

PRELIMINARY LIST OF THE MACRO-LEPIDOPTERA OF
ALBERTA, N.-W.T.

BY F. H. WOLLEY DOD, MILLARVILLE, ALBERTA.

(Continued from page 54.)

GEOMETRIDÆ.

[NOTE.—The generic names are as used by Rev. G. W. Taylor.]

452. *Rachela Bruceata*, Hulst.—Not observed previous to 1898. It appeared in millions in 1902, and in the following year was still more abundant. In those two years hundreds of acres of *Populus tremuloides* were completely denuded by the larvæ during June. It appeared to be aided in its depredations by a Tortrix, the name of which I have not yet discovered, but subsequent observation brings me to believe that by far the greater part of the denudation was caused by this species. I rarely saw more than eight or ten acres cleared in one patch, usually much less, but its ravages extended over a large tract of country, some twenty square miles, between Fish and Sheep Creeks. Beyond that I did not travel where there were poplars in any quantity. *Salix* was also attacked, but not so vigorously. The moths appeared in early October, and the apterous females could be found in numbers hanging with the males on the leafless twigs of poplars after dark. The males flew freely in the daytime, but in far greater numbers at dusk. Both the Rev. G.W. Taylor and Dr. Fletcher have seen the species.

453. *Tallegeda montanata*, Pack.—Two ♂♂ and a ♀. June 23rd to 28th, 1898 and 1904. Occurs at both the Billing's Mill locality and on Pine Creek.

454. *Eupithecia (Tephroclystis) Regina*, Taylor (MSS.)—Fairly common some years, flying at dusk. End June and July.

455. *E. borealis*, Hulst?—Mr. Taylor has a specimen from me, dated July 21st, 1901, on which he comments: "A prairie species, and in Mr. Hanham's collection from Winnipeg, bearing Hulst's label *borealis*, but does not agree with the description." I am not aware that I have taken another specimen of the same species.

456. *E. Casloata*, Dyar (Proc. U. S. Nat. Mus., XXVII., 891).—Described from two specimens taken at Kaslo. Eight specimens are at present in my series, and I fancy the species is not altogether rare here. July to middle of August.

March, 1906

457. *E. nimbicolor*, Hulst.—Described from here. The description says, "wings very uniform, blackish-fuscous, blackish cross-lines very faintly showing." Though I cannot, with certainty, trace back the specimen or specimens from which Hulst described the species, a careful process of elimination turns the probability upon one of two specimens, upon which he commented in a letter to me, dated June 14th, 1895: "They are probably *miserulata*, Grt., but the lines are very indistinct." One of these specimens was returned to me at that time. It is badly worn and greasy, but does not misfit the description. It is labelled "Mouth of Fish Creek, June 3rd, 1894." Mr. Taylor has seen it, and has two others from here of the same species, dated May 27th and June 3rd. He feels confident that they are the *nimbicolor* of Hulst, and writes me: "The species is well marked, and I do not know of any other with which it can be confused." Hulst mentions no data as attached to the type.

458. *E. multistrigata*, Hulst.—Mr. Taylor says: "This is *multistrigata*, without much doubt. Dr. Barnes has the type, and has sent me a specimen agreeing with yours, but it is smaller." In the Kootenai list under this name Dr. Dyar mentions two specimens, which, he says, "agree in general with a specimen from Calgary, communicated to me by Rev. George W. Taylor." Mr. Taylor, however, tells me "this is not the species called *multistrigata* by Dr. Dyar in the Kootenai list. . . . The Kaslo species is quite different." I have a Calgary specimen labelled by Mr. Taylor, dated June 21st, 1895, and at least two other specimens are certainly the same, June 23rd and July 4th, 1898. The description does not misfit, but 24 mm. is given as the expanse, whereas mine vary from 25 (♂) to 27 mm. (♀).

459. *E. ravocostaliata*, Pack.—Decidedly rare. April 23rd to end of May.

460. *E. castigata*, Haw. ?—Mr. Taylor returned me a ♀ so labelled out of a series I sent him, commenting: "I believe this to be the European *castigata*. I have it from the prairies and from B. C. My identification is made from a comparison with a good series of European specimens." I have taken altogether about two dozen specimens, which I believe to be the same species, all, or nearly all, during 1904, and on the wing just before dusk. June 23rd to July 2nd.

461. *Eucymatoge anticaria*, Walk.—Common. I have specimens so named by both Hulst and Mr. Taylor. June and July.

462. *E. intestinata*, Gn.—Fairly common. June to middle of July.

463. *E. vitalbata*, Schiff.—Common. End May to middle of July. This species, widely distributed in Europe, was first recorded as North American from Calgary. It occurs in Manitoba. I have it from the Red Deer River, a hundred miles north-east of Calgary; so it seems to be a prairie rather than a mountain species in this hemisphere. In Europe the larva feeds on *Clematis vitalba*, the "Traveller's Joy," whence its name, but from localities where I have sometimes found it here it is almost certain that it does not, at any rate, confine itself exclusively to *Clematis* in Alberta.

464. *Euchæa albovittata*, Gn.—Common, though apparently somewhat local in woods, and rarely met with outside them. End June and July.

465. *E. cretacea*, Pack.—Fairly common. In this district I have found it more commonly on the prairies than in the hills. In the Kootenai list Dr. Dyar seems to imply that there it occurs most frequently at the higher altitudes. I have met with it very sparingly at Laggan, the highest-up capture being at Agnes Lake (6,850 ft.). End June and July.

466. *Calocalpe (Hydria) undulata*, Linn.—Not common. End June to middle Aug.

467. *Eustroma testata*, Linn.—Fairly common. At light, and occasionally at treacle. August.

468. *E. propulsata*, Walk., = *Packardata*, Lint., = *populata*, Pack., non. Linn.—Rather rare. July 20th to Aug. 13th. The synonymy is Mr. Taylor's, who says: "I don't believe we have the real *populata* in America. Dr. Dyar's (Hulst's) synonymy under this name is all wrong." In the Kootenai list Dr. Dyar suggests that European *populata*, Linn., and *Packardata*, Lint., are probably distinct, but records both forms from British Columbia. Mr. Taylor, however, who has compared a good series of the European *populata*, claims that Dr. Dyar's "true *populata*" from B. C. is quite a different insect, and hitherto undescribed.

469. *E. destinata*, Moeschl.—I have taken five or six specimens in the mountains. On Sulphur Mt., Banff, 4,500 to 6,000 feet, and at Laggan up to about the same altitude. The Laggan specimens are a little the smaller. August 7th to 13th, 1900. Mr. Taylor says: "These appear to be variations of what Dr. Dyar decides to be *Eustroma destinata*. It differs considerably from the *destinata* of the prairies." He refers a Calgary male doubtfully to the same species.

470. *E. nubilata*, Pack.—I have two head of Pine Creek specimens, July 29th and Aug. 24th; one from mouth of Fish Creek labelled "July 5th? Aug.," and one from near Billing's Mill, Aug. 11th. All are more or less rubbed. The last two mentioned have been named as above by Mr. Taylor.

471. *Neolexia xyliana*, Hulst.—Described partly from Calgary material; also from New York, Washington, Montana, and "Canada." Dr. Hulst writes: "The specimen received from Calgary has the cross-bands blackish instead of brown, and the hind wings have a more distinct banding. Very much in appearance like *Eustroma prunata*, with which it may have been confounded, but easily distinguished by the bipectinate antennæ." I kept what I considered a duplicate to the specimen mentioned by Hulst, which is identical with the species referred here by Mr. Taylor. The central band is not always blackish, but I see practically no variation in the secondaries. Not common. July 21st to Aug 6th. I have only one female, which is defective in the two right wings. Dr. Dyar records it from the Kootenai district, mentioning Glacier and Field as localities. Mr. Taylor comments upon Hulst's remarks: "*Xyliana* is a common B. C. species. I doubt its occurrence in New York. Hulst refers often to *E. prunata*, but he did not know it. The eastern so-called *prunata* is not that species (which is European), but the *triangulatum* of Packard. The differences between *prunata*, *triangulatum* and *xyliana* are chiefly in antennal structure."

472. *N. speciosa*, Hulst.—Described from one male from Calgary. Dr. Hulst, after a detailed description, adds: "This may be a variety of *N. xyliana*, Hulst, but the colour and shaping of the bands is different, and there is difference of position in the lines of the hind wings." My notes on the material sent to Hulst in 1895 show me that this was a unique sent labelled No. 9. It is probably a head of Pine Creek specimen, bearing no date. I doubt whether I have seen the form since. Hulst's note to me on No. 9 was "*Neolexia xyliana*, var. *speciosa*," and the description was published more than a year later. I had sent him the type of *xyliana* as No. 10. I copy from his letter: "9 and 10 are perhaps rather widely varying forms of the same species, but I am not sure. I would not think so, only its correlative *Petrophora prunata* has the same variation. It differs from that species, which it resembles in every other way, in having pectinated antennæ in the male."

473. *Plemyria (Rheumaptera) hastata*, Linn.—Common in the spruce. June and early July.

474. *P. tristata*, Linn.—Very common. End May and June.

475. *P. sociata*, Bork.—Common. Middle June to middle July. According to Mr. Charles G. Barrett this is the same as European *subtristata*, Haw., not *substriata*, as Dyar writes it.

476. *P. luctuata*, Schiff.—Very common in the spruce some years, but seems to be rare on Pine Creek. Middle June and July.

477. *P. Georgii*, Hulst.—I always looked upon this as a great rarity until 1903, when it was fairly common. On flowers of *Solidago virgaurea* at night, and also came to treacle. End Aug. and Sept.

478. *P. subrosuffusata*, Pack.—Not rare. May and June. The colour of the secondaries is decidedly an orange-yellow, but I gather from Mr. Taylor that Packard described them as "brick-red." He writes: "I have had abundant material for study, and there is no doubt as to the species. Our specimens and California ones are exactly the same, and apparently our idea of orange-yellow was Packard's notion of 'brick-red.'" Dr. Holland's figure looks like the Calgary species bleached. One of my specimens bears a red-ink label "*Ochyria carneata*," on Hulst's authority.

479. *Zenophleps lignicolorata*, Pack.—Not rare. Middle July to middle Aug. I have it from the flat prairie to the mountains at Banff, but did not see it there above 6,000 feet.

480. *Mesoleuca gratulata*, Walk.—Rather common in the spruce. My only dates are May 30th to June 6th, and my four specimens are perfect. Mr. Taylor says the species is distinctly western.

481. *Mesoleuca caesiata*, Schiff.—I have taken in good condition at Laggan, from July 18th to Aug. 10th, from 5,700 ft., and occasionally far above the timber line, one capture being on the summit of Saddle Mt., 7,900 ft. I have a head of Pine Creek ♀, taken at light on Sept. 3rd, 1904, which Mr. Taylor refers as a var. of this species. It entirely lacks the faint though obvious ochreous tinge present in the Laggan form, the ground colour is paler, with distinct smoky central and terminal bands. The specimen is somewhat worn. I took an exactly similar specimen during 1905. In the Kootenai list Dr. Dyar says that he found this a high altitude species, and records it from Banff, Alta., on Sept. 10th.

482. *M. lacustrata*, Guen.—Not common. Middle June to middle July. Notwithstanding the generic separation, this species seems rather easy to confuse with *Plemyria sociata* without some knowledge of the

variation of both. I sent both to Mr. Taylor as one species. Dr. Holland's figure of *lacustrata* is not very clear, and scarcely shows what seem to me to be distinctions in my series. I find differentiating characters in the secondaries not noticeable in that figure. In my *lacustrata* the central band widens out considerably on both costa and inner margin, and in seven out of eight specimens is sharply but narrowly notched on vein 7. *Sociata* has the band narrower, more even in width, and in none of my specimens notched. The notch is shown in Dr. Holland's figure, and the band is widest on the costa. Otherwise the figure might easily pass for *sociata*.

483. *M. intermediata*, Gn.—A single male, quite fresh, on May 13th, 1905. I recognized it as something new to me directly I saw it, though the colour and maculation suggested *Xanthorhoe munitata* more nearly than anything else I take here. In CAN. ENT., XXXVI, 245, Mr. Taylor points out that Dr. Holland's figure under this name is really *Petrophora fluctuata*.

484. *M. truncata*, Hbn.—Not common. Aug.

485. *M. silaceata*, Hbn., = *albolineata*, Pack.—Rather common. Middle June and July.

486.—*M. hersiliata*, Gn.—Two males, Aug. 15th, 1901, at light, and July 5th, 1903.

487. *M. vasaliata*, Gn.—Rather rare. Earliest April 27th. Through May. A fair female specimen June 17th, and worn females up to July 1st.

(To be continued.)

NOCTUID AND GEOMETRID MOTHS TAKEN AT TEMAGAMI LAKE.

BY D. H. HAIGHT, COPPER CLIFF, ONT.

The following list of moths is the result of collections made during the months of June and July, 1904, in the neighbourhood of Temagami Lake, which is situated in the Nipissing District of Ontario, north of Lake Huron, Lat. 48°. The numbers prefixed are from Dyar's Catalogue:

968. *Raphia frater*, Grote, June 25.

971. *Apatela rubricoma*, Guen., June 25.

983. " *populi*, Riley, June 25.

989. " *betulæ*, Riley, June 25.

1028. " *retardata*, Walk., June 25.

1278. *Hyppa xylinoides*, Guen., July 9.