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THE OTTAWA NATURALIST

VOL. XXV.

OTTAWA, OCT.-NOV., 1911

Nos. 7-8

FAUNA OTTAWAENSIS.

ORDER LEPIDOPTERA: SUPERFAMILY GEOMETROIDEA.

BY ARTHUR GIBSON.

As a contribution towards the preparation of the Catalogue of the Insects of Canada and Newfoundland, which was recently outlined in *The Canadian Entomologist* and *The Ottawa Naturalist*, the following list of the Geometridæ which have been found in the Ottawa district is presented. It has taken a considerable number of years to collect the species here recorded, and the list is, I think, a fairly complete one of these insects which occur in this neighborhood. The late Dr. James Fletcher collected many of the specimens and much material has been gathered together by Mr. C. H. Young, of the Geological Survey Department, who collected extensively at Meach Lake. To the Rev. G. W. Taylor we are indebted for the determination of many of the species. Recently the writer has received help in the identification of certain species from Mr. John A. Grossbeck, of the American Museum of Natural History, New York, and Mr. A. F. Winn, of Montreal.

FAMILY GEOMETRIDÆ.

Subfamily HYDRIOMENINÆ.

- Dyspteris abortivaria* H.-S. 28 May, 1901, (Young); 3 June, 1903, (Fletcher).
Nyctobia limitaria Walk. 25 April, 1901; 28 April, 12, 13 May, 1906; 16, 18 May, 1905, (Young); 26 May, 1899, (Gibson); 4 June, 1906, (Fletcher). 24, 30, 31 May, 1 June, 1906, (Taylor).
Nyctobia viridata Pack. 17 May, 1906, (Young); 23 May, 1903, (Gibson); 4 June, 1906, (Fletcher).
Cladora atroliturata Walk. Bred 9 April, 1906; 10 May, 1901, (Gibson); 18 June, 1906, (Fletcher).
Rachela bruceata Hulst. 2 Oct., 1900; 4 Nov. 1905, (Gibson).
Alsophila pometaria Harr. 3 Nov., 1900, (Gibson).
Eudule mendica Walk. 24 June, 1899, 29 June, 1906; 13 July, 1907, (Gibson).

- Tallegeda montanata* Pack. 12 May, 1901, (Young).
Tallegeda tabulata Hulst. 12 May, 1901, (Young); 19 May, 1904, (Gibson), 30 May, 1 June, 1906, (Taylor).
Nannia refusata Walk. 10 June, 1908, (Letourneau).
Heterophleps triguttaria H.-S. 17 June, 1899, (Young); 11 July, 1907, (Gibson); 13 July, 1905, (Fletcher).
Eupithecia luteata Pack. 19 April, 1905, (Young).
Eupithecia palpata Pack. 25 May, 1905, (Fletcher); 3 June, 1906, (Gibson); 10 June, 1906, (Young).
Eupithecia ornata Hulst. 24 April, 4 May, 1906, (Young).
Eupithecia interruptofasciata Pack. Larvæ found on *Juniperus communis* L., moths emerged Sept. 7, 1904, (Gibson).
Eupithecia albicapitata Pack. 5 June, 1904, (Young).
Eupithecia latipennis Hulst. 4 June, 1887; 9, 19 June, 1906; 20 June, 1905; 27 June, 1907, (Fletcher); 14 June, 1906; 23 June, 1908, (Gibson); 15 June, 1906, (Young), 1 June, 1906, (Taylor).
Eupithecia plumbaria Hulst. 24 May, 1906, (Taylor).
Eupithecia gibsonata Taylor. 9 June, 1903, (Young).
Eupithecia grata Taylor. 5 June, 1906, (Young).
Eupithecia fasciata Taylor. 28 June, 1906, (Gibson).
Eupithecia fumata Taylor. 9 June, 1906, (Young).
Eupithecia packardata Taylor. 7 Aug., 1906, (Young).
Eupithecia fumosa Hulst. A single specimen taken by Dr. Fletcher on 3 June, 1904, was named *fumosa?* by Rev. G. W. Taylor.
Eupithecia coagulata Gn. 19 May, 1905; 23 June, 1908, (Gibson).
Eupithecia casloata Dyar. 5 Aug., 1905, (Young).
Eupithecia youngata Taylor. 7 June, 20 July, 1905, (Young).
Eupithecia fletcherata Taylor. 3 Aug., 10 Sept., 1906, (Young).
Eupithecia raveocostaliata Pack. 17 May, 1904, (Young).
Eucymatoge intestinata Gn. 16 May, 3 June, 1903; 26 May, 1904; 23 June, 1905; 3 July, 1906, (Fletcher); 10 June, 1904, (Young); 2 June, 1906, (Taylor).
Euchoeca inornata Hulst. 29 April, 1903, (Young); 22 May, 1900, (Gibson).
Euchoeca comptaria Walk. 1, 11, 12 May, 1899, (Gibson); 16 May, 1900; 18 May, 1905; 4 June, 1906, (Fletcher); 29 June, 1903, (Young).
Trichodezia albovittata Gn. 26 May, 1 June, 1906, (Taylor), 29 June, 1904, (Young); 9 Aug., 1904, (Gibson).
Trichodezia albifera Walk. 13 June, 1907, (Gibson); 29 June, 1905; 13 Aug., 1906, (Young).
Epirrita dilutata D. & S. 23 Sept., 3 Oct., 1905, (Young).
Hydria undulata L. Reared from cherry 3-15 June, 1904, (Gibson); 26 June, 1900, (Young).

- Eustroma diversilineata* Hbn. Emerged 13, 16 June, 1900; 14 Aug., 1900; 14 Aug. 1903, (Gibson); 14 Aug., 1900, (Young); 12 Aug., 1904, (Fletcher).
- Eustroma populata* L. 9, 18 July, 1905, (Young).
- Neolexia xyliina* Hulst. 18 July, 1904; 19 July, 1906, (Young).
- Rheumaptera hastata* L. 18 May, 1903, (Young); 24 May, 2 June, (Taylor), 26 June, 1906, (Gibson).
- Rheumaptera sociata* Bork. 30 May, 4 June, 1906; 14 June, 1907; 16 Aug., 1904, (Fletcher); 4, 25 June, 1906; 14 June, 15 July, 1907; 9 Aug., 1904, (Gibson).
- Rheumaptera georgii* Hulst. 21 July, 1906, (Young).
- Percnoptilota fluviana* Hbn. 28 July, 1908; 16 Aug., 22 Sept., 1900, (Gibson); 15 Aug., 1899; 18 Aug., 1900, (Young).
- Entephria aurata* Pack. 27 June, 1903, (Young).
- Mesoleuca ruficollata* Gn. 29 May, 3 June, 1899, (Gibson); 31 May, 1899, (Young); 1 June, 1906, (Taylor), 5 June, 1908, (Fletcher).
- Mesoleuca lacustrata* Gn. 27 May, 1900, (Young); 1 June, 1906, (Taylor), 9 June, 1906; 24 June, 1905; 24 June, 6, 11 July, 1907, (Gibson); 14 June, 1907; 1 July, 1906, (Fletcher).
- Mesoleuca intermediata* Gn. 18 May, 19 July, 1904; 10 June, 1901, (Young); 14 June, 1899, (Gibson); 17 Aug., 1906, (Fletcher).
- Mesoleuca truncata* Hfn. 30 July, 1903, (Young).
- Mesoleuca silacea* Hbn. 28 May, 1900, (Gibson); 2 June, 1898; 27 July, 3 Sept., 1904; 12 Aug., 1903, (Young); 16 Aug., 1905, (Fletcher).
- Mesoleuca hersiliata* Gn. 12 June, 1908, (Fletcher); 25 June, 1899, (Gibson); 1 July, 1903, (Young).
- Mesoleuca vasiliata* Gn. 18, 28 April, 9, 15, 29 May, 1899, (Gibson); 20 April, 1900, (Young); 26 May, 1906, (Taylor).
- Hydriomena autumnalis* Strom. 28 May, 1900, (Young); 1 June, 1906, (Taylor), 3 June, 1908; 12 July, 1906, (Fletcher); 19 June, 1908, (Gibson).
- Hydriomena basaliata* Walk. 16 July, 1905; 17 July, 1904, (Young); 20 July, 1905, (Gibson).
- Hydriomena contractata* Pack. 10 Sept., 1901, (Fletcher).
- Hydriomena latirupta* Walk. 21 April, 1902, (Young); 30 Sept., 1900, (Gibson).
- Hydriomena multiferata* Walk. June.
- Triphosa indubitata* Grt. 24 April, 21 Sept., 1900, (Young); 25 Oct., 1900, (Gibson); 31 May, 1906, (Taylor).
- Cænocalpe magnoliata* Gn. 1 June, 1906, (Taylor), 3 June, 1899; 10 June, 1903; 20 Aug., 1904, (Gibson); 5, 6, 8 June, 1906, (Fletcher); 10 June, 1908, (Letourneau).
- Cænocalpe gibbocostata* Walk. No date, (Fletcher). The species flies in early September.

Gypsochroa designata Hfn. 29 May, 9 June, 1899; 4 June, 1906; 20 Aug., 1904, (Gibson); 14 June, 1907, (Fletcher); 28 July, 1903, (Young).

Xanthorhoe ferrugata Clk. 13, 16 May, 1905; 4, 8, 9, 14, 21 June, 1906, (Fletcher); 27 May, 1900, (Young); 3 June, 1904; 23 July, 1899; 8 Sept., 1907, (Gibson).

Xanthorhoe planata Taylor. 19, 20, 30 June, 1904; 3 July, 1905, (Young).

Subfamily MONOCTENINÆ.

Hematopsis grataria Fab. 31 May, 16 Aug., 1900, (Young); 15 Aug., 1907; 16 Aug., 1900; 30 Sept., 1900, (Gibson).

Subfamily STERRHINÆ.

Deptalia insularia Gn. 2 July, 1905; 18 Aug., 1906, (Young).

Cosymbia lumenaria Hbn. 22 July, 1905; 28 July, 1902, (Young); 16 Aug., 1904, (Gibson).

Synelys enucleata Gn. 9 June, 1904, (Gibson); 26 June, 1 July, 1904, (Young); 12 July, 1906, (Fletcher).

Leptomeris quinquelinea Pack. 8 June, 1903; 5 July, 1905, (Young).

Eo's induciata Gn. 13 June, 1903, (Young); 14 June, 1899, (Gibson); 18 June, 1906, (Fletcher).

Subfamily GEOMETRINÆ.

Chlorochlamys chloroleucaria Gn. 12 June, 1901; 14 June, 1899; 16 Aug., 1900, 28 July, 1908, (Gibson); 28 Aug., 1908, (Fletcher). Slender green larva found on *Solidago canadensis*.

Nemoria pistaceata Gn. 25 May, 1901; 30 May, 1903, (Gibson); 28 May, 1904, (Young).

Nemoria subcroceata Walk. 8 June, 1907, (Gibson).

Eucrostes incertata Walk. 14 May, 1904, (Young); 21 May, 1904, (Gibson).

Synchlora arata Fab. 24 July, 1902, (Young).

Aplodes nimosaria Gn. 29 April, 8 June, 1906; 18 June, 1907, (Fletcher); 24 May, 1900, (Young).

Aplodes rubrifrontaria Pack. 5 June, 1906, (Young).

Anaplodes rubromarginaria Pack. 8 June, 1906; 8 June, 1907, (Fletcher). Mr. Young has also taken the species.

Anaplodes remotaria Walk. 19 Aug., 1902, (Young).

Subfamily ENNOMINÆ.

Epelis truncataria Walk. 18 May, 1898, (Young); 25 May, 1903, (Gibson); 8 June, 1903, (Fletcher).

Epelis faxonii Minot. 8 June, 1903, (Fletcher); 20 June, 1908, (Gibson).

Eufidonia notataria Walk. 30 May, 1901; 9 June, 1908, (Gibson); 8 June, 1903, (Fletcher); 18 June, 1902, (Young); 26 June, 1904, (Metcalf).

- Orthofidonia exornata* Walk. 1 June, 1906, (Taylor), 25 June, 1906, (Young).
- Orthofidonia semictarata* Walk. 6 May, 1899, (Young); 30 May, 1908; 9 June, 1900, (Gibson); 14 June, 1907, (Fletcher).
- Orthofidonia vestaliata* Gn. 24 May, 1906, (Taylor), 30 May, 1908; 9 June, 1906, (Gibson).
- Psysosiegania pustularia* Gn. 13 July, 1905, 10 Aug., 1906, (Fletcher); 19 July, 1903, (Young).
- Gueneria basaria* Walk. 16 May, 1905, (Young); 31 May, 9 June, 1900; 14 June, 1907; 6 July, 1903, (Gibson); 4, 8 June, 1906; 13, 14 June, 1907, (Fletcher).
- Deilinia variolaria* Gn. 6 June, 1901; 12 July, 1904, (Young); 4 June, 1908, (Letourneau); 22 June, 1906, (Fletcher); 25 June, 1906, (Gibson).
- Deilinia erythemaria* Gn. 21 May, 22 July, 1904, (Young); 4 June, 1906, (Fletcher).
- Deilinia liberaria* Walk. 6 Sept., 1902, (Young).
- Sciagraphia granitata* Gn. 10 May, 12 July, 1906; 29 May, 1896; 3 June, 1899; 2, 9 June, 1906; 16, 27 June, 1907; 13 Aug., 1904, (Gibson); 27 May, 1903; 1 June, 1901, (Young); 8 June, 1903, (Fletcher); 21 May, 1908, (Letourneau).
- Sciagraphia neptaria* Gn. 1 June, 1905, (Young).
- Sciagraphia continuata* Walk. 23 July, 1900, (Gibson).
- Sciagraphia atrofasciata* Pack. 26 Aug., 1907, (Letourneau).
- Sciagraphia mellisrigata* Grt. 3 June, 1903, (Fletcher); 22 July, 1899, (Young).
- Macaria labradoriata* Moesch. 12 Aug., 1904, (Fletcher). Mr. Grossbeck, who examined this specimen, reported: "This species was described from a male and female from southern Labrador in 1883, and to my knowledge has never been rediscovered since. Your specimen is large for the species but otherwise fits Moeschler's description exactly."
- Macaria bisignata* Walk. 2, 3 July, 1906, (Fletcher).
- Macaria glomeraria* Grt. 29 April, 17 May, 1903, (Young).
- Diastictis hulstiana* Taylor. 12 May, 1903, (Gibson).
- Diastictis virginialis* Hulst. 29 June, 1904, (Young).
- Diastictis ribearia* Fitch. Emerged 2 July, 1903, (Gibson); 19 July, 1903, (Young).
- Diastictis sulphurea* Pack. 12 July, 1902, (Young).
- Diastictis brunneata* Thunb. 6 July, 1903, (Young).
- Diastictis inceptaria* Walk. 23 July, 1900, (Gibson).
- Diastictis evagaria* Hulst. 8 June, 1903, (Young).
- Diastictis subcessaria* Walk. 20 July, 1905, (Gibson); 6 Aug., 1903, (Young).
- Diastictis latiferrugata* Walk. Larva on *Prunus pennsylvanica*, moth emerged 11 Aug., 1906, (Fletcher).

- Diastictis inq:inaria* Hulst. 8 July, 1903, (Young).
Homochlodes fritillaria Gn. 21 May, 1904, (Young); 27 May, 1901; 19 June, 1907, (Gibson); 31 May, 1 June, 1906, (Taylor), 3 June, 1903; 19 June, 1907, (Fletcher).
Apæcasia deersata Gn. 10 May, 1904; 23 May, 1908; 13, 14 June, 1907, (Gibson); 14 May, 1904; 27 May, 1905, (Young); 9 June, 1906, (Fletcher).
Apæcasia defluata Walk. 16 May, 1900, (Young); 25 May, 1903; 27 May, 1901; 19 June, 1907, (Gibson); 1 June, (Fletcher).
Caripeta divisata Walk. 25 July, 1902, (Young).
Nepytia semichusaria Walk. 30 Aug., 1899, (Young); 7 Sept., 1908, (Letourneau).
Alcis guttata Hulst. 20 June, 1894, (Fletcher). This specimen was so named by Mr. Grossbeck. In reporting upon it he says: "The species which I am quite certain is the one described by Hulst as *Alcis guttata* is very interesting. I was never quite certain that the two specimens on which the name was based really came from New York and Pennsylvania as Hulst said. They had a decidedly European aspect. The receipt of your specimen now seems to indicate, however, that the types were caught in this country."
Paraphia subatomaria Wood. 10 July, 1903, (Young); 20 Aug., 1906, (Gibson).
Spodolepis substriaria Hulst. 4 May, 1906, (Young).
Selidosema humaria Gn. 1 July, 1905; 21 July, 1903, (Young).
Cleora pampinaria Gn. 1 June, 1905 (Young).
Cleora takenaria Pears. 20 July, 1905, (Gibson); 28 June, 1905; 16 July, 1903, (Young); 24 July, 1905, (Fletcher).
Melanolophia canadaria Gn. 5 May, 1902; 17 May, 1905; 4, 8, June, 1906; 18 June, 1907, (Fletcher); 17, 18 May, 1905; 8 June, 1906; 12 June, 1899; 18 June, 1907, (Gibson); 7 June, 1903, (Young).
Æthaloptera anticaria Walk. 11 May, 17 June, 1905, (Young), 2 June, 1906, (Taylor), 4 June, 1906, (Fletcher).
Ectropis crepuscularia D. & S. 10 May, 1911; 2, 4 June, 1899; 20 Aug., 1904, (Gibson); 17 May, 1906; 25 July, 1903, (Young), 31 May, 1 June, 1906, (Taylor).
Lycia ursaria Walk. 13 April, 1902; 29 April, 13 May, 1903, (Gibson).
Lycia cognataria Gn. 8, 12 June, 1899, 18 June, 1904, (Gibson).
Nacophora quernaria S. & A. 20 June, 1906, (Young).
Paleacrita vernata Peck. 16, 20 April, (Gibson); 26 April, 1905, (Young).
Phigalia titea Cram. 20, 21 April, 1899, (Gibson).
Erannis tiliaria Harr. 8 Oct., 1900; 11-20 Oct., 1911; (Gibson); 14 Oct., 1899, (Young).

- Cingilia catenaria* Dru. 7 Sept., 1902, (Young); 26 Sept., 1899; (Gibson).
- Cingilia rubiferaria* Swett. 1 Oct., 1902, (Gibson).
- Anagoga pulveraria* Linn. 17 May, 1903; 24 May, 1906, (Young); 30 May, 1906, (Gibson); 14 June, 1907, (Fletcher).
- Sicya macularia* Harr. 10 July, 1904, (Young); 20 July, 1905, (Gibson).
- Therina endropiaria* G. & R. 18 May, (Fletcher); 8 June, 1903; (Gibson); 9 June, 1903, (Young).
- Therina athasiaria* Walk. 17 June, 1906, (Young).
- Therina fiscellaria* Gn. 28 Aug., 1904; 3 Sept., 1903; 7 Sept., 1901, (Young); 22 Aug., 6 Sept., 1905; 12 Sept., 1908, (Gibson); 19 Sept., 1907, (Fletcher).
- Metrocampa perlata* Gn. 17 June, 24 Aug., 1903, (Young); 20 Aug., 1904; 12 Sept., 1903, (Gibson).
- Eugonobapta nivosaria* Gn. 7 July, 1902, (Young).
- Ennomos subsignarius* Hbn. 14 July, 1899; 24, 25 July, 1908, (Gibson); 1 Aug., 1906, (Fletcher).
- Ennomos magnarius* Gn. Em. 9, 15 July, 1904; 7 Sept., 1900; 15, 23 Sept., 1903; 23 Sept., 1899, (Gibson); 4 Sept., 1900, (Young); 24 Sept., 1907, (Fletcher).
- Xanthotype crocataria* Fab. 27 June, 1906; 6 July, 1905, (Fletcher); 28 June, 1899; 12 July, 1900, (Young); 6 July, 1905; 7 July, 1906, (Gibson).
- Plagodis serinaria* H.S. 18 May, 1903, (Young); 18 May, 1904, (Gibson); 18 May, 1905, (Fletcher), 26 May, 1906, (Taylor).
- Plagodis keutzingi* Grt. 26, 31 May, 1906, (Taylor), 2 June, 1902, (Young).
- Plagodis alcoolaria* Gn. 17 May, 1903, (Young.)
- Plagodis keutzingaria* Pack. 24 May, (Gibson).
- Plagodis phlogosaria* Gn. 14 July, 1899; 20 July, 1905, (Gibson); 24 July, 1902, (Young).
- Hyperitis amicaria* H.-S. 26, 31 May, 1906, (Taylor); 27 May, 1900, (Young).
- Ania limbata* Haw. 18 July, 1906; 13 July, 1900; 20 July, 1905; 31 Aug., 1899, (Gibson); 19 July, 1903, (Young).
- Gonodontis hypochraria* H.-S. 28 May, 1899, (Young); 2, 5 June, 1899; 12 June, 1904, (Gibson); 3, 8 June, 1903, (Fletcher).
- Gonodontis duaria* Gn. 29 May, 1901; 25 May, 1903, (Gibson); 31 May, 1900; 13 June, 1906, (Young).
- Gonodontis obfirmaria* Hbn. 30 May, 1901; 25 May, 1903, (Gibson); 18 June, 1902, (Young).
- Euchlaena obtusaria* Hbn. 25 June, 1900, (Young).
- Euchlaena effectoria* Walk. 28 June, 1904, (Young).
- Euchlaena johnsonaria* Fitch. 6 July, 1905, (Gibson).

- Euchlaena astylusaria* Walk. 18 June, 1903, (Young).
Euchlaena pectinaria D. & S. 6, 20 June, 1901, (Gibson).
Euchlaena sirenaria Strk. 8 June, 1903, (Young). When determining this specimen, Mr. Taylor reported: "May be only a variety of *pectinaria* but it is very different in appearance to our western form."
Eutrapela alciphearia Walk. 24 May, 1906, (Young).
Eutrapela hentaria Grt. 24 May, 1906, (Young).
Metanema inatomaria Gn. 29 May, 1905, (Fletcher); 6 July, 1903, (Young); 20 July, 1905, (Gibson).
Metanema determinata Walk. 30 June, 1903, (Young).
Priocycla armataria H.-S. 24 June, 1900, (Young).
Pero honestarius Walk. 31 May, 1902, 10 Aug., 1900, (Young); 5 June, 1906, (Fletcher); 3, 22 June, 1906, (Gibson).
Caberodes confusaria Hbn. 7 July, 1902, (Young); 6 July, 1905, (Fletcher); 14, 24 July, 1899; 20 Aug., 1904, (Gibson).
Caberodes majoraria Gn. 7 June, 1903, (Young).
Tetracis crocallata Gn. 25 May, 1906, (Taylor), 3 June, 1903, (Fletcher); 3 June, 1899, (Young).
Sabulodes arcasaria Walk. 27 May, 1901, (Gibson); 10 June, 1904, (Young).
Sabulodes lorata Grt. 3 June, 1903; 12 June, 1904; 9 June, 1908, (Fletcher); 5 June, 1903, (Gibson); 10 June, 1900, (Young).
Sabulodes transversata Dru. 7 July, 1903, (Young); 5 Aug., 1899; 14 Aug., 1903; 18 Aug., 1904, (Gibson); 9 Aug., 1906; 12 Aug., 1904, (Fletcher); 26 Aug., 1907, (Baldwin).
Abbotana clemataria S. & A. No date, (Fletcher).

Family BREPHIDÆ.

- Brephos injans* Moesch. 29 April, 1900, (Young); April, 2 May, 1896, (Fletcher).

PLANTS CAUSING SKIN IRRITATIONS.

The susceptibility of different individuals towards irritant juices of certain plants may be as different as the individuals themselves. That is to say, the juices of some plants may cause serious Dermatitis in a number of people, while others may not be affected in the slightest degree. Curiously enough all people alike seem to be affected by the sting of the common nettles; while the most common of all skin irritating plants, Poison Ivy, does not seem to affect all persons; even those susceptible may be affected in varying degrees. This peculiar tendency may be termed idiosyncrasy. Some persons cannot partake of strawberries, asparagus and other fruits or vegetables without their being troubled by Urticaria or like skin rashes. This is their idiosyncrasy, their peculiarity of constitution.

There are a large number of plants possessing such irritant juices. Some are well-known, like the Nettles, Poison Ivy, and the much favoured little Primula (*P. obconica*), which is so grateful a flowering plant during the winter months in our conservatories. Experiments have been made with a number of closely related primulas, all members of the *P. Sinensis* section. The Chinese Primula itself has caused considerable irritation to persons handling the plants. The leaves of this group of plants are covered with fine glandular hairs, which contain the irritant juice. It has been found that *Primula Sieboldii* Morr., *P. Arendsii* Pax., *P. Mollis* Hook., may also cause similar irritations. Strangely, however, people unsusceptible to the irritation of *P. obconica* have often suffered considerable annoyance from these latter species.

In examining the glandular hairs of these and similar plants I once had the misfortune to sting myself very severely with a Laportea from Australia (*L. gigas*). For weeks my arm was stiff and swollen, and for months—even years—as soon as the hand affected by the sting was put into cold water a severe pain shooting right through the limb was felt. There grows on Parliament Hill, right in the centre of Ottawa, another member of the same genus, (*L. canadensis*), which has a decidedly unpleasant action upon some people. One of the men at the Experimental Farm still bears large scars due to the effects of this plant.

Certain cruciferous plants with large brittle hairs cause a smarting effect like Stinging Nettles, but much less severe. The fine hairs covering the inside walls of some rosaceous fruits also may cause a very troublesome irritation to the unprotected skin. The glandulous hairs covering leaves and stems of some of our wild orchids, especially *Cypripedium pubescens*, *C. spectabile*, and *C. parviflorum* contain a secretion which acts much like *Primula obconica*.

Some records exist of an eczema-like inflammation of the skin caused by handling Common Ivy (*Hedera Helix*).

Humea elegans is another plant which causes frequent skin irritations. It is a compositous biennial from Australia and is one of the most beautiful herbaceous perennials, though little known in Canada.

No doubt there exist a number of other plants having similar properties, but those mentioned have been repeatedly recorded as having a decidedly disagreeable action on some persons. A saturated solution of lead acetate in alcohol added to an equal quantity of glycerine has been proven to be of the greatest value in relieving the often unbearable irritations.

H. T. Gussow.

SOME CANADIAN SENECIOS.

BY J. M. GREENMAN, CHICAGO, ILL.

In the preparation of a monograph of the North American species of the genus *Senecio*, the writer, through the kindness of Messrs. JOHN and JAMES M. MACOUN, has had the privilege of studying the entire representation of this genus in the herbarium of the Geological Survey of Canada. This collection is especially rich in northern forms, and in many instances excellent series of specimens illustrate individual species of northern distribution. Several plants, however, have been found which hitherto seem not to have been described; these, associated with material from the Gray Herbarium and the herbarium of the Field Museum of Natural History, are characterized and recorded, as follows:—

SENECIO BURKEI, sp. nov.

Herbaceus perennis; caulibus erectis 3–9 dm. altis simplicibus vel rarius ramosis striatis glabris; foliis inferioribus petiolatis ovato-oblongis 2–10 cm. longis 1–4.5 cm. latis ad apicem obtusis vel rotundatis basi cuneatis vel subtruncatis, foliis superioribus irregulariter inciso-dentatis vel pinnatifidis sessilibus et subamplexicaulibus et sursum gradatim reductis; inflorescentiis corymboso-cymosis; capitulis plerumque numerosis 10–12 mm. altis radiatis; bracteis involucri circiter 21 lineari-lanceolatis 6–8 mm. longis glabris vel floccoso-tomentulosus plus minusve purpurascens; floribus femineis ligulatis ca. 12; floribus disci numerosis (50–60); achaeniis glabris. Collected on the "east slope of the Rocky Mountains" by *Burke* (hb. Gray) type. ALBERTA: by the reservoir, Banff, 30 October, 1899, *N. B. Sanson* (hb. Geol. Surv. Canada, no. 22288); vicinity of Banff, July, 1906, *N. B. Sanson*, (hb. Geol. Surv. Canada, without number, and hb. Field Museum, cat. no. 288351); Banff, 28th July, 1904, *Miss Edith M. Farr* (hb. Field Museum, cat. no. 189413); mountain slopes, Crows Nest Pass, 31 July, 1887, *J. Macoun* (hb. Geol. Surv. Canada, no. 22785 in part). BRITISH COLUMBIA: open thickets, Spences Bridge, 31 May, 1889, *J. Macoun* (hb. Geol. Surv. Canada, no. 14811 in part); shaded banks, mouth of Silica Creek, Chilliwack River, 29 June, 1901, *J. M. Macoun* (hb. Geol. Surv. Canada and hb. Gray, no. 26685); on a bog in Chilliwack Lake, 19 July, 1901, *J. M. Macoun* (hb. Geol. Surv. Canada, no. 26682a); in a marsh east of Chilliwack Lake, 25 July, 1901, *J. M. Macoun* (hb. Geol. Surv. Canada and hb. Gray, no. 26682); foot of a snow slide, Middle Creek, Chilliwack River, 2 August, 1901, *J. M. Macoun* (hb. Geol. Surv. Canada, no. 26681); in thicket

by stream at 150 mile house, Cariboo Road, 15 July, 1906, *E. Wilson*, no. 700 (hb. Geol. Surv. Canada); Sophie Mt., 17 and 20 July, 1902, *J. M. Macoun* (hb. Geol. Surv. Canada and hb. Gray, nos. 64990, 64991); low ground, Skagit Valley, alt. 770-925 m., 10 July and 21 August, 1905, *J. M. Macoun* (hb. Geol. Surv. Canada and hb. Gray, nos. 69358, 69359). ROCKY MOUNTAINS: cold moist slopes, Kicking Horse Pass, 13 September, 1884, *J. Macoun* (hb. Geol. Surv. Canada, no. 14818); river margins, Silver City, 7 August, 1885, *J. Macoun* (hb. Geol. Surv. Canada, no. 14772); swamps, Kicking Horse Lake, alt. 1540 m., 10 August, 1890, *J. Macoun* (hb. Geol. Surv. Canada, no. 14810). MONTANA: open ground, shore of Lake McDonald, alt. 300 m., 25 July, 1901, *F. K. Vreeland*, no. 964 (hb. Geol. Surv. Canada, no. 67117).

SENECIO MULTNOMENSIS, sp. nov.

Herbaceous perennis; caulibus erectis vel plus minusve flexuosis 3-7 dm. altis in axillis foliorum floccoso-tomentulosis cetera glabris; foliis inferioribus petiolatis oblongo-oblancoelatis 4-15 cm. longis 0.8-2 cm. latis utrinque glabris apice obtusis vel rotundatis crenato-serratis vel plus minusve lyrato-lobatis cum remote lobis, superioribus sessilibus et subplexicaulibus; inflorescentiis terminalibus corymbo-cymosis, pedunculis plerumque elongatis; capitulis 10-13 mm. altis radiatis; squamis involucri campanulati circiter 21 lineari-lanceolatis 8-10mm. longis acutis pallide viridibus glabris, apice penicillatis; floribus femineis ligulatis ca. 13, ligulis flavis; floribus disci ca. 60; achae-niis glabris. OREGON: Multnomah County, June, 1877, *T. J. Howell*, no. 221 (hb. Gray) type; without locality, June, 1877, *Howell* (hb. Field Museum, cat. no. 69229); low flats, Cascades, coll. of 1868-9, *A. Kellogg* and *W. G. Harford* no. 537 (hb. Gray). BRITISH COLUMBIA: Field, 6 August, 1904, *Miss Edith M. Farr* (hb. Field Museum, cat. no. 189411); Trail, 18 June, 1902, *J. M. Macoun* (hb. Geol. Surv. Canada and hb. Gray, no. 64992). SASKATCHEWAN: without further locality, Palliser's Brit. N. Am. Expl. Expedition, coll. of 1857, *E. Bourgeau* (hb. Gray). A species related to *S. Burkei* Greenm., but distinguished readily from it by the more or less flexuous stem, relatively narrow oblong-oblancoelate basal leaves, remotely lobed lower stem-leaves with broad rounded sinuses, and usually long pedunculate heads. From *S. Balsamitae* Muhl. to which certain of the above specimens have been referred by some authors, *S. multnomensis* is separated easily by the larger heads and longer involucreal bracts.

SENECIO FARRIAE Greenman, Bot. Gaz. 42: 147, 1906; Contr. Bot. Lab. Univ. Pa. 3: 74, 1907. Through the courtesy

of Mr. J. M. MACOUN the writer has had an opportunity to study an excellent lot of about a hundred specimens of this species, which were collected in the vicinity of Banff, Alberta, by Mr. N. B. SANSON, in July of 1906. Several mounted specimens were also found by the writer along with other material of the genus kindly sent to him for examination from the herbarium of the Canadian Geological Survey. The entire series of specimens at hand shows naturally a greater range of variation than the limited material on which the species was founded; nevertheless the essential characters ascribed originally to the species are retained throughout, and the following additional data may be recorded: Stems 1-3 dm. high, lowermost leaves ovate to slightly obovate 1-4 cm. long, 1-2.5 cm. broad; ray-flowers 10-14; disk-flowers 50-60. In addition to Miss FARR's specimen, cited in the original publication of the species, the following collections well represent the species. ALBERTA: damp places, Red Deer, *H. H. Gaetz*, coll. of 1895, (hb. Geol. Surv. Canada, no. 11622); in grass along Bragg's Creek, Elbow River, 26 June, 1897, *J. M. Macoun* (hb. Geol. Surv. Canada, no. 22784); crossing of McLeod's River, 19 June, 1898, *W. Spreadborough* (hb. Geol. Surv. Canada, no. 19725); Devil's Head Lake, alt. 1385 m., 13 July, 1899, *N. B. Sanson* (hb. Geol. Surv. Canada, no. 22125); vicinity of Banff, July, 1906, *N. B. Sanson* (hb. Geol. Surv. Canada, without number; hb. Field Museum, cat. no. 288350); Crows Nest Lake, 9 July, 1883, *Dr. G. M. Dawson* (hb. Geol. Surv. Canada, no. 14800 in part); Banff, 28 June, 1905, *Miss Edith M. Farr* (hb. Field Museum, cat. no. 189412); Sulphur Springs, Banff, alt., 1415 m., 11 June, 1906, *F. K. Butters* and *C. O. Rosendahl*, no. 1324 (hb. Field Museum, cat. no. 276752).

SENECIO BALSAMITAE Muhl. in Willd. Sp. Pl. 3: 1998, 1800.

A very interesting suite of specimens collected by Mr E. WILSON in the Kamloops District, British Columbia, July, 1906, nos. 686, 672 (hb. Geol. Surv. Canada) are indistinguishable from eastern forms of this species secured by Professor M. L. FERNALD on the Gaspé Peninsula, Province of Quebec, in 1904.

SENECIO BALSAMITAE Muhl., var. THOMSONIENSIS, var. nov.

Herbaceous perennis; caulibus erectis simplicibus 3-4.5 dm. altis floccoso-tomentosis; foliis inferioribus petiolatis oblongo-oblanciolatis 3-7 cm. longis 5-12 mm. latis obtusis crenato-serratis juventate utrinque floccoso-tomentosis plus minusve glabris, foliis superioribus petiolatis vel sessilibus usque ad 10 cm. longis pinnato-lobatis, lobis remotis; inflorescentiis tomentosiss; capitulis radiatis per anthesem 6-8 mm. altis. BRITISH COLUMBIA: in grassy thickets fifty miles up North Thompson River, 16 June, 1889, *J. M. Macoun* (hb. Geol.

Surv. Canada, no. 14822); Lake Osoyoos, 31 May, 1905, *J. M. Macoun* (hb. Geol. Surv. Canada and hb. Gray, no. 69357).

This plant was taken at first to represent an undescribed species; and while it differs from typical *S. Balsamitae* Muhl. in being at first floccose-tomentose throughout, and but tardily glabrate, and in having a rather leafy stem, yet these differences do not seem strong enough to merit a specific characterization.

SENECIO MANITOBENSIS, sp. nov.

Herbaceous perennis; caulibus erectis 2-3 dm. altis simplicibus vel interdum ramosis glabris vel in axillis foliorum subtomentosis; foliis subcrassis inferioribus petiolatis oblanceolatis 2-7 cm. longis 2-12 cm. latis serratis vel inaequaliter dentatolobatis basi sensim angustatis utrinque glabris, foliis superioribus petiolatis vel sessilibus lacinato-pinnatifidis, laciniis angustissimis remotis; inflorescentiis corymboso-cymosis; capitulis per anthesem 8-10 mm. altis ligulatis; involucris campanulatis glabris, squamis involucri plerumque 21 lanceolatis 7 mm. longis acutis glabris quam floribus disci brevioribus; floribus femineis ligulatis 6-10, ligulis flavis; floribus disci 45-60; achaeniis 3-3.5 mm. longis, costis alternis hirtellis. MANITOBA: on "sand hills at Brandon and Old Wives Lakes, N.W.T. west of Brandon," 22 June, 1881, *J. Macoun*, no. 22 (hb. Gray), type; on open prairie, south of Sewell, 12 June, 1876, *J. Macoun* (hb. Geol. Surv. Canada, no. 12232); Gravelly or rocky places, Flat Creek, "N.W.T.," 20 June, 1880, *J. Macoun*, no. 103 (hb. Geol. Surv. Canada, no. 14796); Lake Winnipeg Valley, *Bourgeau*, coll. of 1857 (hb. Gray); Stewart's Lake Mountain, 21 June, 1875, *J. Macoun* (hb. Geol. Surv. Canada, no. 14777 in part); north of Carberry, 14 June, 1906, *J. Macoun* and *W. Herriot* (hb. Geol. Surv. Canada and hb. Field Museum, no. 69753); on sand hills, eight miles west of Petrel, 17 June, 1906, *J. Macoun* and *W. Herriot* (hb. Geol. Surv. Canada and hb. Field Museum, no. 69755). NORTH DAKOTA: on sand hills, McHenry County, 13 July, 1899, *J. Lunell*, no. 24 (hb. Gray).

A species somewhat intermediate between *S. plattensis* Nutt. and *S. Balsamitae* Muhl. It is distinguished from the former by the narrowly oblanceolate lower leaves and by the glabrous character of stem and foliage. From the latter it is distinguished by the thicker, firmer texture of the foliage, the serrate-dentate basal leaves, and by the pubescence of the achenes.

SENECIO WILLINGII, sp. nov.

Herbaceous perennis subglaucescens; caulibus erectis 2.5-3 dm. altis glabris striatis foliaceis; foliis oblongo-lanceolatis 3-12 cm. longis 0.7-2 cm. latis crenato-serratis vel multipinnato-

lobatis juventate subtus in costis et nerviis et marginibus petioli floccoso-tomentulosis denique glabratis, lobis oblongis ad apicem rotundatis integris vel obtusodentatis; inflorescentiis dense corymboso-cymosis; capitulis 8-10 mm. altis radiatis; involucris campanulatis calyculatis parce floccoso-tomentulosis glabratis, squamis involucris ca. 21 lineari-lanceolatis 6-7 mm. longis acutis; floribus femineis ligulatis ca. 12, ligulis flavis; floribus disci 60-70; achaeniis glabris. ALBERTA: near Olds, August, 1894, *W. W. Willing* (hb. Geol. Surv. Canada, nos. 14843, 6063; fragment and photograph in hb. Field Museum). Here also is referred doubtfully a specimen collected in gravelly soil at Ninga, Manitoba, 1 June, 1908, *B. J. Hales*, no. 24 (hb. Geol. Surv. Canada).

This species stands nearest to *S. plattensis* Nutt., but differs in its subglauca character, smooth and strongly striated stem and glabrous achenes.

SENECIO CANUS Hook., var. ACRAEUS, var. nov.

Caulis 3-4 dm. altus; foliis oblanceolatis vel lanceolatis subintegris vel irregulariter inciso-dentatis 4-10 cm. longis 0.5-1.5 cm. latis juventate utrinque lanato-tomentosis supra denique glabratis; inflorescentiis corymboso-cymosis, pedunculis per longis. SASKATCHEWAN: Spy Hill, 23 June, 1879, *J. Macoun*, no. 52 (hb. Gray), type; on dry gravelly slopes, Spy Hill, "N.W.T.," 26 June, 1879, *J. Macoun* (hb. Geol. Surv. Canada, no. 14837 in part).

The variety here described is a somewhat taller plant than the species proper with more deeply cut stem-leaves and with a tendency for the upper leaf-surface to become more or less glabrous; furthermore the inflorescence is more open and has relatively long branches.

NOTES ON NATIVE ORCHIDS.

BY CHARLES MACNAMARA, ARNPRIOR, ONT.

Among other peculiarities of our native orchids may be mentioned the surprising manner in which a species will suddenly appear in some place where it was rare or unknown before, only to disappear again in the next year or two. No doubt all plants have their "off" years, but why perennials like the orchids should disappear as suddenly and completely as they do, it is hard to say. Their unexpected appearance is probably due to the exceedingly light nature of their seeds, which a fortuitous wind may carry long distances. But whatever the cause, this remarkable habit adds great zest to orchid hunting, for

one never knows what good fortune may be waiting just around the corner, even in a locality one knows well. Thus, last summer, while walking along a woodland path which I had followed hundreds of times before, I was delighted to find a vigorous plant of the rather rare *Corallorrhiza striata* growing so close to the beaten track that I marvel how it escaped injury from passersby. Another such instance is that of a specimen of the somewhat scarce *Microstylis unijolia* which suddenly appeared this summer in the moss at the side of a road I have travelled for years. I had never before seen this species within four or five miles of the place. The little plant would certainly not have survived the summer in this spot, for the moss it grew in had begun to dry up, and its single leaf was drooping pathetically when I found it. I cut away a large piece of the surrounding moss and transplanted plant and all in a cool, damp swamp. When I revisited it some days later, its leaf had stiffened up again and two of its ovaries had begun to swell. Additional instances of fortunate finds of the kind might be cited, such as *Liparis Loeselii* appearing unexpectedly in a haunt of *Habenaria hyperborea* which I had visited scores of times before, but there is the other side, already mentioned, to this singular orchidaceous habit. If they sometimes delight the botanist by their un hoped-for apparition, they can also disappoint him sadly on occasion. In the summer of 1906, I photographed *Habenaria orbiculata* which that year was very plentiful—for an orchid. The negatives were not entirely satisfactory, and I determined to photograph the plant again next season. But alas, I have never since come across a good specimen in blossom in this vicinity. A few pairs of the flat shining leaves can be found, but they put forth no flowers. The handsome *Habenaria psycodes*, too, has disappeared entirely from a swamp where it grew two years ago. In a beaver meadow which always heretofore contained a large number of *Spiranthes cernua*, this year I can find only two or three; and I have sought diligently but in vain for two plants of *Microstylis monophyllos* which grew last year in a cedar swamp near Marshalls Bay. Neither the original plants, which showed healthy signs of setting seed when I last saw them, nor any of their progeny can now be found.

Some species, however, are quite constant in their habitat. I know a flourishing *Habenaria bracteata* which has flowered every year for six years now. This year, though, its insect guests seem to have all sent in their regrets, for not one of its flowers has set seed. The *Cypripediums*, too, can generally be found in the same place year after year. This is true more particularly of *C. parviflorum* and *C. hirsutum (spectabile)*, which, growing as they do in mosquito-infested swamps, are

pretty safe from the casual flower-picker; but the beautiful *C. acaule*, inhabiting open woods is not so protected, and frequently falls a victim to passersby. Consequently it is becoming decidedly scarce in populated districts. This, however, is due to an accident of civilization, and not to any natural exigency.

The peculiar flowering habits of *Epipactis* have been frequently noticed before. One may sometimes find large numbers of their beautifully veined leaves, but not a single blossom. The dozen or so plants of *E. pubescens* which I know of around here blossomed freely for several years past until this summer, when only one plant put forth a flowering spike. On the other hand, in a small swamp where I never saw more than two or three of the plants in blossom before, this year I counted 132 fine spikes of *E. repens*, and later observation shows that they have nearly all set seed.

This raises the question as to what happens to the immense quantity of seeds which an orchid produces every year. A rough count of the seeds in a capsule of *Cypripedium parviflorum* showed the number to be about 10,000. A single capsule of *Habenaria hyperborea* easily contains 2,000 seeds, and as a large plant bears some 15 or 20 such capsules, the total number of seeds to a plant is 30,000 to 40,000. A well grown specimen of the small *Liparis Loeselii* produces 60,000 seeds in its six or eight capsules. *Microstylis unifolia* never seems to get more than two to four of its blossoms fertilized, but each of its tiny capsules contain some 1,200 seeds. Large as these figures seem, they are nothing to the almost incredible profusion of seeds grown by some tropical species. A German botanist found 1,756,440 seeds in a single capsule of a *Maxillaria*, and the plant sometimes bore half a dozen such capsules. Darwin estimated the seeds produced annually by an European species of *Orchis* at 186,000, and shows that if all the seeds grew, by the third generation the descendants of a single plant would be sufficient to "clothe with one uniform green carpet the entire surface of land throughout the globe." But, in spite of this immense production of seed, orchids, even in the tropics are never very plentiful when compared with other families, and in this country they are always decidedly scarce. As they are practically all cross-fertilized the number of bad seeds must be very small, and admitting that they are somewhat fastidious in their various habitats—the saprophytic coral-roots, for instance, requiring a quite special soil—one would nevertheless imagine that a dozen or so at least of the many thousands of seeds set free by even a single plant would find some suitable soil near the parent. But, nothing of the kind occurs. The same plants come up

year after year, but there is practically no increase in the always scanty number of individuals. In truth, orchids seem to have specialized too far or in the wrong direction. The marvellous apparatus they have developed to ensure cross-fertilization is only moderately successful. It was long ago noticed that a large proportion of their flowers did not set seed, the appropriate insects having failed to visit them. And of the seeds that do come to maturity only an infinitesimal percentage ever take root and grow. They are an aristocratic but decadent family, that in the struggle for supremacy, have been left far behind by the pushing Ox-eye Daisy and the parvenu Viper's Bugloss. But while we deplore the apparent lack of vitality and consequent scarcity of these always interesting and often very beautiful plants, we may perhaps find some consolation in the reflection that at any rate none of them will ever be held up to public execration in the Agricultural Department's book of "Farm Weeds."

NOTES.

THE CARDINAL (*Cardinalis cardinalis*, Licht.) AT OTTAWA.—A fine adult male cardinal was noticed by Col. Wm. P. Anderson, in his garden at 64 Cooper St., on June 22nd, and in his own and neighboring gardens for two or three days afterwards. It was in company with the common robin and was apparently a wild bird. It fed upon green rowan berries and the green seeds of the lilac. The cardinal has been collected at several places in western Ontario and two have been taken as far east as Toronto. The bird seen by Col. Anderson may have escaped from a cage, but it is not improbable that this individual came north with other birds during the spring migration as it is not rare in New York State up to lat. 40°.

J. M. MACOUN.

A FAMILY OF SHARP-SHINNED HAWKS.—During past seasons many nests of eggs of *Accipiter velox* have been located, but no sets of six have come under investigation. On August 6th, while passing through some evergreen woods, I was attracted by the cries of a Sharp-shinned Hawk. After a close scrutiny of the spruce trees the nest was located in the top of one of them and at first glance it could be seen that it was occupied, as the rim was clogged with excrement and feathers. A nearer approach revealed the tenants peering anxiously through the evergreen boughs. When about an arm's length from the nest a formid-

able battle-line of six young Sharp-shinned Hawks was encountered the whole family being perched around the edge and watching every movement of the intruder. The birds vied with one another in the attack and shuffled each other about in the endeavour, to my mind, to obtain the most prominent striking-point. One more daring and adventuresome than the rest fell over the side of the nest and hung head downwards from the projecting twigs. The others, apparently, envied this position, as they made several attempts to use the unfortunate bird as a perch. At this juncture I descended, as it was evident the family would shortly come to grief. The parent birds, strange to say, did not join in this demonstration, but kept some fifty yards away, uttering their alarm notes at intervals. The young, judging by their vigorous protests and actions, were ready to leave the nest. A week later the birds, old and young, were discovered in the tree tops in the vicinity.

W. J. BROWN, Westmount, Que.

THE WHITE-WINGED JUNCO IN MANITOBA.—On the sixth of October, my brother, Stuart, saw a strange Junco among a number of *hyemalis*, and recognising it as probably new he collected it. It answers very well to *aikeni*, having the characteristic white wing bars with the three outer tail feathers wholly, and the fourth partly white.

This makes three different Juncos recorded for the province: *hyemalis*, an abundant species which breeds in fair numbers; *aikeni*, and *shufeldti*, both as yet only observed as migrants.

The White-winged Junco breeds in North Dakota and winters in Colorado and Kansas. It has not, so far as I am aware, been previously recorded for Canada, though odd individuals that looked like it have been seen from time to time at Aweme.

NORMAN CRIDDLE.

HOYT'S HORNED LARK IN MANITOBA.—This Horned Lark, *Otocoris alpestris hoyti*, was taken by my brother, Stuart, and individuals identified through the courtesy of the Chief of the U.S. Biological Survey, by Mr. Oberholser. Though this appears to be the first definite Manitoba record, the bird is quite abundant during the the migratory seasons and arrives in company with the Lapland Longspurs. It can be readily distinguished in the spring from the Prairie Horned Lark, by its rather darker and more distinctly marked plumage. In habits, too, it may be told by its manner of hiding behind clods of earth, like its companion the Longspur, whereas the latter always mounts them, as if desirous of being seen.

Unfortunately the geographical races of Horned Larks are so closely allied that it is almost impossible to tell one from another in nature, and it is only by studying their habits that we can hope to distinguish them.

Hoyt's Horned Lark has been recorded by me for several years past under "Desert Horned Lark," which has not yet been authentically taken in the province. Both these birds occur in Saskatchewan and Alberta, and the latter, according to Oberholser, breeds north of latitude 49°.

NORMAN CRIDDLE.

FESTUCA OCCIDENTALIS IN ONTARIO.—In an open coniferous formation on a rocky point at Oliphant, Ontario, on the Lake Huron shore of the Bruce Peninsula on June 14th, 1911, I found *Festuca occidentalis*, Hook, to be common. On June 16th, I found the same species in a *Populus-Thuja* formation near Boat Lake at the centre of the Base of the Peninsula.

As this species was not reported from further east than Keweenaw County, Michigan, its discovery on the Bruce Peninsula was an eastward extension of range and I consequently sent specimens to Prof. A. S. Hitchcock, Systematic Agrostologist of the Bureau of Plant Industry at Washington, who confirmed my identification. The occurrence of this western grass on the Peninsula is interesting in view of the fact that I have found a somewhat marked western and southern tendency in the flora of this locality, particularly on the Lake Huron shore. Here are found *Solidago riddellii*, Frank, *Cacalia tuberosa*, Nutt, *Linum medium*, Britton, *Satureja glabra*, Fernald and *Gentiana procera*, Holm, all plants whose range lies mostly to the south and west of Ontario. I have already recorded (*Rhodora*, Vol. 10, No. 119), the occurrence on the Peninsula of another western grass *Melica smithii*, Vasey.

A. B. KLUGH, Queen's University,
Kingston.

NEW MEMBERS.

The following new members were elected at a recent meeting of the Council of the Club:

- MISS F. FYLES, Ottawa.
- MR. E. A. HOWES, Ottawa.
- MR. D. A. MARTIN, Lawson, Sask.
- MR. EDW. ARNOLD, Montreal.
- MR. H. W. BEERS, Bridgeport, Conn., U.S.
- MR. J. W. EASTHAM, Ottawa.

THE OTTAWA FIELD-NATURALISTS' CLUB.
LECTURE PROGRAMME

- November 14th, 1911, (Tuesday), (under joint auspices of the Ottawa Horticultural Society and the Ottawa Field-Naturalists' Club).
"Landscape Gardening" (Illustrated).
Prof. F. A. Waugh, Amherst, Mass.
(Normal School Assembly Hall).
- November 28th, 1911, (Tuesday)—
"The Big Game of the Ottawa Valley" (Illustrated).
Prof. E. E. Prince, Dominion Commissioner of Fisheries, Ottawa.
(Normal School Assembly Hall).
- December 12th, 1911, (Tuesday)—
"Some Insect Friends and Foes" (Illustrated).
The President, Mr. Alex. McNeill, Chief of Fruit Division, Ottawa.
(Normal School Assembly Hall).
- January 9th, 1912, (Tuesday)—
"Water and Health."
Prof. F. T. Shutt, M.A., Chemist, Central Experimental Farm, Ottawa.
(Normal School Assembly Hall).
- January 23rd, 1912, (Tuesday)—
"Habits of Some Turtles and Batrachians" (Illustrated with specimens).
E. A. LeSeur, Esq., Ottawa.
(Carnegie Library).
- February 13th, 1912, (Tuesday)—
"Variation in Plant Life, its biological significance and practical value"
(Illustrated with specimens).
M. Oscar Malte, Ph.D., Ottawa.
(Carnegie Library).
- February 27th, 1912, (Tuesday)—
"The Evolution of the Worlds" (Illustrated).
J. S. Plaskett, B.A., F.R.S.C., Dominion Observatory, Ottawa.
(Normal School Assembly Hall).
- March 8th, 1912, (Friday)—
(Under joint auspices of the Ottawa Normal School and the Ottawa Field-Naturalists' Club).
"Our Native Birds" (Illustrated).
Mr. Charles W. Nash, Biologist, Provincial Museum, Toronto.
(Normal School Assembly Hall).
- March 19th, 1912—ANNUAL MEETING.
Election of Officers, Annual Reports, Etc. (A full attendance of members is requested).
(Carnegie Library).

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