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The Canadian Entomologist.

VOL. I. TORONTO, MARCH 15, 1869. No. 8.

ENTOMOLOGICAL NOTES.

PAPER NO. IV.

BY. W. SAUNDERS, LONDON, ONT.

Hesperia mystic, Edw. -Two eggs were deposited by a beaten female in a pill box, on the 20th of June, color pale yellowish green; strongly convex above, flattened below, and depressed or slightly concave in the centre of the flattened portion. The surface appears smooth under a magnifying power of forty-five diameters, whereas in those of *Hobomok*, reticulations are plainly seen under a power of twenty. The egg of *Mystic* appears faintly reticulate under a power of eighty diameters. One specimen produced the larva on the 28th, the other on the 29th.

Appearance when fresh from the egg. Length one-tenth of an inch; head large and prominent, black and shining. Body above white with a slight tint of yellowish brown, which is more apparent towards posterior segments; second segment nearly encircled above with a line of black—under surface white; feet and prolegs of the same color.

July 14th. Length one quarter of an inch. Head not very large but prominent, dark reddish brown. Body above pale green, semi-transparent, darker along the middle of the body, much paler towards the extremities; second segment edged behind with a fine line of brownish black; on each side close to under surface is a fine line of dull greenish white. Under surface dull green with a faint yellowish tinge, feet and prolegs of the same color.

July 26th. Length .62 inch. Head large, dull red. Body above dull dark green with a faint tint of brownish red; downy with very fine short hairs scarcely visible to the unaided eye; second segment edged as before with brownish black; a dull whitish line along each side close to under surface. Below slightly paler; feet and prolegs pale, semi-transparent.

Appearance when full grown, August 7th. Length one inch. Onisciform. Head not large in proportion to the size of body, but prominent and much larger than second segment, dull reddish brown, edged with black posteriorly, downy with very minute whitish hairs.

Body above semi-transparent, dull brownish green, downy with fine whitish hairs similar to those on head, with a dorsal line and many dots over the surface of body of a darker shade; second segment pale whitish with a line of brownish black across the upper surface; terminal segments paler than the rest of body. Under surface slightly paler than upper with a semi-transparent glossiness; feet and prolegs whitish.

This larva was fed on grass, from a plant growing in a flower pot; only one attained its full growth—the other died while young. The full grown specimen, when about to enter the pupa state, attached itself to a piece of coarse gauze with which the flower pot was enclosed to prevent the escape of the larva—and here while undergoing its change it was attacked from the outside by a large spider which completely emptied the fresh pupa case and destroyed it. No description had been taken of the pupa up to the time of this untoward event.

Hesperia hobomok, Harris—Several eggs were deposited in a pill box by a female specimen about the 17th of June. Color pale green, nearly round, flattened on the side that is attached to the box. Under a magnifying power of twenty diameters they appeared plainly reticulated with fine six sided markings, strongly resembling the cornea of a fly's eye. Two specimens hatched on the 27th—two more on the 28th. The young larva on finding its way out commenced to eat the egg shell at the centre above.

Appearance when fresh from the egg. Length one-tenth of an inch. Head large and prominent, black and shining. Body above creamy white with a yellowish tinge towards the posterior segments; second segment half encircled above with a transverse line of black; under surface, feet and prolegs, similar in color to upper surface.

This larva also feeds on grass, stationing itself about the inside of the leaves near the joints, drawing portions of the leaves together with silken threads, forming a rude case in which it secretes itself. When placed on a strong ribbed blade, the edges of which it cannot bend, it spins a few threads from rib to rib, and places itself behind the threads. *Mystic* and *Wamsutta* have similar habits.

On the 14th of July these specimens were unfortunately lost; at this time they were about three-eighths of an inch long and very closely resembled *Mystic* of the same age.

Hesperia wamsutta, Harris—Several eggs were deposited by a beaten female July 10th. Egg pale greenish yellow, strongly convex above, flattened at the place of attachment; flattened portion slightly concave. Surface appears faintly reticulated under a magnifying power of forty-five diameters. On the 21st and 22nd the eggs grew darker in color, the larva appearing on the 24th.

Appearanee of larva fresh from the egg. Length one-tenth of an inch. Head large and prominent, of a shining black color. Body above dull brownish yellow, dotted with black; examined with an eye-glass these black dots are very faint, but under a magnifying power of forty-five dtameters they appear very distinct, about ten or twelve on each segment, each emitting a single, rather long, brownish hair; second segment with a ring of brownish black encircling it above. Under surface rather paler than upper, slightly hairy; feet and prolegs partake of the general color.

These fed also on grass, but I was unsuccessful in my attempts to rear them; they all died while quite young.

NORTHERN INSECTS.

BY WILLIAM COUPER, OTTAWA, ONTARIO.

PAPILIO ASTERIAS, *Fab.*—A specimen of this butterfly was seen by me at Natashquaun, on the 24th June. On the 4th July, I found it common at a place further down the coast, called Musquaro. The same species occurs in Newfoundland.

PIERIS FRIGIDA. *Scudder.*—This butterfly is common at Natashquaun, where it appears about the 15th June. I am of opinion that it is double-brooded, as I noticed fresh specimens on my return to Mingan on the 16th July. It occurs on the whole of the south as well as the eastern coast of Labrador, where Mr. Scudder procured the species.

COLIAS INTERIOR, *Scudd.*—Captured a single specimen on the 22nd July, at Mingani. It is now in the collection of B. Billings, Esq., of this city.

ARGYNNIS CHARICLEA, *Ochs.*—On my arrival in Labrador, this was the first species that attracted my attention. First, on the 30th May at Attepetal Bay, where it was making its first appearance. Afterward at Natashquaun and other points down the coast, where it was extremely common. It is the *A. Boisduvalii* of Mr. Scudder's Labrador List.

ARGYNNIS BOISDUVALII *Sommer.*—Mingan is the only locality where I noticed this butterfly. I captured a few specimens on the 22nd July. Mr. Scudder informs me that this species is closely allied to his *A. Montinus* from the White Mountains. It is not the *A. Boisduvalii* of his Labrador List.

LYCÆNA LYGDAMUS, *Doubl.*—I captured a few specimens of this pretty butterfly on the 4th July, at Musquaro, where they were common. Not having a net or collecting-box at the time, I had to take them as best I could.

LYCÆNA SCUDDERI, *Edw.*—This species was noticed on the 1st June, at Little Watchsheshoo Harbor, but it became common along my route down the coast, and I am inclined to think there are two broods between the former date and the end of July.

LYCÆNA LUCIA, *Kirb.*— Common from the 1st June to the end of July. This species was first noticed by me at Watchsheshoo, early in June, when the weather was cold. They could then be easily taken by the hand.

At Mingan (July 22nd), I saw one specimen of *Argynnis* (probably *A. Aphrodite*, Fab.), but was not able to capture it. During my stay on the coast, I did notice a single species of *Hesperidæ*. If the family are represented in Labrador, I would have noticed some of them between the months of May and July. I visited ten rivers which enter the sea from the northern interior of the country, and I explored some of these river banks from five to ten miles inward, but found little of Entomological interest. It is only on the coast and in the immediate neighborhood of settlements that I was successful in procuring the material which I brought home. At Watchsheshoo, on a July evening, I noticed a species of Sphinx.

Mr. Cresson, of Philadelphia, thinks that I have been on the dividing line between the Canadian and Labrador faunæ. He is, no doubt, correct regarding the Lepidoptera, as the flora of the localities visited by me are mainly subarctic, intermixed with Canadian varieties, therefore where the former predominate it is reasonable to expect a local fauna. But it is not the case with Coleoptera, which, as I formerly stated, do not show any visible variety from those frequenting the district of Quebec.

I took two varieties (green and purple) of *Cicindela longilabris*, Kirby, at Natashquaun, where they were uncommon. I also procured some species of *Hymenoptera* and *Diptera* which are not determined.

MISCELLANEOUS NOTES.

A NEW THORN-LEAF GALL.—The European thorn *Crataegus crus-galli* Linn. has been cultivated for many years at Quebec, where it hedges gardens and farms in the vicinity of the city. The leaves of this thorn appear early in May, and about the beginning of June they are attacked by an insect which deposits its eggs in the fibre of the leaf. The galls are small, each the receptacle of a single larva, and from one to four may be seen on many of the leaves. These galls are composed externally of fibrous denticulated sprouts, which rise from the face of the leaf. The tops of the sprouts are beautifully ornamented with knobs of a reddish color. On separating the sprouts which enclose the mouth of the gall, a larva may be seen (in June) occupying a smooth cell in the same vertical position as *Salicis strobiloides* Osten Sacken, in the pine-cone gall of the willow. I have watched and tried to rear the larva from these thorn-leaf galls, but have not been successful in procuring the imago. In 1866, I sent specimens of the galls to Wilson Armistead, Esq., of Leeds, England, who has devoted upwards of twenty years to the

study of the British galls, and he informed me that my thorn-leaf gall was quite new to him. I found it common on thorns near Cataraqui. Can any of my Quebec entomological friends give me further information regarding it?—WM. COUPER, Ottawa, Ont.

HAIR SNAKES.—Dr. H. Hagen, of Cambridge, Mass., the well known Neuropterist, has communicated to our esteemed friend, Mr. Saunders, the following note on these curious creatures:—"Hair snakes in spiders are not so often observed. Haldeman and Leidy describe them as *Mermis robusta*, found in *Lycosa scutulata*, in North America (Proceed. Acad. Phil. vol. x., p. 58). Prof. Grube observed *Gordius aquaticus* in *Drassus fuscus*, Latr., in Prussia, two specimens in one spider. Prof. Siebold two *Mermis* in one *Micryphanti bi-cuspidatus*, Koch, in Bavaria. Duval, in Germany, observed one hair snake in *Miranda ocropegia*, Koch. Latreille one in a spider and one in *Phalangium cornutum*. Prof. V. Baer one in *Phalangium opilio*. You will find these observations in Prof. Von Siebold's Memoires in the Stettin Entom. Zeitung."

COLEOPTERA TAKEN IN THE NEIGHBOURHOOD OF LONDON, ONT., DURING THE SEASON OF 1868.

The following account is given in the hope of affording encouragement to youthful or intending collectors, and as some slight evidence of what a beetle-bottle and a nest of pill boxes, aided by vigilant eyes and a little perseverance, will procure for one who has so little leisure for Entomology as I have.

The list is compiled from a daily journal. [We regret that our limited space forbids our publishing Mr. Reed's list *in extenso*; the enumeration of the number of species will, however, testify to the success that has rewarded his diligence.—ED. C. E.]

Cicindelidæ, 6 species, April to August.
Carabidæ, 26 species, April to August.
Dytiscidæ, 5 species, July.
Hydrophilidæ, 5 species, April and July.
Silphidæ, 3 species, May and July.
Staphylinidæ, 3 species, May and July.
Histeridæ, 3 species, April, May and July.
Nitidulidæ, 4 species, April to July.
Cucujidæ, 1 species, April, rare.
Dermestidæ, 2 species, April and June.
Byrrhidæ, 1 species, June, very rare.
Lucanidæ, 4 species, May to July.
Scarabaeidæ, 15 species, April to September.
Buprestidæ, 6 species, May to August.

Elateridæ, 7 species, May to July.
Lampyridæ, 7 species, April to July.
Cleridæ, 3 species, April, May and August.
Ptinidæ, 1 species, July, rare.
Tenebrionidæ, 8 species, April to July.
Lagrüdæ, 1 species, June, rare.
Pyrochroidæ, 2 species, May and July.
Anthicidæ, 1 species, June.
Melandryidae, 1 species, June.
Mordellidae, 2 species, May to July.
Meloidae, 1 species, August and September.
Oedemeridae, 1 species, July, rare.
Scolytidae, 3 species, April to June.
Curculionidae, 9 species, April to August.
Cerambycidae, 26 species, April to September.
Chrysomelidae, 13 species, April to August.
Coccinellidae, 10 species, April to September.

In addition to the above 180 species, which belong to 129 genera, and 31 families, I collected over 130 other species which want of leisure has hitherto prevented my determining. Many of the list were determined from the splendid collection of my friend Mr. Saunders.—E. B. REED, London, Ont.

MEETING OF THE ENTOMOLOGICAL SOCIETY.

A meeting of the Society was held on the 16th ult., in the rooms of the Canadian Institute, Toronto. The following gentlemen were unanimously elected Members :

CHARLES E. WOOLVERTON, Esq , Grimsby, Ont.
DR. W. E. MILWARD, " "
EDWARD BOWSLAUGH, Esq. " "

A vote of thanks was passed to W. W. Saunders, Esq., of Reigate, England, for his very handsome donation of twelve boxes of European Diptera, sent by F. Walker, Esq., and received through the Smithsonian Institution, Washington, D. C.

NOTES ON CANADIAN LEPIDOPTERA.

PART II.

BY THE EDITOR.

In our previous notes we brought down the catalogue of corrections and additions to our Society's lists of Canadian Lepidoptera as far as the end of the Bombycidæ ; we now come to the great family of Noctuadæ, in which there is still open so large a field of work for the American student.

In a late number of the Transactions of the American Entomological Society (vol. ii., pp. 67-88), Messrs. Grote and Robinson give a long list of errors that they have detected in our friend Mr. Walker's British Museum Catalogues of Lepidoptera. It appears that, during a recent visit to Europe, these gentlemen took the opportunity of examining the Museum collections, and comparing the North American specimens with material that they had brought with them for the purpose, and were thus enabled to identify many of Mr. Walker's species, and decide upon the merits of others. From our own experience of the insufficiency of many of the descriptions in these catalogues, and our having met with occasional errors in them, we feel compelled to accept this list of emendations, especially as its authors are well known as the chief and almost the only American authorities on this difficult family of Moths. We do not, however, wish to be understood as subscribing entirely to their strictures upon Mr. Walker's works, for we hold that a great deal is due to him for the enormous mass of material that he has brought together in them, and the immense amount of labor that he has bestowed upon their compilation. And who indeed can wonder that some errors should be detected in so vast a work, which perhaps no single individual should have been called upon to undertake?

In order to render our notes as brief as possible, we give the following names of species that are to be *struck out* of our Society's List No. 2, referring the reader to Messrs. Grote and Robinson's paper for the reasons in most cases :—

Acronycta longa, Guen.—This species was inserted in our list on the authority of the Brit. Mus. Cat. (ix. p. 60), which states that a supposed variety of it was taken at Orillia, by Mr. Bush. This variety has since been described as a distinct species by Mr. Grote (Pro. E. S. Phil. ii. p. 437. pl. 9, fig. 3), under the name of A. Noctivaga. We took the insect at Cobourg, in June, 1865.

Mamestra ordinaria, Walk.; *M. unicolor*, Walk.; *Apamea insignata*, Walk.; *A. demissa*, Walk.; *Miana undulifera*, Walk.; *Graphiphora expansa*, Walk.; *Xanthia spurcata*, Walk.; *Hadena contenta*, Walk.; *Xylina contraria*, Walk.; *Anthaecia rivulosa*, Guen., is the same as *A. marginata* (Haw.) Grote; *Homoptera obliqua*, Guen., a supposed variety of this species taken by Mr. Bush at Orillia (C. B. M. xiii. 1054) is a rubbed specimen of *H. minerea*, Guen. *Homoptera calycanthata*, Smith (Bethune, Can. Jour. 1865, p. 251), according to Grote and Rob., is *Zale horrida*, Hubn. Not having access to Abbot and Smith's work, our erroneous determination was derived from Guenee's and Walker's brief descriptions, the latter of whom had mistaken Z. horrida for H. Calycanthata. *Hypena caecalis*, Walk.; *Ennychia glomeralis*, Walk.

Calpe Canadensis, Bethune.—This species is stated by Grote and Rob. to

be the same as *Plusiodonta (?) purpurascens*, to which (correcting the generic name to *Calpe*) they give the priority. We claim, however, that our name, *C. Canadensis*, do stand, as our description was communicated to the Ent. Soc. Philada. on Feb. 13, 1865, and published in their proceedings for March, 1865 (vol. iv. p. 213), whereas Mr. Walker's description appeared subsequently in the Brit. Mus. Cat. (xxxiii. p. 842), which bears date "July 1, 1865."

(To be Continued.)

BOOKS RECEIVED.

Le Naturaliste Canadien (No. 2, Janvier, 1867) contains several valuable and interesting papers, among which we may mention those on the Potato Disease (illustrated), the Beaver, the Study of Natural History, &c. We are pleased to notice the valiant manner in which the talented Editor takes up the cudgels in defence of his favorite science, and the summary manner in which he deals with the errors of non-scientific journalists, following in this way the notable example of our esteemed contemporary, the *American Entomologist*.

Proceedings of the Boston Soc. Nat. Hist. Vol. xii., Jan. & Feb., 1869.

On some Insects collected in Madagascar by Mr. J. Caldwell, and *Characters of a new Genus and Species of Chalcidites.* By F. Walker, F.L.S., London, Eng.

The Maine Farmer. Augusta, Me., Jan. 23, 30, Feb. 6, 1869.

The Canada Farmer. Toronto, Feb., 1869.

The N. Y. Sun. New York, Feb. 17, 24, 1869.

Notes on a remarkable variety of Papilio Turnus, &c. By W. H. Edwards, Coalburgh, West Va.

TO CORRESPONDENTS.

SUBSCRIPTIONS RECEIVED.—To Vol. i., from J. A. U. B., Montreal (with Am. Ent.); J. P. J., and S. B. D., Keytesville, Mo. (per C. Veatch). Members' subscriptions from Rev. W. A. J., Weston; J. M., Belleville; J. M. J., Halifax, N. S.

DONATION TO PUBLICATION FUND.—W. Saunders, Esq., of London, Ont., has very kindly sent us a donation of $2, for which we beg him to accept our best thanks.

C. S. M., Boston, Mass.—We have sent you the back Nos. of the *Canadian Entomologist*. Your note was our first intimation of your being a subscriber, Mr. Studley not having informed us of the fact.

W. C., Ottawa.—Sets of the *Canadian Entomologist* sent to Dr. V. C., and the Parl. Lib., as desired.

C. V. R., St. Louis, Mo.—Did not succeed in rearing the Strawberry Leaf-roller, as the specimens had become exhausted before they reached us. Shall try again. Believe them to be your *Anchylopera fragaria*. Many thanks for the photo.

The *American Entomologist* ($1), and the *Canadian Entomologist* (56 cents), will be furnished, post paid, for one dollar and twenty-five cents ($1.25) per annum. All communications, remittances and exchanges should be addressed to

"THE REV. C. J. S. BETHUNE, *Credit, Ont., Canada.*"