

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from:/
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments:/
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
						✓					

NOTICE—The May Excursion to Kirk's Ferry has been postponed until Saturday, 2nd June.

May, 1888.

THE
* OTTAWA NATURALIST *

VOLUME II. No. 2.

The
TRANSACTIONS.
Of the
* Ottawa Field-Naturalists' Club *

(Organized March, 1879. Incorporated March, 1884.)

CONTENTS.

	PAGE
Editorial.....	17
Annual Report of the Council.....	18
Royal Society of Canada.....	19
Treasurer's Report.....	20
Report of the Entomological Branch for the year 1887.....	21
Report of the Botanical Branch for the season of 1887.....	23
Flora Ottawaensis (additions made in 1887).....	26
Librarian's Record.....	27
Flora Ottawaensis. By James Fletcher.....	28

OTTAWA, CANADA:
Citizen Printing and Publishing Company, Queen St.

1888.

Published Monthly at \$1.00 per annum.

Patron:
HIS EXCELLENCY THE MARQUIS OF LANSDOWNE,
GOVERNOR GENERAL OF CANADA.

President: R. B. WHYTE.

Vice-Presidents:

1ST, REV. PROF. C. F. MARSAN. | 2ND, DR. R. W. ELLS.

Secretary: T. J. MACLAUGHLIN (Dept. Public Works).

Treasurer: JAMES FLETCHER (Experimental Farm).

Librarian: W. H. HARRINGTON (Post Office Dept).

Committee: Dr. H. B. SMALL, | H. M. AMI, | J. BALLANTYNE.

Standing Committees of Council:

Publishing—T. J. MACLAUGHLIN, JAMES FLETCHER, W. H. HARRINGTON.

Excursions—J. FLETCHER, H. M. AMI, J. BALLANTYNE.

Soirées—REV. PROF. MARSAN, DR. ELLS, DR. SMALL.

Sections:

Geology—DR. ELLS, REV. PROF. MARSAN, H. M. AMI.

Botany—PROF. MACOUN, J. FLETCHER, DR. SMALL.

Conchology—F. R. LATCHFORD.

Entomology—J. FLETCHER, W. H. HARRINGTON, T. J. MACLAUGHLIN.

Ornithology—PROF. MACOUN, G. R. WHITE.

Zoology—H. B. SMALL, J. BALLANTYNE.

Editor (pro tem): J. FLETCHER.

The Librarian will furnish the Publications of the Club at the following rates:—

Transactions, Part 1, Not sold singly	}	\$1.00 for Vol. I.
“ 2, 25 Cents.		
“ 3, 25 “		
“ 4, 25 “		
“ 5, 30 “		
“ 9, 40 “	}	\$1.00 for Vol. II.
“ 7, 30 “		

(Less 10% to members.)

The Ottawa Naturalist, \$1.00 per annum.

Extra copy to members, .75 “

Monthly parts, 10 cents each, \$1.00 per doz.

To members, 8 “ .75

NOTICE.—The Treasurer begs to call the attention of members to the advertisements.

EDITORIAL.

Owing to unforeseen circumstances which necessitate the absence of Mr. Harrington from Ottawa for some months, he has been obliged temporarily to discontinue the editorship of this journal. Until he is again able to resume his duties, the OTTAWA NATURALIST will be edited by the undersigned as Chairman of the Publishing Committee. All communications intended for the editor should therefore, until further notice, be sent to the address given below.

The opening of Spring and with it the beginning of the collecting season make it fitting that members should at once prepare themselves to take up vigorously their studies—and it may not be amiss to suggest that all apparatus should be at once got into order or procured. In this connection I consider it but right to direct the attention of members to those merchants who assist us by advertising in the NATURALIST. I would further remind them that all the apparatus and books necessary for the collection, preservation and study of specimens in all branches, may be procured from the firms whose names appear on our covers.

Beginning with the present number some pages each month will be devoted to the publication of an annotated list of the Flora of the locality. This list will not only be a record of all the species so far observed in the neighbourhood of Ottawa, but the habitat, and, in the case of uncommon species, the exact localities where they have been found will be given, together with the date, approximately, when they may be expected to blossom.

The plan adopted in the past will be continued as heretofore. Notice will be given beforehand of all excursions and sub-excursions of the Club, and short descriptions of such excursions will appear in the following number of the journal.

JAMES FLETCHER,
 Editor (*pro tem*),
 Central Experimental Farm.

ANNUAL REPORT OF THE COUNCIL

To the Members of the Ottawa Field-Naturalists' Club :

The Council has much pleasure in reporting that the present condition of the Club is very satisfactory, and that during the year just closed its work was carried on with increased success.

At the commencement of the year there were 170 members, and these have increased to 200; the number of new members elected having been 48.

No additions have been made to the list of corresponding members, of whom there are at present six.

The Excursions held during the summer were very enjoyable and were largely attended. They were five in number, and the following places were visited: - Kingsmere, Aylmer, Buckingham, Britannia and Kirk's Ferry.

Sub-Excursions were held every Saturday afternoon throughout the season and numbered twenty-one. They were well attended, and proved very pleasant and profitable to all present.

The winter course of meetings comprised six Soirées and ten Afternoon Lectures; the former being held on alternate Thursdays and the latter every Monday, commencing 9th January. At the Soirées the following Papers and Reports were read:—Dec. 5th, "President's Inaugural Address," Mr. R. B. Whyte; Jan. 5th, "Testimony of Ottawa Clays and Gravels to the expansion of the Gulf of St. Lawrence and Canadian Lakes within the Human Period," Mr. Amos Bowman; Report of the Geological Branch; January 19th, "Our Forest Trees," Prof. Macoun; "Notes on Geological Work during the Summer of 1887," Mr. John Stewart; "On Utica Fossils from Rideau," Mr. H. M. Ami; February 2nd, "Vegetable Parasites," Mr. James Fletcher; Report of the Entomological Branch; March 1st, "Preliminary Notes on the Chazy at Aylmer, Que.," Mr. T. W. E. Sowter; "Our Squirrels," Mr. J. Ballantyne; Report of the Ornithological Branch; March 16th, "Autumn on the Ottawa," Mr. A. O. Wheeler; "On the Sequence of Strata about Ottawa," Mr. H. M. Ami; Report of the Conchological Branch.

The Council here desires to thank the Leaders of the several Branches for their efforts to make the Outings instructive and interesting, and also those members who read Papers at the Soirées or gave Afternoon Lectures, especially Prof. Macoun, who, in addition to the work originally undertaken by him, kindly and ably supplied the place of two members who were unable to deliver their lectures.

The Library has been enriched by many valuable exchanges and donations, lists of which have been published from time to time.

In accordance with the resolution passed at the last Annual Meeting, the Transactions and Proceedings of the Club have been published monthly, under the title of *THE OTTAWA NATURALIST*, forming a volume of 180 pages, and containing reports of all Excursions and Meetings, as well as the Papers and Reports which formerly were alone published.

As members have been thus kept fully informed as to the work of the Club, it is unnecessary to further enlarge this Report.

Signed on behalf of the Council,

W. H. HARRINGTON,

20th March, 1888.

Secretary.

—————:0:—————

ROYAL SOCIETY OF CANADA.

The Seventh Annual Meeting of the Royal Society will be held at Ottawa, commencing on 22nd May next.

There are upon the Programme several papers of interest to the members of this Club, all of whom have been invited to attend the meetings. The Club will be represented by the President, who, as Delegate, will report on the progress we have made during the past year.

TREASURER'S REPORT.

To the Council of the Ottawa Field-Naturalists' Club :

GENTLEMEN,—Herewith I beg to submit a Statement of the Receipts and Expenditure during the past year. It will be observed, with regard to the Excursions, that merely the balances have been extended. This, I think, gives a clearer idea of the results of this important part of the Club's work.

I would suggest to the Council that some means should be adopted to draw the attention of the members of the Club to those firms who assist us by advertising in "The Ottawa Naturalist." They are a great help to us, and I think it only right that the members should do business with them whenever possible.

I am, Gentlemen,

Yours truly,

JAMES FLETCHER,

Treasurer.

TREASURER'S BALANCE SHEET.

<i>Dr.</i>	<i>The Treasurer in account with the Ottawa Field-Naturalists' Club.</i>	<i>Cr.</i>
<hr/>		
RECEIPTS.		EXPENDITURE.
Balance, 1886-87.....	\$ 34 92	By Nos. 1 to 12 "Ottawa Naturalist".....
Membership Fees.....	152 00	\$238 66
" Arrears.....	20 00	Miscellaneous printing.....
Profit on Excursions.....	14 60	3 75
Sale of Transactions.....	17 05	Postage.....
Advertisements.....	33 00	6 65
Soirée Receipts.....	1 10	Stationery.....
		2 40
		Loss on Excursion No. 5...
		1 05
		Balance.....
		20 16
	<hr/> \$272 67	<hr/> \$272 67
<hr/>		

REPORT OF THE ENTOMOLOGICAL BRANCH FOR THE
YEAR 1887-1888.

To the Council of the Ottawa Field Naturalists' Club :—

The past season has probably been the most active for the Entomological Branch since the organization of the Club. Special efforts were made by the Leaders to bring this important study before the members and to gain their assistance and sympathy, Every exertion was made to have at least one Leader present at each Excursion or Sub-Excursion, so that beginners might always have someone to consult with reference to any insects captured or observed during the outing.

No opportunity was lost on such occasions to give information both by means of conversation during the outing, and by elementary addresses when the party had re-assembled preparatory to the return home. The activity thus forced upon the Leaders in striving to carry out the wishes of the Council helped them materially in building up their collections, and combined with their work at other times, resulted, as in former years, in adding largely to the knowledge of our local insect fauna.

Particular attention was given to the study of gall-forming insects and of the small Hymenoptera belonging to the families Cynipidae, Chalcididae and Proctotrupidae, regarding the Canadian species of which but little was previously known. The results have been very satisfactory, but show that very much work will be yet required before our knowledge of these interesting forms will be in any degree complete.

In last year's report mention was made of the fact that this locality had already yielded 100 new species of Hymenoptera, and it can now be recorded that the number has been raised to fully 200, while undoubtedly many others are still in our collections awaiting study and description. In addition, very many rare species not hitherto recorded from Canada have been captured.

Among injurious insects the only ones demanding special attention were the two species of *Clisiocampa*, or Tent-caterpillars, which appeared in greater numbers than for many years previously; forest trees for

many miles being seriously disfigured. *Pieris Rapae*, the cabbage butterfly, was a most troublesome pest in gardens, but had its numbers greatly reduced towards the end of the season by the fungous disease known under the name of *flacherie*. Another butterfly, *Colias Philodice*, the sulphur yellow butterfly mentioned in last year's report as having been extremely scarce, this year appeared in almost unprecedented numbers, and committed considerable depredations upon various leguminous plants. It was found to be parasitized by a small ichneumon named *Apanteles congregatus*, Say.

Among beetles a small brownish species, *Byturus unicolor*, was very troublesome from destroying the flowers of garden raspberries. *Systema frontalis*, an elongate, black "flea-beetle" attacked many plants in gardens.

The larvæ of a saw-fly, *Emphytus pallipes*, Prov., was found to severely attack pansies, while another species of the same genus *Emphytus maculatus*, the strawberry saw-fly, was unusually abundant. The larch saw-flies, *Nematus Erichsonii*, were numerous in the early summer, depositing their eggs, but the larvæ were not correspondingly abundant, and it is probable that the increase of this destructive species has attained its maximum in this locality.

An event of great interest to our students of Entomology was the holding in this city last October of the Annual Meeting of the Entomological Society of Ontario, an account of which was duly published in the OTTAWA NATURALIST.

The object of this Report being merely to show what work this Branch has been accomplishing, it is not deemed necessary to go into further details either of an economic or scientific character.

W. H. HARRINGTON,
J. FLETCHER,
T. J. MACLAUGHLIN,

February, 1888.

Leaders.

REPORT OF THE BOTANICAL BRANCH FOR THE SEASON
OF 1887.

To the Council of the Ottawa Field-Naturalists' Club :

The leaders of the Botanical Branch are pleased to report that the interest in their department continues to increase, and that this has been the means of adding several new members to the Club.

A feature of the past year has been the regularity with which the sub-excursions have been kept up during the whole season. The Botanical and Entomological branches have in most cases joined their forces and worked together. The leaders in Botany wish especially to thank the President for the assistance he has given, in enabling them to carry out the plan decided upon at the beginning of the season, of having at each of these sub-excursions a short popular lecture upon the specimens collected during the afternoon. Upon some occasions it was impossible for any of us to be present, when he always undertook this important duty and performed it to the universal satisfaction of the numerous members of the Club and their friends who attended these pleasant open air classes.

During the past season several fresh students have begun to collect and preserve our local plants, and we trust that they may be the means of adding many species, as yet unrecorded, to the "Flora Ottawaensis."

The general excursions of the Club were well attended by Botanical workers. The last of the season to Kirk's Ferry, on the Gatineau River, has introduced us to a new field, on the northern slope of the Laurentian Mountains. This district had been hitherto unworked by us. At the time of our visit (Sept. 17) it was too late in the season for most of the flowering plants; but, from what was then seen of the locality, the leaders are under the impression that it would well repay a visit earlier in the summer.

Notwithstanding that this district has now been worked carefully for nine years, the steady investigation carried on during the past season has resulted, as in every preceding year, in the addition of several new names to the list of plants. These, 24 in number, will be found at the end of this report,

Perhaps the most interesting of these were those found at the Kirk's Ferry excursion, which were of a much more northern character than the rest.

Tilia Americana, L. var. *pubescens*, Loud, was found near the St. Louis Dam as well as *Solidago juncea*, Ait.

Geranium pratense, L., a European garden-escape has been observed by Mr. R. B. Whyte at Aylmer, P.Q., for some years, and is, for that reason introduced into the list as an adventitious plant.

A specimen of *Cerastium arvense*, L., sent in by Mrs. Chamberlin, found at New Edinburgh by Miss Lewis, was probably introduced from Europe amongst grass-seed.

A beautiful albino form of *Habenaria psychodes*, Gray, was collected during the past summer near Ironsides by Mr. H. M. Ami. It was growing amongst a number of plants of the ordinary colour and was of vigorous growth.

Pterospora an-tromedeae, a rare ericaceous plant, up to the present year only found in one place in this locality, viz: under the pines over the Gatineau Rapids was found in July, at Rockcliffe, by Mr. A. J. Forward.

The Rev. C. J. Young sent in several specimens of the rare orchid *Corallorhiza striata*, Benth, which he had collected at Renfrew, and he also reports that he has found it at Perth.

It is to be regretted that in our last report "The May-Apple" (*Podophyllum peltatum*, L.) was stated to have been found by Mr. R. B. Whyte at Perth. It should have been "*Claytonia Virginica*." The leaders are responsible for this error, the name having been inserted in the report from memory instead of from Mr. Whyte's note.

On the 15th October a sub-excursion was made to Berchwood with the special object of collecting roots of the rare orchid *Aplectrum hiemale*, Nutt, and a fine patch of seven roots was found by Mr. Fred. Magee, three of which were removed for study under cultivation. The leaders wish especially to direct the attention of the Botanists to the value of studying plants while growing. This can only be done by transplanting them to some convenient place where their gradual development

can be watched. Another subject of vital importance is the growth, development, prolificacy, and time of maturity of introduced plants, especially those which are classed as weeds. Observations upon any of these points are valuable and may be useful in finding a remedy for the extermination of noxious species.

The leaders are pleased to hear that the Council has requested Mr. Fletcher to prepare a new and revised edition of the "Flora Ottawensis," and they believe that it will be a great assistance to those who wish to study the Botany of the district. They would again suggest the advisability of some of the members of the Club taking up the study of Cryptogamic Botany—a wide field as yet barely touched upon by Canadians. Our respected member, Prof. Macoun, has shown what may be done by one man working alone, and during the past season he has added eight more species to our list of mosses, six of which are new to science and the other two had not before been found in America. He has rendered valuable assistance on several occasions, but the leaders are particularly grateful to him for his two admirable lectures upon the way to study and collect mosses, lichens and liverworts. The first of these orders has received some attention from our members, but the latter interesting subjects are as yet, we regret to say, almost virgin fields of study.

Towards the end of October a curious botanical phenomenon was observed, many of the willows coming into full flower. This was probably due to the excessive drought of the summer by which a season of forced rest was given the plants, and, as will often happen after trees have been defoliated by insects, as soon as rain came they burst into blossom. When the first snow fell some of the willows were covered with flowers.

Fine specimens of the parasitic fungi *Dooussansia occulta*, Hoffm., (*D. Farlowii*, Cornu.) and *D. alismatis*, Cornu, were collected on Kettle Island in October. The former on *Potamogeton gramineus*, var. *maximus*, Morong, a new host plant for this parasite.

JAMES FLETCHER,
H. BEAUMONT SMALL, M.D.
GEORGE BAPTIE,

March, 1888.

Leaders.

FLORA OTTAWAENSIS.

(Additions made in 1887.)

Barbarea vulgaris, R.Br. var. stricta		
Regel.....	McKay's Woods.	Mr. Fletcher.
Geranium arvense, L.....	New Edinburgh.	Mrs. Chamberlin.
Tilia Americana, L., var pubescens,		
London.....	St. Louis Dam.	Mr. Fletcher.
Geranium pratense, L.....	Aylmer.	Mr. Whyte.
Impatiens fulva, Nutt. (unspotted		
variety).....	St. Louis Dam.	Mr. Fletcher.
Rosa Sayi, Schwein.	Hull, P.Q.	"
Cornus paniculata, L'Her.....	Hull and Aylmer.	"
Aster corymbosus, Ait....	Rockcliffe.	"
Solidago arguta, Ait.....	Kirk's Ferry.	"
" juncea, Ait.	St. Louis Dam	"
Vaccinium caespitosum, Mx.	Kirk's Ferry.	"
" corymbosum, L. var. pal-		
lidum, Gr.....	"	"
Spiranthes gracilis, Big....	Aylmer.	"
Juncus pelocarpus, E. Meyer....	Briannia.	Prof. Macoun.
Orizopsis Canadensis, Torr.....	Aylmer.	Mr. Fletcher.
Andropogon scoparins, Mx.....	Kirk's Ferry.	"
Leskea nigrescens, Kindb	McKay's Woods	Prof. Macoun.
Platygyrium repens, Brid., var.		
orthocladon, Kindb.....	"	"
Pylaisia Selwyni, Kindb.....	"	"
Homalothecium corticola, Kindb..	"	"
Hypnum adnatum, Sul. var. den-		
tatum, Kindb.....	"	"
Hypnum brevinerve, Kindb.....	"	"
Fissidens adiantoides, Hedw. var.		
immarginatus, Led.....	Dow's Swamp.	"
Fissidens pusillus, Wils	Beechwood.	"

LIBRARIAN'S RECORD.

The following donations have been received since our last issue :

U. S. Geological Survey : Bulletin No. 37 ; Types of the Laramie Fauna ; Annual Report, 1884-5 ; Geology and Mining Industry of Leadville, Col. ; Mineral Resources of the U. S.

American Association for the Advancement of Science : Proceedings, Vol. XXXIV.

Physikalisch-Ökonomischen Gesellschaft, Königsberg : Schriftender, 1886, etc.

Elisha Mitchell Scientific Society : Journal, 1886-7.

North Staffordshire Naturalists' Field Club : Annual Report, 1887.

Entomological Society of Ontario : Canadian Entomologist, Vol. XIX, No. 12, Vol. XX, Nos. 1-3.

Cambridge Entomological Society : Psyche, Vol. V, Nos. 141-2.

Montague Chamberlain : Catalogue of Canadian Birds.

Dr. W. A. Kellerman : Journal of Mycology, Vol. III, Nos. 11 and 12, Vol. IV, No. 1.

Dr. Geo. Vasey : Report of U. S. Botanist, 1886.

Kansas Academy of Sciences : Transactions, Vol. X.

California Academy of Sciences : Bulletin, Vol. II, Nos. 6 and 7.

American Ornithologists' Union : The Auk, Vol. V, No. 1.

F. H. Carpenter : The Ornithologist and Oölogist, Vol. XII, Nos. 7-12, Vol. XIII, No. 1.

Chas. M. Bell : Our Northern Waters.

Montreal Natural History Society : The Canadian Record of Science, Vol. III, No. 1.

Cincinnati Society of Natural History : Journal, Vol. X, No. 4.

Torrey Botanical Club : Bulletin, Vol. XIV, Nos. 11 and 12, Vol. XV, Nos. 1 and 2.

The Editor : Botanical Gazette, Vol. XII, Nos. 7-12, Vol. XIII, Nos. 1 and 2.

Brooklyn Entomological Society : Entomologica Americana, Vol. IV, Nos. 7-12.

New York Microscopical Society : Journal, Vol. IV, No. 1.

FLORA OTTAWAENSIS.

BY JAMES FLETCHER, F. R. S. C., F. L. S.

It is now eight years since my first list of the plants of this district was prepared for the members of the club. This was merely a bare list of the names of 810 species collected by the writer during the summer of 1879. "This district" was then understood to mean a radius of about twelve miles from the City of Ottawa, and was defined as the country lying between the following points:—Meech's Lake in the Chelsea Mountains on the one side, and the Mer Bleue on the other. Down the Ottawa River, East Templeton and Green's Creek were included, and up the river, Britannia and the islands above Aylmer. Latterly, however, by general consent of the botanists of the club, this radius has been extended to about 30 miles, so as to include Casselman on the one side, and Wakefield on the other; and up the river as far as the Chats Rapids and down to Buckingham.

Previous to the appearance of the above-mentioned list, there had been printed by the Ottawa Natural History Society a "List of plants collected by Mr. B. Billings in the vicinity of the City of Ottawa during the summer of 1866." This contained the names of 404 species, with the dates of their inflorescence, which appear in the present list marked (B).

The following collections had also been made previous to 1879:—By Mr. B. Billings, (1866-7) which is now in the museum of the Ottawa Literary and Scientific Society; by Mr. A. H. Moore, an energetic collector, and one who added largely to our knowledge of the flora of the vicinity (1870-78). Through the generosity of the last named gentleman, this collection now forms part of my own herbarium; by Mr. Robert Whyte and Dr. H. B. Small, who began to collect about 1875, and are still active members of the Botanical Branch of the Club. The present list contains every species up to this time found in the district and identified with certainty; further additions will be published annually, as they are recorded. It has been prepared at the request of the Council, more especially as an aid for those beginning to study our flora.

The 1879 list gave merely the names of all species at that time known to have been found at Ottawa; but gave no information upon some of the most important points the local botanist requires to know about, such as the prevalence of any species in the locality, whether it be indigenous or introduced, plentiful or scarce.

Certain plants common in some localities are rare here, and *vice versa*; again, plants indigenous to Canada, but not to the Ottawa district, have been introduced either by accident or have escaped from cultivation. All of these facts should be made known to students, or they may fall into error. It was therefore thought well, this time, to add short notes under each species, giving the general habitat special localities and approximately the date in the year when collectors may expect to find the different species in flower.

With the exception of two or three species, all have been found by the writer in the localities mentioned, and in every case the actual specimens recorded have been carefully examined by him.

A general habitat is given for each species, and in the case of rarities, exact localities are mentioned. When no special locality is given, it is intended to show that the species is of common occurrence.

When no collector's name is given after a locality, or the initials (J. F.) appear, the writer is responsible for the record. When a plant of interest is recorded from other localities than those where the writer has found it, the name of the collector is given in parentheses. In instances where a person's name is followed by an asterisk, (*) it is to show that this was the first record of the plant having been discovered in the Ottawa district.

In indicating the time of the year when the plant may be looked for in flower, the months have been divided into four quarters, so that when the name of a month is followed by the numbers 1, 2, 3 or 4, it shows that the plant may be expected to flower in the 1st, 2nd, 3rd or 4th quarter of the month.

Synonyms have been, for the most part, omitted, except in cases where plants appear in the list under other names than those given in Dr. Gray's "Manual." These, as well as introduced plants, (whether into this district or into Canada) are printed in Italics.

In compiling this new list, Prof. Macoun's catalogue, issued by the Geological and Natural History Survey of Canada, 1883, *et seq.* has been followed, and as Canadian botanists now arrange their collections by that excellent catalogue, I have thought it well to give before each species Prof. Macoun's number.

—:—

POLYPETALOUS EXOGENS.

RANUNCULACEÆ.—Crow-foot Family.

CLEMATIS, L. Traveller's Joy. Virgin's Bower.

1. C. VERTICILLARIS, D C., (Mauve-flowered Clematis).

Atragene Americana. Sims.

Creeping over rocks and low shrubs. King's and other mountains, Chelsea, P.Q. Not uncommon. May—4.

2. C. VIRGINIANA. (Common Virgin's-Bower).

Borders of streams. Aug.—1.

ANEMONE, L. Wind Flower.

12. A. CYLINDRICA, Gray, (Long-fruited Anemone). Dry pastures. Ju.—2.

13. VIRGINIANA, L.

Rocky, open woods. There are two forms of this plant, (i) with greenish flowers like the preceding, but always with much shorter heads of fruit; and (ii) with white flowers almost as large as those of No. 15. From this latter, however, it is easily distinguished by the woolly seeds. (i) Common, (ii) on the rocks round Lake Flora, Hull, P. Q. Ju.—2. (B).

15. A. DICHOTOMA, L., (Round-headed Anemone).

A. Pennsylvanica, L.

Along river margins and in low meadows. Ju.—2. (B).

17. A. HEPATICA, L. (Liverwort. Blue May-flower).

Hepatica triloba, Chaix.

Dry, rocky, woods. One of our earliest flowers; not quite as common as No. 18. Ap.—3. (B).

18. *A. ACUTILOBA*, Lawson, ("May-flower.")
 Dry, shady, woods. Ap.—3. (B).
- THALICTRUM. Tourn, (Meadow-rue).
20. *T. DIOICUM*, L. (Early Meadow rue).
 River banks and low woods. Ju.—1. (B).
21. *T. PURPURASCENS*. (Purplish Meadow-rue).
 Templeton and along the Ottawa below the city, (H. M. Ami*),
 Hull, (J. F.). This species is distinguishable from *T. Cornuti*
 by having the anthers drooping on capillary filaments, and the
 flowers greenish purple. On the other hand, *T. Cornuti* has
 white flowers, short filaments and anthers not drooping.
22. *T. CORNUTI*, L. (White-flowered Meadow-rue).
 Islands and wet meadows and swamps; a tall handsome plant.
 July—1. (B).
- RANUNCULUS, L. (Crow-foot. Buttercup).
28. *R. AQUATILIS*, L. *v.* *TRICHOPHYLLUS*, Chaix, (White Water-Crow-
 foot).
 Stagnant and slow-flowing waters. Ju.—1.
29. *R. MULTIFIDUS*, Pursh. (Yellow Water-Crow-foot).
 In shallow water, and creeping over mud, Mallock's Bay, Dow's
 Swamp and Kettle Island, (J. F.) Billing's Bridge. (R. B.
 Whyte). Ju.—2.
- Var. *y.* *REPENS*, Watson.
 Leaves all round-reniform, palmately, 3—8 cleft; stems creeping in
 mud, Casselman and Gatineau Point, (Prof. Macoun). Ju.—2.
31. *R. FLAMMULA*, L. *var.* *REPTANS*, Meyer, (Smaller Creeping Crow-
 foot).
 Mud-flats and river margins. July—1.
32. *R. CYMBALARIA*, Pursh, (Salt-water Crowfoot).
 In a low wet meadow, at Thurso, P. Q. Ju.—2.
37. *R. ABORTIVUS*, L. *var.* *MICRANTHUS*, Gray, (Small-flowered
 Buttercup).
 Woods and Meadows. From Macoun's Catalogue, Part III., p.
 480. It would appear that our Ottawa plant is not the type of *R.*
abortivus, L. May—2. (B).

30. *R. RECURVATUS*, Poir, (Downy Wood-Buttercup)

Woods. An attractive species with large leaves and small flowers.
May—2. (B).

45. *R. acris*, L. Meadow Buttercup.

Introduced from Europe. Very abundant in meadows. June. (B).

47. *R. PENNSYLVANICUS*, L. (Bristly Buttercup).

River flats and swampy woods. July—2. (B).

48. *R. Repens*, L. (Creeping Crowfoot).

Introduced from Europe. Governor-General's Bay, New Edinburgh. I have not succeeded in finding the native form of this species at Ottawa.

CALTHA, L. Marsh Marigold.

54. *C. PALUSTRIS*, L. (Water-Cowslip).

Margins of streams and in swamps. May—2. (B).

COPTIS, Salisb. Gold-thread.

57. *C. TRIFOLIA*, Salisb, (Three-leaved Gold-thread).

Low woods and on hummocks in swamps. A lovely little plant with shining leaves and white starry flowers. May—1. (B).

AQUILEGIA, Tourn, Columbine.

59. *A. CANADENSIS*, L. (Wild Columbine "Honey-suckle.")

Rocky woods. A beautiful plant well worth cultivation for its red and yellow flowers. May—3. (B).

DELPHINIUM, Tourn, Larkspur.

65. *D. Consolida*, L. (Blue Field Larkspur).

Introduced from Europe in seed grain, and escaped from gardens. Flowers sometimes pink or white. June—4.

ACTÆA, L. Baneberry.

73. *A. ALBA*, Bigelow, (White-berried Cohosh).

Woods and river banks. The spikes of flowers longer and blooming a week later than those of No. 74. The conspicuous waxy white berries on their thick red pedicels, render this one of our most notable berry-bearing plants. May—4. (B).

74. *A. SPICATA*, L. *var.* *rubra*, Ait. (Red-berried Cohosh).

Rich woods. The flowers in a more compact head than the preceding, on longer pedicels and of a clearer white. A white-berried variety of this species frequently occurs; but it may be



SUMMARY

— OF —

Canadian Mining Regulations.

NOTICE.

THE following is a summary of the Regulations with respect to the manner of recording claims for *Mineral Lands*, other than *Coal Lands*, and the conditions governing the purchase of the same.

Any person may explore vacant Dominion Lands not appropriated or reserved by Government for other purposes, and may search therein, either by surface or subterranean prospecting, for mineral deposits, with a view to obtaining a mining location for the same, but no mining location shall be granted until actual discovery has been made of the vein, lode or deposit of mineral or metal within the limits of the location of claim.

A location for mining, except for *Iron* or *Petroleum*, shall not be more than 1500 feet in length, nor more than 600 feet in breadth. A location for mining *Iron* or *Petroleum* shall not exceed 160 acres in area.

On discovering a mineral deposit any person may obtain a mining location, upon marking out his location on the ground, in accordance with the regulations in that behalf, and filing with the Agent of Dominion Lands for the district, within sixty days from discovery, an affidavit in form prescribed by Mining Regulations, and paying at the same time an office fee of five dollars, which will entitle the person so recording his claim to enter into possession of the location applied for.

At any time before the expiration of five years from the date of recording his claim, the claimant may, upon filing proof with the Local Agent that he has expended \$500.00 in actual mining operations on the claim, by paying to the Local Agent therefor \$5 per acre cash and a further sum of \$50 to cover the cost of survey, obtain a patent for said claim as provided in the said Mining Regulations.

Copies of the Regulations may be obtained upon application to the Department of the Interior.

A. M. BURGESS,

Deputy of the Minister of the Interior.

DEPARTMENT OF THE INTERIOR, }
Ottawa, Canada, December 19th, 1887. }

Nov 1 3 1966

HENRY WATTERS,

Chemist and Druggist,

Corner of Sparks and Bank Streets,

OTTAWA.

J. DURIE & SON

Booksellers,

Stationers,

Publishers.

☞ Daily orders to the United States.

A case from London received by Allan Steamer every week.

C. ROSS & CO.

MAKE TO ORDER Ladies' Mantles, Costumes, Hats and Bonnets. Are the largest dealers in the city in Silks, Plushes, Velvets, Dress Materials, Cloths, Mantles and Millinery.

We make prices an object to buyers.

Wholesale and Retail Departments, 94 & 96 Sparks Streets, 24, 26, 28 & 30 Metcalfe Street.

W. BORTHWICK,

Importer and Dealer in

Fruit, Fish and Oysters.

Borthwick's Mineral Water Depot.

M. M. FYKE,

MEN'S OUTFITTER,

99 SPARKS ST.,

OTTAWA, - - - ONTARIO.

WM. HOWE,

Importer of Artists' Materials and Artistic Interior Decorations. Manufacturer of White Lead, Paints & Colors.

Howe's Block, - - OTTAWA.

A. J. STEPHENS,

FINE SHOES,

102 SPARKS ST.

Boots and Shoes Made to Measure.

G. W. McCULLOUGH,

ALL RAIL

Anthracite & Bituminous Coal

RUSSELL HOUSE BLOCK.

J. & R. CRAIG

TAILORS,

105 Sparks St., - Ottawa.

OTTAWA LADIES' COLLEGE

For terms apply to the

PRINCIPAL - - REV. W. D. BALLANTYNE.