

NOVEMBER, 1908

VOL. XXII, No. 8

THE
OTTAWA
NATURALIST

Published by The Ottawa Field-Naturalists' Club.

CONTENTS.

	PAGE
The Importance of Nature Study, with some suggestions as to Methods. By J. F. Power, M.A. - - - - -	145
Some Bird Habits. By Norman Criddle. - - - - -	153
Council Meeting. - - - - -	157
The Cotton-tail Rabbit in Ontario. By J. H. Fleming. - -	158
Excursions : Central Experimental Farm ; Beaver Meadow and Fairy Lake; McKay's Lake. - - - - -	158
Notes : Worm-eating Warbler in Ontario ; Nesting of Bartramian Sandpiper; Cypripedium arietinum on Shore of Lake Erie ; Unusual nesting habit of Slate-colored Junco; Extension of the Range of Peronyscus Michiganensis; Black-fruited Thorn in Ontario. - - -	163

ISSUED NOVEMBER 2, 1908

OTTAWA, CANADA ;
THE ROLLA L. CRAIN CO. LIMITED
WELLINGTON ST.

Entered at the Ottawa Post Office as second class matter.

WE DEAL WITH OUR ADVERTISERS

JAMES OGILVY,

Bookseller, Stationer and Publisher
63 Sparks St.

THE BUSY STORE
ON THE BUSY CORNER

JARVIS' "THE

BOOKSTORE"
157 Bank St. Phone 732

"THE BOOKSTORE" SELLS
GOOD BOOKS

"Merit" placed ALLEN & COCHRANE
THE RED CROSS DRUGGISTS at
the head in the drug business of
Ottawa—on merit they seek your
trade. 3 STORES, OTTAWA, CANADA



ASK FOR OUR CELEBRATED
FLOOR AND HOUSE
PAINTS

MADE IN OTTAWA

OTTAWA PAINT WORKS

Phone 395

138 Bank St.

WOODS, Limited

SLEEPING
BAGS

OTTAWA AND WINNIPEG,

Factory - HULL

SILK TENTS

Wholesale Manufacturers
Lumbermen's and Contractors' Supplies,
Outfitting Survey Parties,
Exploration and Outing Parties of any kind,
A Specialty

For Quotations
PHONE 5512

Ottawa Sample Room,
Canadian Building. Phone 4463

ROONEY & COOPER
TAILORS

(Ladies and Gentlemen)

Your Patronage
Solicited

67 Sparks Street
Ottawa

A. ROSENTHAL & SONS, LTD.

JEWELLERS AND
OPTICIANS

Goldsmith's Hall

Ottawa

THE BANK OF OTTAWA

Head Office and Main Branch
Wellington Street, Ottawa

LOCAL BRANCH OFFICES

Cor. Bank and Gloucester Sts.
Cor. Bank and Gladstone Ave.
Cor. Bank and Fourth Ave.
Rideau Street
Somerset Street
Main Street, Hull, Que.

At each of the above named offices, savings
accounts may be opened with a deposit of \$1
and upwards, on which interest will be al-
lowed.

R. H. KENNY & CO.

HIGH CLASS
TAILORS

96 Bank Street

Ottawa

INSURE IN

Mutual Life of Canada

H. MOONEY & SON

General Agents

111 Sparks Street

Ottawa

THE 2 MACS, LIMITED

KODAKS

TOPLEY

KODAKS

EVERYTHING NEW IN WALL PAPER

P. STEWART 224 - 226 BANK STREET } OTTAWA.
701 SOMERSET STREET }

Library Bureau of Canada

HEAD OFFICE—201 QUEEN ST., OTTAWA, ONT

BRANCHES—Toronto, Montreal and Winnipeg

Inventors of the Card System,
Vertical Filing and
various Office Devices.

Special Insect Cases
and Natural History
Cabinets made to
order.

BRYSON, GRAHAM & CO.

SELL EVERYTHING

The Rolla L. Crain Co.

LIMITED

Printers, Bookbinders and
Loose-Leaf Manufacturers

174-6-8 WELLINGTON ST.



OTTAWA, ONTARIO

THE NEW NATURE LIBRARY

Now complete in 15 large superb volumes.

- | | | |
|------------------------|----------------------|-----------------------------|
| Vol. 1—Bird Neighbors. | Vol. 6—Butterflies. | Vol. 11—Trees. |
| Vol. 2—Game Birds. | Vol. 7—Moths. | Vol. 12—Frogs. |
| Vol. 3—Bird Homes. | Vol. 8—Insects. | Vol. 13—Reptiles. |
| Vol. 4—Animals. | Vol. 9—Wild Flowers. | Vol. 14—Mosses and Lichens. |
| Vol. 5—Fishes. | Vol. 10—Mushrooms. | Vol. 15—Shells. |

TEAR OFF HERE

DOUBLEDAY, PAGE & CO.,

133 East 10th Street, New York, U.S.

Please send me descriptive circulars and full details of your new plan for the purchase of your Nature Library. I understand you offer most favorable terms.

O. NAT.

GRAVES BROS. FINE HARDWARE

Large Assortment of Fishing and other Sporting Goods.
Camp Supplies.

COR. SPARKS AND METCALFE STREETS, OTTAWA.

FILING



SYSTEMS

Office Furniture and Equipment in Wood and Steel.

THE OFFICE SPECIALTY MFG. CO., L'd. 143 SPARKS ST.
Phone 835



LONDON LEATHER

The famous "CROSS" Leather is universally accepted as the acknowledged standard of excellence and is sold in Canada exclusively by

HENRY BIRKS AND SONS
Limited.

When in want of High Grade Furniture
Call and See Our Stock

AGENTS for the Celebrated - - -
CREX PRAIRIE GRASS FURNITURE
and OSTERMOOR MATTRESSES

STEWART & CO.

34 Rideau Street
Just Below the Bridge

THE OTTAWA NATURALIST

VOL. XXII. OTTAWA, NOVEMBER, 1908

No. 8.

THE IMPORTANCE OF NATURE STUDY, WITH SOME SUGGESTIONS AS TO METHODS.*

BY J. F. POWER, M.A., TORONTO.

Since most of us were pupils at the primary schools, marked changes have taken place in the subjects taught therein. This need create no surprise. Strange it would be if reforms in education did not keep pace with the revolutionary changes going on in the world around us. To-day, as never before, the plea is being made for a course of study which will better adapt the child to his environment. Hence, subjects like manual training and domestic science are receiving a place on the curriculum. Nor need there be any conflict between those subjects and what have been always considered the essentials of a proper school course; rather will they supplement the latter. I think we are all pretty well agreed as to their educational importance; if so, it is our duty to do all we can to encourage their existence. This we can do by speaking well of them and by giving them our sympathy and hearty support.

There is another subject, nature study, which has been attracting a good deal of attention. It is now about four years since it was formally introduced on the curriculum; and the question may well be asked, what has been accomplished? I venture to say a good deal has been done. We may not fully realize this; we may not be always conscious that we are dealing with nature study when, perhaps, we are doing some of our best work in the subject. We have heard a good deal about it and have listened to considerable discussion upon it; and I think we are, perhaps unconsciously, more interested in the things around us than ever before. I fully believe also that our pupils have imbibed some of this enthusiasm, and that they are beginning to see pleasures in the common things of every day life.

*Read before Ottawa Teachers' Association, May 8th, 1908.

There seems to be some difference of opinion as to what nature study is. With some it is a method of teaching—the natural method. With this opinion I must disagree. I do admit there is such a thing as natural or common sense method in teaching, *e.g.*, if we wish to teach carpeting in arithmetic, the natural method is to have the pupils go through the actual operation of carpeting. There is no question as to the value of this method, but it is not nature study. How can it be, shut off as we are from the very face of nature? With others nature study is confounded with elementary science. 'Tis true that in actual practice it is sometimes difficult to distinguish the two. At least, as teachers, we are so anxious to impart knowledge that I'm afraid we do not always avoid the domain of science. Nature study, however, is not science; it is the study of the objects and conditions everywhere environing us, that we may the better see and comprehend the common things of life; above all, that we may acquire a sympathy with, and a love for nature. In my opinion, it matters little what name we give it, whether nature study or elementary science, or whether we give it a name at all, so long as we endeavor to acquire this sympathy with nature; and, as Bailey says, "To see what we look at and to draw proper conclusions from what we see."

As to its educational values, I need offer no special plea. On this topic you have already listened to much discussion. It rests upon the same psychological basis as domestic science and manual training, and is advocated by most of the distinguished educators of the present day. We are all well aware of the "knowledge never learned of schools," which a child acquires during his early years; the idea is to continue, as far as possible, the same natural means of educating. It is claimed our school work has been too bookish; we talk about sense perceptions, sense training, objective teaching, and concrete notions; and yet, we cling to our books as closely as ever. If there is anything in the educational principles, from percept to concept, from particular to general, surely it is in nature study, with its objective realities, that they receive their truest and widest application. The subject, therefore, rests upon rational and sound pedagogical principles. Moreover, few other subjects on our curriculum give anything like the same training in observation, nor does it stop here; the child must interpret what he sees, thus his reasoning and judgment are exercised and trained; his mental activities are made the most of and are directed along useful lines. The child is interested in the common things about him; if we are to succeed as teachers we must take advantage of this interest and

seize upon this mental desire for knowledge, otherwise it will fade away and a golden opportunity is lost.

Not only is nature study pedagogically sound, but it is also the very foundation of many of the other subjects we are called upon to teach. Much of geography is essentially nature study. I'm afraid, however, we do not always go to nature and the world outside to give our classes concrete notions in this subject. We have been too long adhering to the text-book and the classroom. In art much of the material employed is taken from nature, and the better a child is able to see and to interpret this material, the better will he be able to give expression to it. Much of the literature taught in the various grades abounds in nature pictures, and what child, who has never learned to examine and to verify these, will appreciate and enjoy the sentiments of the poet? The material for much of our work in composition may also be taken from nature study topics, thus, by correlation, it will prove a help in our ordinary school work and not a hindrance.

There is another and, in my opinion, the most important value of nature study, viz.: the influence it has on the character of the child. We emphasize character building, and rightly so, as the chief object of education. In no way, however, can we influence a child's character more than by giving him a love for nature, a love which will prove a solace to him when tired of the monotony of every day life. It gives a sympathy not only between teacher and pupil, but also with every living thing. The more we know of nature the more humble we must necessarily become—since a knowledge of nature lifts the veil of science, that unlimited field of knowledge, and makes us feel how very little we know. Not only does it make us humbler, but also kinder, more patient and more considerate. This may be said to be the æsthetic or emotional value of the subject; and who will deny that the æsthetic training of our pupils is daily becoming more necessary?

As this country grows older and becomes better settled more attention will be given to decorations and general improvements. Already in this city, the matter is assuming large proportions, in the efforts that are being made to make Ottawa the Washington of Canada. If the work is to be a success we must do something in our schools to help it along and to enable our future citizens to better enjoy their surroundings. We look upon the C.P.R. as a soulless corporation without a spark of sentiment or refinement; and yet, I notice that orders went forth the other day to have a flower garden at every station across the continent and seeds were distributed for that purpose. Think of the comfort, the pleasure, the solace that will come to many a

wearily traveller when beholding those flowers; and to the station agent and his family, in many an out of the way place, in tending and caring for them. If the C.P.R. is alive to the necessity of those things, surely we, the teachers of this province, should not be left behind. What an opportunity there is to give such a training by raising flowers in connection with our schools! Perhaps the most valuable lesson that has been given in this city in this connection was that given last fall by His Excellency, Earl Grey, when he had some hundreds of the school boys take part in the planting of bulbs at Rockcliffe. The animal nature is evident in us all; let us check it by cultivating the emotional and æsthetic side. For this purpose nature study has the same claim on our curriculum as art, music, or even good literature.

While the educational value of the subject is pretty freely admitted there are some imaginary objections to its universal adoption. The chief of these is the lack of time; it is quite true that teachers are, as a rule, pretty busy. So far, however, as our urban schools are concerned I need scarcely remind you that overteaching is one of our greatest weaknesses. Too much is done by the teacher and too little self-effort or self-investigation is demanded from the pupil. I am old-fashioned enough to champion the three R's. These, in my opinion, must continue to form the basis of our school work. Is it not possible, however, that we are spending too much time in grinding them and that equally good results might be obtained in a shorter period? I have every faith too in giving our boys and girls a taste for the right kind of reading; and the teacher, who is succeeding in doing this, is doing a work of the highest educational value. I am well aware that some of the advocates of nature study are apt to speak slightly of books and to maintain that our pupils must become original investigators. While it is important that we, as teachers, should encourage, as far as lies in our power, the spirit of self-discovery, the great majority of mankind must ever depend upon books for the bulk of their knowledge. There is, however, no quarrel between nature study and the three R's. Those teachers who fly in the face of nature study in defence of the three R's are not always the ones who are doing the best work in the latter; as a rule, the teacher who does the three R's best will also do nature study best and will find time to do it. Let me repeat, nature study, if properly taken up, will prove an assistance to the rest of the schoolwork; and the three-quarters of an hour or hour devoted to it each week will prove a delightful recreation from the ordinary school grind. I am satisfied too that many of the lessons we give in nature study

will remain green in the memories of our pupils when perhaps many of those given in other subjects are gone and forgotten.

Another objection, frequently advanced, is that the teachers are not specially prepared to teach the subject. This is no insurmountable objection. A great deal of knowledge is not necessary. What is specially required on the part of the teacher is a belief in the educational values of the subject combined with a strong desire to do the work, and with an earnest effort and a will to become better acquainted with the common things around us. That most of us are entirely unacquainted with our surroundings need scarcely be affirmed. Is it not our duty to do all we can to remedy this state of affairs? The old saying, "Where there's a will there's a way," holds specially true in the teaching of nature study. Enthusiasm counts for more than anything else. The difficulty is we have become so accustomed to the pouring out of knowledge to our pupils that we are ashamed to say "I don't know"; after all, how little any of us know! Why can't we give our pupils some topic to investigate and at the same time work with them? It may be how an apple is formed in the bud, or how a maple tree gets out of the seed, or the various changes through which a butterfly passes. In investigating these topics with our pupils, being willing to have them teach us if necessary, our knowledge will soon increase; and our confidence in and love for the subject will lead us to do better things. Moreover this mutual effort of teacher and pupil to investigate together will do more to stimulate the latter to self-exertion than will all the second-hand information we can otherwise give him. I am not denying the importance of and the necessity for knowledge on the part of the teacher; what I do say is, that lack of knowledge need not deter us from taking up the work. Besides, too much knowledge may lead us into our present fatal error of telling what the child should seek for himself.

It is true that the subject, as dealt with in many of the texts, is quite exhaustive; and is sufficient to discourage the average teacher who has done little in the various sciences. Nature study, however, as I have already said, is not science. It takes things as they are around us and endeavors to understand them without any attempt at systematic order or classification; it is wholly informal and is free from definitions and technical terms. We may be interested in insects, their habits and metamorphoses without attempting to know anything about them from a scientific point of view. Leave all that to the specialists. We may take much pleasure in birds, their songs, migrations, habits, and uses, without ever having heard of

ornithology. Just as in literature we may appreciate the beauty, the sentiment, and the feeling without entering into a detailed analysis of it, so in nature study we may learn to love a flower, a bird, or an insect without having any technical knowledge concerning any of them. Of course in taking up the work a vast fund of knowledge is sure to be acquired by the pupil and this knowledge will form, later on, an excellent scientific foundation.

There is no doubt, however, that the complexity of material is a stumbling block, hence the necessity for some outlining of work for the various grades. There must be a great deal of elasticity in the course laid down and there need be no special order for taking up the work, except what may be incidentally suggested, as the teaching of a lesson in literature, a topic in geography or any other individual occurrence. It is well too, in graded schools that, while each teacher is given great latitude, some definite course be followed in each grade. Otherwise much confusion and useless repetition are sure to follow. The work for each grade, as outlined in the school regulations, is merely suggestive and may be supplemented to meet any local conditions. The course to be followed should deal with plant and animal life, the earth itself, the sky, the atmosphere, in fact everything around us. I understand some such course is being outlined for the various grades in your schools; it is, therefore, unnecessary that I say more on this phase of the subject.

I do strongly advocate, however, that, during the long winter seasons when out-door work in nature is practically impossible, or at least very difficult, more attention be given, especially in the Third and Fourth Forms, to elementary science. I am fully aware that it has been, and is to-day, customary to introduce this phase of school work in the High or Secondary School. This I consider a mistake. There is much in elementary physics and even in chemistry that the average child, who will never go beyond the primary school, might take up with great profit. In fact the course outlined in the regulations covers some of this work. I see no valid reason why those Forms should not have simple experiments to show them the chief properties of air—such, *e.g.* as its composition, weight, pressure, the structure and uses of a barometer; simple experiments on water, *e.g.* hard and soft, chief impurities, filtration, evaporation, condensation and buoyancy; on heat, such as sources, expansion by heat, conduction, convection, radiation and the structure and uses of thermometers; simple lessons on the cause and transmission of sound, light, etc. There is, in all this work, much valuable information which will enable pupils to better

understand their surroundings; for what things are so common as air, water, heat and soil. The proper understanding of these will enable the pupils to more easily comprehend the facts of geography, physiology, and other subjects that are taught. I realize that this would involve having in each school simple apparatus to carry on the work. The cost would not be great and the interest taken by the pupils and the value derived from two such lessons each week would more than make up for it.

Let me pass on to what we may call the general method of treatment of nature study. It is so wide and is of such a nature, it may be said that each teacher must be a law unto himself. Certain it is, that the method to be employed must be almost as informal as are the topics to be studied. It would prove fatal to the subject to set down hard and fast rules for its treatment. It may be truthfully said that the feeling and disposition of the teacher towards the work counts for more than any formal method. What the teacher requires more than method is a love for nature; this love, combined with a reasonable amount of knowledge and with a desire to get more, will doubtless bring success. This does not mean that children are to be taught by the teacher. The former are to find out facts for themselves under the guidance and direction of the latter who must always keep her knowledge in the background. It is a golden rule that the child must not be told what he can reasonably find out for himself.

We frequently hear it said that a child is a born naturalist. This statement I consider extreme. It is quite true, I think, that childhood is the age when most enthusiasm can be produced; when the mental activities are seeking to be satisfied. In later life we become set in our ways and notions, and it is more difficult to produce an impression upon us. Our own experiences, however, will teach us that a child may live daily surrounded by nature without learning to interpret what he sees. The direction of a teacher is necessary. How many people there are who are quite familiar with mosquitoes and with the "wrigglers" of a water barrel, but who never for a moment connect the two and who are surprised when they are told that both are stages in the life history of this insect. We must take care then that children do see; and by well directed and judicious questioning we must assist them to interpret what would otherwise have no meaning for them. Mere contact with nature or with natural objects is insufficient.

If nature study teaching consisted in setting before the pupils a number of facts in nature to be memorized, or a number

of objects about which they were to find out facts as best they could, the work might be easily done. But it is neither the one nor the other. The main question for the teacher is, what is the best way to bring the material before the pupils in order to get the most self-effort from them? A question is always a challenge to a child, especially if that question is in the shape of a problem to be solved, e.g., where do the birds that remain with us all winter secure their food? On what kind of day do the streets dry up fastest? In what part of the sky do you look for a new moon? How is a duck specially adapted for swimming? Why can it keep warm while swimming in cold water? By questions such as these the children are kept on the alert looking for something on which they are to report. Thus are they learning to look around them and soon the habit is formed. Another thing in which the teacher must be very careful is not to discourage pupils by forgetting to take up problems thus set them, or by giving little attention to objects they may bring in for examination. Children are very sensitive in this matter and a little thoughtlessness on the part of the teacher may cast the shadow of discouragement over them.

The time of year, too, must necessarily influence the work to be done, e.g., spring time is the season for the germination and planting of seeds, the setting out of flowers, the opening of buds, the return of the birds, etc. In the fall, comes fruits and seeds, the means of dispersion of the latter, caterpillars and cocoons. Some topics may require more than one season to work out, e.g. the metamorphosis of a butterfly, the growth of a plant from seed to fruit, etc. The weather we have always with us; and it furnishes many interesting topics for investigation.

Many of the lessons in our readers abound in nature study topics and furnish an excellent means of treating it incidentally. In our general literature too, is to be found much, both in prose and poetry, which is descriptive of nature, and the reading of which by our pupils will do a great deal to create a disposition to become better acquainted with her. Moreover, this incidental treatment of the subject is of great value and does away with the excuse of lack of time for more formal nature work.

The teachers of this city have every advantage in cultivating the acquaintance of nature. I know of no other city offering like facilities. Here live many of the best experts in Canada who are ever ready and willing to render assistance, and an association with whom is an inspiration in the work. You have here also the Field-Naturalists' Club, an organization of wide reputation,

the president and the secretary of which, we are proud to number among our fellow teachers. Take advantage of these facilities and I am sure you will soon become more interested in a subject which, for pupils in our day, had no existence.

In conclusion, I have tried to present this subject to you not from the standpoint of the faddist, but from the standpoint of one who believes that our primary schools, dealing as they do with the masses, must continue to fit our people for the affairs of every day life. At the same time I am convinced we can do much to train the future men and women of this province, that there is lying everywhere around them a means of creating a disposition to appreciate the sentiments of the poet who said:

"Nature never did betray
The heart that loved her; 'tis her privilege,
Through all the years of this, our life, to leap
From joy to joy; for she can so inform
The mind that is within us, so impress
With greatness and beauty, and so feed
With lofty thoughts, that neither evil tongues,
Rash judgments, nor the sneers of selfish men,
Nor greetings where no kindness is, nor all
The dreary intercourse of daily life,
Shall e'er prevail against us, or disturb
Our cheerful faith, that all which we behold
Is full of blessings."

SOME BIRD HABITS.

BY NORMAN CRIDDLE, TREESBANK, MANITOBA.

Several years ago my brother Stuart drew my attention to some remarkable habits practised by the Killdeer Plover while endeavoring to preserve its eggs from enemies. He had observed that this bird, while sitting upon its eggs, when disturbed by a dog, would leave the nest and flutter along the ground as if badly injured, as many other birds are known to do, and so entice the dog away. But, if the danger came from a cow, or horse, the tactics were changed and the bird, with wings and feathers spread out, would run into the animal's face and so by startling it drive the intruder aside. In the former instance the

bird left its eggs while the dog was some distance away, but with cattle it waited until almost touched before moving, so that its sudden appearance was more startling.

It would, of course, be a fatal mistake were the latter method employed to drive away a dog, or coyote; while the former would prove useless as a means of preventing cattle from treading upon the eggs. Hence, two habits to gain the same end.

It might be asked how a bird had acquired so much wisdom in being able to distinguish between an enemy which would eat both bird and eggs if opportunity offered, and a generally harmless cow from which the only danger would be of accidentally treading upon the eggs. And also, how it had learned to employ methods of defence so totally different. I believe the answer is this. Before the advent of civilization the prairies were inhabited by countless numbers of buffaloes, while coyotes as well as foxes were also more numerous than they are to-day. The Killdeer is a bird that nests in open spots, usually on dry low hills not far removed from water. Consequently, the eggs and young would often come in contact with these mammals, and if the parent bird did not resort to some artifice, their offspring would often suffer. The parents which contended most successfully with enemies would naturally rear more young. Thus, by the "survival of the fittest" the instinct—I believe it is an instinct—has been acquired. I have observed these birds practise both methods with success when contending against crows, but man, they rank with coyote and dog and only feign injury. They consider—unfortunately rightly—that we are not to be trusted.

The American Goldfinch, often wrongly called Wild Canary, nests very late in the season, in spite of the fact that in some parts of the country, such as at Ottawa, it is a permanent resident. I remember puzzling over the reason of this late nesting until it occurred to me that the young were fed principally upon the seeds of wild sunflowers and similar plants such as Gaillardia, burdock, thistle, etc. Then the reason became plain: these birds waited until the seeds were ripe so that they would have an abundance of food both for their young and for themselves, during the breeding season. In Manitoba the sunflowers are much preferred, and I believe this is due partly to the birds' plumage harmonizing so remarkably with the flowers. Earlier in the season they feed to a large extent upon dandelions and Gaillardia seeds, both yellow-flowering plants.

At one of the Ottawa Field-Naturalists' Club excursions last spring, at which I had the pleasure of speaking, I made the rather loose statement that the American Cuckoos differed from the European species in that they reared their own young. While this is, generally speaking, true, the habit—as pointed out by Mr. Halkett*—is not quite so distinctive as my remarks might lead one to imagine. I have never personally found American Cuckoo eggs in the nests of other birds, though, I believe, there are records of such having been found. I have, however, on several occasions discovered more than the usual number of eggs in a nest, and in one instance found ten under one bird, which would indicate that at least three birds were responsible for them. Unfortunately the eggs were abandoned and consequently never hatched. There are also, I believe, instances on record of the European Cuckoo rearing its own young.

Writing of Cuckoos, brings me to a doubtful case of the same habit practised by the Redwinged Blackbird. The usual number of eggs is four or five, but on several occasions I have found nests containing six or eight, and once nine, which leads me to the belief that these might be from more than one bird. I am also suspicious as to whether the birds are not somewhat sociable in their nest-building operations. That is, whether more than one bird engages in building one nest. But this subject must be dropped for the present as not proven. I have introduced it in the hope that others might be able to throw light upon the matter.

The Mourning Dove has increased very largely within the last twenty years and in some respects is taking the place of the once abundant Passenger Pigeon, which it somewhat resembles in coloured markings. It seems well adapted to the changed conditions brought about by the ploughing up of the country. It delights to feed upon stubble fields or on waste land where weed seeds are plentiful, and seems rather partial to Green Foxtail (*Setaria viridis*), also not taking amiss to a good feed of wheat when opportunity offers. These birds often congregate in small flocks, sometimes several hundred being seen together, but they nest in solitary pairs. They are very fond of salt, like the domestic pigeon, and if they ever become too numerous could probably be captured by using salt as a bait. On examining the nests of doves at different times of the year, I have noticed the rather interesting fact that the nests are

*Ottawa Naturalist, Aug. 1908, page 95.

usually, if not always, more warmly built late in the season, doubtless to protect the eggs and young from cold, though I have no records tending to show that the habit is practised in the spring when the weather is often equally cold.

The young of the Osprey are said to have an inclination to hunt birds and mammals. Some naturalists claim that they are taught to abandon this habit by the parent birds, after which they devote their time to hunting fish. I am always rather skeptical about this "schooling" idea. It seems to me that a certain modern class of nature writers attribute altogether too much to this method of acquiring knowledge among wild animals. I have observed that young Marsh Hawks have much the same habits of differing from the adults in the matter of food. The young, as soon as they learn to catch for themselves, devote a large portion of their time to hunting young grouse which they destroy in considerable numbers. This habit only lasts about a month, after which small rodents form the bulk of their food supply, as is the case with the adults. The question is, do these young birds later find the grouse too strong and fast, and so are obliged of necessity to turn their attentions elsewhere; or are they taught by their parents that grouse hunting is bad for them? The question might be answered by another. If these hawks can capture grouse to advantage why should they leave them to seek other food of which a larger quantity would be required to appease their appetites?

There is no doubt, however, that parent birds do teach their young certain habits. I have watched both the Marsh and Swainson's Hawk teaching their young to catch the food that is brought to them. The old bird would soar above the young, which seemed keenly on the watch, and suddenly drop the food to be caught. If it were missed the parent would swoop gracefully down and secure it again before it had time to reach the ground, and the lesson was continued until one of the young accomplished the task. So we must admit the teaching of parents in wild life. The problem is where to draw the line between teaching, learning by experience, and instinct.

The 45th annual meeting of the Entomological Society of Ontario, will be held at the Ontario Agricultural College, Guelph, on November 5th and 6th. Dr. E. P. Felt, New York State Entomologist will deliver the evening popular lecture. At the day sessions papers of economic and scientific interest will be read. Dr. James Fletcher is the retiring President.

COUNCIL MEETING.

A meeting of the Council was held in the Carnegie Library on September 8th, with the following members in attendance: the President, Mr. A. E. Attwood, Miss E. E. Currie, Messrs. A. Gibson, H. H. Pitts, and T. E. Clarke. The following were elected ordinary members:—

1. Mr. Thos. Jamieson, B.A., Inspector of Public Schools, Carleton County.
2. Mr. H. Groh, B.S.A., Central Experimental Farm.
3. Mr. J. W. Swaine, Macdonald College, Ste. Anne de Bellevue.
4. Mrs. F. W. Carman, Ottawa.
5. Mr. Ward M. Irvin, Ottawa.
6. Miss F. J. McNeill, Ottawa.
7. Mr. W. A. Dent, Collegiate Institute, Sarnia.

The Secretary reported that a meeting of representatives from various literary and scientific associations of Ottawa was held in the Speaker's Room, House of Commons, on June 3rd, when the following resolution was adopted unanimously:—

"Resolved that this meeting recommends to each of the societies represented, and other societies of a similar nature in Ottawa, the consideration of the desirability of having one course of free popular lectures under the auspices of the various societies united for that purpose only, it being understood that the proposed course of lectures is not to interfere with the meetings or lectures of each society under its own special arrangements. That a joint committee meet for consideration of the subject as soon as all are chosen. That each society send in the name of the delegate elected to Dr. J. F. White, Principal of the Normal School, who will call the meeting."

A programme of autumn excursions was arranged for as follows:—

- September 12th—Central Experimental Farm.
- September 19th—Fairy Lake and Beaver Meadow.
- September 26th—Rockcliffe, McKay's Lake and outlet.

Mr. Gibson suggested the advisability of making a Club Exhibit at the Central Canada Exhibition on some future occasion, the exhibit to be composed of material from the collections of individual members.

T. E. C.

THE COTTON-TAIL RABBIT IN ONTARIO.

By J. H. FLEMING, TORONTO.

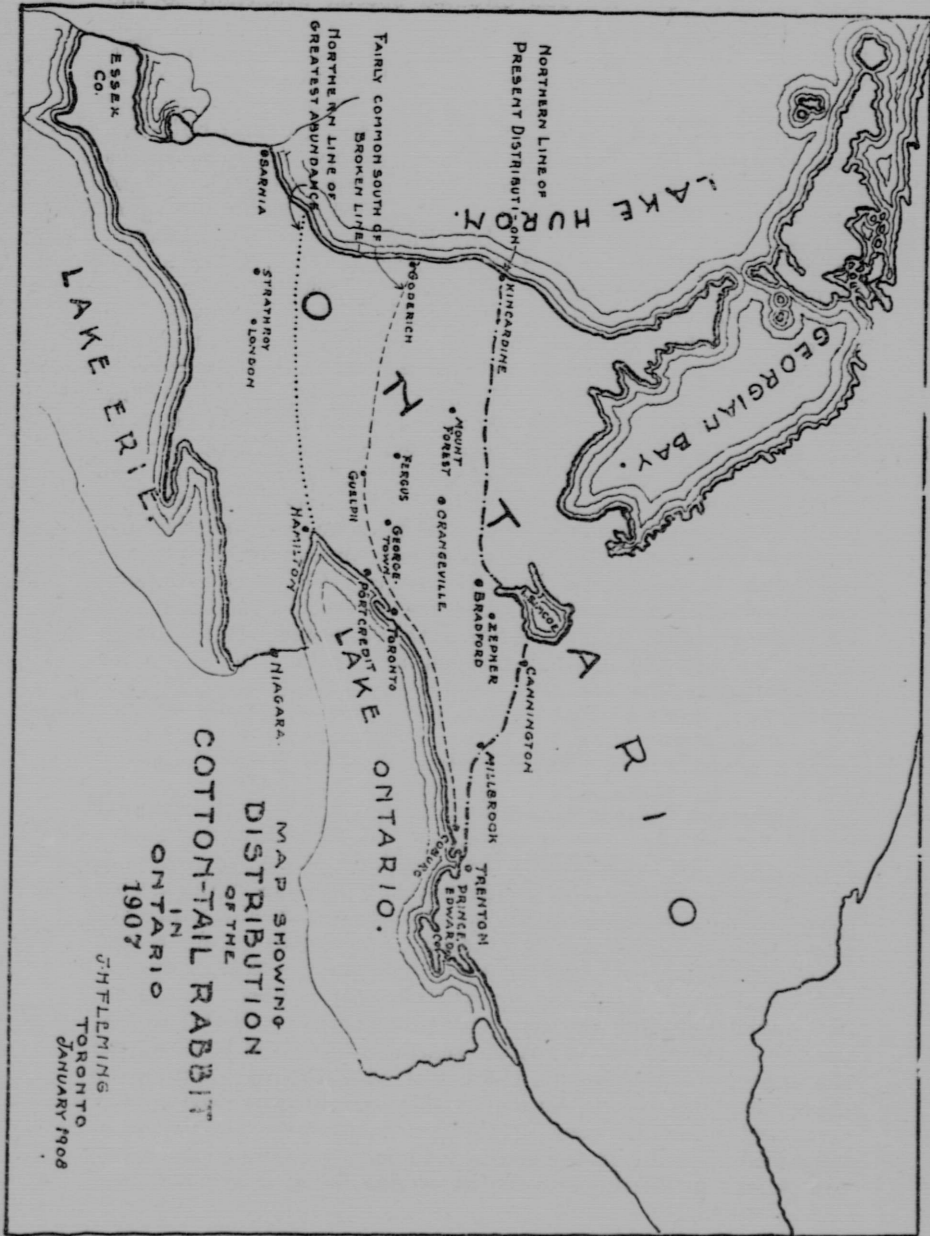
This rabbit was not, so far as can be ascertained, indigenous even in south-western Ontario, where the faunal conditions are strongly Carolinian and favourable to its increase. While no very definite date can be given for its first appearance in the south-western counties, it has been a resident in Essex for at least forty years. At Niagara the first cotton-tails were noticed in 1871; this is the date given by Mr. C. W. Nash and agrees closely with that of others. Mr. Ernest Seton says that rabbits were seen in Peel in 1872; westward they were recorded at Strathroy by Mr. Walter Brett in 1882. At Toronto, there is some confusion, owing to the attempted introduction of English rabbits and the coming of the cotton-tail was overlooked; but Dr. Brodie considers the date was about 1884. Specimens were taken at Lorne Park, by Mr. Seton, in 1887, and Mr. Allan Brooks states that they were not abundant at Milton till 1888.

During the last twenty years the range has steadily increased, but the centre of abundance still remains south of the line drawn from a few miles north of Sarnia, to the west end of Lake Ontario, as shown on the accompanying map. North and east of this line the cotton-tail is subject to climatic conditions that keep it in check, and were it not for a constant migration from the south and west counties very few would remain after an unfavourable season; and in any case, the natural increase is kept down by the hunting the animal is subject to at all times.

The cotton-tail in winter often finds refuge under barns, but it is usually to be found near the woods, showing a decided preference for hardwood ridges. Solitary ones may be found in old skunk holes at all seasons. A common way of hunting them is with ferrets. There have been numerous attempts to introduce this rabbit, but the present range is due to the migration of the animal itself.

EXCURSIONS.

The first of the autumn excursions of the Club was held on September 12th, to the Central Experimental Farm. The members of the Ottawa Horticultural Society also visited the Farm the same afternoon, and the two societies joined forces and were conducted around the Farm by Dr. Fletcher, Mr. W. T. Macoun and other members of the staff. About 150 in all



were present. Mr. Macoun directed special attention to the hedges near the poultry houses and to the different groups of trees and shrubs in the Arboretum, or Botanic Garden. The various beds of late flowering plants in the central lawn, such as cannas, asters, etc., were much admired. An interesting feature of the excursion was a visit to the new horticultural building. Here everyone was treated to a liberal supply of plums, apples and melons. The musk melons were in fine condition and, of course, were very much enjoyed. While in the building short addresses were delivered by Dr. Fletcher and Mr. Macoun. Dr. Fletcher outlined some of the work which is carried on at the Farm, referring particularly to that of horticulture by Mr. Macoun, the Horticulturist, and spoke in high terms of the success which had attended his efforts in developing that branch of agriculture in Canada. Mr. Macoun explained the objects of the new building and said that he hoped during coming seasons to have on exhibition samples of the different kinds of vegetables and fruits which were best grown in the Ottawa district. These would be shown in glass covered cases and could be seen in their proper season. He hoped also to have meetings of horticulturists, from time to time, in the building, when the new car line to the Farm is in operation. From the standpoint of the Ottawa Field-Naturalists' Club, the excursion was a most unique one, and was much enjoyed by all the members who were present. It is to be hoped that another joint excursion of the two societies may be arranged for at some future date not too far distant.

A. G.

SUB-EXCURSION TO BEAVER MEADOW AND FAIRY LAKE.

The second of the autumn excursions of the Club was held to Beaver Meadow and Fairy Lake, on Saturday, September 19th, under the leadership of the President, Mr. A. E. Attwood.

The day was ideal, a timely rain the previous night having cleared the air of the dense and oppressive smoke with which the forest fires had obscured everything. Over sixty members and others, including a strong representation from the Normal School, availed themselves of the opportunity for a pleasant outing, in a hunting ground well and favorably known to all of the older members. While this is not the season for the best results from the collector's standpoint, there was nevertheless much to be observed; and the freshness of this retreat was particularly remarked upon, in view of the general parched condition of vegetation, owing to the long-continued drought. After some time spent in skirmishing in the woods flanking the meadow,

the party proceeded to Fairy Lake, a beautifully retired spot. On its rocky banks, the afternoon's treasures were discussed, and several interesting addresses were listened to.

Dr. Blackader reviewed the half dozen species of ferns which had been collected. Some of these were shown to be in the fruiting condition; and examples of the curious "bladders" on the leaves of the Bladder fern were also exhibited.

Prof. McCready, of the Ontario Agricultural College, Guelph, was then called on. In view of the presence of so many from the Normal School, he spoke more particularly on what the Macdonald Institute is prepared to do for teachers. A three months' Summer School will be held again next year, at which teachers may get a training in nature study, school garden work and elementary agriculture. Rural school teachers should be able to appreciate the conditions on the farm, and while they can not be expected to teach the people how to farm, they can still be, to quite an extent, a medium between the college and the farm. Prof. McCready also believes in nature study, which has an agricultural bearing, or in other words, which utilizes the everyday things of the farm as its objects of study.

Mr. J. W. Gibson, of the Normal School, called attention to the various maples seen, and also explained some points with regard to the autumn colouration of leaves, examples of which were already to be found.

Mr. J. H. Putman exhibited several climbing plants, including Canada Moonseed and Climbing Bittersweet. He also called attention to the Poison Ivy growing all about, and showed that its poisonous properties were often over-estimated.

Some alder twigs bearing specimens of woolly aphid were shown by Mr. H. Groh, who spoke about the nature of the secretion which gave this woolly appearance, and about the honey dew secreted by many aphids.

Mr. Arthur Gibson, besides presenting some specimens of interest, outlined briefly some of the aims of the Club. One of these was to still further increase the already large membership; and to this end he extended the Club's invitation to all who were interested in its work, to become members. The improvement of the OTTAWA NATURALIST, its official organ, was another important aim of the Club. It continues to attract articles from many of the best known naturalists.

In the course of his duties as Chairman, Mr. Attwood contributed many valuable points. In speaking of oaks, he classified them all as either black or white, and gave several easily remembered characteristics by means of which they could be placed in one or the other of these groups.

H. G.

SUB-EXCURSION TO MCKAY'S LAKE.

This autumn's sub-excursions have been most interesting and enjoyable and the one held on September 26th at McKay's Lake was certainly not an exception. The woods around this charming little sheet of water are beautiful at any time, but the gay colouring of the fall season seemed to lend additional charms. The attendance was not as large as at some former outings, there being only about fifty present, but never has greater interest been shown in the finds of the day.

Strolling slowly along through the woods on the lake side, the whole topic of conversation seemed to be on the different points of interest in nature about them.

Some time was spent at the sand pit, and here Mr. McNeill gave much interesting information concerning the sand deposit and also about the formation of marl found in that locality.

Returning at 4.30 to a pleasant knoll, overlooking the lake, the company listened with much interest and profit to addresses by several of the Leaders.

Mr. Arthur Gibson presided, in the absence of the President, and first called on Mr. W. T. Macoun, who spoke of the various trees met with during the afternoon, making his talk doubly forcible by passing around a small branch of each kind, and explaining the difference between closely related species. This created such an interest that quite a discussion followed.

Mr. McNeill spoke of certain aquatic plants, and of the pleasure to be had from keeping an aquarium. He gave many practical hints of how to manufacture one at a very slight expense. Mention was made that great care should be taken in filling the aquarium, so as to have the right balance of animal and vegetable life, or the consequences would doubtless be discouraging.

Mr. J. W. Gibson corroborated what had been said by Mr. McNeill and affirmed that he had found an aquarium a source of great interest as well as profit. He also spoke of the difference to be found among plants at different elevations.

Mr. H. Groh said a few words about the birds noticed during the afternoon, giving a list of those observed, and Mr. Arthur Gibson showed the very beautiful chrysalis of the Monarch butterfly and described the life-history of the insect. He also told something of the insects that spend the winter in the heads of the common mullein and in the stems of the golden rod.

E. E. C.

NOTES.

THE WORM-EATING WARBLER IN ONTARIO.—On the morning of May 28th, 1908, I took a male Worm-eating Warbler in a maple wood, with chestnut ridge, about three miles west of London, Ont.

My attention was attracted by a song which seemed to be that of a Chipping Sparrow, delivered very rapidly but with a tone a trifle more musical than is the case with the sparrow. After some search we found him sitting still about fifty feet up and with a glass I could see a warbler's bill and could tell that it was flesh coloured, although the light was too poor to show anything more. A lucky shot brought him down and I had the pleasure of picking up the first Worm-eating Warbler recorded for Canada.

In thinking the matter over I remembered having heard a similar, but not identical, song about a week before, ten miles farther west but was unable to even see the author of the note. Since then I have been told that this warbler was accurately described by a boy living not far from where mine was taken, so that it is possible more than one have been about. Three or four years ago Prairie Warblers were reported and taken in several places throughout the province where they had not been seen before and it is possible that this year may see an occurrence of Worm-eating Warblers which will parallel that of the other species.—W. E. SAUNDERS, London, Ont.

NESTING OF THE BARTRAMIAN SANDPIPER.—On May 26th, 1908, while passing through some fields near Morrisburg, Ont., I was surprised by flushing a bird of the above species. In a minute the nest and four fresh eggs were found. The nest was built in a dry, scrubby field, where Meadowlarks were nesting. The bird had excavated a hole about the size of a saucer, and lined the same with a few dead grasses, the whole being partially concealed by long grass.—W. J. BROWN, Westmount, Que.

CYPRIPEDIUM ARIETINUM ON THE SHORE OF LAKE ERIE.—On May 30th, while exploring Turkey Point with Mr. J. S. Wallace, of Toronto, we found a large patch of Ram's Head Lady Slipper within one-quarter mile of Lake Erie, which was growing in the more open places in a cedar thicket and appeared to be flourishing. We brought away about 20 roots for the garden but we made no serious impression on the numbers of the colony. I had found this plant on the shore of Lake Huron in two places, but never on Lake Erie.

Turkey Point is a small marshy piece of land extending about two miles out into Long Point Bay, on the north shore of Lake Erie, some 40 miles south-west of Hamilton.—W. E. SAUNDERS, London, Ont.

UNUSUAL NESTING HABIT OF SLATE-COLORED JUNCO.—While at Armstrong's Point, Youghall, N.B., in July last, I was surprised to see a nest of the Slate-colored Junco, *Junco hyemalis*, built on a ledge beneath the gable of the house in which I was staying. When examined on July 20th, it contained two young birds, about half grown, and one old egg. The nest was situated about 10 feet from the ground and the house was partly surrounded by the edge of a spruce grove.—ARTHUR GIBSON.

EXTENSION OF THE RANGE OF PERONYSCUS MICHIGANENSIS.—Some months ago I published an account of the taking of this mouse at Point Pelee. Subsequently Mr. John Morden found these in great numbers at the base of Point Pelee on the main land, so that one is led to expect them throughout the Lake Erie District of Ontario, but I was rather surprised on May 13th to find in my traps on the shore of Lake Huron several of these mice. The locality was about twenty-five miles east of Sarnia, just at the south-east corner of Lake Huron. The mice were inhabiting the beach in the same way that they lived at Point Pelee.

I have received from Mr. Norval Jones at Grand Bend, two more specimens of this mouse. Grand Bend is only fifteen miles north-east of the Point where I took the mice on May 13th, but the district is very northern in its characteristics. Crossbills are to be seen there during the summer, and the White-throated Sparrow and Olive-sided Fly-catcher spend the summer there, so that the range of this mouse in Ontario receives quite a northern aspect from these facts. In June, 1908, at the mouth of the Thames River in Lake St. Clair I trapped another of this species, and there is no doubt that it occurs all throughout the South Western Peninsula in considerable numbers.—W. E. SAUNDERS, London, Ont.

A BLACK-FRUITED THORN IN ONTARIO.—Mr. Frank Moberley, C.E., has sent down from Abitibi, specimens of black fruit of a *Crataegus*, presumably *Douglasii*, which Mr. James M. Macoun records as far east as Manitoba. I know of no black-fruited thorn having been previously found in Ontario.—J. FLETCHER.

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

OPPOSITE THE
 CITIZEN BUILDING,
 Ottawa.
 133 Sparks St.,
 W. E. SEED TAILOR

J.G. BUTTERWORTH & Co.

ALI RAIL SCRANTON COAL
 HAS NO EQUAL
 86 SPARKS STREET, OTTAWA

THE C. C. RAY CO. Ltd.

BEST QUALITY **COAL** LOWEST PRICE
 58 SPARKS ST. Phone 461

The TORONTO GENERAL TRUSTS CORPORATION.

A Quarter of a Century's

Successful administration of ESTATES ranging in value from \$500 to \$5,000,000 each, is the best guarantee that you may confidently name as your EXECUTOR and TRUSTEE this Corporation

JAMES DAVEY, Manager
 OTTAWA BRANCH:
 Cor. SPARKS and ELGIN STS.

CHARLES WATT

Specialist in ARTISTIC HARDWARE AND KITCHEN FURNISHINGS
 Phone 1350
 Bank & Somerset Streets

American Entomological Co.

DEALERS IN
 Insects and Entomological Supplies

The only makers of the genuine Schmitt Insect Boxes. Manufacturers of Cabinets and Cases for Insect Collections, and of the

American Entomological Company
 Insect Pins

Supply List No. 7 and List of Entomological Publications for sale just out. Write for it. Insect List No. 6 still in force

GEORGE FRANCK, Manager
 55 Stuyvesant Av., BROOKLYN, N.Y.

Publisher of Views of Ottawa Phone 902 Books on Nature Study

C. H. THORBURN

Books & Stationery
 80 SPARKS STREET, OTTAWA

R. McGIFFIN

MEN'S FURNISHINGS
 106 Sparks Street }
 24 Rideau Street } OTTAWA

GEO. H. HOPPER,

Groceries and Dairy Produce
 PHONE 1967
 395 BANK ST., Cor. Waverley, OTTAWA

THE SMITH PREMIER

The World's Best Typewriter

E. R. McNEILL, Agent
 35 QUEEN ST., OTTAWA

HENRY J. SIMS & Co.

Furriers and Hatters
 110-112 SPARKS ST. - OTTAWA.

MASSON'S



SHOES

72 Sparks Street, Ottawa

OTTAWA DAIRY
 PURITY
 INSPECTED
 MILK
 CREAM

That Eye Strain

can be relieved by glasses. Eyes tested free of charge by graduate optician

MUSGROVE'S DISPENSARY
 212 BANK STREET

Jan 1 3 1886

The Ottawa Field-Naturalists' Club, 1908-1909

Patron:

THE RIGHT HONOURABLE EARL GREY,
GOVERNOR-GENERAL OF CANADA.

President:

A. E. Attwood, M.A.

Vice-Presidents:

A. Halkett. Rev. G. Eifrig.

Librarian:]

C. H. Young.

Secretary:

T. E. Clarke, B.A.
(470 O'Connor Street).

Treasurer:

Arthur Gibson,
(Central Experimental Farm).

Committee:

Mr. J. M. Macoun.
Mr. H. H. Pitts.
Mr. E. E. Lemieux.
Mr. Alex. McNeil.

Mr. L. H. Newman.
Miss Q. Jackson.
Miss E. E. Currie.
Miss M. B. Williams.

Auditors:

R. B. Whyte. F. T. Shutt.

Standing Committees of Council:

Publishing: A. Gibson, J. M. Macoun, H. H. Pitts, L. H. Newman, Alex. McNeil, Miss Q. Jackson.

Excursions: G. Eifrig, E. E. Lemieux, T. E. Clarke, C. H. Young, A. McNeil, Miss E. E. Currie.

Soirées: A. Halkett, H. H. Pitts, J. M. Macoun, E. E. Lemieux, L. H. Newman, Miss M. B. Williams.

Leaders:

Geology: H. M. Ami, W. J. Wilson, W. H. Collins, M. F. Connor, M. Wilson.

Botany: J. Fletcher, John Macoun, D. A. Campbell, S. B. Sinclair, A. McNeil, L. H. Newman, T. E. Clarke.

Entomology: W. H. Harrington, J. Fletcher, A. Gibson, C. H. Young, J. W. Baldwin.

Conchology: J. F. Whiteaves, F. R. Latchford, J. Fletcher, S. E. O'Brien.

Ornithology: G. Eifrig, W. T. Macoun, A. G. Kingston, A. H. Gallup, H. F. Tufts.

Zoology: E. E. Prince, A. Halkett, W. S. Odell, E. E. Lemieux.

Archæology: T. W. E. Sowter, J. Ballantyne.

Meteorology: Otto Klotz, A. E. Attwood, D. A. Campbell, A. McNeil.

THE OTTAWA NATURALIST

Acting Editor:

ARTHUR GIBSON, (Central Experimental Farm.)

Associate Editors:

DR. H. M. AMI, Geological Survey of Canada.—Department of *Geology*.

DR. J. F. WHITEAVES, Geological Survey of Canada.—Dept. of *Palæontology*.

DR. JAS. FLETCHER, Central Experimental Farm.—*Botany & Nature Study*.

HON. F. R. LATCHFORD.—Department of *Conchology*.

MR. W. H. HARRINGTON, Post Office Department.—Dept. of *Entomology*.

REV. G. EIFRIG, 210 Wilbrod St.—Dept. of *Ornithology*.

PROF. E. E. PRINCE, Com. of Fisheries for Canada.—Dept. of *Zoology*.

DR. OTTO KLOTZ—Dept. of *Meteorology*.

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