and longer ovipositor will readily separate this from *Apanteles creatonoti* Viereck.

Female.—Length, 2.75 mm. Supraclypeal foveae small, deep, punctiform; face shining, with a few irregularly defined punctures below the antennae; vertex and posterior orbits shining and impunctate; ocelli in a low triangle; postocellar line slightly shorter than the ocellocular line; posterior orbits not narrowing posteriorly, their width subequal with the cephalo-caudad diameter of the eye; mesoscutum shining, with only a few setigerous punctures; the suture in front of the scutellum opaque below with close punctuation and with a narrow median ruga; scutellum shining, impunctate, depressed lateral areas opaque; metanotum with a U-shaped median area; propodeum shining, impunctate; first tergal plate slightly narrower posteriorly, nearly twice as long as its anterior width; second tergal plate trapezoidal in outline, its posterior width a little less than its

length; the third tergal plate triangular in outline, the anterior width greater than its length; the entire abdomen shining, without sculpture; ovipositor nearly half as long as the abdomen. Black; the legs except the posterior trochanters and apices of the posterior tibiae, bright yellow; sides of the first three tergites and all of the sternites yellow; wings hyaline, iridescent, costa and stigma dark brown, the rest of the venation pale brown.

Male.—Length 2 mm. The male agrees very well with the female.

Type-locality.—Bandoeng, Java.

Described from 29 females (one, type) and 5 males (one, allotype) reared from the larva of *Belipha ohor* by K. W. Dammerman.

Type.—Cat. No. 21507, U.S.N.M.

APANTELES JAVENSIS, new species.

This species differs from *plusiae* Viereck, which it resembles, by having the first tergal plate smoother and more rounded apically and by the sparse punctures on the mesoscutum.

Female.—Length, 2 mm. The area between the eyes much broader than the length of the eye; face opaque, with irregular punctures; inner margins of the eyes nearly parallel; eyes hairy; frons, vertex, and posterior orbits with close, rather well-defined punctures; ocelli in a curved line; postocellar line subequal with the ocellular line; posterior orbits narrowing posteriorly, subequal in width to the cephalo-caudad diameter of the eye; mesoscutum opaque, with close, sometimes confluent punctures; the suture in front of the scutellum plain; scutellum smooth and shining, the lateral depressed area foveolate; propodeum shining, with two median carinae which converge posteriorly; first tergal plate narrowing somewhat behind the middle, anterior width slightly less than its length; second tergal plate trapezoidal in outline, anterior width nearly twice as great as the length; third tergite normal; all of the abdomen shining, smooth; ovipositor about one-third the length of the abdomen. Black; tegulae, anterior femora except at base above, anterior tibiae and tarsi, intermediate femora beneath apically, intermediate tibiae and tarsi, basal half of the posterior tarsi and a narrow ring at base of the tarsal joints, white; wings clear hyaline, iridescent, venation yellowish brown.

Type-locality.—Buitenzorg, Java.

Described from 24 females (one, type) reared from the larva of *Hesperia conjuncta*, October, 1911, by K. W. Dammerman under his number 253.1.

Type.—Cat. No. 21506, U.S.N.M.

AMYOSOMA LEUZERAE, new species.

This species is very like the genotype *Amyosoma chilomis* Viereck, but it is slightly larger and darker, the front legs are black and the

ovipositor is longer than the abdomen. It is probably very closely allied to, if not the same as, the Braconid figured on plate 16, figure 3, by van Deventer, Handboek ten dientse van de Suikerriet-Cultuur on de Rutsuiker-Fabricage op Java, 1906.

Female.—Length, 4 mm.; length of ovipositor, 2 mm. Eyes slightly converging below, the distance between them at the vertex subequal with the length of the eye; clypeus finely granular, the rest of the head smooth, shining; ocelli in nearly an equilateral triangle; postocellar orbits sharply narrowing posteriorly, about half as wide as the cephalo-caudad diameter of the eye; thorax shining, without sculpture; the suture in front of the scutellum plain; first tergal plate about three times as long as its posterior width, nearly parallel-sided, anteriorly with two raised lines which diverge posteriorly; second tergal plate triangular in outline; the entire abdomen smooth and without sculpture, nervulus interstitial; recurrent interstitial; first abscissa of the radius slightly less than the first intercubitus, the second abscissa subequal in length to the first abscissa of the cubitus; radius leaving the stigma distinctly before the middle; legs normal. Black the entire mesothorax and lateral margins of the pronotum rufo-piceous; the sides of the first tergites white; body with sparse rather long gray hair; wings hyaline, iridescent, venation dark brown.

Type-locality.—Ambarawa, Java.

Described from three females (one, type) reared from the larva of *Zeuzera coffeae*, August, 1913, by K. W. Dammerman, under his number 389.

Type.—Cat. No. 21508, U.S.N.M.

PLATYBRACON JAVENSIS, new species.

Judging from descriptions this seems close to *Platybracon carini-ceps* Cameron, yet it does not agree sufficiently well with his description to be considered that species. It is the second species known from Java.

Male.—Length, 6 mm. Face with a median nearly quadrate depression; a distinct carina from anterior ocellus to between bases of antennae, head somewhat narrowing behind eyes; posterior orbits as broad as cephalo-caudad diameter of eyes; head and thorax shining without sculpture; first tergal plate nearly parallel-sided, a little more than twice as long as apical width, its surface with irregular raised lines; second, third, and fourth tergites irregularly, longitudinally striate; the suture between the second and third crenulate; recurrent antefurcal by about one-third the length of the first intercubitus; second cubital cell quadrangular, about one-third longer than the first abscissa of cubitus; nervulus interstitial. Entirely reddish yellow; interocellar area and scape blackish; flagellum brownish; wings yellowish hyaline nearly to basal, beyond that

brownish; along the anterior margin of first abscissa of cubitus and basal margin of second discoidal clear hyaline; venation the color of wing; stigma yellow basally, black apically.

Cocoon.—9.5 mm. by 4.5 mm. by 1 mm. Thin brownish, papery; single walled; parallel-sided with the ends rounded; flat, of uniform thickness throughout.

Type-locality.—Cheribon, Java.

Described from one male reared from a cocoon collected under bark and believed to be parasitic on *Chrysobotheris sexnotatus*. Reared by K. W. Dammerman under his number 396.

Type.—Cat. No. 21504, U.S.N.M.

ONCOPHANES HESPERIDIS, new species.

In Szepligeti's key¹ this space runs to the genus *Clinocentrus* Haliday. In Ashmead's key² it agrees better with *Oncophanes*, but even here the venation is somewhat at variance with the characters given. In habitus and abdominal structure it is more like *Oncophanes*, and it seems to congeneric with *O. launceolator* Nees, even though the venation is different.

Female.—Length, 2.75 mm.; length of ovipositor, .75 mm. Head shining, polished, distinctly narrowing behind the eyes; eyes large, subreniform, and slightly converging below; antennae with more than 30 joints; ocelli in nearly an equilateral triangle; thorax shining; prescutum with a median depression; suture in front of the scutellum with a few poorly defined rugae; propodeum with a median longitudinal carina, which becomes forked posteriorly; the area along this carina and the posterior face irregularly reticulate; first tergite short, the posterior width as great as the length, sharply margined laterally, its surface rather uniformly finely striate, with two carinae near the middle more prominent; second tergite fully one and two-thirds times as wide as long, shining without sculpture; the following tergites without sculpture, soft; ovipositor not half as long as abdomen; nervulus postfureal by nearly its length; recurrent received in first cubital well before the intercubitus; first abscissa of radius two-thirds the length of first intercubitus; second abscissa of radius fully one and one-half times as long as the first intercubitus. Uniformly reddish-yellow; interocellar area and sheaths, brown, wings hyaline; venation pale brown.

In one paratype the tergites are brownish.

Type-locality.—Buitenzorg, Java.

Described from three females reared from a Hesperid larva, February, 1916, by K. W. Dammerman.

Type.—Cat. 21503, U.S.N.M.

¹ Genera Insectorum, fas. 22, 1904, p. 76.

² Proc. U. S. Nat. Mus., vol. 23, 1900, p. 142.

HORMIOPTERUS CHOENOBIVORUS, new species.

The sculpture of the second tergite readily differentiates this species from all other species of this genus, which are in the United States National Museum collection. This is the first species of this genus from the East Indies and does not seem to be closely allied to any of the described forms.

Female.—Length, 3.5 mm. Length of ovipositor, 1.25 mm. Face shining, practically without sculpture, the lateral margin with a number of long, pale hairs; frons irregular reticulate; vertex and posterior orbits shining, very finely granular; ocelli arranged in nearly an equilateral triangle; mesocutum and prescutum opaque, closely granular; notauli complete and without distinct foveolations; prescutum posteriorly and the scutum on the posterior middle with a few large irregular punctures; the suture in front of the scutellum with a few rugae; scutellum opaque; propodeum granular, the middle areas somewhat shining, the posterior face coarsely reticulate, the carinae sharply defined, the median one two-thirds the length of the lateral ones, due to the deep V made by the transverse carinae; abdomen shining, the first, second, and third segments with regular well-defined longitudinal striae, the base of the fourth segment with a few irregular striae, the apical margin of the second and third narrowly, most of the fourth and all of the following smooth and without sculpture; the second tergite with a median more or less lens-shaped area defined by foveolate furrows (this area is not quite as heavily striate); radius leaving the stigma at the middle; first abscissa one-fifth shorter than the first intercubitus; second abscissa but very little shorter than the first intercubitus; recurrent slightly beyond first intercubitus. Brownish yellow; head posteriorly and dorsally, mesoscutum, prescutum, and propodeum (medianly) brownish; legs pale yellow; wings hyaline, iridescent, venation including the stigma yellowish.

Type-locality.—Buitenzorg, Java.

Described from one female reared from pupa of *Choenobius bipunctifera* by K. W. Dammerman under his number 417.

Type.—Cat. No. 21501, U.S.N.M.