

MARCH, 1905.

VOL. XVIII, No. 12

THE OTTAWA NATURALIST.

Published by the Ottawa Field-Naturalists' Club.

CONTENTS.

	PAGE
1. President's Address, by W. T. Macoun.....	213
2. New British Columbian Rosaceæ, by Edw. L. Greene. . .	215
3. Some of the Rarer Plants of Wellington County, Ont., col- lected by A. B. Klugh..	217
4. Meetings of the Entomological Branch	219
5. Botanical Branch	223

(ISSUED MARCH 14, 1905.)

OTTAWA, CANADA,
OTTAWA PRINTING COMPANY (LIMITED),
3 & 5 MOSGROVE ST.

JAMES OGILVY, Bookseller, Stationer and Publisher.
191 Sparks Street

FOR SALE Transactions and Naturalist. W. A. D. LEES, 78 Rideau St.

<p>WM. STRACHAN, Importer and Dealer in Shelf and Heavy Hardware, Stoves, Tinware, Paint, &c. Corner Queen and Bridge Streets, OTTAWA. Phone 629</p>	<p>R. A. McCORMICK, Prescription Druggist, 75 Sparks Street. Phone 159. Ottawa.</p>
<p>A. G. PITTAWAY, ...PHOTOGRAPHER. 58 Sparks St. OTTAWA.</p>	

James W. Woods,
Headquarters
for....

Camping Outfits, Tents, Kit Bags,
Blankets, Clothing, etc.

See us about your **NEW AWNING.**
Special attention paid to Letter Orders

64-66 Queen St.

SEND FOR CATALOGUE

<p>R. H. WRIGHT, Rose Grower and Florist, AYLMER EAST. Store—63 Sparks Street, Ottawa.</p>	<p>HENRY BIRKS & SONS, Manufacturing Gold and Silversmiths DIAMOND MERCHANTS. Phillips' Square, Montreal and 57 & 59 Sparks Street, Ottawa.</p>
<p>For neat printing GO TO.... Ottawa Printing Co., Ltd. 3 & 5 Mosgrove St., OTTAWA.</p>	<p>C. STRATTON, Wholesale and Retail Grocer, &c. Corner Sparks and Lyon Sts. TEL. 664.</p>

Ketchum & Co., SPORTING GOODS 52, 54, 56 BANK STREET.

KODAKS
-
TOPLEY
-
KODAKS

THE OTTAWA NATURALIST.

VOL. XVIII.

OTTAWA, MARCH, 1905.

No. 12

PRESIDENT'S ADDRESS.

W. T. MACOUN.

Members of the Ottawa Field-Naturalists' Club, Ladies and Gentlemen :—

About this time last year we celebrated the 25th anniversary of the organization of the Ottawa Field-Naturalists' Club, and it was with feelings of gratification that many of the original members of the Club came together and told of the work which had been accomplished by the Club during the past twenty-five years. Another year has gone since then and the Club has entered upon its second quarter century ; let us hope that there will be continued progress in the study of Nature in the Ottawa district, and that we shall realize even more than we have done in the past, what a broad field of work there is, and how little is yet known in the wonderful realm of Nature which lies about us. We can, however, look back over the past year's work with some satisfaction and feel that there is still a bright future for the Club. Although planned by last year's Council, the first work of this year was the evening devoted to Practical Demonstrations of How to Collect and Preserve Natural History Specimens, on April 5th, 1904. This proved very successful. The meeting was well attended, the demonstrations were good, and the numerous questions which were asked showed that this was a popular way of teaching Natural History and of interesting people in the study of it. It is expected that this will be repeated, in some respects at least, next spring.

During the spring, summer and autumn three general excursions were held and six sub-excursions. References have been

made to some of these in THE OTTAWA NATURALIST, and fuller particulars regarding them will be given in the Annual Report of the Council. While at these excursions there is not very much new work done, it is felt that their principal value is in the assistance which the leaders of the Club are able to give at these times to those who are beginning the study of Natural Science and to the delightful outing which they afford to those who, perhaps, may be induced by seeing the enthusiasm of others, and the many attractions which the study of Natural History affords, to investigate for themselves, and thus develop a love for such work.

The Botanical Branch of the Club, which last winter held so many successful meetings at the homes of the members, has begun work this winter with much enthusiasm, and those who attend these meetings feel that in no way can Natural History be studied so well as among a small band of enthusiasts, each with his own views on certain questions and eager to give expression to them. The Entomological Branch will shortly resume its meetings also, and it is hoped that the Ornithologists will soon organize.

There has probably never been a more popular, and at the same time a more valuable, volume of THE OTTAWA NATURALIST than that of the current year. There has been a number of bright articles which have attracted the attention of members who do not always read THE NATURALIST carefully. The series of Nature Study articles continues to be of a very high order, and it is hoped that more members of the Club will take advantage of the pages devoted to Nature Study to give expression to their enthusiasm. There must be many members of the Club who are just bubbling over with good things, if they would only present them. The Editor of THE NATURALIST informs me that he finds it very difficult to get material for THE NATURALIST from local members, and if outsiders did not appreciate the advantages of publishing articles in THE NATURALIST he would be very short of material. Let us try and do better in the future. All lovers of Nature should be able to contribute something from personal observation that would be interesting and useful to others.

We invite you to study the Programme of Soirées for this winter. A change has been made this year in the character of the

programme, and the meetings will be more informal than they have been for some years. It is believed that greater good will be accomplished by giving more time for general discussion. A glance at the subjects which are to be discussed and the men who will present them is sufficient to show what is in store for the members of the Club this winter.

I desire to express on behalf of the Club our feelings of appreciation for the use of the rooms at the Normal School and for the courtesy shown by Principal White.

It is with feelings of deep regret that we have to record the loss of a member of the Ottawa Field-Naturalists' Club who was always during the last twenty two years of her lifetime one of the Club's most valued and best friends. I refer to Miss A. M. Harmon, whose sad death startled us not many weeks ago. If there was ever one who felt the thrill which Nature gives at times to those who know and feel her charms, Miss Harmon was one. She was one of the most faithful members of the Club, and attended regularly its excursions, soirées and annual meetings. The members of the Club will miss her kindly face this winter, and I am sure will trust that her love for Nature is expanding in that broader field beyond the grave.

Ladies and gentlemen, members of the Ottawa Field-Naturalists' Club, I anticipate a most enjoyable and profitable series of meetings this winter.

NEW BRITISH COLUMBIAN ROSACEÆ.

By EDW. L. GREENE.

MALUS MACOUNII. Tree, 20 feet high, four inches in diameter: leaves ample, rather thin, oval, mostly obtuse, from slightly to conspicuously 3-lobed, 2 to 3½ inches long, 1½ to 2½ inches wide, sharply serrate, glabrous on both faces even when young: pedicels nearly glabrous and exterior of calyx wholly so, only the inner face of the acutely triangular reflexed lobes tomentose: corolla, large, white: fruit not seen.

Margin of Chilliwack Lake, B.C., 7 and 13 July, Mr. J. M. Macoun. Thoroughly distinct from *M. rivularis* by its broad

obtusish thin glabrous 3-lobed foliage, and equally peculiar pedicels and calyx.

FRAGARIA LATIUSCULA. Low and not slender, the parts rather firm, peduncles 3 to 6 inches high, the leaves nearly as long, both peduncles and petioles villous with spreading hairs: leaflets pale, glaucescent and almost glabrous above, glaucous and pilose-pubescent beneath: leaflets in the largest leaves not very dissimilar, all on uncommonly long petiolules, very broadly cuneate-obovate, 1 to $1\frac{3}{4}$ inches long and nearly as broad, those of smaller earlier leaves even broader than long, all coarsely, deeply and evenly crenate: calyx-segments quadrate-oblong, very acute, the elliptic bracteoles quite as long: corolla $\frac{3}{4}$ inch broad, the petals mostly broader than long and overlapping: achenes large, superficial.

Chilliwack Valley, also by Mr. Macoun, 1891; 34,337, 34,338 and 34,339 of the Geological Survey collection.

FRAGARIA RETRORSA. Slender, soft and delicate woodland plant 6 or 8 inches high; petioles, peduncles and pedicels retrorsely long-villous: leaflets light-green above and with few scattered hairs, underneath pale and glaucescent as well as more hairy, especially along the fine whitish veins, the middle one rather acutely obovate-rhomboidal, 1 or 2 inches long, the laterals similar but oblique, the teeth of all minutely cuspidate-apiculate: calyx-segments almost caudately acuminate: corolla small for plant, about $\frac{3}{4}$ inch wide; petals round-obovate, not overlapping, dull white, turning red in drying: fruits large, subglobose: achenes superficial.

Collected in the Chilliwack Valley 1901 by Mr. J. M. Macoun and distributed under Geol. Surv. No. 34,336. No. 34,335 may be specifically the same, but in this the pubescence is scanty and scarcely retrorse; but if habit, foliage and flowers offer here the essential marks of a species, the two numbers must bear the same specific name.

SOME OF THE RARER PLANTS OF WELLINGTON
COUNTY, ONT.

Collected by A. B. KLUGH.

AZPHRODIUM BOOTHII. Very rare. One plant only found, in a cedar swamp near Guelph, Ont. June 28, 1903.

ASPLENIUM VIRIDIS. Rare. Moist mossy rocks near Guelph, July 6, 1903.

MUHLENBERGIA SYLVATICA. Common in places along the River Speed, near Guelph.

SPOROBOLUS VAGINÆFLORUS. Abundant along roadsides throughout the southern half of Wellington Co.

ARRHENATHERUM AVENACEUM. Roadsides south of Guelph.

POA ALSODES. Fairly common in woods south of Guelph. This is not the type of *alsodes* but a glabrous-glumed form with few and long branches, thus somewhat approaching *P. debilis*, but distinguished from that species by the very acute flowering glumes and the longer and broader leaves.

PUCCINELLIA DISTANS. Along roadsides south of Guelph.

AGROPYRUM CANINUM. Common in some thickets south of Guelph.

ARETHUSA BULBOSA. Fairly common in an open bog south of Guelph.

ORCHIS ROTUNDIFOLIA. Frequent in a bog south of Guelph.

HABENARIA TRIDENTATA. Frequent in an open bog south of Guelph.

HABENARIA LACERA. Common in an open bog south of Guelph.

SALIX AMYGDALOIDES. Very common in Wellington Co. and wherever I have been in southern and south-central Ontario. In the southern portion of Wellington Co. it outnumbers *S. nigra* twenty to one. Usually passed over for *S. nigra*, but easily distinguished by the leaves being glaucous beneath instead of bright green as in *S. nigra*.

SALIX SERISSIMA. Fern. Rather scarce in southern Welling-

ton. A very distinct species (*Rhodora*, Jan., 1904) recently separated from *S. lucida* by Dr. Fernald. The capsules of this species do not dehisce until late in October or the beginning of November, while those of *S. lucida* do so in June.

SALIX PURPUREA. Rare. A shrub near Puslinch Lake, in the south of the county.

SALIX SERICEA. Our most abundant willow.

SALIX PETIOLARIS. Scarce.

NYPHÆA RENIFORMIS. Common in Puslinch Lake.

ADLUMIA CIRRHOSA. Scarce. Rockwood, Ont.

LEPIDIUM CAMPESTRE. Scarce.

LEPIDIUM INTERMEDIUM. Our common *Lepidium*. I have not yet found *Virginicum* here.

BARBAREA VULGARIS. Scarce.

ALYSSUM CALYGINUM. Common along roadsides south of Guelph.

AMELANCHIER CANADENSIS ROTUNDIFOLIA. Common at Puslinch Lake.

PHUS VENFNATA. Rare at Puslinch Lake.

VICIA TETRASPERMA. Along the C. P. R. track near Killean, Ont.

VIOLA SELKIRKII. Rare.

LYTHRUM SALICARIA. Rare. At the west end of Guelph by the roadside.

CONIOSELINUM CANADENSE. Common in bogs and damp ground in the south of the county.

ANGELICA ATROPURPUREA. Common near Guelph and eastward in the county.

MONOTROPA HYPOPITYS. Scarce at Puslinch Lake.

MONARDA DIDYMA. Common along the Speed west of Guelph.

VERBENA STRICTA. Rare at Puslinch Lake.

VIBURNUM CASSINOIDES. Scarce.

LONICERA OBLONGIFOLIA. Rare at Puslinch Lake.

LACTUCA HIRSUTA. Common at Puslinch Lake.

AMBROSIA TRIFIDA. In a yard in Guelph.

SOLIDAGO PATULA. Very common at Puslinch Lake.

SOLIDAGO NEGLECTA. Very common at Puslinch Lake.

BELLIS PERENNIS. Mr. Sunley's lawn, Guelph.

ASTER SAGITTIFOLIUS. Frequent.

POLYMNIA CANADENSIS. In two localities near Guelph.

CARDUUS NUTANS. Common in some pastures and in places along the roadside near Guelph.

MEETINGS OF THE ENTOMOLOGICAL BRANCH.

Meeting No. 20 was held at Dr. Fletcher's rooms on Feb. 2nd, 1905. The chairman, Dr. Fletcher, opened the meeting with an address on the use of Insects in Nature Study, pointing out the difficulties of using and preserving such small and fragile objects. He advocated the examination of specimens out of class and the teaching in class from enlarged charts. He opposed strongly the passing of specimens around an audience while a speaker was delivering an address, on account of the confusion thus caused. Suggestions were made as to species of common insects which would be particularly suitable for study by students, each of whom should have the same insect under consideration at the same time. Insects mentioned were the Clouded Sulphur butterfly (*Colias philodice*) of which eggs could be obtained easily by enclosing a female in a gauze bag over a plant of white clover, planted in a flower pot. Each student could easily provide the food plant and secure the egg laying female. The Camberwell Beauty, the Small Tortoise-shell, the Graptas and Cabbage White butterflies, all of which could be easily obtained and all of which had short life-histories were also recommended.

Mr. D. A. Campbell in discussing the address gave his experience of ten years in teaching natural science and nature study. He had noticed the same difficulty of confusion in the class but believed in making the students examine the specimens very carefully and thought that they did this better when in class at a specified time than outside whenever opportunity arose. Another difficulty

was in finding enough specimens for the whole class to examine at once.

Mr. Arthur Gibson read a paper describing the life-history of *Eupithecia interruptofasciata*, a small geometrid moth which he had reared from larvæ found on *Juniperus communis* by Mr. W. Metcalfe, at Hull, Que. Specimens were exhibited.

Mr. W. Metcalfe described the finding of 42 specimens of *Pachyta rugipennis* which he had taken upon a dead pine tree on May 29 last. The females were ovipositing and every one of these had about half a dozen males in attendance. This is an extremely rare insect and had never previously been recorded from Ottawa. A few days afterwards Mr. Metcalfe revisited the tree but could not find a single specimen.

Mr. Jos. Keele gave a most interesting account of an expedition made by him during the past season along the Mayo Lake and in the valley of the Mayo River, Yukon Territory, describing the animals and fishes there observed. Among the insects brought back by Mr. Keele was a beautiful specimen of *Papilio machaon*, var. *alaska*, and a rubbed but undoubted specimen of *Eurymus boothii*, which answered exactly to a figure of the species published by Mr. H. J. Elwes, in the Transactions of the Entomological Society of London, part III, 1903.

Mr. C. H. Young, exhibited a box of exquisitely mounted geometers taken during the past summer at Meach Lake, Que.

Mr. Andrew Halkett showed specimens of the pupæ of the Tomato Sphinx and casts of some dragonfly nymphs, including *Didymops transversa*.

Mr J. W. Baldwin referred to insects imported with bananas and showed specimens of cockroaches thus brought to Ottawa.

Mr. Norman Criddle, of Aweme, Man. was present and joined in the discussions.

Meeting No. 21 was held at the residence of Mr. W. Simpson on the 16th Feb., 1905, Mr. Simpson in the chair. The first half hour was pleasantly spent examining the chairman's large collection of local coleoptera, which comprises many rare species. Mr. Simpson, while the cases were being examined and passed around,

drew special attention to the more interesting specimens and gave notes upon their capture.

The advisability of enlarging the Ottawa district for investigation by members of the Entomological Branch was discussed and the general opinion seemed to be that the limits as shown in the Geological Survey Map of Ottawa, of which a large number had been purchased by the Club, were sufficient for present requirements.

Mr. J. W. Baldwin, showed, among other specimens, a beautiful form of *Calloides nobilis*, which he had taken at Ottawa last summer, also some orthoptera and bees.

Mr. Arthur Gibson showed a complete collection of the Ottawa Halisidotas and promised a paper on them for the next meeting.

There was an interesting discussion upon the habits of Gordius and Mermis, and in speaking on this subject Dr. Fletcher mentioned that both were treated of as parasites of locusts in the annual report of the Entomologist and Botanist to the Dominion Experimental Farms, for 1896, at page 238.

Mr. A. Halkett spoke of the parasitic worms to be found in fishes, and referring to imported insects showed a specimen of the large cockroach, *Periplaneta americana*, which had been brought to Ottawa in a bunch of bananas.

Mr. W. Metcalle showed a collection of Hemiptera many species of which were new to the Ottawa list, and of which he had recently received the names.

Dr. Fletcher exhibited a box of specimens containing many rare and interesting species, among others *Sphinx canadensis*, taken at Ottawa last season at the unusually late date of Aug. 12, also a fine specimen of *Sesia titan*, taken at Sydney, C. B., by Miss Margaret Brown, of Halifax. Specimens of *Termes flavipes* winged and apterous, from Victoria, B. C., were examined with interest by all present.

Mr. Norman Criddle, of Aweme, Man., showed, among other rarities *Pæctes oculatrix*, which he had taken at Aweme on the 20th June last.

Meeting No. 22 was held at Mr. Halkett's house, Mr. Halkett in the chair. The chairman opened the meeting by drawing attention to a neatly mounted collection of conspicuous insects put up on tablets in an original method, which showed the specimens off to great advantage. There were in this collection many specimens which Mr. Halkett had reared from the larva or egg, and concerning which he gave many interesting notes.

Dr. Fletcher showed two cases of insects such as were prepared in the Division of Entomology, for examination by farmers and fruit growers. Each species was represented in all its stages of development together with its work, and parasites. In these cases were such well known pests as the San Jose Scale, the Variegated Cutworm, and other allied species, Tent Caterpillars, Fall Webworm, and White Spotted Tussock Moth. A description was given of the habits of the Black Sand wasp, *Ammophila luctuosa*, and the way in which it hunted for and carried off cutworms and other larvæ. Mr. Geo. Holland and Mr. Norman Criddle, had both studied these insects and Mr. Criddle mentioned that he had seen in Manitoba on one occasion the same or a similar species carrying off a large sphingid caterpillar. Referring to the Tent Caterpillars, Mr. Holland attributed their sudden disappearance to a severe frost in May, which destroyed all the foliage of the trees upon which the recently hatched caterpillars were feeding, and which extended over a vast area in North America. This view was agreed with by most present who recalled the peculiar condensed growth on some trees that year, where the young twigs, of the new growth, had been destroyed by the frost.

Mr. Gibson read a paper which he had promised at the last meeting on the three species of *Halisidota* which are found in the Ottawa district, and gave much information on the habits of the common but handsome caterpillars of these insects.

J. F. for Sec.

BOTANICAL BRANCH.

On January 26th the following members and friends of the Botanical Branch met at the residence of Mr. A. E. Attwood: Messrs. J. Fletcher, J. Macoun, R. B. Whyte, W. T. Macoun, T. E. Clarke, J. M. Macoun, D. A. Campbell, R. Cameron, W. C. Ewing, J. C. Spence and Norman Criddle.

The greater part of the evening was spent in considering the obstacles to the successful teaching of Nature Study in city public schools. The following difficulties were pointed out by the leader:

1. Lack of time. The curriculum is already crowded, and public opinion is declaring itself in favor of greater thoroughness in the old staple subjects.

2. Lack of material and appliances for study. As is the case with the other two new subjects, Domestic Science and Manual Training, the work must be done by the pupils individually in a place with the necessary equipments. A Nature Study laboratory is as necessary to the successful teaching of elementary science as is a workshop in the teaching of manual training.

3. Lack of definiteness. An educationist has said that the teacher tolerates the product on account of the process, and that the pupil tolerates the process on account of the product. As things are at present, there is no tangible product for work done by the pupils. Even teachers lack a clear conception of the scope of the subject. Nature Study requires to be defined in a way that will appeal to all.

4. A cause of disorder. The frivolity often observable in a large class of small children during a lesson in Nature Study tends to demoralize the class. The orderly freedom necessary to good work in mutual investigation is a difficult condition in classes of forty or fifty young pupils.

5. Lack of popularity. By actual vote of over 200 pupils, it was ascertained that Nature Study is not liked as well as are the ordinary subjects. Unpopularity of any school subject is due either to its essential unsuitability or to the unattractiveness of its presentation by the teacher. There is little doubt that the latter is the chief cause for the present lack of popularity of Nature Study.

All the teachers present, including Professor Macoun, who taught school for many years, felt the force of the difficulties mentioned; the latter declared it to be his conviction that Nature Study would soon be consigned to the limbo of exploded educational fads. Dr. Fletcher was much more optimistic, and believed that the movement would have a permanent effect on the character of the work done in the schools of the future. Mr. J. M. Macoun thought that a competent supervisor of Nature Study should be appointed. Mr. Whyte expressed himself as thinking that the matter of order in a school-room was unnecessarily emphasized. Mr. W. T. Macoun said that if a clear relation was made to the life of the pupil of the various aspects of Nature Study, there would be no lack of interest in the subject.

The very animated discussion was stopped in time to give the gentlemen an opportunity of examining the wonderfully accurate and exceedingly artistic pictures of plants painted by Mr. Norman Criddle in water colors.

A. E. A.

The Botanical Branch met at the residence of Prof. Macoun, Feb. 9th, when all the members but two were present. A proposition to extend the limits of the "Ottawa District" for botanical purposes was discussed and the general opinion was that such an extension would add to the opportunities for work, as some of the Club's members spend the summer near Ottawa but still outside the present limits. Prof. Macoun drew the attention of the members to the very small cost of making a herbarium collection of plants—only \$7 per 1,000 sheets. The mounting paper can be had for \$5 per 1,000 sheets, printed labels may be had for \$1.50 per 1,000, and another \$1 pays for the genus covers.

INDEX

TO THE

OTTAWA NATURALIST, VOL. XVIII, 1904-5.

	PAGE		PAGE
Address, President's.....	213	Canada Jay, the.....	142
Alum Root as a Remedy for Diarrhœa.....	76	Canadian Species of Trocholites.....	13
Ami, H. M., Giant Puff-bail.....	121	Canine Intellegence.....	197
Experiment Illustrating the Cir- culation of Fluids in Plants.....	170	Circulation of Fluids in Plants,..	170
Anderson, J. R., Note on the Ruffed Grouse.....	144	Conchological Notes.....	91
Antennarias, Some Canadian ..	37	Correspondence	177
<i>Antennaria chlorantha</i> , Greene..	38	Council, Report of.....	7
<i>lanulosa</i> , Greene.....	38	Criddle, Norman, The Mountain Bluebird in Manitoba.....	85
<i>maculata</i> , Greene.....	39	Diarrhœa, Alum Root as a reme- dy for.....	76
<i>Sansonii</i> , Greene.....	37	Dinosaurs. On the Squamoso pa- rietal Crest of two Horned..	82
<i>sedoides</i> , Greene.....	37	Doyle, D. J., Nature Study at the Macdonald Institute....	193
<i>Aphyllostylus</i> , Whiteaves.....	114	Eifrig, G., Warbler Songs and Notes.....	19
<i>gracilis</i> , Whiteaves.....	115	Bird Notes	39
Barlow, A. E., A Landslide on the Lièvre River.....	182	Some Underlying Principles of Nature Study.....	77
Beaupré, E., Ornithological Notes	153	Some Bird Notes of the Year ..	118
Bennett, H. C., School Gardens in Great Cities.....	26	Entomological Branch, Meeting of.....	55, 104, 199, 219
Bird Migration.....	144, 158	Evening Grosbeak, The.....	24
Bird Notes.....	39, 144, 154	Excursions,.....	75, 89
Bird Notes of the Year, Some...	118	Flora of the Peace River Region	115
Birds, Observation on some of our rare.....	138	Fletcher, J., Alum Root as a Re- medy for Diarrhœa.....	76
Bluebird, The Mountain, in Manitoba.....	85	<i>Fragaria latiuscula</i> , Greene....	216
Botanical Branch, Meetings of.....	58, 157, 202, 223	<i>retrorsa</i> , Greene.....	216
Botanical Club of Canada.....	120	<i>Fringillide</i> , The Winter, of New Brunswick.....	165
British Association, The Presi- dent's Address.....	129	Gibson, Arthur, The Collection and Preservation of Butter- flies and Moths.....	123
British Columbian Rosaceæ, New.	215		
Butterflies and Moths, The Col- lection and Preservation of ..	123		
<i>Calopogon pulchellus</i> , The Ferti- lization of	107		

	PAGE		PAGE
Grant, Sir James, Canine Intelligence.....	107	<i>Margaritana deltoidea</i>	91
Grasping Power of the Manus of <i>Ornithomimus altus</i>	33	M. E., My Birds and how they came to me.....	73
Greene, E. L., Some Canadian Antennariæ.....	37	A serious Misunderstanding between my Squirrel and me.....	176
New British Columbian Rosaceæ	215	Members, List of.....	4
Grosbeak, The Evening.....	24	Merganser, Unusual Nesting Sites of the American.....	157
Gillet, Cephas, Relationship Between the weather and Plant Growth	40	Migration, The Annals of the Fall.....	174
Harrington, W. H., An October Tramp.....	155	Mollusca, Introduced.....	92
Herony near Eganville.....	119	New to Canadian Fauna.....	18
Jay, The Canada.....	142	Moore, W. H., Notes Concerning New Brunswick Warblers..	98
Kells, W. L., Nesting of Some Canadian Warblers.....	65	The Canada Jay	142
Klugh, A. B., The Fertilization of <i>Colopogon pulchellus</i>	107	The Winter Fringillidæ of New Brunswick.....	165
The Annals of the Fall Migration.....	174	Mushrooms, Note on the Food Value of Certain.....	87
Some of the Rarer Plants of Wellington County	217	My Birds and How they came to me.....	73
Lambe, L. M., The Grasping Power of the Manus of <i>Ornithomimus altus</i>	33	Nature Study and Camera	161
On the Squamoso Parietal Crest of two Species of Horned Dinosaurs.....	82	Nature Study at the Macdonald Institute	193
Landslide on Lièvre River,	182	Nature Study in the School of Nova Scotia.....	209
Latchford, F. R. Introduced Mollusca,	92	Nature Study in Winnipeg Schools.....	61
<i>Margaritana deltoidea</i>	91	Nature Study, Some underlying Principles of	77
Lièvre River, A Landslide on	182	Nature Study, The Prescribed Course for Public Schools ..	145
Macdonald Institute, Nature Study at	193	Nature Study Papers, 26, 61, 77, 93, 109, 123, 145, 161, 193, 209	209
Mackay, A. H., Nature Study in the Schools of Nova Scotia.....	209	Nesting of Some Canadian Warblers.....	55
Macoun, J. M., The Flora of the Peace River Region.....	115	<i>Ornithomimus altus</i> , Grasping Power of the Manus of	33
Macoun, John, Huge Puff-balls.....	23	Peace River Region, The Flora of.....	115
Macoun, W. T., How to Collect and Preserve Plants,	93	Pelican, A White, at Manotick.....	71
How to mount Plants and Complete the Herbarium.....	109	Pelican, The Brown, on Cape Breton Island.....	108
President's Address	213	Plants, How to collect and Preserve.....	93
<i>Malus Macounii</i> , Greene.....	91	Plants, How to Mount and Complete the Herbarium	109
		Plants, Some of the Rarer, of Wellington Co.....	217
		President's Address	213
		Prince, E. E., The British Association President's Address.....	129

PAGE		PAGE
180	Programme of Soirées	
122	Puff-ball, Giant.....	
23	Puff-ball, Huge	
135	Raine, W., Discovery of the eggs of Solitary Sandpiper.....	
153	Unusual Nesting Sites of the American Merganser	
40	Relationship between the Wea- ther and Plant Growth. ..	
159, 192	Reviews.....	
215	Rosaceæ, New British Columbian	
144	Ruffed Grouse.....	
114	Rugose Corals, Description of a New Genus and Species of	
135	Sandpiper, Discovery of the Eggs of the Solitary	
26	School Gardens in Great Cities	
	Shutt, Frank T., Note on the Food Value of Certain Mush- rooms.....	87
	Nature Study and the Camera	161
	Sinclair, S. B., The Prescribed Course in Nature Study for Public Schools.....	145
	Solitary Sandpiper, Discovery of the Eggs of	135
	Squirrel, A Serious misunder- standing between my Squir- rel and me.....	147
	Terrill, Summer Warblers in Compton County, Que.....	169
	Tramp, An October.....	154
	Treasurer, Report of	12
	Trochilites, Canadian Species of	13
	<i>Trochilites ammonius</i> , Conrad.	14
	<i>Canadensis</i> , Hyatt.....	16
	<i>planorbiformis</i> Conrad.....	15
	Walker, Bryant, Mollusca New to Canadian Fauna.....	18
	Wallis, J. B., Nature Study in Winnipeg Schools,	61
	Warbler Songs and Notes	19
	Warbler, A Red-letter day for..	118
	Warblers in Compton County..	149
	Warblers, Nesting of Some Cana- dian.....	65
	Warblers, Notes Concerning New Brunswick	98
	Wellington Co., Some of the Ra- rer Plants of.	217
	Whiteaves, J. F., The Canadian species of Trochilites.....	13
	A White Pelican at Manotick	71
	The Brown Pelican on Cape Breton Island	108
	Description of a New Genus and Species of Rugose Corals	114
	Winnipeg Schools, Nature Study in.....	61
	Young, C. J., The Evening Gros- beak.....	24
	Observation on Some of our Rare Birds.....	138

R. H. CONLEY,

Fashionable
Tailor,

213 Wellington
near Bank.

near Bank.

James Hope & Sons, Booksellers, Stationers,
SPARKS St., Ottawa. Bookbinders, Printers.

J. G. BUTTERWORTH & Co.

All-Rail Scranton Coal.

Has no Equal.

86 SPARKS ST.

C. C. RAY & Co.
COAL

Best quality, lowest price.

53 SPARKS ST.

Phone 461.

Publisher of Views of Ottawa.
C. H. THORBURN

Books and Stationery.

BOOKS ON NATURE STUDY.

8c Sparks St., Ottawa. Phone 902.

R. McGIFFIN,

... MEN'S FURNISHINGS ...

106 SPARKS ST.

OTTAWA.

The Ottawa Trust & Deposit Co.

(Limited)

as Executor, Trustee, Agent &c.

— OFFERS —

Continuous Service,
Experienced Management,
Prompt Investment,
Absolute Security.

Safety Vaults to Rent.

H. W. CHAMBERLAIN,
Manager

The Bank of Ottawa.

Capital (authorised) - - \$3,000,000
Capital (paid up) - - - 2,366,130
Rest - - - - - 2,194,517

BOARD OF DIRECTORS:

GEORGE HAY, President.
DAVID MACLAREN, Vice-Pres.
Henry N. Bate, Hon. Geo. Bryson,
H. K. Egan, John B. Fraser, John
Mather, Denis Murphy, M.L.A.,
Geo. H. Perley.
Head Office, - - - Ottawa, Ont.
GEO. BURN, Gen. Manager.
D. M. FINNIE, Ottawa Manager.
L. C. OWEN, Inspector
General Banking Business. Savings
Department

When on a tramp take a
supply of...

**EDDY'S
FLAMERS
and
WAX VESTAS
MATCHES.**

They ensure a good
"LIGHT" in any kind
of weather.

**The Russell
Motel**

Mulligan Bros.

One of the most useful things in the household is — "MOZART PIANO and FURNITURE POLISH" Use it on your piano and that smoky appearance will vanish. Furniture, woodwork etc. will regain its old-time lustre

MCNEIL'S SUITS are the best.

Try them.

203 SPARKS ST.
OTTAWA.

JUN 1 1956

THE OTTAWA FIELD-NATURALISTS' CLUB, 1903-1904.

Patron:

THE RIGHT HONOURABLE EARL OF MINTO
GOVERNOR-GENERAL OF CANADA.

President:

W. T. Macoun.

Vice-Presidents:

S. B. Sinclair, B.A., Ph.D. W. J. Wilson, Ph.B.

Librarian:

J. H. Putnam, B.A.

Secretary:

T. E. Clarke.
(470 O'Connor Street.)

Treasurer:

Arthur Gibson.
(Central Experimental Farm.)

Committee:

Dr. Jas. Fletcher.
Rev. G. Eifrig.
Mr. J. M. Macoun.

Miss M. McK. Scott.
Miss A. Matthews.
Miss R. B. McQuesten.

Auditors:

J. Ballantyne, R. B. Whyte.

Standing Committees of Council:

- Publishing*: J. Fletcher, Miss M. McKay Scott, W. J. Wilson, Arthur Gibson
G. Eifrig, J. M. Macoun.
- Excursions*: S. B. Sinclair, J. Fletcher, T. E. Clarke, A. Gibson, Miss Ruby
B. McQuesten, Miss Annie L. Matthews, Miss M. McKay
Scott.
- Soirees*: W. J. Wilson, J. H. Putnam, J. M. Macoun, T. E. Clarke, G.
Eifrig, Miss Ruby B. McQuesten, Miss Annie L. Matthews.

Leaders:

- Geology*: H. M. Ami, W. J. Wilson, D. B. Dowling.
- Botany*: J. M. Macoun, C. Guillet, D. A. Campbell, A. E. Attwood, S. B.
Sinclair, T. E. Clarke.
- Entomology*: J. Fletcher, W. H. Harrington, C. H. Young, A. Gibson.
- Conchology*: J. F. Whiteaves, F. R. Latchford, J. Fletcher, S. E. O'Brien.
- Ornithology*: John Macoun, A. G. Kingston, G. Eifrig, E. F. G. White.
- Zoology*: E. E. Prince, Andrew Halkett, W. S. Odeil.
- Archaeology*: T. W. E. Sower, J. Ballantyne.

THE OTTAWA NATURALIST.

Editor:

JAMES M. MACOUN.

Associate Editors:

- DR. R. W. ELLS, Geological Survey of Canada.—Department of *Geology*.
- DR. J. F. WHITEAVES, Geological Survey of Canada.—Dept. of *Paleontology*.
- DR. A. E. BARLOW, Geological Survey of Canada.—Dept. of *Petrography*.
- DR. JAS. FLETCHER, Central Experimental Farm.—*Botany and Nature Study*.
- HON. F. R. LATCHFORD.—Department of *Conchology*.
- MR. W. H. HARRINGTON, Post Office Department.—Dept. of *Entomology*.
- REV. G. EIFRIG, 210 Wilbrod St.—Dept. of *Ornithology*.
- PROF. E. E. PRINCE, Commissioner of Fisheries for Canada.—Dept. of *Zoology*.

Membership Fee to O.F.N.C., with "Ottawa Naturalist," \$1.00 per annum.