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# THE OTTAWA NATURALIST

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# THE OTTAWA NATURALIST

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VOL. XXV.

OTTAWA, APRIL, 1911

No. 1

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## REPORT OF THE COUNCIL OF THE OTTAWA FIELD-NATURALISTS' CLUB FOR THE YEAR ENDING MARCH 21st, 1911.

In accordance with the new Constitution of the Club, the following report is largely a compilation of reports submitted by the various Branches of the Club and the Standing Committees of the Council.

### MEMBERSHIP.

During the year 27 new members have been elected, making the present membership 316, composed of 308 Active Members and 8 Corresponding Members.

### PUBLICATIONS COMMITTEE.

The bound publications belonging to the Club occupy a special section in the stack room of the Carnegie Library, where they will be available to the general public as soon as properly indexed.

The unbound copies of periodicals which are received by the Library regularly on behalf of the Club are placed on file in the reading room, for a time, after which they are laid away for binding or for such purpose as the Club may decide. The following is a list of these periodicals:—

1. The Nature Study Review.
2. The Auk.
3. The Canadian Entomologist.
4. Journal of the New York Entomological Society.
5. The Journal of Geography.
6. Le Naturaliste Canadien.
7. Journal of the Elisha Mitchell Scientific Society.
8. Transactions of the Botanical Society of Edinburgh.
9. Publications of the Field Museum of Natural History.
10. The Ohio Naturalist.
11. Torreya.
12. The Wilson Bulletin of Ornithology.

13. The University of California Chronicle.
14. Queen's Quarterly.
15. Bulletin of the New York Botanical Garden.
16. Bulletin of the American Museum of Natural History.
17. Proceedings of the Boston Society of Natural History.
18. Transactions of the Wisconsin Academy of Sciences.
19. Proceedings of the Indiana Academy of Science.
20. The Missouri Botanical Garden Reports.
21. Proceedings of the Hamilton Scientific Association.
22. Arkiv for Zoologi, Stockholm.
23. Arkiv for Botanik, Stockholm.

In addition to the above mentioned publications a considerable number of pamphlets dealing with a variety of subjects have been received during the year. Those of special value are preserved for future use as the Club directs.

The reserve copies of THE OTTAWA NATURALIST which have hitherto been stored in the old Geological Survey Museum have been removed to an upper room in the Osgoode Street Public School. The extra copies which were placed in the basement of the Normal School are still there, having been arranged in bundles and labelled during the year. We suggest that all spare copies and sets of THE NATURALIST be brought together in some more convenient place for the Librarian.

#### THE OTTAWA NATURALIST.

Volume XXIV. of THE OTTAWA NATURALIST, the official organ of the Club, has been published monthly under the editorship of Mr. Arthur Gibson. It consists of 236 pages and three plates.

The following are among the papers which appear in this volume:—

#### *On Botany.*

1. "Contributions from the Herbarium of the Geological Survey." J. M. Macoun.
2. "Plants Growing Wild and Without Cultivation in the County of Lambton, Ont." C. K. Dodge.
3. "Canadian Species of *Thalictrum*. IV." E. L. Greene.
4. "Fern Hunting in Ontario." F. J. A. Morris.
5. "Plant Physiology versus Psychology." H. T. Gussow.
6. "A Preliminary List of the *Cratægi* of the Ottawa District." Herbert Groh.
7. "Field Notes of Canadian Botany. II." E. L. Greene.
8. "Club Mosses." F. J. A. Morris.

*On Entomology.*

1. "House-Flies and the Public Health." C. Gordon Hewitt.
2. "The Imperial Moth." Arthur Gibson.
3. "Notes on *Euxoa detersa* Wlk. and *E. personata* Morr."  
John B. Smith.
4. "The Migration of Some Native Locusts." Norman Criddle.

*On Geology.*

1. "On Two New Trilobites from the 'Chazy' River Near Ottawa." Percy E. Raymond.
2. "Note on the Parietal Crest of *Centrosaurus apertus* and a Proposed New Generic Name for *Stereocephalus tretus*." L. M. Lambe.
3. "Preliminary Notes on the 'Chazy' Formation in the Vicinity of Ottawa." Percy E. Raymond.

*On Ornithology.*

1. "Stomach Contents of Some Canadian Birds." C. W. G. Eifrig.
2. "Winter Birds at Point Pelee, Ont." W. E. Saunders.
3. "Notes on the White-throated Sparrow." L. McL. Terrill.
4. "A Colony of Cliff Swallows and Others." Norman Criddle.
5. "The Birds of Ottawa." C. W. G. Eifrig.

This latter paper appeared in the December, January, February and March issues, and is an exceedingly valuable list of the Birds of the Ottawa district.

*On Zoology.*

1. "A Weasel's Home." S. E. Percival.

## EXCURSIONS COMMITTEE.

The usual series of excursions, to the number of 13, was arranged for the spring and fall months. Nearly all were to localities often visited in the past, and chosen because of their all-round natural history features. The aim was to make them instructive and attractive to the non-scientifically trained members of the Club, as well as profitable to those who are able to do valuable original field work in any of the departments of the Club's activities. Enthusiastic leaders were always present to contribute to the success of these outings, and while some of the excursions were fairly well attended, it is, nevertheless, a regrettable fact that far too few of the members availed themselves of the splendid opportunities thus afforded for studying the plants, animals, rocks, etc., at first hand, and for partaking of the refreshing pleasure of an afternoon in the open country. For many of us these are the best and almost the only occasions when field study is possible.

The programme of excursions as arranged was as follows:—

- April 16—Rockcliffe.
- April 23—Britannia.
- April 30—Billings' Bridge.
- May 7—Blueberry Point.
- May 14—Beaver Meadow.
- May 21—Green's Creek (General).
- May 28—McKay's Lake.
- June 4—Macdonald College (in conjunction with Y.W.C.A.)
- June 11—Leamy's Lake.
- June 18—Hog's Back.
- Sept. 24—Green's Creek.
- Oct. 1—Beaver Meadow.
- Oct. 8—Experimental Farm.

Owing to unfavorable weather several of these excursions had to be cancelled, the General excursion to Green's Creek being among them. Those which were held were reported in every case for THE OTTAWA NATURALIST by some member present.

#### LECTURES COMMITTEE

The course of lectures provided by the Club during the winter of 1910-11 consisted of seven events. Five of these were held in the Assembly Hall of the Normal School; and on each of these occasions the excellent lantern belonging to that institution afforded invaluable service, under the management of Mr. J. W. Gibson, in exhibiting to the audience the slides prepared by the lecturer for the elucidation of his subject.

The lecture of the 24th of January was delivered in the Hall of the Carnegie Library, and was illustrated with charts, crayon diagrams and sketches by the hand of Dr. Percy E. Raymond, the lecturer of the evening. The Annual Address of the President, Mr. Andrew Halkett, was also delivered in the Hall of the Carnegie Library and immediately preceded the Annual Meeting on the evening of 21st March.

The audiences present at these events varied from 75 to 250 persons. After the delivery of the lecture on each occasion opportunity was taken for questions and discussion in accordance with the immemorial practice of the Club. Many interesting exchanges of opinion and facts of personal observation in connection with the subject of the evening were thus made public.

The following is a list of the events:—

- Dec. 6th, 1910—"Some Recent Developments in Canadian Fisheries." Prof. E. E. Prince, Dominion Commissioner of Fisheries.

- Jan. 10th, 1911—"Conservation, or the Protection of Nature." Dr. C. Gordon Hewitt, Dominion Entomologist.
- Jan. 24th, 1911—"Local Geology, the Rocks and their Fossils." Dr. Percy E. Raymond, of the Geological Survey.
- Feb. 7th, 1911—"Insects Injurious to Orchard, Shade, and Ornamental Trees." Mr. J. M. Swaine, of Macdonald College, Que.
- Feb. 21st, 1911—"Edible, Poisonous and Other Fungi." Mr. H. T. Gussow, Dominion Botanist.
- March 7th, 1911—"How the Forest Grows." Mr. R. H. Campbell, Dominion Superintendent of Forestry.
- March 21st, 1911—President's Annual Address. Mr. Andrew Halkett.

#### REPORTS OF BRANCHES.

##### THE BOTANICAL BRANCH.

The work of the Botanical Branch during the past year has been confined mainly to the papers and discussions in connection with the meetings of the Branch which have been held during the winter. Little field work in botany was done about Ottawa during the past season. Few young men in Ottawa are interested in systematic botany, and the older men seem to be too busy at their official duties to take time to study plants in the field. Prof. John Macoun spent the summer of 1910 in botanizing in Nova Scotia and added a number of new species to the flora of that province. Mr. James M. Macoun made very valuable collections about Hudson Bay. Mr. H. T. Gussow is doing very important work in investigating plant diseases, especially those relating to economic plants. Mr. H. Groh devoted considerable time during the summer of 1910 in studying the native Amelanchiers and also in noting the species of plants growing or establishing themselves in an evergreen plantation at the Central Experimental Farm.

The following meetings of the Botanical Branch have been held during the winter of 1910-11:—

1. "Reports of Field Work," given by Mr. R. B. Whyte. Jan. 7th, 1911.
2. "A Flora in the Making," by Mr. H. Groh. Jan. 28th, 1911.
3. "The Flora of the Barren Grounds," by Mr. J. M. Macoun. Feb. 11, 1911.
4. "Canadian Grasses," by Dr. M. O. Malte. Feb. 25th, 1911.
5. "The Composition of An Old Race of Cereals and Its Variability," by Mr. L. H. Newman. March 11th, 1911.

## THE ENTOMOLOGICAL BRANCH.

The members of the Entomological Branch report that fair progress has been made during the past year in the knowledge of the insects of the district. A number of species were collected for the first time, and others of extremely rare occurrence were taken on several occasions. Two species are worth mentioning here. The Ghost-moth, *Sthenopsis thule*, which was found at Ottawa in 1905, was again collected the past season, a single specimen being taken by Mr. A. Nicholls. In the Montreal district the insect is taken almost every year in fair numbers, but at Ottawa only two examples have as yet been captured. The large handsome insect, the Imperial Moth, *Basilona imperialis*, which is decidedly uncommon in Canada, must have been fairly abundant in the district, judging from the number of examples taken, mostly by certain individuals not specially interested in insects. Specimens were collected at Hull, Que., at Britannia and at the Experimental Farm. The Hull captures are most probably the only specimens which have ever been recorded from the Province of Quebec.

The Leaders hope that during the new Club year more members will take an interest in this branch of our work. The study of insects in the field is extremely fascinating and no branch of the Club's work offers a better, or so little known, field for investigation. So much is still to be learned regarding the life-habits of our insects, that anyone who makes careful observations can easily add to the known knowledge of many of these creatures. The Leaders of this Branch will gladly assist anyone who desires to take a deeper interest in the insects occurring in the Ottawa district. The field is a large one and the workers are few.

## THE GEOLOGICAL BRANCH.

As in former years Leaders of this Branch attended the Saturday afternoon excursions and explained as far as possible the principal geological features of the localities visited. Dr. P. E. Raymond, a new member, has done considerable work in the Chazy formation near Ottawa. In THE OTTAWA NATURALIST for November, 1910, he described two new species of trilobites from this formation, and in the February number, 1911, he gave sections in the Chazy at Rockcliffe, Hog's Back, Westboro, near the Robillard quarries, Montreal Road, and Mechanicsville, with typical fossils from each layer. These sections will be of great value to students who wish to study this formation.

He finds that the sections in the vicinity of Ottawa show about 250 feet of strata between the Beekmantown (Calciferous) and the base of the Black River. The lower 125 to 135 feet he



correlates with the upper Chazy of the Champlain Valley and proposes for this part the name Aylmer formation. The upper portion of the section consisting of 115 to 125 feet contains fossils more nearly related to the Black River and offers a splendid field for future study.

The Club was represented at the meeting of the Royal Society of Canada by the President, Mr. Andrew Halkett.

The Treasurer's report shows a balance on hand of \$21.48.

The thanks of the Club are due to Principal White for the use of the Normal School Assembly Hall, to the Library Board of the City Council, and to the Librarian, Mr. Burpee, for the use of the Lecture Hall and Committee Room of the Carnegie Library, to the gentlemen who have so kindly assisted us in our winter lecture course, and to the Press of the City for its co-operation in furthering the work of the Club.

All of which is respectfully submitted.

J. J. CARTER, *Secretary*.

#### NOTES FROM NEW BRUNSWICK.

GREY SQUIRREL.—On December 20th a fine specimen of Grey Squirrel (female) was taken on the eastern side of the St. John River about twenty-five miles above Fredericton, in York County. A few have perviously been taken, but the species is of sufficiently rare occurrence to put this capture on record. Total length, twenty inches; tail, seven and one-quarter; hind foot, two and three-quarters. The pelage was in beautiful condition.

CANADA JAY.—I also received from a friend a partial albino Canada Jay taken in the northern part of the province. The two central tail feathers are white with ashy spot on tips. The next pair are entirely white; remainder of tail about normal. Some of the primary feathers are white; the greater wing covers and part of the lesser wing covers white; balance of plumage natural. The skin was in a badly mutilated condition, but the abnormal colour has been fairly well brought out in mounting.

MAMMALS CAUGHT IN TRAP.—My small boy recently found, in one of his steel traps, two mammals caught at the same time, while taking a feast from the bait. Occasionally we have known of two mammals (usually mice) being taken in a trap simultaneously, but it was an interesting surprise to obtain at one catch a flying squirrel and a short-tailed shrew, as was the case in this instance.

WM. H. MOORE, SCOTCH LAKE, N.B.

TREASURER'S STATEMENT FOR YEAR ENDING 21st  
MARCH, 1911.

RECEIPTS.

Balance from previous year.....	\$ 31.85
Subscriptions:—	
Arrears.....	\$ 49.00
1910-1911.....	181.00
1911-1912, in advance.....	25.00
	<hr/> 255.00
Advertisements in OTTAWA NATURALIST.....	108.30
OTTAWA NATURALISTS sold.....	4.50
Authors' extras sold.....	27.02
Maps of Ottawa sold.....	.35
Government grant.....	200.00
	<hr/> \$627.02

EXPENDITURE.

Printing OTTAWA NATURALIST, Vol. XXIV., 11 Nos. including cover.....	\$399.88
Illustrations.....	19.50
Authors' extras.....	34.05
Miscellaneous printing: circulars, mailing en- velopes, etc.....	35.11
	<hr/> \$488.54
Postage on OTTAWA NATURALIST.....	32.34
Editor.....	50.00
	<hr/> \$570.88
Less 2 per cent. for cash on some accounts of printer.....	1.45
	<hr/> 569.43
Soiree expenses.....	16.13
Sundry expenses, postage, etc.....	19.98
Balance.....	21.48
	<hr/> \$627.02

HERBERT GROH,  
*Treasurer.*

Examined and found correct,

R. B. WHYTE,	} <i>Auditors.</i>
J. BALLANTYNE.	

SUMMARY OF A LECTURE DELIVERED, BEFORE THE  
OTTAWA FIELD-NATURALISTS' CLUB, ON JAN.  
28TH, 1911, BY DR. PERCY E. RAYMOND.

The subject of the talk, the "Local Geology," had been so often and so admirably treated before the Society, that the speaker did not attempt to repeat the details of the local distribution of the rocks and fossils, but made the local section the basis of a brief exposition of what has been recently accomplished in mapping the ancient geography of the region. The older view, that throughout Ordovician time the Ottawa valley was continuously an arm of the sea has been modified in recent years by critical studies of the fossils, and the speaker endeavoured to show the great value of fossils in studying the former distribution of lands and seas. It was pointed out that at the present time the fauna of the Pacific Ocean was very different from that along our eastern coasts, and that it had been found that the fossils showed similar differences in contemporaneous faunas living in separated ocean basins. The two great basins which had affected this region were the Atlantic and the great interior sea.

The most ancient fossiliferous sedimentary rocks, the lower Cambrian, do not seem to have been deposited in this region, though an arm of the sea passed through the St. Lawrence and Champlain valleys at this time. During a large part or all of Middle Cambrian time, both the Ottawa and Champlain regions were above sea level, and the next inundation, the first to reach Ottawa, came from the Gulf of Mexico. In late Upper Cambrian time, however, the sea seems to have broken through to the Atlantic in the St. Lawrence valley, for at Levis we have a mixture of interior and European types of fossils. At this time the water was very shallow in the Ottawa valley, and the arm of the sea was probably in the form of a bay opening to the eastward. In this bay was deposited the Potsdam sandstone.

During the early part of Beekmantown time the Ottawa region was again above the water level, but toward the later part, the sea to the eastward again encroached upon the land, bringing in a part of the Upper Beekmantown (Ft. Cassin) fauna. As the land was submerged, the sea seems to have at first derived a large part of its sediment, from the more ancient Potsdam sandstone, thus forming the so-called passage beds of Potsdam sands with Beekmantown fossils.

After Beekmantown time there was a general emergence of the Ottawa and Champlain valleys, and the Ottawa region was land until the latter part of Chazy time. The Chazy sea was an

arm of the Atlantic which advanced up the St. Lawrence trough and into the Champlain valley long before it reached Montreal or Ottawa. In the later part of Chazy time, however, there was a shallow bay extending as far up the Ottawa valley as Allumette Island, while deeper water existed at the same time about Montreal. At the end of Chazy time the land was tilted, so that the sea was forced to retreat eastward and the interior sea again reached the Ottawa region, this time coming across west of the Adirondacks. In this sea were deposited the Lowville limestone and shale, 125 feet thick at Ottawa. In Lowville time this sea does not seem to have extended very far east of Montreal, and its advance into the region east of that place was accompanied by the erosion of the upper beds of the Chazy.

In Black River time this same sea continued to advance down the St. Lawrence till it broke through into the Atlantic, and in the limestones formed at this time we find a mixture of inland and Atlantic types again.

Although the general facts of the subsequent history of the region are known, the details are still so obscure that no attempt was made to present maps showing the local conditions.

Persons interested in a further study of this subject are referred to Prof. Schuchert's great work on the Paleogeography of North America, published as a bulletin of the Geological Society of America in 1910.

#### MEETING OF BOTANICAL BRANCH.

Held on Jan. 28th at the home of Mr. Geo. H. Clark, the following members being present, in addition to the host: Messrs. Whyte, W. T. Macoun, Michaud, Malte, Campbell, Sirett, Bunting, Carter, Blackader and Groh.

On assembling the company first examined some roots of ginseng which had been collected at Wakefield, Que., and were shown by Dr. Blackader. This plant is rare in the Ottawa district, but some of the members were able to report its former occurrence in localities close to the city.

Mr. Clark spoke briefly about large sets of representative Canadian seeds which have been put up by the Seed Branch, and about certain recent developments in Canadian vegetable seed production.

The subject for the evening was, "A Forest Flora in the Making"; in other words, a report on a botanical survey of a plantation of Scotch and Austrian pines at the Experimental Farm. It was presented by Mr. H. Groh, who made the observations during the past summer. The plantation in question is

about 50 feet by 300 feet in extent, and adjoins the Dominion Observatory. It was started in 1887 on what was then a cultivated field. The trees were planted mostly three feet apart each way, but have been thinned out considerably since, as individuals fell behind in the struggle for light. Those which remain are now over thirty feet in average height, and their tops unite to form a continuous canopy overhead, through which little direct light filters. Natural pruning has kept the trunks comparatively free of large branches, and about five years ago the lower branches were all trimmed off. On the sides of the plantation an untrimmed border of more densely branching Norway Spruce shuts out the light from that quarter and acts as a barrier to the sod. In only one place within, on an area of a few square yards, is there sufficient light to admit of the formation of a sod; otherwise the conditions are uniformly those of a dense pine forest. The floor has a moist covering of several inches of needles, the soil beneath being a light sandy loam with some gravel.

To casual observation, vegetation was almost wanting in this area, plants occurring for the most part as isolated individuals. Nevertheless as the result of four careful examinations in as many months, forty-five species of fern and flowering plants were recorded, as well as several mushrooms and other fungi. Many of these were merely seedlings or immature plants, but twenty-four were found to be flowering, and in most cases producing seed. Specimens of the latter were shown, and a tabulated list of all the plants was distributed. It showed that there were represented twenty-five families and thirty-seven genera, no family having more than three representatives, except the Compositæ, which had twelve. Twenty-two were indigenous, seven were annuals, three winter annuals, five biennials and thirty perennials.

A noteworthy fact about the plants recorded is that almost all are field, not forest plants; and practically none had the appearance of being well established in their present home. This led to the deduction that vegetation had been absent entirely until recently; probably until the trimming up of the trees five years ago admitted more light and circulating air to the floor of the plantation. An older forest society might be expected to contain a larger proportion of indigenous and true forest plants. Assuming it to be true that this flora is of recent development, we may ask, how has it arisen? Plant migration and adaptability to environment are two factors which would operate together in determining its composition. The former, we may suppose, has been continuously at work; but only when the environment became such that it was tolerable for certain of the plants brought into it, could there be any result. In illus-

tration of this fact, the observation was made that among various seeds which have been found in the snow in this area this winter, the most abundant is birch, which, nevertheless, was not represented by living plants in the summer. The birch cannot thrive without the light of the open and therefore fails to gain a foothold here. Similarly many other species must perish when brought by the vagaries of their migrations to this plantation; and this is just what has been going on with all species, until recently. On the other hand, many forest and other plants which would be perfectly at home in this environment, or would at least be capable of enduring it, have not yet reached here. Among the plants collected which seem best at home are a fern, *Aspidium spinulosum*, var. *intermedium*; a violet, *Viola blanda*; a bedstraw, *Galium triflorum*, and two sedges, *Carex Deweyana* and *C. varia*, as also the various fungi, which are no doubt at their best in such a habitat.

Many of the plants not so well adapted for enduring shade showed plainly its effects upon their habit or structure, as for instance, by their broader, greener and more succulent leaves, their elongated internodes, etc. The prickly lettuce or compass plant, *Lactuca scariola*, which ordinarily turns its leaves edgewise to escape the force of the strong mid-day sun, was here compelled to spread them after the fashion of other plants, so as to catch the full benefit of the light which filtered down to them.

Notice was taken of the various ways in which the seeds of these plants may have been brought to the plantation. Animal life and the wind were no doubt the principal agencies. The seed may have adhered with mud to the feet of men or animals, or they may have been drifted along over the frozen snow. Three or four of them are armed with prickles or barbed processes for attachment to animals etc. Some would be eaten by birds and other animals and then be deposited in a fit state for germination at this place, and six possessed fleshy fruits indicating this means of dispersal. Another six were provided with wings, while ten had pappus tufts, enabling them to be carried for greater or less distances through the air.

Such a survey as described, opens up a variety of interesting problems which can only be settled by repeating the observations during a series of years. No society of plants can be fixed and stable at such an early stage of its history, and each year should contribute something new to its composition.

H. G.

## CONCHOLOGICAL NOTES.

The fresh water pearl mussel, *Margaritana margaritifera*, was recently collected by one of my sons in the Ste. Croix River near St. Stephen, New Brunswick. The shells are small in comparison with specimens from the St. Lawrence Valley, and none contained pearls. Larger, and especially contorted, shells, from rapid water would no doubt produce, as such shell do in other countries, the concretions which are sometimes so beautiful and highly prized. In Saxony a profitable fishery of this mussel has been carried on as a state enterprise for hundreds of years. Shells presenting the characters known to indicate the true pearl-bearers are carefully opened with a wooden wedge, searched and if found barren returned uninjured to the streams, from which they are again taken in a year or two.

A shell of the same genus, not previously reported from Ontario, was recently found in the Winnipeg River at Kenora, below the falls. It is the flat pearl shell, *Margaritana complanata*, abundant throughout the Mississippi basin, and extending northward into Manitoba.

The rare *Planorbis corpulentus*, originally described in 1830 by Thomas Say, from the Lake of the Woods and Rainy Lake, and the still rarer *Lymnæa binneyi*, Tryon, were found near Fort Frances. Tryon's shell has unfortunately shared the fate to which his *Planorbis binneyi* was so long subjected. It was thought to be a form of *Lymnæa emarginata*, as *Pl. binneyi* was thought to be either a form of *trivolvus* or Say's *Pl. corpulentus*. *L. binneyi* is a beautiful, large and distinct species, of which I hope soon to see a plate in the NATURALIST. *Pl. binneyi* is the very large *Planorbis* which occurs in the Rideau just west of Billing's Bridge, especially on the north shore, above the rapids. I have found it at several other points in the same river; in the Rideau Canal, at the Exhibition Grounds, in Meach Lake—one specimen only—and in Giroux Lake, near Cobalt. In certain localities in the Rideau Canal and River it is associated with *Pl. trivolvus*, but it does not seem to occur in the Ottawa, where *Pl. trivolvus* is in every bay a common shell.

The numerous specimens of *Pl. corpulentus* which Say collected were lost\* and the shell which he figures, Plate 15, Fig. 9, was procured from Dr. Bigsby. My shells were collected near Kettle Falls, at the east end of Rainy Lake. Many are larger than those measured by Say. He rightly describes it as "closely allied to *Pl. trivolvus* but much less rounded on the sides of the whorls. The carinæ are more prominent, the upper side

\*Appendix to Narrative of Long's Expedition, London, 1825, page 10.

is much more frequently flattened, the labrum is less rounded, and the whole shell is larger and higher in proportion to its width, and the aperture extends both above and below the penultimate whorl."

The shell described and figured by DeKay as *Pl. corpu-lentus*, Say, Zool. of New York, 1843, Pt. V., p. 64, and Pl. VIII, Fig. 185, is undoubtedly *Pl. binneyi*, Tryon. DeKay's error is to a large extent responsible for the confusion of the two species, which are in range as well as appearance quite distinct.

Of the Sphæria or "little-ball shells" several species new to the Ottawa list, and some probably undescribed, were collected in 1910. The most notable are *Sph. transversum*, Say, which is found in great numbers in the Rideau Canal along the right bank just above Hartwell's Locks and in the by-wash from the locks, and *Sph. crassum*, Sterki. But of these more anon.—L.

#### BLUE JAY IMITATING RED-SHOULDERED HAWK: ABSENCE OF CONES ON EVERGREEN TREES.

On December 10th whilst at Bury, Compton County, Que., I was surprised at hearing the cry of a Red-shouldered Hawk thrice repeated.—Keé-oo; Keé-oo; Keé-oo. Turning, I expected to see the bird circling above, but a thorough search failed to reveal it. One hundred yards away stood a small district school-house, and beyond, as far as the eye could reach, stretched an evergreen forest,—not exactly the locality for *lineatus*. In the opposite direction were hills, with patches of hardwood, a summer home of the Broad-winged Hawk. As the Red-shouldered Hawk is uncommon in this locality and considering the lateness of the season with the thermometer registering below zero, I was bound to have a look at the author of these cries. Thinking that the boys might have a wing-clipped bird, I started to search in the rear of the school, when suddenly a Blue Jay appeared to view in the lower branches of an elm. Fifteen minutes' wait failed to reveal any other bird life, and I became convinced that the Jay was the author of the cries, though it failed to repeat its efforts.

I was informed by residents of this district that Red Squirrels have been unusually numerous about their barns this fall. There is an excellent reason for this as there are no cones. I failed to find a single conifer bearing seed, and these seeds are bread and meat to the Squirrel, as the nut crop is insignificant and especially so this season. Are these conditions general?

L. McIVER TERRILL, WESTMOUNT, QUE.



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