

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
- Covers damaged/
Couverture endommagée
- Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée
- Cover title missing/
Le titre de couverture manque
- Coloured maps/
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur
- Bound with other material/
Relié avec d'autres documents
- 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
- 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.

- Coloured pages/
Pages de couleur
 - Pages damaged/
Pages endommagées
 - Pages restored and/or laminated/
Pages restaurées et/ou pelliculées
 - Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
 - Pages detached/
Pages détachées
 - Showthrough/
Transparence
 - Quality of print varies/
Qualité inégale de l'impression
 - Continuous pagination/
Pagination continue
 - Includes index(es)/
Comprend un (des) index
- Title on header taken from:/
Le titre de l'en-tête provient:
- 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:

Pagination is as follows: 105-116, 22-41 p.

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

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

November and December, 1888.

THE
* OTTAWA NATURALIST *

VOLUME II. No. 849.

The
TRANSACTIONS.

Of the

* Ottawa Field-Naturalists' Club *

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

CONTENTS.

	PAGE
Our Patron.....	105
The Programme for the Winter of 1888-89.....	105
Programme.....	106
The President's Inaugural Address.....	107
Flora Ottawaensis, by J. Fletcher.....	22

OTTAWA, CANADA:

Citizen Printing and Publishing Company, Queen St.

1888.

Published Monthly at \$1.00 per annum.

Patron:
HIS EXCELLENCY LORD STANLEY OF PRESTON,
GOVERNOR GENERAL OF CANADA.

President: R. B. WHYTE.

Vice-Presidents:

1ST, REV. PROF. C. F. MARSAN; | 2ND, DR. B. 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.

Leads:

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

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

Conchology—F. R. LATCHFORD.

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

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

Zoology—H. B. SMALL, J. BALLANTYNE.

Editor (pro tem): J. FLETCHER.

The Librarian will furnish the Publications at 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.

OUR PATRON.

We have much pleasure in announcing that His Excellency the Governor-General, Lord Stanley of Preston, has graciously consented to become the patron of the Club in the place of the Marquis of Lansdowne.

—: o :—

THE PROGRAMME FOR THE WINTER OF 1888-89.

Acting upon the recommendation of the Soiree Committee, the Council has decided that during the coming winter, instead of having one long paper read at each soiree, as has been the custom in the past, a number of short papers and interesting notes should be substituted.

This change is suggested for the purpose of making the discussions more general and of a conversational nature.

Each evening will be devoted, as much as possible, to the consideration of one branch of science only, and will be under the joint management of the leaders and the Soiree Committee. This has been thought advisable as the leaders are most familiar with the work that has been done in their several branches during the season. The leaders' reports will also be read upon the evening bearing the name of their branch.

An ample supply of papers upon each subject has been promised.

The admission fee will be the same as in past years, viz., *free* to all members of the Club and of the Ottawa Literary and Scientific Society, and 10c. each to non-members.

The Monday afternoon course of Popular Elementary Lectures will be *free* to all comers as heretofore and it is hoped that they will be well attended.

PROGRAMME.

SOIREES.

1888.
 Dec. 13. President's Inaugural Address Mr. R. B. Whyte.
 1889.
 Jan. 17. Geological Evening
 " 31. Botanical Evening
 Feb. 14. Entomological Evening
 " 28. Conchological and Ornithological Evening.
 Mar. 7. General Zoology Evening

MONDAY AFTERNOON LECTURES.

1889.
 Jan. 7. Ornithology, Prof. Macoun
 " 14. Conchology, Mr. Latchford
 " 21. Geology, Dr. Ells
 " 28. Geology, Mr. Ami
 Feb'y. 4. Entomology, Mr. Fletcher
 " 11. Entomology, Mr. Harrington
 " 18. Zoology, Rev. G. W. Taylor
 " 25. Botany, Prof. Macoun
 Mar. 4. Botany, Mr. Fletcher
 " 11. Botany, Mr. Whyte

The above meetings will be held as usual in the museum of the Ottawa Literary and Scientific Society, 25 Sparks street. The soirees will begin at 8 p.m. punctually. The Monday afternoon lectures will begin at 4.15 p.m. and close at 5.30 p.m. punctually.

THE PRESIDENT'S INAUGURAL ADDRESS.

DELIVERED THURSDAY EVENING, DECEMBER 12, 1888.

Mr. Chairman and Members of the Ottawa Field-Naturalists' Club.

Though very much averse to taking the responsible position to which you elected me for the second time last March, I cannot but feel proud of the honor conferred upon me when made President of such an active working society of students of nature as the Ottawa Field Naturalist's Club, and am much gratified to be again able to congratulate you upon the general prosperity of the Club, and that in the face of difficulties greater than usual, which will be referred to hereafter.

Though our membership has not been increased so largely as last year, still we have added the respectable number of 19 to our list, and the very gratifying attendance at the general excursions shows that there has been no falling off of interest in the Club work. These excursions were four in number. The first to Kirk's Ferry on June 2nd. This, the largest excursion yet held by the Club, and which promised to be our most successful one, was unfortunately spoiled by the rain, which fell from midday till evening. Many of the party never left the vans, and only a few—the happy possessors of waterproofs—were able to explore the woods in the vicinity of the falls. But very little collecting was done, and an early start was made for home.

On June 23rd we visited the shores of Lake Duchesne, near Aylmer, for the second time, and had a very enjoyable excursion. Though held in the same week as last year, the extreme lateness of the season interfered very much with the expected collections, as plants found in full bloom the previous year were yet only in bud.

On July 2nd we visited Eastman's Springs and the Mer Bleue, probably the most interesting locality to the naturalist visited by the Club. After testing the more or less nasty-tasted water of the different springs, the bog was visited and large collections made of the many interesting and beautiful plants for which it is famous, including the insect-eating sundews, the bearded orchis, the horned bladderwort, and a great profusion of the lovely white fringed orchis, collected by many of our botanists for the first time,

The fourth and last of the season, on September 15th, was our eighth trip to King's Mountain, visited this year for the first time in the autumn, and I think the general verdict was that the locality lost nothing by the change. If there was not such a profusion of flowers as in the spring, neither was there of mosquitoes, and the clear beautiful day made the view the finest on record.

Another excursion was advertised to Sulphur Springs, but owing to the continued wet weather, after being postponed two weeks, had to be dropped altogether.

You will no doubt have noticed in the July *NATURALIST* a brief account of the Montreal Natural History Society's excursion to Montebello. They kindly sent an invitation to any of our Club able to go to meet them there. Unfortunately we did not receive it in time to organize a party, and I very much regret that a business engagement prevented my being able to represent the Club; but I am glad to know that we were most efficiently represented by Messrs. Whiteaves and Ami, who gave a most glowing account of the kindly treatment they received from our Montreal friends.

I notice in the account given in the *NATURALIST* a feature that I have often thought we might adopt with great advantage at our own excursions, that is, the giving of prizes for the best collections made during the day. I well remember, on the two occasions when I had the pleasure of meeting our Montreal friends—at Calumet in 1879 and Montebello in 1881—the great interest taken in these competitions not only by the competitors and their friends but by everyone present. Prizes are given in botany, geology and entomology, for unnamed as well as named collections, thus making them interesting to the juniors and more advanced students alike. I would like to draw the attention of our lady members to the fact that at Montebello all the prizes in botany and geology were carried off by ladies, and that the large number of specimens collected show that the fair prize-winners deserved their honors. I have several times urged the advisability of giving prizes at our outings, but have not been able to persuade the Council to see the advantages of it as I do; but if I should be on the Council next season I will certainly try again, as the more I think over the matter the more convinced I am that the effects would be in every way beneficial,

Our Saturday afternoon sub-excursions were not nearly so numerous as last year, owing to the very large number of wet Saturdays in the early part of the season, and in the latter part to the absence from the city of the leaders who take charge of these outings; but though few in number, they included two of the most successful yet held by the Club. One, that to the Beaver Meadow, Hull, though not very largely attended, was in every other way so satisfactory that it might be taken as a model of what the Council aim at in their Saturday afternoon trips, therefore a brief sketch of it will not be out of place here.

The meadow, a favorite resort of our botanists, is about a mile from the street car terminus north of the Aylmer Road. The party of about 25 explored the north side without much success, but on crossing over to the south side we beheld the most magnificent display of spring flowers I ever saw—Bellworts, Trilliums, Squirrel corn, and many others in the greatest profusion—a sight well worth the walk to see. After making large collections the party reassembled to hear the usual addresses. The most notable plants collected were exhibited and their principal characteristics and properties explained as simply as possible by your President, special attention being directed to the Cruciferae. Prof. Macoun, by special request, gave a most admirable address on the willows, many of which were then in flower, explaining the different groups into which this most difficult order is divided, and the best way to collect and study them. Mosses and allied forms were also referred to. Mr. Fletcher, on behalf of the entomological leaders, spoke of the principal insects captured, with special reference to gall formation, and also gave some valuable advice on how to begin the study of insect life, what apparatus was necessary, and where it could be procured. Prof. Macoun then gave a short address on some birds he had observed, illustrating his remarks with specimens he had collected for the museum, and by others flying overhead, making altogether a combination of pleasure and instruction that ought to be attractive not only to students of natural history but to every thinking person who desires to become acquainted with the beauties of the world around him.

The other excursion referred to was that to the Experimental Farm on July 14, which was the largest sub-excursion on record, over 60 members taking part in it. As a full account of it was published in

August *Naturalist* it will not be necessary to repeat it here, but I would strongly advise any one wishing to see the farm under the best auspices to go with the club on our next visit. The only important innovation attempted in the mode of conducting these sub-excursions during the past summer was, in addition to the usual talk on the plants collected, the giving of a simple lecture on some one of the botanical families, explaining the distinguishing features of the family, and in what it differed from allied families, drawing attention to the members of it that were of most value and interest to man. I am sorry that the plan was not carried out as thoroughly as I would have liked, the irregularity of our excursions and frequent absence from the city of the botanical leaders interfering very materially with the success of the scheme, but I am quite satisfied, from our short experience this year, that if properly conducted it would prove a most instructive and attractive feature of our afternoon outings, and I would most strongly commend the idea to the favourable consideration of the leaders for next season.

Our little magazine has been published with more or less regularity during the past season. If any of you thought that it sometimes appeared rather late in the month I would beg of you to make allowance for the difficulties our publishing committee have had to contend with; the absence of our editor for two months, the assumption of his duties by the other members of the committee and the moving of our printers led to delays which were quite unavoidable. In addition to the usual reports and papers read at our soirees, reports of excursions, &c., it contains four instalments of Mr. Fletcher's revised *Flora Ottawensis*, a work of very great value to every botanical student. As originally published in 1880 it was merely a list of all flowering plants and ferns found here, but as revised it gives the usual habitat and special localities for the rarer plants, the time of flowering, and in many cases the points of difference between allied species, making it immensely more valuable than as first printed. I need hardly say that all this must have entailed a great deal of labour on Mr. Fletcher, and, though I am sure a labour of love, must have been a severe tax on the time of such a busy man as we know him to be, and he deserves the thanks of the club and of every botanical student in the country.

The club contribution to the exhibition last summer was not as full an exhibit of the club work as I would have liked. Several members on whom the committee relied for assistance were absent from the city, and their collections were not available. Notwithstanding this drawback, the space allotted to us was a great centre of attraction to visitors. Mr. Fletcher's magnificent collection of foreign butterflies, injurious insects, and Ottawa butterflies, Mr. Latchford's cases of shells, Mr. G. R. White's birds, Mr. Bell's great mineral display, along with the botanical collections, made a display of which we have every reason to be proud.

It has often occurred to me while observing the working of the Club during the last three or four years, that in some respects it has become too mechanical for the best results, not only as far as the effects on our members is concerned, but for the cause we all have at heart, the study and cultivation of a love for natural history. To confine myself to the section I know most about, that of botany. As you are aware, the Council at its first meeting after election appoints two or three members to be leaders in each department, whose duties are to arrange excursions, look after the interest of the branch, and make a report at the end of the year of the work done—duties which, as a rule, are performed with most commendable zeal and efficiency. But though most valuable results have flowed from the system since its inauguration eight years ago, I cannot but think some serious drawbacks attend it, the principal being the tendency to weaken the spontaneous work of the other members. I think I see a disposition to lean too much on the leaders. At our excursions, for instance, many of our young botanists who make collections are too ready to get the whole work of naming their specimens done for them by the leaders—a plan which I need hardly say will never make them botanists. There is all the difference in the world between the knowledge one has of a plant he has got named by some one else and one that he has ferreted out for himself; and it is only when he fails to find it out that he should call on the leaders for assistance. Others carry this dependence still further, and do not collect at all, expecting that the leaders will have done so, and that they will get the names of the plants they have seen at the close of the outing; and the knowledge that this assistance can so

easily be got tends to prevent individual work. One is very apt to say "What is the use of bothering about this? I'll ask the leaders." About things that, if it were not so easy to get their information second hand, they would have got first hand by investigating the matter for themselves. Whether you agree with me or not as to the evils of the present system, I hope the scheme I have to propose to counteract what seems to me its drawbacks will have advantages enough, apart from its main object, to commend it to your favorable consideration.

It is this: That during the active collecting season—say from May to September—a course of weekly meetings should be held in some convenient place—one another's houses would do very well—open to all the botanical students of the Club, to compare notes and talk over the week's work. Though such meetings would be necessarily under the control of the leaders, everyone should be expected to contribute something they have observed during the week—a new locality for a rare species, any abnormal specimens they have observed, any species new to our list—in short any fact of interest to them, or which they think would be of interest to other members. And I may say here that young students are very apt to undervalue the importance of their own observations. I am sure much valuable information is lost because the observer did not think it of any consequence, or that it would be sure to have been seen by some one before him. Such meetings as I propose would be of great value not only to the juniors by bringing before them the results of the work done by the more advanced students, but also to the leaders, who would have in this way brought under their notice all the work done by all the members of the branch, instead of as at present, when they draw up their report having to depend almost entirely on their own note-books. Were this done, any new fact observed would become common property when of most value and interest—that is, when fresh and capable of verification. Indeed there is no end to the advantages that would be derived from such meetings in furthering the educational work of the Club, and that, as I have always maintained, is the most important phase of our work, that in which there is the greatest field for well directed effort.

But in order that our efforts in that direction may bear full fruit we have first to disabuse people's minds of the very common delu-

sion that peculiar difficulties beset the study of natural history, only to be overcome by a favored few. Many a time I have heard the remark "I would like to know something about botany, but it would take too much time, and I never could remember the long names;" to which my answer has been: "If you are only anxious to learn it is not nearly so difficult as, say, Latin, or German, or algebra, or half a dozen other subjects that an average boy or girl is expected to master during their school life." To show what can be done by anyone who is in earnest about it I will ask your attention to what has been done by some members of our own club, leaving out of consideration our professional naturalists and confining myself to those who study nature for the love of it, first apologizing to the gentlemen concerned for mentioning their names without permission. In the (in our club) somewhat neglected subject of conchology, one of our members while a student at college occupied his few leisure moments in the study of our shells, to such purpose that he is now, as I was told the other day on good authority, one of the first amateur conchologists in the Dominion. Those of you who were present at our afternoon lecture on conchology last winter will know to whom I refer. To those who were not I would say come to the lecture on that subject in this winter's course, and see what a master of his subject Mr. Latchford is. Another student at the same University of Ottawa, Mr. W. L. Scott, devoted himself so assiduously to the study of birds as to be a thorough ornithologist before he left college. In the same department we have another member (Mr. Lees) who uses his eyes to such good effect that, as Prof. Macoun tells me, his list of bird arrivals sent in to the leaders last spring was as complete as his own or that of Mr. G. R. White, the two recognized heads of the department, and I may say that Mr. Lees has acquired his knowledge without taking the life of a single bird, and all in the last two years.

One more example for the last in the most important branch of entomology. It would be hard to name an amateur naturalist more widely known over the whole Dominion, and through the pages of the *Canadian Entomologist*, to which he is a frequent contributor, over the world, than our friend Mr. Harrington. I have selected these names from among many others because they are all alike very busy men, and

acquired their knowledge of nature in the hours that others wasted or worse than waste.

I often grieve to think of the hundreds of young men and women in this city who aimlessly walk our streets because "they have nothing else to do." To all such I say, turn over a new leaf and join the Field Naturalists' Club. You have no idea how much happier and healthier you will be if you earnestly devote yourself to the study of some branch of natural history; and you cannot fail to learn one of the most valuable lessons—how to use your eyes, how to observe and compare. You have no conception of how much of the beauty of this lovely world of ours is lost to you because you don't know how to use your faculties. In conclusion let me quote from an essay on "How to Study Botany" by our member, Dr. T. J. W. Burgess, F.R.S.C., of London, Ont. In speaking of the study of botany as a means of teaching us how to observe and compare, he says:—"Do this honestly, and you cannot fail to become lovers of nature, and, being lovers of nature, better and happier men and women, men and women in some degree approaching that illustrious scientist of whom it was said:

" And Nature, the old nurse, took
The child upon her knee,
Saying: 'Here is a story book
Thy Father has written for Thee.'

'Come, wander with me,' she said,
'Into regions yet untrod,
And read what is still unread
In the manuscripts of God.'

" And he wandered away and away
With Nature, the dear old nurse,
Who sang to him night and day
"The rhymes of the universe."

" And whenever the way seemed long,
Or his heart began to fail,
She would sing a more wonderful song
Or tell a more marvellous tale."

DISCUSSION.

Mr. J. Ballantyne had listened with much pleasure to the President's concise report of the Club's progress. He particularly agreed with what was said about the advantages of beginners relying on themselves instead of going to the leaders upon every occasion for assistance. He was of the opinion that if the President's suggestions were carried out much better results would be secured. Not only would the individual students find a far greater interest in their work, but they would impart it to others, and thus the influence and utility of the Club would be widened and felt by a larger number.

Mr. Fletcher endorsed what Mr. Ballantyne had said, but thought it possible to carry that spirit too far. There were certain difficulties at the outset in studying any science which, although surmountable by close application, were much more advantageously overcome and valuable time was to be saved by applying for help from those better informed. It must, however, be only for help, not to have the work done for them. He had heard with extreme pleasure of the good work in ornithology which had been done by Mr. Lees. It was remarkable that such results could have been obtained without having recourse to what was the greatest objection to ornithology, the necessity for killing the specimens, particularly in the breeding season. He did not consider that killing insects was such an objection to entomology. The specimens were killed outright very rapidly, and were seldom allowed to escape in a wounded and mutilated condition. Moreover, it was certain that insects had not the higher feelings, as birds have, of affection for their mates and their young, and he considered it pretty well established that they could not feel pain in the same way either. He would be pleased to hear something more from Mr. Lees of the plan he had followed.

Mr. Lees said the plan was very simple, and consisted merely of going to the woods very early in the morning with a good field glass and note-book and sitting quietly watching the birds and making notes on their habits. He could not allow all the credit to be given to himself for the work recorded; an equal amount had been done by his constant companion on these excursions, Mr. Norman Ballantyne.

Dr. Ells cited some experiments which seemed to prove that fish could not feel pain in the same way as higher animals.

Mr. J. Ballantyne could not agree either with Dr. Ells or Mr. Fletcher that the lower animals could not feel pain. He thought that worms when impaled on the hook of the angler showed unmistakable signs of pain.

Mr. H. B. Small, President of the Ottawa Literary and Scientific Society, agreed heartily with the President in his remarks on the value of students depending on their own researches for the identification of specimens, as much of the value to be gained by personal examination of a plant depended on such a plan for fixing its name in the memory. If they were simply told by someone else what a certain plant was, they would probably have to ask again the next day, unless committed to writing. A very good evidence of the value of this method of study came to his notice some years ago, when he was connected with one of the United States preparatory military schools in New York State. At the botany lecture a bunch of wild flowers was laid on the table, gathered at haphazard for the occasion, and one or more pupils took one to analyse and explain before the class, whilst at its close each student took a specimen away for examination, a report thereon in detail to be handed in at the next weekly lecture. So ardently did the pupils vie with each other in this, that some of the reports were full enough of matter to have made magazine articles, and the knowledge thus gained was lasting in its after effects.

Mr. Small strongly urged on the Club extending their summer rambles to points accessible by railway, as the older fields of research round the city had been well gone over, and he recommended each member of the Club to bear in mind the fact that if they would only take the trouble of getting even one friend to accompany them or to attend the meetings, it would be the best manner they could adopt to advertise the society, and aid the workers in it by countenancing their efforts with their personal support.

AMPHICARPÆA, Ell. Hog Pea-nut.

563. *A. MONOICA*, Ell.

River banks and islands. Aug.—1. (B.) A graceful creeper, with pretty trifoliolate foliage, slender twining stems and delicate purplish flowers; bearing, as well as the thin scymetar-shaped pods which follow the upper flowers, large fleshy reniform subterranean pods which are generally one-seeded.

ROSACEÆ.—Rose Family.

PRUNUS, Tourn. Plum, Cherry.

568. *P. AMERICANA*, Marshall. (Wild Red Plum.)

Thickets. May—3. (B)

The fruit of this species varies very much upon different trees, both in size and colour, and also in quality. Many varieties are cultivated, and form a valuable fruit for domestic purposes.

—— var. *MOLLIS*, T. & G. Fl. I. 407.

In Prof. Macoun's Catalogue this variety is recorded as follows:

“Chaudière Falls, Ottawa (?) (Pursh.) This is the black fruited variety of our wild plum, and is to be looked for throughout Ontario. It is probable we have two species in our territory.” I have never succeeded in finding it here.

570. *P. PUMILA*, L. (Dwarf Cherry.)

Growing in crevices and trailing over rocks. Chaudière Islands and Rockcliffe. Rare. Ju.—1. This is possibly the plant recorded as *P. maritima* from the “borders of the Ottawa” by Pursh.

571. *P. PENNSYLVANICA*, L. (Bird Cherry, Red Cherry.)

Sandy and rocky woods. A graceful tree, sometimes 30 feet high. Well suited for lawns. May—2. (B)

573. *P. VIRGINIANA*, L. (Choke Cherry.)

River banks and thickets. An ornamental shrub bearing a profusion of racemes of white flowers. Fruit, dark purplish red; very astringent. May—3. (B)

575. *P. SEROTINA*, Ehrh. (Black Cherry.)

Woods. An uncommon tree in this locality. King's Mountain, Chelsea. Billings Bridge. Beechwood. Fruit in long racemes, black, slightly astringent. May—4. (B)

SPIRÆA, L. Meadow Sweet.

577. *S. SALICIFOLIA*, L. (Willow-leaved Meadow Sweet.)

Low ground. July—2. (B.)

578. *S. TOMENTOSA*, L. (Hardhack, Pink Spiræa.)

Low ground. Aug.—1. (B.)

NEILLIA, Don.

584. *N. OPULIFOLIA*, Benth & Hook. (Nine-bark.)

Spiræa opulifolia, L.

Rocky river banks. An ornamental shrub with bright foliage and bearing a profusion of white flowers, which are followed by corymbs of pinkish, membranaceous, inflated pods. Ju.—3. (B)

RUBUS, Tourn. Bramble. Raspberry.

586. *R. ODORATUS*, L. (Purple Flowering Raspberry, "Mulberry.")

Thickets and rocky fields. Ju.—2. (B.)

590. *R. DALIBARDA*, L. (Barren Raspberry.)

Dalibarda repens, L.

In a low swampy wood at Eastman's Springs (*J. F.*). Damp wood at Casselman (*Prof. Maroun*). Very local, only detected in the above localities. July—2.

592. *R. TRIFLORUS*, Rich. (Swamp-berry.)

Swamps and peat bogs. May—3 (B.)

594. *R. STRICOSUS*, Mx. (Red Raspberry.)

Rocky woods and borders of fields. Ju.—2. (B.)

595. *R. OCCIDENTALIS*, L. (Black Raspberry.)

Rocky woods. A useful fruit, ripening between the last and the next. A variety with yellow fruit has twice been found in this district. Ju.—3. (B.)

600. *R. VILLOSUS*, Ait. (Blackberry, Thimbleberry.)

Rocky and sandy woods. What I take to be the type of this species is found at Kingsmere. The whole plant is more glandular than the ordinary form, and although the lower bracts are generally leafy the description answers as to inflorescence, &c.

——— var. *FRONDOSUS*, Tor.

Woods and thickets. The common form. Ju.—2. (B.)

——— var. *HUMIFUSUS*, T. & G.

Low ground and shady river banks. This is a very distinct variety, which seems worthy of a specific name. Stems low (1 to 2 feet) and trailing, with weak prickles. Flowers few in number, fine and large. Patterson's Creek. Hull. Aylmer. Ju.—3.

601. *R. CANADENSIS*, L. (Low Blackberry.)

Rocky woods and sandy fields. Montreal Road. (*R. B. Whyte*) King's Mountain and Aylmer (*J. F.*) Ju.—2.

602. *R. HISPIDUS*, L. (Swamp Blackberry.)

Borders of peat-bogs. Mer Bleue. Race-course swamp, Bank Street Road. Aylmer. Ju.—2.

GEUM, L. Avens.

607. *G. ALBUM*, Gmelin. (White Avens.)

Low woods. July—1. (B.)

609. *G. MACROPHYLLUM*, Willd. (Large-leaved Avens.)

Rocky woods. Little Chaudiere. Hull. Chelsea. July—1.

610. *G. STRICTUM*, Ait. (Yellow Avens.)

Woods and thickets. July—1. (B.)

612. *G. RIVALE*, L. (Nodding or Purple Avens.)

Swamps. Lake Flora. Buckingham. Dow's Swamp. Stewarton. Ju.—3.

WALDSTEINIA, Willd.

616. *W. FRAGARIODES*, Tratt. (Barren Strawberry.)

Woods and thickets. May—3. (B.)

FRAGARIA, Tourn. Strawberry.

620. *F. VIRGINIANA*, Duchesne. (Round-fruited Strawberry.)

Woods and fields. May—3. (B.)

621. *F. vesca*, L. (Wood Strawberry.)

Woods and rocky fields. Fruit pointed and seldom more than 2 ripe at once upon a scape, while *F. Virginiana* frequently has 5 or 6. The whole plant of *F. vesca* is villous downy. Ma.—1 (B.)

POTENTILLA, L. Five Fingers.

623. *P. ARGUTA*, Pursh.

Rocky banks. A tall coarse plant with cream-coloured flowers.

Rare. Britannia (*R. B. Whyte*). King's Mountain (*J. F.*)
Ju.—2.

625. *P. NORVEGICA*, L.

Fields. Ju.—2. (B.)

637. *P. argentea*, L. (Silvery Potentilla.)

Introduced. Fields and waysides. Very much commoner than a few years ago. Stewarton abundant. New Edinburgh. Theodore street. July—1.

645. *P. PALUSTRIS*, Scop. (Marsh Five-finger.)*Comarum palustre*, L.

Peat-bogs and Marshes. July—1.

649. *P. ANSERINA*, L. (Silver Weed.)

Sandy margins of rivers. July—1. (B.)

650. *P. CANADENSIS*, L.

Pine woods at Aylmer. Rare in this district. Some of the specimens in open dry spots taking the form of the var. *simplex*
T. & G. Ju.—1.

AGRIMONIA, Tourn. Agrimony.

654. *A. EUPATORIA*, L. (Common Agrimony.)

Borders of woods. July—1. (B)

ROSA, Tourn. Rose.

660. *R. CAROLINA*, L. (Swamp Rose.)
 Borders of swamps. Rare. Hull. Aylmer (*J.F.*) Meech's Lake
 (*H. M. Ami*). July—2.
662. *R. BLANDA*, Ait. (Early Wild Rose.)
 Rocky islands and fields. Ju.—1. (B.)
2135. *R. SAYII*, Schwein. (Prickly Wild Rose.)
R. blanda, Ait. var. *setigera*, Crépin.
 A pretty species somewhat like *R. blanda*; but with very prickly
 stems and glaucous pinkish-tinged round, oval, or almost pear
 shaped fruit. Hull. Kingsmere. Ju.—1.
670. *R. micrantha*, Smith. (Sweet Brier.)
 Introduced. A few bushes of this rose are to be found growing
 wild as at Hull and near the St. Louis Dam; but they do not
 increase here as they do in Western Ontario. Ju.—1.

PIRUS, L. Pear.

672. *P. malus*, L. (Cultivated Apple.)
 Introduced. Trees which have grown from seed of cultivated
 apples are occasionally found in thickets and by waysides. The
 native crab, *P. coronaria*, L. has never yet been found in this
 district.
673. *P. ARBUTIFOLIA*, L. (Choke-berry.)
P. arbutifolia, L. var. *erythrocarpa*, G.
 Peat-bogs. Pedicels and leaves beneath pubescent. Fruit purple.
 Ju.—1.
 ————— var. *MELANOCARPA*, Hook.
 Peat-bogs. With the above, but much more abundant. Leaves
 and pedicels almost smooth, and the somewhat smaller berries
 much blacker. Ju.—1.
674. *P. AMERICANA*, DC. (American Mountain Ash.)
 Rocky woods. King's Mountain and other places near Chelsea.
 Ju.—2. The buds of this species are covered with a resinous gum.
 ————— var. *MICROCARPA*, T. & G.
 Rocky woods. Fruit much smaller. Trees of this variety brought
 from King's Mountain are now growing in the two gardens on
 the N.E. and N.W. corners of Metcalfe and Cooper streets,

675. *P. SAMBUCIFOLIA*, Cham & Schlecht.

Peat-bog. A shrub closely resembling *P. Americana*, but with downy buds, is growing in the Lake Flora bog, Hull. This species and the preceding appear to run so close together as to suggest that they are, as Michaux thought, only varieties of one species. Ju.—2.

——. *P. Aucuparia*, Meyer. (Rowan Tree.)

Introduced. Extensively cultivated as an ornamental tree, and naturalized from seed in many of our woods.

CRATÆGUS, L. Hawthorn.

678. *C. COCCINEA*, L. Scarlet-fruited Thorn.

Thickets and fields. May—4.

Leaves thin, pedicels glabrous or nearly so.

————— var. *MACRANTHA*, Lodd.

C. tomentosa, L. of Gray's Manual and other authors.

Thickets. May—4. (B.)

Leaves thicker, pedicels calyx, and leaves when young villous-pubescent.

Prof. Macoum tells me that what has up to this time been taken as *C. tomentosa*, from this locality is not that species, but merely a pubescent variety of *C. coccinea*, as is also the var. *pyrifolius* of his catalogue.

The working up of the Thorns of this locality is a simple matter. We have only detected the above mentioned forms, and these seem to vary very little. They require more study, however, and careful search should be made for the true *C. tomentosa*, which is described in "Garden and Forest," 1888, p. 249, as flowering some weeks later than the forms of *C. coccinea*, with pale gray branches almost destitute of thorns, leaves thicker and more pubescent, without glands, gradually contracted into a stout margined petiole, densely pubescent on the under side as are the calyx and stems of the inflorescence, corymbs broader and looser, fruit smoother. We have none of the yellow-fruited varieties of Western Ontario at Ottawa.

AMELANCHIER, Medic. June-berry. Service-berry.

685. *A. CANADENSIS*, T. & G. (Shad-bush.)

A. Canadensis, T. & G. var. *Botryopium*, Gray.

Thickets and woods, May—3. (B.)

This is a most variable species,* and it is sometimes difficult to refer specimens to the characterised varieties. Those referred to the type have pointed, sharply serrate, glabrous leaves (varying, however, to villous-pubescent when young), flowers large, in pendulous racemes. Here, too, must come a beautiful variety found upon King's Mountain, recorded in the 1887 list as var. *alnifolia*. The leaves are large, oblong, coarsely-serrate and glabrous. The flowers larger than those of the type. In fact it resembles *A. alnifolia* of the West very closely, and only differs in the leaves, which in the Ottawa plant are thin and toothed much lower down to the base. I have never seen the fruit.

————— var. (?) *OBLONGIFOLIA*, T. & G.

Rocky banks. Parliament Hill. Little Chaudiere. Hull. May—4.

A small shrub. If a variety of *A. Canadensis*, a very distinct one with erect racemes of small creamy-white flowers and the leaves beneath, & branchlets thickly covered with yellowish-white down.

SAXIFRAGACEÆ.—Saxifrage Family.

SAXIFRAGA, L. Saxifrage.

699. *S. VIRGINENSIS*, Mx. (Spring Saxifrage.)

Rocks. Rockcliffe. Chelsea Hills. May—3.

TIARELLA, L. False Mitre-wort.

720. *T. CORDIFOLIA*, L. ("Wood Mignonette.")

Rich woods. A charming spring flower. May—2. (B.)

MITELLA, Tourm. Mitre-wort.

723. *M. DIPHYLLA*, L.

Rich woods. May—2. (B.)

724. *M. NUDA*, L.

Cold swampy woods. May—2. (B.)

This is one of the gems of our woods. The inconspicuous green flowers are of exquisite beauty when examined, and have a most powerful odour for such small flowers.

CHRYSOSPLENIUM, Tft. Golden Saxifrage.

735. *C. AMERICANUM*, Schwein.

In brooks and swampy woods. May—3. (B.)

RIBES, L. Gooseberry. Currant.

747. *R. OXYACANTHOIDES*, L. (Smooth Gooseberry.)

R. hirtellum, Mx.

Swamps. May—3.

The fruit, although small, is very pleasant.

749. *R. CYNOSBATI*, L. (Prickly Gooseberry.)

Rocky banks. May—3. (B.)

750. *R. LACUSTRE*, Poir: (Bristly Gooseberry.)

Wet woods. May—4. (B.)

Young stems thickly beset with slender prickles. Fruit bristly and growing in a raceme, almost tasteless.

752. *R. RUBRUM*, L. (Red Currant.)

Cool woods. May—2.

Fruit sparsely produced, astringent.

753. *R. PROSTRATUM*, L'Her. (Fetid Currant, Skunk Currant.)

Swamps and cool woods. May—3.

Stems prostrate. Fruit red, bristly, and very unpleasant.

757. *R. FLORIDUM*, L'Her. (Wild Black Currant.)

River banks and thickets. May—3. (B.)

A useful shrub bearing a profusion of greenish yellow flowers followed by quantities of palatable ovoid fruit of the same character as the cultivated Black Currant.

CRASSULACEÆ.—Orpine Family.

PENTHORUM, Gronov. Ditch Stone-crop.

762. *P. SEDOIDES*, L.

Ditches. July—1. (B.)

SEDUM, Tourn. Stone Crop.

763. *S. acre*, L. (Mountain Moss. Stone Crop.)

Introduced. On limestone rocks. Richmond Road. New Edinburgh. Mount Sherwood. June—3,

768. *S. Telophium*, L. (Live for ever. Orpine.)
 Introduced. On the rocks round Parliament Hill. Near St.
 Louis Dam. July—1.

DROSERACEÆ—Sundew Family.

- DROSEREA, L. Sundew.
 771. *D. ROTUNDIFOLIA*, L. (Round-leaved Sundew.)
 Peat bogs. June—4.
 773. *D. INTERMEDIA*, Drev & Hayne, var. *AMERICANA*, DC.
D. longifolia, Mx.
 Peat bogs, with the last. Mer Bleue. Dow's Swamp, &c. Ju.—4.

HAMAMELACEÆ—Witch Hazel Family.

- HAMAMELIS, L. Witch Hazel.
 775. *H. VIRGINIANA*, L.
H. Virginica, L.
 Thickets. Very rare at Ottawa. The only locality being on the
 Chelsea Road about 2 miles from Hull, where there are a few
 bushes. An interesting shrub, flowering after the leaves have
 fallen. Oct.—3.

HALORAGEÆ—Water Milfoil Family.

- MYRIOPHYLLUM, Vail. (Water Milfoil.)
 776. *M. SPICATUM*, L.
 In ponds and slow-running streams. July—1.
 PROSERPINACA, L. (Mermaid Weed.)
 780. *P. PALUSTRIS*, L.
 In shallow water. "Banks of the Nation River at the crossing of
 the Ottawa & Prescott Railway." (*B. Billings*) July—1.
 Not since found. To be looked for at Casselman and at the
 Mer Bleue.
 HIPURIS, L. Mare's Tail.
 781. *H. VULGARIS*, L.
 In mud on the banks of rivers. Rare. Malloch's Bay. Hull.
 New Edinburgh.

ONAGRACEÆ—Evening-Primrose Family.

LUDWIGIA, L.

784. *L. PALUSTRIS*, Ell. (Water Purslane.)*L. palustris*, L.

Ditches and borders of rivers. July.

EPILOBIUM, L. Willow Herb.

786. *E. PICATUM*, L. (Fire Weed. Great Willow-herb.)*E. angustifolium*, L.Low ground in woods, especially after fires have run over them.
July—1. (B)792. *E. COLORATUM*, Muhl.

Low ground. July—1. (B)

794. *E. PALUSTRE*, L. var. *LINEARE*, L.

Swamps. July—1. (B)

796. *E. MOLLE*, Torrey.Swamps. Lake Flora (*J. A. Guignard*). Upon a small island in the Rideau Canal near C. A. Railway station. Mer Bleue. (*J.F.*)
Uncommon. Leaves wider and the rose-coloured flowers larger than those of 794. Whole plant villous pubescent. July.

CENOTHERA, L. Evening Primrose.

800. *C. BIENNIS*, L. (Common Evening Primrose.)

Fields and waste places. July—1. (B)

An exceedingly variable species. What I have considered as the type has green stems and pods without tubercles or bristles and petals almost the length of the stamens. This almost answers to Gray's var. *parviflora*, but the flowers are too large.————— var. *MURICATA*, Lindl.

This is the commonest form at Ottawa, with stems and pods rough with red bristle-bearing tubercles. Petals rather longer than the stamens.

————— var. *GRANDIFLORA*, Lindl.

A distinct variety with large showy flowers. Stems and pods without bristles. Malloch's Bay. Hull. Stewarton.

Æ. BIENNIS, L. var. OAKESIANA, Gr.

Leaves and stems apparently glabrous, but with a minute appressed pubescence. On the rocks above the Locks going up to Major's Hill Park.

803. Æ. PUMILA, L. (Dwarf Evening Primrose.)

River banks. July—1. (B) When growing in damp places almost glabrous. When on dry sandy banks the stems are more slender and the whole plant more pubescent, it is then *Æ. chrysantha*, Mx.

CIRCÆA. Enchanter's Nightshade.**817. C. ALPINA, L.**

Low shady woods and swamps. July—1. (B)

818. C. LUTETIANA, L.

C. Lutetiana, var. *Canadensis*, L.

Woods. July—2. (B)

Linné considered our Canadian plant a distinct variety. It certainly seems to me to be different from the European form.

LYTHRACEÆ—Loosestrife Family.**LYTHRUM, L. Loosestrife.****822. L. SALICARIA, L. (Spiked Loosestrife.)**

Introduced here. Railway bank. Found along the line of the Canada Atlantic Railway, a quarter of a mile from the Elgin street station (*W. Scott, B.A.*) Aug.—2.

NESÆA, Juss. Swamp Loosestrife.**823. N. VERTICILLATA, HBK.**

Borders of ponds and rivers, Aug.—1.

CUCURBITACEÆ—Gourd Family.**SICYOS, L. Star Cucumber.****827. S. ANGULATUS, L.**

Not indigenous in this locality. Frequently found on waste heaps, but always as a garden escape. Ju.—2.

ECHINO CYSTIS, T. & G.

828. *E. LOBATA*, T. & G. (Wild Cucumber.)

Introduced from the North-West, where it grows along streams.
Extensively cultivated as a creeper for its rapid growth, as
well as its showy flowers and fruit. Ju.—2.

UMBELLIFERÆ—Parsley Family.

HYDROCOTYLE, Tourn. Water Penny-wort.

834. *H. AMERICANA*, L.

Borders of swamps and damp places. July—1.

SANICULA, Tourn. Black Snake-root.

835. *S. CANADENSIS*, L. (Canada Sanicle.)

Rich woods. Rare. Billings Bridge. Hull. Ju.—2.

836. *S. MARILANDICA*, L.

Rich woods. Common. Ju.—1. (B)

Easily distinguished from the last by the long styles, which are
much longer than the prickles of the fruit, and are recurved.
The leaves are all 5-7-parted, whilst those of *S. Canadensis* are
3-5-parted (the upper only 3-).

CONIUM.

840. *C. maculatum*, L. (Poison Hemlock.)

Introduced. Uncommon. July—2.

APIUM, L. Parsley,

844. *A. Petroselinum*, L. Parsley.

Introduced. Occasionally spontaneous and living over the winter
to produce seed ; but of uncertain tenure.

CORIANDRUM, L. Coriander Seed.

— *C. sativum*, L.

Introduced. Ju.—3.

CARUM, Koch. Carraway.

845. *C. Carui*, L.

Introduced, Waste heaps. Not uncommon. Ju.—3.

THASPIUM, Nutt. Meadow Parsnip.

849. *T. AUREUM*, Nutt.Rocky river bank. Casselman. Aug.—2. (*Miss Isabel Grant*).

CICUTA, Koch. (Water Hemlock.)

851. *C. MACULATA*, L. (Spotted Cowbane.)

River sides and ditches. Billings Bridge. Hull. July—1. (B)

853. *C. BULBIFERA*, L.

River sides and swampy ground. Aug.—1.

SIUM, L. Water Parsnip.

854. *S. CICUTÆFOLIUM*, Gmelin.*S. lineare*, Mx.

River sides. July—2 (B)

CRYPTOTÆNIA, DC. (Honewort.)

855. *C. CANADENSIS*, DC.

Rich damp woods. Ju.—2. (B)

BUPLÉURUM, L. Thorough Wax.

2151. *B. rotundifolium*, L.

Introduced. Oat-field at Billings Bridge, 3 or 4 plants. Ju.—2.

OSMORRHIZA, Raf. Sweet Cicely.

858. *O. LONGISTYLIS*, DC. (Smoother Sweet Cicely.)

Rich woods. Uncommon. Gatineau Point. Hull. Beechwood.

Styles conspicuous. May—4.

859. *O. BREVISTYLIS*, DC. (Hairy Sweet Cicely.)

Rich woods, Common, Smaller than the last. Styles very short, inconspicuous. May—4. (B)

PEUCEDANUM, Hog Fennel.

882. *P. sativum*, Benth. & Hook. (Parsnip.)*Pastinaca sativa*, L.

Low ground and by waysides. Introduced. Ju.—4, (B)

HERACLEUM, L. Cow Parsnip.

883. *H. LANATUM*, Michx.Low ground near Rockcliffe (*J. A. Guignard*). Casselman (*J. F.*)

Ju.—3. A tall handsome plant. Rare in this locality.

DAUCUS, Tourn. Carrot.

887. *D. Carota*, L. (Cultivated Carrot,

Introduced. Thoroughly established and spreading in some localities. Ironsides. Billings Bridge, July—2,

ARALIACEÆ—Ginseng Family.

ARALIA, Tourn.

889. *A. RACEMOSA*, L. (Spikenard.)

Rich low woods and swamps. July—1. (B)

890. *A. HISPIDA*, Vent. (Bristly Sarsaparilla. "Dwarf Elder,")

Rocky and Sandy woods. Ju.—3.

891. *A. NUDICAULIS*, L. (Wild Sarsaparilla.)

Rich damp woods. May—1. (B)

892. *A. QUINQUEFOLIA*, Decsne. (Ginseng.)

Rich low woods, Rare and local. Beechwood. Powell's Grove. Billings Bridge. A fine species with bright scarlet berries. July—1.

893. *A. TRIFOLIA*, Decsne. (Dwarf Ginseng. Ground-nut.)

Rich woods, May—2, (B)

CORNACEÆ—Dogwood Family.

CORNUS, Tourn. Cornel. Dogwood.

895. *C. CANADENSIS*, L. (Bunch-berry. "Pigeon-berry.")

Sandy woods. A charming plant. Ju.—1. (E)

900. *C. CIRCINATA*, L'Her. (Round-leaved Cornel.)

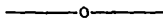
Rocky woods, Ju.—4. (B)

A handsome species with large leaves, which are white beneath, and bluish berries.

901. *C. SERICEA*, L. (Silky Cornel.)

River bank. Parliament Hill, Britannia, Rare. Often confounded with the next, and sometimes difficult to separate. The leaves are more pointed and more pubescent. The cymes and flowers are a little larger and the buds are more inflated at the base.

902. *C. STOLONIFERA*, Mx. (Red-osier Dogwood.)
Wet places. Common. Growing in large clumps. Young branches bright red. Ju.—2. (B) This is the "Kinnikinnik" of the Indians on the great plains.
905. *C. PANICULATA*, L'Her. (Panicled Cornel.)
Sandy woods and river banks. Rare. Hull. Aylmer. Casselman, Easily distinguished by the taper-pointed ovate-lanceolate leaves and the pyramidal cymes. Ju.—4.
906. *C. ALTERNIFOLIA*, L.
Rocky woods and thickets. Not uncommon. Ju.—1. (B)
A small tree with a flattish top. Branches greenish-grey streaked with white, alternate. Cymes white, large and showy, with red stems. Rather a difficult species for beginners to identify.



GAMOPETALOUS EXOGENS.



CAPRIFOLIACEÆ—Honeysuckle Family.

- SAMBUCUS, L. Elder.
909. *S. RACEMOSA*, L, var. *PUBENS*, Watson. (Red-berried Elder.)
S. pubens, Mx.
River sides and rocky thickets. May—4. (B)
910. *S. CANADENSIS*, L. (Black-berried Elder.)
Low thickets. July—1. (B)
- VIBURNUM, L. Arrow Wood.
911. *V. LENTAGO*, L. (Sheep-berry.)
River sides and low thickets. May—3. (B)
912. *V. CASSINOIDES*, L.
V. nudum, var. *cassinoides*, T. & G.
Swamps and low woods. Ju.—2.
914. *V. PUBESCENS*, Pursh. (Downy Arrow-wood.)
Rocky woods. An ornamental shrub. Ju.—2.

915. *V. ACERIFOLIUM*, L. (Maple-leaved Arrow-wood.)
Thickets and woods. Ju.—3.
917. *V. OPULUS*, L. (High-bush Cranberry. "Guelder Rose.")
Low thickets and river sides. Rather uncommon. Casselman.
Aylmer. Britannia. Billings Bridge. July—2. (B)
918. *V. LANTANOIDES*, Mx. (Hobble-bush.)
Cool or rocky woods. Stewarton. Chelsea. May—2. (B)

LINNÆA.

919. *L. BOREALIS*, Gronov. (Northern Twin-flower.)
Cool woods and borders of swamps. Very common. Ju.—1. (B)
Certainly one of our most attractive native plants, both for the
grace of the delicate pink flowers with their exquisite scent and
the beauty of the foliage.

SYMPHORICARPUS, Juss. (Snow-berry.)

920. *S. RACEMOSUS*, Mx. var. *PAUCIFLORUS*, Robbins.
Rocky banks. Along both banks of the Ottawa. July—2.

LONICERA, L. Honeysuckle.

924. *L. HIRSUTA*, Eaton. (Yellow-flowered Honeysuckle.)
Rocky woods. Rare. Hull (*J.F.*) March (*A. H. Moore*). July—2
926. *L. GLAUCA*, Hill. (Smooth Honeysuckle.)
L. parviflora, Lam.
Rocky banks and woods. A straggling shrub with glaucous leaves
and small clusters of flowers purple or greenish purple outside
and yellow inside. Ju.—1. (B)
928. *L. CILIATA*, Muhl. (Fly Honeysuckle.)
Damp and rocky woods. May—3. (B)
930. *L. OBLONGIFOLIA*, Hook. (Swamp Honeysuckle.)
Peat bog. Mer Bleue. Rare. July—4.
931. *L. Tartarica*, L. (Garden Fly Honeysuckle.)
Escaped from cultivation. Not uncommon in woods. Beechwood.
Henlock Lake. Stewarton. June.

DIERVILLA.

932. *D. TRIFIDA*, Mœnch. Bush Honeysuckle.
Rocky banks and woods. Ju.—2. (B)

TRIOSTEUM.

933. *T. PERFOLIATUM*, L. (Fever-wort. Horse Gentian.)

Rich woods and low meadows. Chelsea. Casselman. Ju.—1. (B)

RUBIACEÆ—Madder Family.

CEPHALANTHUS, L. Button-bush.

934. *C. OCCIDENTALIS*, L. (Button-bush.)

Alluvial banks of streams. July—2. (B)

MITCHELLA, L. Partridge-berry.

937. *M. REPENS*, L. ("Twin-flower.")

Dry woods, particularly under *Coniferæ*. An interesting little plant with dark shining foliage, and bright scarlet berries each of which is formed from the joined ovaries of a pair of flowers. July—1.

GALIUM, L. Cleavers. Ladies' Bed-straw.

938. *G. APARINE*, L. (Goose-grass.)

Fields and borders of woods. Uncommon. Billings Bridge. Hull. Mer Bleue The Canadian plant is a smaller and slenderer form than the English, with smaller fruit. July—1.

939. *G. ASPRELLUM*, Mx. (Rough Bed-straw.)

Low ground. Common. July—1. (B)

941. *G. TRIFIDIUM*, L. Small Bed-straw.

Low grounds in swamps and wet woods. A very variable species.

942. *G. TRIFLORUM*, Mx. (Three-flowered Galium.)

Cool woods. Very common. May—4. (B)

945. *G. CIRCÆZANS*, Mx. (Smaller Wild Liquorice.)

Dry open wood beyond Beechwood Cemetery. Rare. Ju.—2.

946. *G. LANCEOLATUM*, Tor. (Wild Liquorice.)

Rocky woods. Uncommon. Chelsea. Hull. Hemlock Lake. Ju.—1

950. *G. verum*, L. (Yellow Bed-straw.)

Introduced. Two miles from Ottawa along the Montreal Road are two large patches of this plant, one in the Roman Catholic Cemetery, the other in a meadow. It is evidently well established and is increasing. (*R. B. Whyte*)

SHERARDIA, L. Blue Field Madder.

951. *S. avensis*, L.

Introduced. Roadside. Gathered two years in succession upon Friel street. (*H. M. Ami*).

COMPOSITÆ—Daisy Family.

EUPATORIUM, L. Thorough-wort.

959. *E. PURPUREUM*, L. var. *MACULATUM*, Darl. (Joe-Pye Weed.)

E. purpureum, L. in part of Gray's Manual.

Low woods and meadows. July—4. (B)

960. *E. PERFOLIATUM*, L. (Boneset.)

Low woods and meadows. July--4. (B)

961. *E. AGERATOIDES*, L. (White Snake-root.)

Rich damp woods. A lovely species well worthy of cultivation.

Aug.—1. (B)

SOLIDAGO, L. Golden Rod.

980. *S. squarrosa*, Muhl.

Rocky woods & ravines, An erect handsome species. Aug.—1, (B)

981. *S. CÆSIA*, L.

Rich woods. Billings Bridge. Found only in the above locality (*Miss Isabel Grant*). Aug.—1.

————— var. *AXILLARIS*, Gray.

Mountain woods, Hull. Chelsea, &c, Aug.—1.

This is the common form of this beautiful species—the short spikes springing from the axils of the upper leaves.

982. *S. LATIFOLIA*, L.

Rich woods and borders of ravines. A fine species. Aug.—1.

983. *S. BICOLOR*, L. (Soft Golden-rod.)

Dry rocky woods and river banks, Rockcliffe. Rare, Aug.—1. (B)
Flowers cream-coloured.

————— var. *CONCOLOR*. T. & G.

Rocky woods. Common. Larger than the type. Inflorescence more frequently branching. Flowers yellow. Aug.—1.

992. *S. ULIGINOSA*, Nutt. (Swamp Golden-rod.)
Swamps. Mer Bleue. Swamp on King's Mountain. Aug.—3.
An almost smooth species with an erect plumose panicle of bright yellow flowers.
995. *S. RUGOSA*, Mill. (Rough Golden-rod.)
S. altissima, Hook.
Fields and woods. Aug.—1. (B) The whole plant covered with short coarse pubescence.
996. *S. NEGLECTA*, T. & G.
Wet clay bank along the Gatineau at Ironsides. Rare. Aug.—2.
998. *S. ARGUTA*, Ait.
S. Muhlenbergii, T. & G. and of Gray's Manual.
Rocky woods. Kirk's Ferry. Aug.—2. Root-leaves large, thin and smooth. Panicle erect, but open,
999. *S. JUNCEA*, Ait.
S. arguta, T. & G. and of Gray's Manual,
Sandy and rocky woods. Near St. Louis Dam and Kirk's Ferry.
Rare. Aug.—2. Root leaves smaller and narrower. Stems red,
Panicle corymbose, with long drooping racemes,
- 1001, *S. SEROTINA*, Ait.
S. gigantea, T. & G. and of Gray's Manual.
Borders of woods. Common but not abundant. Aug.—1. (B)
Leaves quite smooth on both sides. Panicle pubescent.
-
- var. *GIGANTEA*, Gray.
S. serotina, T. & G. and of Gray's Manual.
Rocky woods. Commoner than the last. Aug.—1. Leaves hairy on the veins beneath.
1004. *S. CANADENSIS*, L. (Common Golden-rod.)
Woods and fields. Aug.—1. (B) Our commonest species extending under one form or another from the Atlantic to the Pacific. As represented at Ottawa the plants may be divided into three forms, ranging from almost smooth to sottonly downy. One of the most striking is

S. CANADENSIS, L. var. *PROCERA*, T. & G.

This is a tall, softly pubescent, almost canescent form, generally found in low ground. Although very distinct, it grows with the other forms.

1005. *S. NEMORALIS*, Ait.

Dry sandy fields. Aug.—1. A dwarf rough species,

1010. *S. LANCEOLATA*, L.

Low wet ground. July—3. (B)

ASTER, L. Star-wort.

1017. *A. CORYMBOSUS*, Ait.

Shady woods. Rather rare, July—4. Leaves large and thin stem slender and weak.

1018. *A. MACROPHYLLUS*, L. (Large-leaved Aster.)

Rocky open woods. Common. Aug.—1. (B) Leaves large, thick and rough; stems stout and rigid.

1033. *A. CORDIFOLIUS*, L.

Woodlands and thickets. Aug.—1. (B) A showy species well worthy of cultivation. This and the next are the only species found here with the lower leaves all cordate.

1034. *A. LINDLEYANUS*, T. & G.

Woodlands and thickets. Aug.—1. Usually taller and slenderer than the last. The stem-leaves with margined petioles and the mid-rib with a fringe of long soft hairs beneath,

1041. *A. PANICULATUS*, Lam.

Low ground. Aug.—2. (B)

Under this species are now grouped all the forms formerly included in *A. simplex*, T. & G. and *A. tenuifolius*, T. & G. In it is included all the forms occurring here with smoothish, very much branched stems, and with long narrow leaves and whitish flowers. I cannot help thinking that Dr. Gray has brought together too many forms under this name.

1042. *A. DIFFUSUS*, Hook.

A. miser, T. & G.

A. miser, T. & G. var. *hirsuticaulis*. T. & G.

Low ground. Aug.—1. (B)

This name also now covers a multiplicity of forms of very different



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 13 1866

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, Pushes, 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.

WM. HOWE,

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

Howe's Block, - - OTTAWA.

G. W. McCULLOUGH,

ALL RAIL

Anthracite & Bituminous Coal

RUSSELL HOUSE BLOCK.

BOARDING and DAY SCHOOL

—FOR—

YOUNG LADIES.

(Established 1862.)

49 DALY AVENUE.

MISS M. HARMON, - - PRINCIPAL

M. M. PYKE,

MEN'S OUTFITTER,

99 SPARKS ST.,

OTTAWA, - - - ONTARIO.

A. J. STEPHENS,

FINE SHOES;

39 SPARKS ST.

Boots and Shoes Made to Measure.

J. & R. CRAIG

TAILORS,

105 Sparks St., - Ottawa.

OTTAWA LADIES' COLLEGE

For terms apply to the

PRINCIPAL - - - REV. M. H. SCOTT.