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# The Canadian Entomologist.

VOL. XXV.

LONDON, JULY, 1893.

No. 7.

## COMMENTS ON MR. VAN DER WULP'S RECENT DIAGNOSES OF NEW SPECIES OF MEXICAN PHASIIDÆ, GYM- NOSOMATIDÆ, OCYPTERIDÆ, AND PHANIIDÆ.

BY C. H. TYLER TOWNSEND.

Mr. F. M. van der Wulp, the well-known Dutch dipterologist, has recently published, in the *Tijdschrift voor Entomologie*, vol. 35, pp. 183-195, short diagnoses of a large number of new species and several new genera of Mexican Tachinidæ sens. lat. Of these, there are 33 new species and 4 new genera which belong to the above four groups. Of such well-known and well-worked genera as *Trichopoda*, there are 4 new species; of *Hyalomyia*, 10 new species; of *Cistogaster*, 8 new species!

This material was received by Mr. van der Wulp from the editors of the *Biologia Centrali Americana*, but too late to be included in his parts on the above groups, which had already been published. These forms are to be fully described at some future time in a supplement to the *Biologia*. No localities whatever accompany the short diagnoses.

I desire to offer the following notes on these species:—

### PHASIIDÆ.

*Trichopoda nitidiventris*, ♂, is described as having the cilia of hind tibiæ black with yellow tips. This must be a quite divergent form, since it is the first one known with the tibial cilia varicoloured. It is also very distinct from the previously known forms in having the abdomen shining black with a rufous anus.

*T. alipes*, ♂, seems to be different from the described species, inasmuch as the tip of the wing, as well as the hind border, is broadly hyaline.

*T. squamipes*, ♂, seems quite distinct in its yellowish rufous scutellum and abdomen. *T. histrio*, Wlk. (*trifasciata*, Liv.), is the only species known to me with a yellowish, or other than a nearly black, scutellum.

*T. nigripes*, ♂ ♀, must be near *T. pennipes*. It is smaller, however, and the face and front are whitish instead of golden-yellow.

HOMOGENIA, nov. genus, v. d. W.

This genus must be closely allied to either *Xysta*, or *Phasia*. It is described as similar to *Trichopoda*, but with apical cell open, and cilia of hind tibiae short and less conspicuous. This name is preoccupied (Homogenes) by Thomson in Coleoptera. I propose, therefore, that the genus be known as *Trichopododes*, from its close relationship with *Trichopoda*, as shown by its somewhat less ciliate hind tibiae. Three species of it are described, from 7 to 11 mm. long. They are: *Trichopododes rufipes*, ♂; *T. latipennis*, ♂ ♀; and *T. nigroscutellata*, ♂.

*Hyalomyia munda*, ♂, seems distinct in the whole body being thickly covered with a yellowish-gray tomentum.

*H. villosa*, ♂, also seems distinct in its dense yellowish pilosity.

*H. hebes*, ♂, is apparently distinct in the shorter yellow pilosity.

*H. ochraceps*, ♂, seems very close to *H. aeneiventris*, Will.

*H. argenticeps*, ♂, is also apparently very near *H. aeneiventris*, Will. I do not see why the front in the above five male specimens is described to be as broad as, or broader than, the eyes, unless the anterior triangular portion of the front is meant. But this interpretation is precluded by the next five specimens being indicated as females, all of which are described as having the front trigonal and the eyes but little separated on the vertex. I do not know of any *Hyalomyias* which have the front as broad as the eyes,

*H. nigrens*, ♀, does not apparently differ much from *H. punctigera*. Twins., so far as can be gathered from the short description.

*H. piceipes*, ♀, may be a valid species.

*H. mærens*, ♀, is quite near *H. purpurascens*, Twins. The wings, however, of the latter are not brown, but whitish.

*H. umbrosa*, ♀, is a similar but larger species.

*H. umbrifera*, ♀, is allied to *H. punctigera*, Twins.

#### GYNOSOMATIDÆ.

*Cistogaster ruficornis*, ♂, seems to be *Gymnosoma fliola*, Liv., ♂.

*C. melanosoma*, ♀, is probably *C. pallasii*, Twins.

*C. subpetiolata*, ♀, seems only a variety of *C. pallasii*, Twins.

*C. propinqua*, ♀, seems very near *C. immaculata*, Mcq., ♀.

*C. griseonigra*, ♀, may be same as *C. occidua*, Walk., ♀.

*C. ferruginosa*, ♂, is probably *C. immaculata*, Mcq., ♂.

*C. hirticollis*, ♂, is doubtless *C. occidua*, Wlk., ♂.

*C. variegata*, ♂, seems to be only a variety of preceding.

## OCYPTERIDÆ.

*Ocyptera signatipennis*, ♂, is probably *Ocyptera euchenor*, Wlk.

XANTHOMELANA, nov. genus, v. d. W.

This genus must be very similar to *Ocyptera*, differing only by the curved, not angulated, fourth vein, and the shortly petiolate apical cell, with the petiole ending at the wing's tip. This name is also preoccupied (*Xanthomelon*, Mart., Moll., 1860), and may be changed to XANTHOMELANODES. Six species are described, from  $4\frac{1}{2}$  to  $7\frac{1}{2}$  mm. long. They are:—*Xanthomelanodes articulata*, ♂; *X. rubicunda*, ♂ (?); *X. dorsalis*, ♂ ♀; *X. trigonalis*, ♂; *X. gracilentia*, ♂ ♀; and *X. anceps*, ♂.

## PHANIIDÆ.

CLINOGASTER, nov. genus, v. d. W.

This genus must bear a striking resemblance to *Hemyda*, differing almost wholly in the short petiolate, instead of open, apical cell, and in the fourth vein being bent at an angle. It belongs apparently in the *Ocypteridæ*, however, and not in the *Phaniidæ*, as indicated by the elongate and incurvate abdomen.

*Clinogaster notabilis*, ♂, type of the genus, must be very similar in size and appearance to *Hemyda aurata*.

PENTHOSIA, nov. genus, v. d. W.

This genus is erected by Mr. van der Wulp for *Scopolia satanica*, Bigot (Ann. Soc. Ent. Fr., 1888, p. 254). Mr. van der Wulp has been kind enough to send me a specimen of this species, labelled: "Omiteme, Guerrero, 8,000 ft. July. H. H. Smith." It is a well-marked genus, bearing much structural resemblance to *Ocyptera*, but differing at once in its well-formed palpi, and its intensely and evenly black colour. It should, I think, also be included in the *Ocypteridæ*. Both this genus and *Clinogaster* exhibit a closer relationship with *Ocyptera* than do any of the other American genera of *Ocypteridæ*, by virtue of their petiolate apical cell.

To sum up:

The above 4 new genera appear to be quite distinct and valid. The species of *Trichopoda* appear to be distinct from those previously described. The *Hyalomyias*, at least the most of them, are doubtless valid species. This is not to be wondered at, since the genus *Hyalomyia* is rich in forms. It is more remarkable, however, that 4 new species of *Trichopoda* should turn up at this late day, and in a single collection.

When we come to the genus *Cistogaster*, and find 8 new species, we may well be astonished. This genus has never before been turned up in Mexico, or anywhere in tropical America. Though most numerous in individuals in most parts of the United States, there were heretofore but 3 species to be distinguished, and these might easily all be considered but forms of a single variable species. Bearing this in mind, we are wholly unprepared for such a sudden increase in the number of species, and may well doubt their validity. With the single exception of the first species (*C. ruficornis*), they are probably all referable to the three already known species. From the description of *C. ruficornis*, I cannot resist the conclusion that Mr. van der Wulp has mistaken *Gymnosoma filiola*, Liv., for a *Cistogaster*.

Of course it is difficult, and to a certain extent uncertain, to judge of these forms from the brief diagnoses alone that have so far appeared. For this reason I feel called upon to delay the publication of Part I. of the Monograph of North American Tachinidæ, referred to in *Psyche*, Jan., 1893, until the Biologia supplement appears giving fuller descriptions of these species with drawings.

If any of the above comments prove to be erroneous in their conclusions, I shall be most happy to amend them.

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## DESCRIPTION OF THE GRUBS OF CHRYSOMELA EXCLAMATIONIS.

BY C. H. TYLER TOWNSEND.

This species is quite common in New Mexico, where it feeds on the native sunflower (*Helianthus sp.*). On August 7, 1892, at Belen, N. Mex., I found the native *Helianthus annuus* badly infested with the adults and numerous light green grubs of this species, which were eating the leaves extensively. From these grubs the following description is drawn:—

*Larva* (about full grown)—Length,  $5\frac{1}{2}$  to 7 mm.; greatest width, 4 to  $4\frac{1}{2}$  mm.; greatest thickness, 3 to  $3\frac{1}{2}$  mm.; width of prothoracic segment, 2 to  $2\frac{1}{2}$  mm.; of head,  $1\frac{1}{2}$  mm. Colour wholly light green, except head and legs, which are slightly tinged with brownish; eyes, antennæ and jaws, brown. Shape subpyriform, curvate, very strongly convex dorsally; slightly concave ventrally in lateral profile, but a little convex in longitudinal profile;

tapering anteriorly to head, stout posteriorly, coming suddenly to a point at anal extremity. Transversely wrinkled, both above and below. Consisting of thirteen segments, head chitinous, other segments fleshy, the prothoracic segment hardly less so. Nearly naked, clothed only with a few very sparsely distributed hairs, somewhat more numerous on the prothoracic segment and head. Head semi-circular in outline from above, not retracted, narrower than prothoracic segment; second, third, fourth, and fifth segments each successively wider than its predecessor, and increasing at about the same rate; segments 6 to 8 about same width, a little wider than 5; 9 to 12 narrowing successively, each with greater rapidity than its predecessor; 13 very small. Prothoracic segment a little longer than head; segment 3 (in wrinkled condition of alcoholic specimens) about two-thirds length of second, the following segments increasing very slightly to the somewhat greater length of 6 to 9; 10 and 11 successively a little shorter; 12 and 13 very short, of about equal length, 13 bearing a blunt subbifid anal proleg. All the segments with a few short hairs on lateral edges, varying in number usually from 3 to 5, second segment and head with more. Eyes represented by six prominent brown or blackish, often glistening, simple eyes on each side of the head, four of them arranged in a transverse diamond just posterior to antenna and a little removed inwardly from edge of head; the other two situated on edge of head, more separated, one ventrad of the antenna and the other ventrad of the upper four. Antennae small, situated in an excavation and somewhat sunken, 3-jointed; first joint stout, cylindrical, hardly as long as broad; second joint less than one-half the diameter of first, not as long; third joint nearly as wide as second, hardly as long. Labrum twice as wide as long, front border hollowed out, bearing two bristles on its dorsal surface, clypeus appearing as a long transverse narrow strip posterior to labrum. Mandibles stout, 5-toothed on the blunt apical portion. Maxillae well-developed. Maxillary palpi 4-jointed, first joint short; second a little shorter than first, but nearly same diameter; third longer than first, narrower than second, cylindrical; fourth conical, almost as long as third, not as wide at base as third, and tapering evenly to a point. Labial palpi 2-jointed; basal joint stout, tubercular, hardly as long as wide, subcylindrical; the second joint conical, hardly as wide at base, and hardly longer than basal joint. A spiracle (the mesothoracic) on lower anterior portion of third segment; 5 to 12 with a spiracle on lateral portion dorsad of the lateral

ridge which separates the tergum from the venter on these segments; the thoracic segments extend farther ventrad on the sides. Legs apparently 4-jointed, corneous, first two joints more or less amalgamated, fourth shorter than third, terminated by a hooked claw.

Described from many alcoholic specimens. Belen, N. Mex. August 7.

#### A LIST OF SPECIES OF DIPTERA FROM SAN DOMINGO.

BY S. W. WILLISTON, LAWRENCE, KANSAS.

Some years ago I received a small collection of diptera from San Domingo, made by Mr. F. Frazar, a list of the species of which it is composed I herewith give. Hitherto scarcely two score species have been recorded from the island. The habitats followed by an exclamation point are given from specimens which I have examined:—

1. *Odontomyia*, sp.
2. *Cyphomyia*, sp.
3. *Lepidoselago crassipes*, Fabr. South America! Mexico! Cuba.
4. *Chrysops costatus*, Fabr. South America! Cuba.
5. *Chrysops Frazari*, Will.
6. *Tabanus parvulus*, Will.
7. *Tabanus fenestra*, Will.
8. *Plesiomma lineata*, Fabr. St. Thomas.
9. *Laphria ruficauda*, Williston. Cuba!
10. *Andrenosoma chalybea*, Will. Cuba!
11. *Atonia Mikii*, Will.
12. *Proctacanthus rufiventris*, Maco. Honduras. Porto Rico.
13. *Erax*, sp.
14. *Ommatius vitreus*, Bigot.
15. *Psilopus chrysoprasius*, Walker. Cuba! Brazil! Porto Rico.
16. *Plagioneurus univittatus*, Loew. South America! Cuba.
17. *Microdon pulcher*, Will.
18. *Mesogramma aurulentum*, Will.
19. *Syrphus simplex*, Loew. Cuba.
20. *Ocyptamus dimidiata*, Fabr. Brazil! Mexico!
21. *Ocyptamus latiusculus*, Loew. Cuba.
22. *Ocyptamus fasciatus*, Roeder. Porto Rico.
23. *Eristalis atrimanus*, Loew. Cuba.
24. *Eristalis albifrons*, Wied. Brazil! Mexico! United States! Porto Rico.
25. *Eristalis hortorum*, Fabr.

26. *Volucella obesa*, Fabr. Cosmopolitan.
27. *Pteroptila cincta*, Drury. Jamaica.
28. *Phrissopoda praeceps*, Fabr. South America.
29. *Lucilia*, sp.
30. *Compsomyia macellaria*, Fabr. Brazil! Mexico! United States!
31. *Dexia*, sp.
32. *Morinia*, sp. nov.
33. *Limophora*, sp.
34. *Belvosia Van der Wulpi*, Will.
35. *Blepharipeza leucophrys*, Wied. Brazil! United States! Porto Rico.
36. *Jurinia*. Two species.
37. *Jurinia apicifera*, Walker. United States!
38. *Trichopoda pennipes*, Fabr. Brazil! United States!
39. *Trichopoda*, sp.
40. *Sipedon macropus*, Walker. Cuba. Jamaica. Porto Rico.
41. *Calobata lasciva*, Fabr. South America! Cuba! United States!  
Porto Rico.
42. *Notiphila*, n. sp.

*Fem. Flavo cinerea, facie flava, antennarum articuli tertii basi rufa, thoracis dorso vittis quinque humerisque brunneis; abdomen brunneum vitta media maculisque cinereis; pedes nigri, tibiis tarsisque posterioribus et tibiaram anticarum basi apiceque luteis.*

#### FITCH'S TYPES OF N. A. MEMBRACIDÆ.

F. W. GODING, M. D., PH. D., RUTLAND, ILLINOIS.

During a recent visit to the city of Washington, through the kindness of Prof. C. V. Riley and his courteous assistants, I had the pleasure of examining typical examples of some of the Membracidæ described by Dr. Asa Fitch, the labels being in Dr. Fitch's own handwriting. Each specimen is numbered to agree with those given in the doctor's manuscript note-books, now in the possession of Dr. Riley and the Boston Society of Natural History. No. 11793 and 59782 are labelled *Telamona acclivata*, Fh.; on the label he states: "like *cristata*, Fm., but hind lobe rounded, not angular." This is *Heliria cristata*, Fm., ♀. No. 3109 is the typical example of *Telamona querci*, Fh. It is usually seen in collections labelled *monticola*, Fab, on whose authority I do not know. It is much smaller than that species and entirely different. I believe it to be a good species. It is a male. No. 2132, labelled *Atyta irrorata*, Mels., is *Telamona*



*irrorata*, Godg., described first in Bul. Ill. Lab. Nat. Hist., Vol. 3. It is the only description ever published. No. 2133, labelled *Telamona concava*, Fh., ♀, and apparently identical with No. 12727, a male. There is a beautifully coloured ♀ of this species in the collection of the Department of Agriculture, light and dark blue-green.

No. 3907 is *Telamona tristis*, Fh., ♀, and another smaller example doubtless the same. With these is a *coryli*, Fh., ♂, which I believe to be the same species as suggested by Van Duzee.

No. 2152, labelled *Ledra perdita* and *capra*, Mels., is *Centruclus Liebeckii*, Godg.

No. 6276, is *Microcentrus carya*, Fh., ♂, and No. 1878 is ♀. This species was erroneously referred, by Fitch, to the genus *Uroxiphus*. The female is about one-fourth larger than the male.

No. 6926 is labelled *Cyrtosia fenestrata*, Fh., ♀. It is the only example I have seen that agrees with Fitch's description "tip of the thorax reaching beyond the terminal cells of the elytra." In all the examples in my own collection the tip of prothorax barely reaches the terminal cells, while Mr. E. P. Van Duzee, a careful student and successful collector, informs me that all the specimens he has seen agree with my own.

No. 11764 is labelled *Cyrtosia fuliginosa*, ♀, described and figured in Emmon's valueless work on the Insects of New York. The dorsum is dark-brown with an arcuated yellow stripe on each side; legs yellow.

No. 3038 is labelled *Cyrtosia discoidalis*, ♀; also No. 4837. Described in Emmon's work. No. 11763 is *Cyrtosia pallidifrontis* of the same author and doubtless the same.

No. 11777 = *Cyrtosia maculifrontis*, and No. 4536 = *Cyrtosia cinereum* of the author's.

There are many other examples of this genus [*Cyrtosia* being preoccupied, I have given to this genus the name *Cyrtolobus*] in the collection under various manuscript names, such as *nigra*, *punctifrontis*, *tricineta*, etc., which may be distinct species, but I am inclined to the opinion that they are variations of a single species and that species may be *Vau* of Say.

There are several examples of the genus *Ophiderma* in the collection, under the manuscript names *nigripennis*, *arquata*, *rectineura*, *flaviguttula*, *bicincta*, *nigriventris*, *dimidiata*, *columbis*, etc., which I believe are variations of not more than two species.

In the collection are to be found examples of *Platycotis 4-vittata*, Say, = *4-lincata*, Germ. It is a dimorphic species, as has been proven by Prof. Riley and Mr. Ashmead, the anterior horn being present in the one and wanting in the other. Both forms are represented in the Fitch collection and in my own cabinet.

## NORTH AMERICAN THYSANURA.—II.

BY ALEX. D. MACGILLIVRAY, ITHACA, N. Y.

The genus *Japyx* has been of particular interest because of the apparent absence of rudimentary abdominal appendages. One American \* writer says very decidedly, "*Japyx* has none"; a well-known English † writer considers these appendages as "represented by mere groups of stiff hairs." The presence of these appendages was indicated as early as 1869, by Brauer, ‡ in his description of *Japyx gigas*. In 1889 there appeared a very important paper by Haase §, in which the rudimentary appendages are distinctly shown. These appendages can easily be seen in either of the species described below.

*JAPYX SUBTERRANEUS*, Pack.

1874, *Japyx*, Packard, Amer. Nat., VIII., 501.

Head quadrangular, not broader than long. Antennæ about thirty joints. Prothorax narrower than the head, truncate in front. Abdomen gradually broader behind, segments marked on each side with whitish dots, arranged in the form of a figure six; segments one to six rounded at the sides, the seventh slightly emarginate behind, posterior angles produced, not spinate, eighth subequal to the seventh, longer than the sixth, slightly emarginate behind, sides straight; ninth segment one-third the length of the eighth, posterior angles not produced; the tenth segment and forceps subequal in length, together equal in length to the four preceding segments. Right arm of the forceps broader than the left, with a stout tooth on the inner margin near the middle; in front of this tooth the inner margin is convex with four small tubercles, adjacent to the tooth, beyond the tooth the arm is concave and armed with tubercles to the apex. The left arm is broadest at base, becoming gradually narrower till a little beyond the middle, where there is a large tooth-like tubercle, in front of this tubercle the arm is concave and armed with seven to eight small tubercles; beyond the tubercle the arm is convex and armed with very small tubercles.

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\* Packard, Standard Natural History., II, 1884, 137.

† Lubbock., Monog. Collem. and Thys., 1873, 205.

‡ Brauer, Verh. Zool.-bot. Ges. Wien, XIX., 1869, 557.

§ Haase, Die Abdominalanhänge der Insekten mit Berücksichtigung der Myriopoden, Morphol. Jahr., XV., 1889, 330-435; pls. XIV.-XV.

Length, 12-14 mm. ; length of the antennæ, 4 mm. ; length of the abdomen, 8 mm. ; length of the last abdominal segment and the forceps, 2 mm.

Habitat : Kentucky (Packard), District of Columbia (Nathan Banks).

*JAPYX AMERICANUS*, sp. nov.

Head transverse, broader than long. Antennæ twenty-four jointed, segments one to five cylindrical, subequal, the following segments thicker, spherical. Prothorax nearly as broad as the head, concave in front. Abdomen gradually broader behind, segments immaculate. Segments one to six rounded in the sides behind ; the seventh emarginate behind, posterior angles produced into stout spines, pointing inward ; the eighth segment equal to the seventh, subequal to the sixth, very slightly emarginate behind, posterior angles slightly produced, not spinate ; ninth segment one-fourth the length of the eighth, posterior angles slightly produced ; tenth segment and forceps subequal in length, together equal to the four preceding segments. Right arm of the forceps scarcely broader than the left, with two large tubercles on the inner margin, one just before the middle and the other beyond it ; in front of the larger tubercle the inner margin is convex with five smaller equidistant tubercles, between the larger tubercles the inner margin is straight with six equidistant tubercles, beyond the last tubercle the inner margin is concave with many small tubercles. The left arm is broadest at base, gradually tapering to the apex ; at one-third of the length from the base on the inner margin there is a large tooth, in front of and adjacent to this tooth are three smaller tubercles, which are as large as the larger tubercles of the right arm and with their apices broadly rounding ; beyond the tooth the inner margin is convex with nine feebly marked tubercles, giving a crenulated appearance ; beyond these tubercles the inner margin is simple.

Length, 14 mm. ; length of the antennæ, 5 mm. ; length of the abdomen, 10 mm. ; length of the last abdominal segment and forceps, 3 mm.

Habitat : Olympia, Washington State.

For the discovery of this interesting species science is indebted to Mr. Trevor Kincaid, of Olympia, Washington.

A third species of *Japyx* has been described from Mexico. It can be distinguished by its longer antennæ, consisting of from forty-five to forty-eight segments.

## A NEW ASILID GENUS RELATED TO ERAX.

BY D. W. COQUILLET, LOS ANGELES, CAL.

Among the species heretofore referred to the genus *Erax* is a small group in which the first submarginal cell is divided by an oblique cross vein into two cells. The venation is similar to that of the genus *Promachus*, except that the foremost of the two apical submarginal cells is shorter, and the third vein curves forward to the costa before the apex of the wing, instead of curving backward to the hind margin beyond the apex. The examination of quite a large series of specimens belonging to this group proves that the characters above mentioned are constant, and as the genus *Erax* already contains a large number of species, it is desirable to separate as a new genus those species possessing these characters. For this group I propose the name *Efferia*, and would further characterize the genus as follows:—

*Efferia*, n. gen.—Third joint of antennæ provided with a distinct naked terminal style; wings having three submarginal and five posterior cells, the marginal, fourth posterior and anal cells closed; third vein terminating in the costa before the tip of the wing; front tibiæ destitute of a claw at the apex: ovipositor of the female compressed and destitute of a circlet of spines at the tip.

Two species belonging to this group have been described from North America: *anomalis*, Bellardi (Saggio, II., 32) and *completus*, Macquart (Dipt. Exot., I, 2, 117). The last-named species has not been identified. My collection contains three apparently undescribed species, which, with *anomalis*, may be separated as follows:—

- 1.—Thorax destitute of a median longitudinal crest of nearly erect hairs . . . . . 2  
 Thorax provided with such a crest; bristles of the palpi black . . . . . *rara*, n. sp.
- 2.—Bristles of palpi, mystax and scutellum white . . . . . 3  
 Bristles of palpi, scutellum, occiput above, and several in lower part of mystax, black . . . . . *anomalis*, Bell.
- 3.—Abdomen silvery-white pollinose, and with rather long white pile parted in the middle and directed outward . . . . . *candida*, n. sp.  
 Abdomen grayish-brown pollinose, and not with pile as above described . . . . . *pernicis*, n. sp.

*Efferia pernicis*, n. sp., ♂. Black, the base of the tibiæ red. Pile and bristles of entire head yellowish-white, the pollen yellow. First antennal

joint nearly twice as long as the second and slightly longer than the third, style two and a-half times as long as the third joint. Pile of prothorax long, white, that of mesothorax very short, sparse, black, not forming a crest, that on the posterior part longer and partly white; dorsai stripes and spots indistinct, grayish-black; pile of pleura, legs and scutellum white, that on the abdomen short, sparse, not parted in the middle where it is largely black, elsewhere white; pollen of abdomen nearly uniform grayish-brown. Inner side of the front and hind tibiæ next the tips, and the under side of their first two tarsal joints, densely beset with rather short golden-yellow pile. Halteres pale brown. Wings hyaline, small cross-vein at middle of the discal cell, base of third submarginal cell at last third to sixth of distance between small cross-vein and apex of discal cell; costa not enlarged. Hypopygium shining black, but slightly wider near the apex than at the base, equal in length to the fifth and sixth abdominal segments united, its pile white, more dense below at the base.

♀ same as the ♂, except the genitalia; ovipositor slightly longer than the fifth, sixth and seventh abdominal segments taken together.

Length, 20 to 24 mm. Los Angeles and San Diego Counties, Cal. Two males and two females.

*Efferia rava*, n. sp.—♀. Same as *pernicis*, with these exceptions; Bristles of front, of upper part of occiput, on under side of antennæ, in lower part of mystax, and those of the palpi, black. Thorax with a median crest of rather long and nearly black hairs; the fan-like row of hairs in front of the halteres mostly black, pile of scutellum also black. Ovipositor but slightly longer than the sixth and seventh abdominal segments. Wings yellowish-hyaline.

Texas. A single female (Morrison).

*Efferia candida*, n. sp., ♂. Black, bases of tibiæ red. Pile and bristles of entire head white, a few bristles of the occiput sometimes black, pollen of head silvery-white. Pile of thorax short, sparse, black, not forming a crest, that behind and on the prothorax longer and mostly white; stripes and spots of thorax distinct, black. Pile of pleura, legs, scutellum and abdomen white, that on the abdomen rather long, parted in the middle and directed outwardly; abdomen nearly uniformly silvery-white pollinose, destitute of black spots; hypopygium shining black, but slightly wider near the apex than at base, slightly longer than the fifth and sixth abdominal segments taken together, its pile white. Front and hind tibiæ within next the tips, and under sides of their first two tarsal

joints densely short golden-yellow pilose. Wings hyaline, small cross-vein at middle of discal cell, base of third submarginal cell at last fifth of distance between small cross-vein and apex of discal cell; costa not enlarged. On the anterior part of the second abdominal segment are many rather large, transversely-elliptical punctures, and similar punctures also occur on some of the other segments. Antennæ similar in structure to those of *pernicis*.

♀ same as the ♂, except that the pollen of the abdomen is darker, and the pile is shorter and sparser; ovipositor as long as the fifth, sixth and seventh abdominal segments taken together.

Length, 20 to 25 mm. Los Angeles County, Cal. Six males and four females.

#### NOTES ON COLLECTING SOME OF THE SMALLER SESIIDÆ IN THE LONDON (ENGLAND) DISTRICT.

The one most commonly met with is *S. tipuliformis*, and is to be found sunning itself on the leaves of the currant bushes at the time when the fruit is about two-thirds grown, and on a bright sunny morning about 10 o'clock, or afternoon about 4 o'clock, one can easily take from six to twelve in one or two hours. Once I found them assembling, and took some thirty or forty in a very short time. It is a little difficult to procure the larvæ, as they feed in the two-year-old wood, and, as this is the fruit-producing part, it is better not to cut it while the owner is about, and when you can cut, I have found so many blanks that the bushes have suffered more than the gain warranted.

The next species commonly met with is our red-banded one, *S. myopæformis*, feeding in the bark of apple trees (about six feet from the ground), and can generally be found in gardens where *Tipuliformis* is found. I have never seen this moth at rest, and though one can generally count on taking several in a morning, one must watch the trunks of the trees and find them flying round and round, evidently for depositing eggs; cutting out the larvæ without doing much damage to the tree is hard, as they feed just under the bark.

Our next commonest one is *S. culiciformis*. For this we must go to the woods where birch is common; so, taking the train down to Croydon, ten miles (about the end of April), a two-mile walk brings us to West Wickham Wood, one of our best in the South London district. We go through it till we find a part which was cut down two winters back;

here, having found some nice looking birch stumps with frass showing, we set to work with a saw to saw off the sides, and so find we have secured one or two larvæ or pupæ, and in a good afternoon's work may perhaps obtain twenty. These we take home and put on wet moss to prevent drying up, and with care may in about six weeks breed a good many. I have found putting them under a bell glass a good way. I have never taken this insect on the wing.

The next, *S. formicaeformis*, with its pretty claret-coloured wings, we find flying in the sun along the sides of the roads which intersect our osier beds in the Mitcham district (about eight miles out). This species seems on the wing all the day, and fifteen or twenty is a fair catch. The larvæ can be cut out of the osiers about April, but it is very risky, as the basket makers have a decided objection to their osiers being cut.

*S. chrysidiformis*, the handsomest of all our smaller Sesiadæ, with its bright scarlet wings, was, until some twelve years ago, most rare, fetching as much as two and three pounds per pair, but about that time they found out how to take the larvæ. Starting from the London Bridge station, on the S. E. R., we take tickets for Folkestone (town station). Arriving there after about two and a-half hours' run, we turn towards the Warren (a sort of undercliff running along the shore for about three miles), and after a mile's walk we get on to the slopes closest to the sea. Having brought a good, sharp, two-inch chisel with us, we look round for roots of dock and sorrel; the former we find are very scarce, having been cleared off by collectors; the latter, however, are still common, and having selected a good strong one dig it up, and scraping part of the root away see signs of workings. We put the root into a small sack we have provided and then search for more. In the course of a day we get a nice lot together, and upon our arrival home plant them into boxes. As it is only April, and the imago will not be out till June, there is now nothing else to do but to keep them watered and cover over with muslin till about the end of May. One year, from three days' work in Folkestone Warren, I bred about 150 fine imagos.

*S. cynipiformis*, feeding in oak, is said to occur in Hyde Park, but I have never been able to find it there. However, I have obtained the larvæ commonly at Tilgate in early May by finding the trunks of large oaks which have been cut down two winters previous, then ripping off the bark the larvæ are found feeding in it. In England the trees are cut off only four or five inches from the ground, and the moths seem to prefer

these to the growing tree. There, however, appears plenty of sap to support the larvæ till full grown. The only trouble, having got the larvæ, is to prevent drying up till time of emergence.

*S. ichneumoniformis*. I have never bred and have only taken it very sparingly by sweeping the herbage along the edge of cliff at Eastbourne and Ramsgate. The most I ever took in a day was five.

*S. spheniformis* (one of our rarest ones, which is taken every year), has to be cut out of the alder. About March we take train for Three-Bridges Station, thirty miles out on the Brighton line. Arriving there we are soon on the ground and examining the alder stems from one to four inches thick. When we find workings which would denote larvæ in the second year, we saw off just below and then again about eighteen inches higher, and if very lucky we may get from ten to thirty sticks in a day. These have to be kept on moist moss in tin boxes till the middle of June, when the moth appears. Having a nice ♀ quite fresh, we are off by the first train, and having put her in a collar box with muslin on each side, we hang it to a bough and sit down and wait events. Perhaps nothing for the first half hour, but what is that buzzing in front of the box? We get up quickly and see it is a fine ♂. We need no net; he is so intent that we hold our bottle just behind him and bottle him on the wing. By this means I took twenty-three in one day. The curious part is, I never saw them coming until they were quite at the box hovering, and also that an insect so quick on the wing should not fly off, even when the bottle is as it were all round it and only the cork to put on.

*S. scoliaeformis* was taken out of birch fairly commonly at Llangollen, Wales, some twenty years back, but was quite worked out then, and for some fifteen years no one had taken it. However, last year in Scotland I hear it has been taken fairly commonly.

*S. philantiformis* was added to our list only some ten years back. It was found by accident feeding in the common thrift on the sea coast in the west of England, but I have never taken it.

*S. vespiiformis* and *S. andreniformis*, the two remaining of our smaller Sesiiadæ, are of the greatest rarity, and have only been taken singly.

Regarding *Tipuliformis*, in 1874 and 1875 I took and saw several in Mr. B. Gibb's garden, St. Catharine street, Montreal, among the currant bushes, and I should think it would be found in any of our old town gardens now.



## A SUGGESTION AS TO THE IDENTITY OF CYCNIA DUBIA, WALKER.

BY HARRISON G. DYAR, ROXBURY, MASS.

In Vol. XXII., p. 120, of CAN. ENT., Prof. Smith calls attention to the fact that the above name awaits identification, and says: "There should be no difficulty in identifying this species, should it turn up." The moth was described by Walker as *Cychnia*, referred by Grote and Robinson to *Phragmatobia*, and lastly by Kirby to *Estigmene* (= *Leucarctia*). It has occurred to me that this form has already been turned up, and by Mr. Bruce, as described in Entom. Amer., Vol. III., p. 140, where it was shown to be a form of *Spilosoma virginica*. Compare the following descriptions:—

1. By Walker. "Female. Pale brown. Antennæ and legs with whitish tomentum. Thorax fawn colour, whitish behind. Abdomen somewhat ferruginous, with three stripes of black spots. Wings with two oblique, incomplete, indistinct, brown bands, composed of blackish spots. Forewings with whitish veins. Length of body, 5 lines; of wings, 16 lines. Hudson's Bay."

2. By G. & R. "Wings semi-translucent, brown or mouse colour; veins on both wings whitish above; eyes margined narrowly with white; legs shaded with whitish outwardly; abdomen with three rows of brown spots."

3. By Bruce. "Head, body and legs sooty brown, small black dorsal spots on body; all the wings brownish mouse colour. The veins on forewings distinctly white."

Mr. Bruce adds:—"If my friend had not preserved the eggs, and I had not reared the larvæ, this would certainly have been named as a new species, and would have been a standing puzzle to entomologists." If my surmise be correct, this has taken place.

*C. dubia* may be provisionally referred as follows:—

*SPILOSOMA VIRGINICA*, Fabr.

*var. DUBIA*, Walk.

1856—Walk., C. B. Mus., III., 682, *Cychnia*.

1868—G. & R., Tr. Am. Ent., Sc., II., 72, *Phragmatobia*.

1887—Bruce, Ent. Amer., III., 140, *Spilosoma*.

1890—Smith, CAN. ENT., XXII., 120, *Phragmatobia*.

1892—Kirby, Cat. Lep. Het., I., 227, *Estigmene*.

## A NEW LAC-INSECT FROM JAMAICA.

BY T. D. A. COCKERELL, LAS CRUCES, NEW MEXICO.

The lac-producing Coccidæ are usually referred to the genus *Carteria*, Signoret, but as this name is pre-occupied in Protozoa, Signoret (Bull. Soc. Ent. Fr., 1886) substituted for it the term *Tachardia*. The known species referable to this genus are five, namely :—

1. *Tachardia lacca* (Kerr.) India, on 43 species of plants of 18 natural orders (Watt, Dict. Econ. Prod. India, II., 1889, p. 409-412); British Guiana, on *Erythroxylon* (*Timehri*, Dec. 1890, p. 308).

2. *Tachardia larreae* (Comst.), Arizona, on *Larrea*. (Rep. U. S. Dept. Agr., 1882).

3. *Tachardia mexicana* (Comst.), Tampico, Mexico, on *Mimosa*. (Rep. U. S. Dept. Agr., 1882).

4. *Tachardia melaleuce* (Maskell), Australia, on *Melaleuca*, &c. (Tr. N. Z. Inst., 1891).

5. *Tachardia acaciæ* (Maskell), Australia, on *Acacia*. (Tr. N. Z. Inst., 1891).

To these may now be added a sixth, as follows :—

6. *Tachardia gemmifera*, n. sp., Kingston, Jamaica, on *Chrysobalanus icaco*, Linn.

Some months ago, Mr. H. Vendryes directed my attention to a Coccid which was damaging a Coco Plum in his garden, and kindly gave me some twigs with many scales upon them. These were evidently referable to a new *Tachardia*, which I call *gemmifera*, on account of the ruby-like prominence on the dorsum of the scale. The female scales (if the covering of lac can properly be so called) are subglobular, shiny, crimson-black, with a crimson ruby-like prominence on the centre of the back, best seen in somewhat immature examples. There are also one or two dorso-lateral prominences, more or less obscure. Sides with 4 or 5 keel-like folds. There is a conspicuous subdorsal aperture.

Length of scale, 5 mill.; diam., 5 mill.; alt., about 4 mill.

The scales are extremely hard, but will fracture if sufficiently pressed; sides of scale crimson by transmitted light.

The lac when heated melts to a substance about the colour of guava jelly, which turns crimson on the application of caustic soda: this colour-change is most marked.

The *female* is very broad oval, almost circular, posteriorly bluntly angled. On breaking open a scale, it is seen not to be completely filled

by the body of the female. In the cavity, besides the ♀, is a quantity of white secretion, breaking into short strap-shaped fragments. None of this appears externally. There are also more hair-like white fragments, some of which may be seen protruding from the produced tubular organs. This white secretion is no doubt analogous to the ovisac, as in it I found larvæ.

The *male scale* is cylindrical, rather over 1 mill. long, dull dark crimson. There is an anterior dorsal ridge, leading to a mid-dorsal swelling. Hind end truncate. Front end with a large hole, where the ♂ has escaped; or, when the ♂ has not escaped, this is covered by a flat lid or cap.

The *larvæ*, as observed in numbers on the bark of the twig, are crimson, elongate, with the segmentation distinct; sides with a longitudinal furrow. Caudal hairs about  $\frac{2}{3}$  length of body, free from secretion. These hairs arise some distance apart, and immediately caudad of each is a small elongated process or tubercle; between these, and terminating the body, is a short, white, opaque caudal stylus, which is distinctly bifid, and no doubt consists of the anal hairs covered by secretion. This arrangement is suggestive of *Dactylopius*.

The last joint of each antenna bears two long hairs, longer than the whole antenna; this is also the case with the larva of Maskell's *Carteria melaleucæ*.

The claws have short knobbed digitules; and the tarsus presents the usual pair of knobbed hairs, which are very long. The tibia seems quite as long as the femur, and the tarsus is *very* little shorter than the tibia. There are some short stiff hairs about the base of the legs.

Maskell remarks (Indian Mus. Notes, Vol. II., No. 1, p. 62), on the almost invariable rule that in larval Coccidæ the tarsus is longer than the tibia. This, however, is not the case in *Erischiton cajani*, Mask.; and a further exception is presented by *Tachardia*, in which, at least in *T. gemmifera* and *T. melaleucæ*, the tibia of the larva is slightly longer than the tarsus.

On placing some of the ♀ scales in soda, I found fragments of a Chalcidid parasite, which seems to belong to the genus *Aphycus*. The antennæ present the following characters: Scape long, with an apparent false joint near its base, its upper part zoned with brown; pedicel about twice as long as broad; the following 6 joints moniliform, increasing regularly in size, the first three joined together, the last three more separated and bearing whorls of hairs. Club large, brown (the joint just

before it is colourless), and consisting of three joints. The middle tibia has two brown zones, and a large thick spur. The ovipositor projects but slightly beyond the abdomen, and bears on each side of its tip a small brush of hairs.

*Tachardia gemmifera* must, I think, be regarded as an injurious insect, since it affects the Coco Plum rather seriously. The lac is so small in quantity that it would probably not pay to collect and prepare it.

Institute of Jamaica, Kingston,  
Jamaica, Dec. 27, 1892.

#### NOTES ON TAXONUS NIGRISOMA AND T. DUBITATUS.

BY J. G. JACK, JAMAICA PLAIN, MASS.

The following notes of observations of some stages of these two little saw-flies are fragmentary and incomplete, but they are now given as they may be of some assistance to others working upon this group of insects.

*Taxonus nigrisoma*, Nort., Larva.—The fully grown larva is cylindrical, and 10 to 12 millimeters long. It is of a pale green colour above, very slightly darker towards the sides above the spiracles, the spiracle line being marked by very minute dark dots one to each segment; and the under side (including the abdominal or prop legs) is of a dull whitish colour.

The upper part of the head is dark brown, shading from pale brown to whitish on the face and whitish beneath.

The eyes are black and prominent; antennæ small, six-jointed and light brownish coloured; and the mouth parts dark.

The thoracic legs are of a dull white colour, generally bearing more or less easily distinguishable narrow smoky brown or dark markings on the outer side of the apical segments, the strong, simple, terminal claws usually having a dark brown or black tip.

When they ceased feeding at full growth the larvæ abandoned the leaves of their food plant, which was *Polygonum Muhlenbergii*, Watson, and prepared for pupating by boring into the green stems of the food plant or sometimes into some such substance as partially decayed wood if it happened to be in the vicinity. In these burrows pupation takes place without the formation of any cocoon. The pupa is uniformly yellowish-white in colour, the dark eyes showing prominently.

Within a week or two after entering their burrows the insects emerge as saw-flies. Both larvæ and pupæ were very much parasitized by

*Pimpla pterelas*, Say, of which species I have bred both the males and females, the latter being by far the most abundant.

Apparently, the male imago of *Taxonus nigrisoma* has not been described, but it does not differ from the female in general appearance, except by its much smaller size.

Collected and observed in the Arnold Arboretum, at Jamaica Plain, Mass., in June, 1890: the saw-flies noted as emerging from the stems of the Polygonum about June 30 and some days later. For the determination of the food plant I am indebted to Prof. William Trelease.

*Taxonus dubitatus*, Nort. The larvæ of this species are of a light grass-green colour, so that it is not an easy matter to detect them when resting on the fronds of the Sensitive Fern (*Onoclea sensibilis*) upon which they feed. I have bred the saw-flies from the larvæ, but made no critical notes as to peculiar markings, if any exist. There are certainly no spots or markings large enough to be noticeable by a casual look, the whole effect being green.

The saw-flies of this species appear as early as the latter part of May and the beginning of June, and are also very abundant about the fern early in July, so that there must be at least two, and possibly more, broods. The males were seen in greatest abundance.

When at rest both males and females fold their legs and antennæ, and drop to the ground on very slight alarm.

Collected and observed at Jamaica Plain, Mass., in 1890.

#### NOTE ON COPIMAMESTRA AND EULEPIDOTIS.

BY A. R. GROTE, A. M., BREMEN, GERMANY.

In discovering a North American representative of the European *Brassicæ*, I proposed for this latter and our *Occidentis* the generic title *Copimamestra*, based on the tibial claw. In the Philadelphia List the term *Barathra* is resuscitated out of Hübner's Verzeichniss, p. 218, for the genus, but incorrectly. Hübner refers two species, *Bra. icæ* and *Albicolor*, to his genus, and I was free to use for one of them the new term. I need not state that Hübner took no note of the structure of *Brassicæ*, and that *Albicolor* differs structurally. I must therefore insist that *Copimamestra* be used for the two species *Brassicæ* and *Occidentis* under the laws of scientific nomenclature.

In the CANADIAN ENTOMOLOGIST, when discussing Hübner's figures of North American Noctuidæ in the Zutraege, I drew attention to his

illustration of *Eulepidotis alabastraria*, figs. 311, 312, which he states to be from Savannah, Georgia, l. c. 22. It is probable that the locality is incorrect, and that this species is not found in North America. I have identified it in the Bremen Museum from South America. The insect is not a Geometrid, but belongs to Guenée's genus *Palindia*, and is described in the Spec. Gen., VI., 275, from Brazil. It seems, therefore, likely that Hübner's locality is incorrect, while Guenée makes no note upon the subject.

## DESCRIPTIONS OF CERTAIN LEPIDOPTEROUS LARVÆ.

BY HARRISON G. DYAR.

(Continued from page 160.)

### *Ichthyura vau* Fitch.

*Egg*.—The colour of the unhatched eggs is deep purplish-pink, pale around the bottom; slightly shining.

*First stage*.—Head bilobed, bearing a few hairs; shining black; width .45 mm. Dorsum broadly bluish-white, except the black cervical shield and anal plate and joints 5 and 12, which latter are hardly enlarged, coloured vinous-brown. Whole lateral area also brown but paler, and broken into patches. Feet black outwardly. Hair fine, very long laterally, pale, darker dorsally, arising singly from black conical tubercles with the normal arrangement. The body is minutely dotted with brown (under a half-inch objective) and there are no hairs present except those from the tubercles. The hairs are simple, not glandular nor branched. The cervical shield is elongated transversely, with a central constriction.

*Second stage*.—Head bilobed, median suture deep at vertex but shallow in front; head flattened before, slightly wider than high. Colour, shining black, with some hairs; width 7 mm. Body flattened, wider than high, the dorsal region pale yellow, with the tubercles of rows 1 and 2 darker yellow and three narrow brown lines. The enlarged dorsal portion of joints 5 and 12 and the whole lateral area is deep vinous-brown. Cervical shield and anal plate blackish, but not so distinct and corneous as before. From the tubercles arise singly long hairs, and many others arise from little elevations on the body; but these are much shorter.

[We regret that the above note, completing the description, did not reach us in time for insertion in its proper place in the June number.—  
ED. C. E.]

## CORRESPONDENCE.

## HEPIALUS 4-GUTTATUS.

*Sir:* The statement on page 125 of CAN. ENT. for May, that *4-guttatus* is a synonym of the typical *argenteomaculatus*, is incorrect. The type form of the latter is the smaller not pinkish form, and is the *argenteomaculata* of the Reports on Ins. Inj. to Vegetation. The form *4-guttatus* is apparently that figured in "Lake Superior" by Agassiz. So far as I am able to judge from the short description, in which the colour seems to coincide with *4-guttatus*, the writers have apparently redescribed my *4-guttatus*.

A. R. GROTE.

## ARGYNNIS ASTARTE.

*Sir:* It may interest your readers to know that *Argynnis astarte* (= *Victoria*, W. H. Edw., CAN. ENT., XXIII., 198, *vide* Strecker, Ent. News, Nov., 1892, p. 218) Double-Hew., which was rediscovered last year by Mr. Bean in the Rocky Mountains near Laggan, is, as far as I can judge from the single specimen he has been good enough to send me, a very near ally, and perhaps not separable from *A. amphilochnus* of Menetries, a species which appears to be either very rare or very local near the head waters of the Amur river in Siberia. My specimen is smaller and paler than *Amphilochnus*, but every marking seems to be identical in position. It is quite probable that when the northern extension of the Rocky Mountains has been explored, this species will be found at lower elevations, as I learn from Mr. Bean that he took it at 8,500 feet.

W. J. ELWES, Colesborne, Andoversford, Gloucestershire, England.

P. S.—I may add that I have still spare copies of my revisions of the genera *Argynnis* and *Erebia*, which I shall be glad to send to anyone who wants them in Canada or the States.

## LITHOPHANE ORIUNDA.

*Sir,*—On the 24th of Sept., 1892, I found, in the vicinity of London, a moth new to me. It was resting in an upright position, on the stalk of a weed, quite fresh, as if it had but recently emerged. Its thoracic crest and tufts stood out conspicuously, which, with its gracefully curved and pointed wings, at once suggested a *Lithophane*; but its colour and markings were so different from what I had been accustomed to in that genus, that I hesitated to decide upon it as such.

In November I sent it with other material to Prof. J. B. Smith for

identification. He pronounced it to be a *Xylina* without doubt, but retained it for further investigation. On the 6th of March, 1893, I received a letter from him conveying what was to me the gratifying information that it had proved to be *X. oriunda*, on comparison with a typical specimen in the U. S. National Museum. I had long desired to obtain a specimen of *Oriunda*, and made inquiries for it of those with whom I exchanged, but none of my correspondents had ever met with it. *Lithophanes* have been one of my favourites, and my interest in this one was specially awakened by reading in the CANADIAN ENTOMOLOGIST, Vol. 7, p. 188, a quotation made by Mr. Grote from a letter received by him from Mr. Norman, where, after giving the names of the *Lithophanes* he had taken at Orillia, he adds, "and that lovely *Oriunda* a single specimen," that quotation constituting the whole of my knowledge of the insect until recently.

The original description by Mr. Grote is to be found in the Bulletin of the Buffalo Society of Natural Sciences, Vol. 2, p. 160, which I copy in full for the benefit of those of your readers who may not have the volume to refer to :—

"LITHOPHANE ORIUNDA, Grote. Allied to *L. Bethunei*, and belonging to the typical group of the genus. Distinct, intense, even, somewhat purply-brown. Forewings concolorous, with the costal edge shaded with whitish to the t p. line, and interrupted by oblique brown streaks indicating the transverse lines. Reniform and orbicular spots more or less shaded with whitish, shaped as in *L. Bethunei*. Claviform distinctly outlined in black, large. Subterminal line alone distinctly indicated by pale points. The median dentate lines more or less lost in the ground colour. Veins terminally indistinctly black marked opposite pale dots on the brown dentate fringes. Secondaries dark fuscous, with a warmer shade on the fringes. Beneath paler, shaded with reddish, with a distinct discal spot on the paler hind-wings and a common line. On the primaries the pale costal dots are evident on both surfaces. Expanse, 34 m.m. Canada, Mr. Wm. Saunders, No. 960.

"Colour like *L. ferrealis*, but darker, with the subterminal line more even, the orbicular smaller, and the costal discoloration paler and more distinctly contrasted and limited."

This description is dated Sept., 1874.

No mention is made of the number of specimens the description is taken from, and Prof. Saunders does not now recollect the number of specimens captured by him, but knows that they were but few; perhaps not more than three. It would be very interesting if the number of speci-



mens to be found in collections could be known. So far as my information goes, it still remains an exclusively Canadian species.

J. ALSTON MOFFAT.

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UNIDENTIFIED BOMBYCIDS.

*Sir*: Concerning Prof. Smith's note on page 164 of June CAN. ENT., it is, perhaps, unprofitable to enter into a discussion as to whether the generic names from Hübner's Tentamen should be adopted or not; but, as far as our Bombyces are concerned, there are only four of these names with which we have to do. They are: (1) *Nycteola*, Hubn., for *Sarrothripus*, Curt.; (2) *Hypercompa*, Hubn., for *Zoote*, Hubn. (Verz.), for *Euprepia caja*, Linn.; (3) *Dasychira*, Hubn., for *Dasychira*, Steph.; (4) *Melalopha*, Hubn., for *Ichthyura*, Hubn., (Verz.). The third of these introduces only a change in the name of the author; *Euprepia* cannot stand for *caja* anyway since it must be used for the species of "Arctia" according to Mr. Kirby's method of fixing types, which seems eminently proper. The name *Arctia*, Schrank, has for its type *A. villica*, Linn., replacing *Epicallia*, Hubn. Our species, *E. virginalis*, by the way, is not congeneric with *A. villica*, nor with *C. dominula*, as Kirby puts it; but it seems hazardous to charge it till the European genera have been revised. If we discard *Hypercompa* (Hubn., Tent), for *caja*, the name *Zoote* (Hubn., Verz.), comes next in order. Thus there are only two of the Tentamen names which supplant names now in use, and only one which supplants a name by a different author. It seems to us more satisfactory to adopt these names and end controversy about them, especially as they have been adopted by Kirby in his work where the Bombyces of the world are brought together in a uniform system. We dislike to depart from this standard without conclusive reason.

HARRISON G. DYAR.

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AGASSIZ ASSOCIATION.

*Sir*,—The Henry Edwards Entomological Corresponding Chapter of the Agassiz Association invites entomological students who read this notice to join its ranks. Members are expected to keep each other informed of the progress of their work in special lines of study, and to contribute to the published reports. During the winter one or more courses in Elementary Entomology will be conducted. The initiation fee is 50 cents. For further particulars, address the Secretary,

WILLIAM L. W. FIELD, Guilford, Conn.,

(After Oct. 1, Milton, Mass.)

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Mailed July 7th.