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The Canadian Entomologist.

VOL. I. TORONTO, SEPTEMBER 15, 1868. No. 2.

NOTES ON CANADIAN LEPIDOPTERA.

BY THE EDITOR.

Two lists of Canadian Lepidoptera have been published by our Entomological Society; the first one, prepared by Mr. W. Saunders and issued in 1864, contained the names of all the Butterflies, Sphinges, and Bombyces then known to inhabit this country; the next year a second list, prepared by ourselves, was issued, containing the names of species in the remaining families of moths, and some additions to the former list. Since then a number of new species have been captured in this country, whose names may now be added to our lists; great changes have also been made in the generic nomenclature of others, and in some cases the very species has been proved to be erroneous and to require correction. On these grounds it is necessary that the lists should be revised and corrected preparatory to the publication of new ones at some future period; this we now propose doing as far as our own materials extend, trusting that others will lend their assistance and make the corrections and additions as complete as possible. With regard to the substitution of new generic names, while we make the alterations in order that we may not be "behind the times," we yet cannot but think that this endless splitting up of old and well known genera into numberless new ones is a serious drawback to the study of entomology. At the present rate we shall soon have a separate genus for each species, as is already very nearly the case in some families, further than which sub-division can hardly go.

1. ARGYNNIS ATLANTIS, Edwards.—This beautiful butterfly, which somewhat resembles our well-known *A. aphrodite*, is figured in Mr. Edwards' magnificent new work on the "Butterflies of North America." He states that "it is found in the mountainous districts of New York, and in British America at least as far north as Rupert's House, Hudson's Bay, and Lake Winnipeg." It was taken by Mr. Saunders, below Quebec, in 1866.

2. CHIONOBAS JUTTA, Möschler.—Mr. Seudder, in his revision of this genus (Pro. Ent. Soc. Phil. v. 3-5), states that this name should be substituted for *C. valder*, Bois. & Lec., which is on our first list. It has been taken in the neighbourhood of Quebec.

3. *THECLA STRIGOSA*, Harris, Ins. Mass. p. 276.—Mr. Saunders has succeeded in raising this insect from the larva, which fed on thorn.

4. *THECLA CALANUS*, Westwood.—Messrs. Grote & Robinson in the Trans. Am. Ent. Soc. i. 172-3, state that they "have the male *T. calanus* from Canada, under the, they believe, unpublished name of *T. Edwardsii*, Saunders;" they consider that *T. Falacer*, as described by Harris, should probably be referred to this species,—Godart's species, as illustrated by Boisduval and Leconte, not corresponding to it.

5. *THECLA INORATA*, Grote & Rob.—These writers in a later part of the Trans. Am. Ent. Soc. (i. 323), describe *T. falacer* of Bois & Leconte's plate as a new species under the above name, and state that the *T. Falacer* of Godt. and Bois. and Lec., text, is *T. calanus*. Both species have been taken in Canada. All our own specimens which we had labelled *T. falacer* are *T. inorata* G. & R.

6. *LYCÆNA PEMBINA*, Edwards.—Taken by Mr. Saunders at Cacouna in 1866 (*vide* his paper).

7. *LEPISIESIA FLAVOFASCIATA*, Walk.—Described by Walker under the genus *Macroglossa* (C. B. M. viii. 87), but erected by Mr. Grote into a new genus as above (Pro. Ent. Soc. Phil. v. 39). Specimens of this insect taken in Canada are in the collection of the Ent. Soc. Phil.

8. *HÆMORRHAGIA GRACILIS*, Grote & Rob.—Described from specimens obtained by Mr. Saunders in Canada West (Pro. E. S. Phil. v. 175, pl. 3, figs. 1 and 2).

9. *HÆMORRHAGIA THYSBE*, Fab.—This is on our list as *Sesia pelagus*, Cram.; the specific name of *Fabricius* has the priority, while the new generic name is given by Grote & Robinson to this and three other species, the genus *Sesia* being by them restricted to *S. diffinis*.

10. *AELLOPOS TANTALUS*, Linn.—In our list as a *Macroglossa*, placed under Hübner's genus by Grote (Pro. E. S. Phil. v. 42). Our specimen, a somewhat mutilated one, was taken by Mr. Pettit at Grimsby in 1864; we have never heard of any other being taken so far north.

11. *THYREUS ABBOTII*, Swains.—This handsome insect has been captured at Hamilton, Ont.

12. *AMPHION NESSUS*, Cram.—In our list as a *Thyreus*, belongs to Hübner's genus *Amphion*.

13. *OTUS CHERILUS*, Cram.—Hübner's generic name has here also priority over the name *Darapsa*.

14. *OTUS MYRON*, Cram.—In our list *Darapsa pampinatrix*, Smith. Cramer's specific name has priority over Smith's.

15. *OTUS VERSICOLOR*, Harris.—Removed from *Darapsa* to this genus (Grote Pro. E. S. Phil. v. 81).

16. PHILAMPELUS PANDORUS, Walk. (*P. satellitia*, Harris.)—*Satellitita* Linn., is a South American species, and not that figured by Harris (*vide* Grote & Rob. Trans. Am. E. S. ii. 76). This magnificent Sphinx was captured in 1866 by the Rev. V. Clementi at Lakefield, North Douro, Ont., as it has been taken so far north it is likely to occur in other parts of the country where the grape is cultivated.

(To be continued)

ENTOMOLOGICAL NOTES DURING A TRIP TO SAGUENAY.

BY W. SAUNDERS.

During the summer of 1866 we found ourselves among those who were trying to escape the hot weather of July by a trip to the Saguenay. The few hasty notes of insects taken during this journey must necessarily be very imperfect, since a day or two at most was all the time that could be devoted to any one locality.

During the down trip there were no opportunities for entomological observations. On the evening of July 10th we reached the mouth of the Saguenay, and early on the following morning the steamer *Magnet* landed us at Ha Ha Bay. I was surprised to find that *Pieris rapæ*, so lately introduced into Quebec from Europe had found its way so far down as this, it was the commonest butterfly here. During a twelve miles journey across the country to Chicoutimi it still prevailed, flying about the gardens and cultivated fields—in no great abundance anywhere, but commoner than any other species. How much further north it extended I was not able to ascertain.

After spending two days in this neighbourhood we returned on the third to Tadousac and from thence to Cacouna, remaining two or three days in each place. The following list embraces all the species observed, with localities:

Papilio turnus, Linn.—Tadousac, not uncommon.

“ *asterias*, Fab.—This insect was not seen on the wing, but two specimens of the full grown larva were taken at Cacouna.

Pieris rapæ, Linn.—Ha Ha Bay, Chicoutimi, Cacouna, common. It is rather remarkable that this insect was not seen at all in Tadousac.

Colias philodice, Godt.—Tadousac, common. Cacouna not so plentiful.

Argynnis atlantis, Edwards.—Cacouna, rather common, but very wild and difficult to capture.

Argynnis myrina, Cram.—Cacouna, abundant.

Melitæa Harrisii, Scud.—Ha Ha Bay.

“ *tharos*, Cram.—Ha Ha Bay, Cacouna, common.

Vanessa Milberti, Encyc.—Ha Ha Bay.

Pyrameis cardui, Linn.—Cacouna.

Lycena pambina, Edwards.—Two specimens of this rare insect were taken at Cacouna on the 19th of July, one in tolerably good order, the other much beaten. At the same time a larva was taken feeding on a blue vetch, very abundant there (*vicia cracca*), which I strongly suspect to be the larva of this species. Several specimens were secured, but a series of mishaps prevented my rearing any of them. I append a description, with the hope that some entomologist may before long meet with it again.

Length 0.50 in., onisciform.

Head very small, brownish black, drawn within the second segment when at rest.

Body above delicate pink or flesh color, thickly covered with very short fine pink hairs scarcely visible without a magnifying glass, a brownish red dorsal line from third to terminal segments, widest and darkest on anterior segments. Second segment pinkish anteriorly, with a patch of dull green behind just in front of the dark dorsal line on third segment. On each side are eight short brownish red lines, those on third and fourth segments being placed nearly parallel with the dorsal line, those behind extending obliquely down the sides and edged above with dull white. A lateral line of dull white close to under surface extending on each side from third to terminal segments, fainter on anterior segments.

Under surface greenish along the middle bordered with pink, which shades gradually into a pinkish red line, lying close to the white one which forms the boundary of upper surface; feet greenish faintly tipped with brown; prolegs green.

Specimens less than half grown have a decidedly greenish tint, with a dark reddish brown dorsal line; the lateral lines with that close to under surface are of a whitish green with a tinge of yellow; under surface dark green with a brownish red line underlying the greenish white one which borders the upper surface.

Half grown specimens are pinkish with a tint of green, as they grow older they gradually assume the delicate pink of the full grown specimen.

Polyommatus Americana, D'urban.—Cacouna.

Nisoniades persius, Scud.—Ha Ha Bay.

Hesperia mystic, Edwards.—Ha Ha Bay, Cacouna.

Alypia Langtonii, Couper.—Cacouna.

Ctenucha virginica, Charp.—Ha Ha Bay.

Spilosoma Virginica, Fab.—Ha Ha Bay.

Saturnia polyphemus, Fab.—Ha Ha Bay.

Crocota ferruginosa, Walk.—Cacouna.

- Agrotis suffusa*, W. Verz.—Ha Ha Bay.
Erynychia octo-maculata, Linn.—Cacouna.
Angerona crocatoria, Guen.—Ha Ha Bay.
Corycia albata, Guen.—Cacouna.
Melanippe gothicata, Guen.—Abundant between Ha Ha Bay and Chicoutimi,
 common also at Tadousac and Cacouna.
Scotosia undulata, Linn.—Tadousac, Cacouna.

Besides these about twenty-five undetermined species were taken, chiefly small moths.

COLEOPTERA.

- Cicindela longilabris*, Say.—On the road from Ha Ha Bay to Chicoutimi.
 “ *limbalis*, Lec.—Taken along with *longilabris*.

I did not anticipate the occurrence of this insect here. The only locality I knew for it before was at Port Stanley on Lake Erie, and I did not imagine it had so wide a range.

- Cicindela vulgaris*, Say.—Tadousac, Cacouna.
Notiophilus 9 *striatus*, Lec.—This interesting little insect was taken at Tadousac on the ground on the highest part of a pass through the hills, and a short cut from the wharf to the hotel.
Harpalus herbivagus, Say.—Cacouna.
Trichius piger, Fabr.—Ha Ha Bay.
Ancylochira nuttalli, Kirby.—Ha Ha Bay.
Melanophila longipes, Say.—Ha Ha Bay.
Upis ceramboides, Linn.—Ha Ha Bay.
Hyllobius pales, Herbet.—Ha Ha Bay.
Attelabus analis, Illig.—Cacouna.
Clytus undulatus, Say.—Ha Ha Bay.
Monohammus scutellatus, Say.—Common everywhere.
Acmaeops proteus, Kirby.—Ha Ha Bay.
Leptura nigrella, Say.—Ha Ha Bay.
Leptura 8 *notata*, Say.—On road to Chicoutimi.
Galeruca rufosanguinea, Say.—Ha Ha Bay.
Chrysomela polygoni, Linn.—Ha Ha Bay.—

In addition a few species still undetermined, and a few insects belonging to other orders, including

- Bombus borealis*.—Cacouna.
Diplax assimolata, Uhler.—Cacouna.
Eysacoris carnifex.—Ha Ha Bay.
Capsus 4 *vittatus*.—Ha Ha Bay.

THE LUMINOUS LARVA.

Respecting our notice of this singular insect in our first number the Rev. J. G. Morris, D.D., of Baltimore, Md., writes as follows:—"Judging from your description precisely a similar larva was brought to me a few years ago for investigation. As it belonged to a public museum I could not retain it for daily observation and feeding, neither had I time to go and watch its habits. I presumed, however, that it was full fed and would soon change. A few days after I went to make enquiry and was told that the bottle with earth had been thrown out, and on further asking they told me "the worm wasn't there any longer;" on pressing my questions the stupid fellow said that "there was a ball of earth almost as round as a marble, which he had not seen before, in the glass jar, but not knowing what it was he had emptied the whole concern into the street!" I have no doubt that the ball was the work of the larva in which it had enclosed itself, but it was irrecoverably lost. I made no description of the insect, but yours suits it precisely. Do the *Lampyridæ* cover themselves with dirt, as the *Geotrupidæ*, for example, in undergoing their transformation? If so, then we have one presumptive proof that the larva belonged to that family, but it is best not to be too rash in our conclusions. I very much regret that I can give you no more satisfactory information."

A few days ago (Sept. 3) we had the great good fortune to find a wingless female Fire-fly, whose tail segments were luminous. We must defer an account of it for the present.

 NOTICE OF ENTOMOLOGICAL WORKS.

THE AMERICAN ENTOMOLOGIST. Edited by B. D. Walsh and C. V. Riley. Published monthly by R. P. Studley & Co., 104 Olive Street, St. Louis, Mo. September, 1868.

The first number of a new periodical on practical entomology, edited by the State entomologists of Illinois and Missouri, is now before us. We gladly welcome its advent as a worthy successor to our old friend the *Practical Entomologist*, whose discontinuance was a source of much regret to us, and trust that it may long continue to flourish as a worthy and useful exponent of the true history and habits of the myriad insect friends and foes to the gardeners and farmers of this continent. Time was when to be an entomologist was to render oneself a source of anxiety and care to one's friends, and an object of pity or derision to one's neighbours; but now, happily, people in general are becoming rather more enlightened, and do not think that a man has a bee in his bonnet because he catches butterflies; is it because they find that

insects draw so largely upon their pockets, and devastate their fields and gardens if not looked after and repressed? That they do abstract annually enormous sums from the wealth of the country, our editors show us plainly in their opening article; they state, and we do not suppose they are far wrong, that the United States lose \$300,000,000 per annum by the depredations of noxious insects! Their object in issuing this new periodical is to shew the people how to save a small proportion, at any rate, of this vast sum, and teach them how to fight with the best prospect of success their tiny but countless foes. The official position of these gentlemen, as well as their various published writings, are a sufficient guarantee for the character and usefulness of their journal; the hearty coöperation of the public is all that is needed for its success. The number before us consists of twenty large octavo pages; it is written in a clear and lively style, and is illustrated by nine excellent woodcuts. It is to be published once a month, and will be profusely illustrated by original drawings from the pen of Mr. Riley, and at least one colored lithographic plate will be given with each volume. For the convenience of subscribers in Canada we have consented to act as agent for this Province; on receipt of one dollar we shall furnish it, *free of Canadian and American postage*, for one year—the difference of exchange covering the postage on both sides of the line. The title, *American Entomologist*, should be particularly mentioned to prevent any confusion with our own publication.

BOOKS RECEIVED:—*On the Development of a Dragon Fly (Diplax)*, and *On the Structure of the Ovipositor and Homologous Parts in the Male Insect*. By A. S. Packard, jun., M.D. From the Pro. Soc. Nat. Hist. Boston, 1868.

The author will please accept our thanks for the copy of these valuable papers that he has kindly sent us.

The Maine Farmer. Augusta, Me., Sept. 3, 1868.

TO CORRESPONDENTS.

M. S. R., Wooler, Ont.—Your name will be submitted for election as an ordinary member of the Entomological Society of Canada at the next meeting. The best works that we can recommend to you to begin with are Packard's *Guide to the Study of Insects*, now being published in parts at 50 cts. each, and Harris' *Insects Injurious to Vegetation*; other works, of course, will be required as you go on. As a general introduction to the study, you should read Kirby and Spence's *Entomology*, a valuable and highly entertaining work to any one who cares at all for natural history. We shall be happy to procure Dr. Packard's work for you if you desire it; two parts are now published.

B. B., Ottawa; J. N., Belleville; J. R., Montreal.—A large supply of sheet cork has been ordered from England; we expect its arrival about the middle of next

month; till then we pray your patience. We have still several thousand pins left of Nos. 2, 3 & 4.

C. Wallbridge, Belleville.—The specimens left by you at the Canadian Institute some little time ago are the following: The large moth is the American Silkworm, or Eyed Emperor (*Telea polyphemus*); a full account by L. Trouvelot of its habits, transformations, and the most successful mode of rearing it, is contained in the *American Naturalist*, Vol. i., Nos. 1, 2 & 3; there is also a short notice of it, with a figure of the moth, in the *Canada Farmer*, 1866, p. 181. The gigantic water-fly is a fine male specimen of the Horned Corydalis (*C. cornutus*); its larva is commonly called a "Crawler," in the Western States a "Hellgramite,"—whatever that means—and is a capital bait for bass, etc.; there is an illustration and notice of it in the current number of the *Canada Farmer*. The smaller water-fly is a species of *Perla*, often found in the earlier part of summer, fluttering about the banks of rivers, and settling on stones, aquatic plants, or any other convenient resting-place. Its larva lives in the water, generally hiding itself under stones, and feeds upon small insects; it exists through the winter, and changes to a pupa in the Spring; before assuming the winged state it crawls out of the water and leaves its empty case behind when it flies away to enjoy its brief life in the air; the empty shells are often to be found on bridges and the margins of streams. We shall be happy to receive specimens from you at any time.

SUBSCRIPTIONS to Vol. I. have been received, with thanks, from the following:—Rev. Dr. G., Wellington Square; T. P., Berlin, Ont.; Rev. F. A., Guelph; Prof. H. Y. H. and D. H. H., Windsor, N. S.; V. S. C., Covington, Ky.; S. H. S., Boston, Mass., who kindly writes, "Please put my name down for a copy of the CANADIAN ENTOMOLOGIST—even if it is to be published at \$5 per volume." We have also received the following subscriptions to Vol. I. through Mr. Saunders:—L. S., D. H. M., and Judge L., Hamilton. D. W. B., St. Catharines; C. A., Paris, Ont.; A. M. S., Grimsby.

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Suitable advertisements will be inserted on reasonable terms.

N.B.—Correspondence is invited respecting the habits, localities, occurrence, etc., of insects, as this journal is intended to be a medium for the recording of observations made in all parts of the country; insects for identification will be gladly attended to and returned when desired. Any contributions to the publication fund will be thankfully received and gratefully acknowledged.

All communications, remittances and exchanges, should be addressed to "THE REV. C. J. S. BETHUNE, *Credit, Ont., Canada.*"