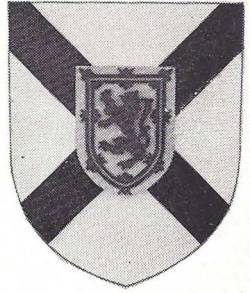


NEWS LETTER



Volume 1-Number 2
August 1955

The Nova Scotia Museum of Science

DEPARTMENT OF EDUCATION

MINISTER

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EDITORIAL

As the name Museum denotes, it is a seat of the Muses, a place of study, and it was as such that the great museum of antiquity at Alexandria, with its botanical and zoological gardens, was maintained in the third century B.C. In Europe in the Middle Ages, collections of curiosities, brought by travellers from other lands, accumulated in the monasteries and churches, but these were not kept for scientific purposes or for study. Many were relics, such as bones of saints, which were kept for religious reasons; such items as ostrich eggs, sometimes presented as griffins' eggs, were kept as curiosities to bring people to church.

The modern museum serves both the curious idler and the scholar. For the latter, in certain fields, the museum is essential for his research work. As to the idler, whether curious or otherwise, we welcome him: whether he wants to or not, he will certainly glean some iota of information, and carry away some particle of food for thought. Hence its excellence as a popular educator, a museum is recognized as the easiest form of self-instruction, with advantages over all others.

It has been noted that every community, when it reaches a certain cultural level, feels the need for a museum (or museums), just as it feels the need for, say, a public library.

Our own museum, which had humble origins in the Mechanics Institute (a forerunner of the N. S. Institute of Science) in 1831, became a provincial institution in 1868, and had many ups and downs before it found permanent quarters in 1910 in the N. S. Technical College in Spring Garden Road. Since those times, it has undergone many changes, and now renders the community many services, chiefly in the field of Natural History.

Having looked into the past, one inevitably looks to the future. Man's ingenuity in discovering ever new materials and new techniques, holds great promise of more and more fascinating displays, and of greater educational facilities to the public.

A. M. R.



MUSEUM EXHIBITS

No. 2 NORTH AMERICAN MOOSE

(Cervus alces)

The North American moose (Old World Elk), that roams the coniferous forests of both the Old and New Worlds, is the largest member of the deer family. Whereas the female has no antlers, the majestic bull bears the characteristic large palmated antlers, and has the particular dewlap or "bell" hanging from his throat. Of a dark brown to almost black colouring, he is a heavy animal, with thick high shoulders, a short tail, and long legs which facilitate his ploughing through bogs and marshes. He feeds mainly on trees and shrubs, as well as aquatic, semi-aquatic and other plants.

The Indians found the moose a valuable source of food and hides, as also did the pioneers. Because of this, and other causes it was inevitable that their numbers should decrease and the moose has had to be protected. Even so they are no longer abundant in our province. The cow usually bears twins: the calf at birth is completely helpless, and the mother keeps it in seclusion for at least a few days.

In our province the moose has been struck by a strange disease. He has been seen to wander about as if he had lost his wits. The cause of this has not been definitely established, but it is considered to be due to some dietary deficiency.

This exhibit on view at the N. S. Museum of Science, was prepared by Louis Paul Jonas, of Hudson, New York.

A. M. R.

NOVA SCOTIA BIRD SOCIETY

Summary of Spring Migration Project

Robin, Tree Swallow, Ruby-Throated Humming Bird, Nighthawk

Sixty-five members from 15 counties responded to our request for reports concerning the arrival dates of the above cited species in their respective localities. The figure following the name of the county indicates the number of reporters from that county. Several reporters mention hearing nighthawks so early that it is quite obvious that they have mistaken the "ground note" of the woodcock for the cry of a nighthawk. In such cases the records were disregarded. (In over 50 years the writer has not recorded a nighthawk earlier than May 15 in Kings County. A number of April and even March recordings were therefore deleted when preparing the following summary). The dates for "first seen" in a few cases were so late that they were well out-of-line with others from the same general district. To include such dates when determining averages would tend to distort the true picture, for which reason they were deleted. When no average is given it signifies that only one report for that species was received from the county in question. No Ruby-throated Hummingbirds were recorded for Shelburne or Queens, though three out of five reporters saw them in Yarmouth County and two out of four saw them in Lunenburg. Following is my summarization of the reports which were received.

	Robin		Tree Swallow	
	Ist	Av.	Ist	Av.
ANNAPOLIS (4).....	Mar. 30	Mar. 30	Apr. 19	Apr. 23
ANTIGONISH (1).....	Mar. 23			
CAPE BRETON (1).....	Apr. 22		May 6	
COLCHESTER (1).....	Apr. 5		Apr. 25	
CUMBERLAND (5).....	Mar. 26	Apr. 6	Apr. 26	May 2
GUYSBORO (1).....	Apr. 4		May 12	
HALIFAX (17).....	Mar. 13	Apr. 1	Apr. 21	Apr. 29
HANTS (3).....	Apr. 23	—	Apr. 23	—
INVERNESS (1).....	—		May 14	—
KINGS (16).....	Mar. 24	Apr. 3	Apr. 5	Apr. 18
LUNENBURG (4).....	Mar. 31	Apr. 2	Apr. 12	Apr. 20
PICTOU (1).....	Apr. 6		May (Apr.?)	20
QUEENS (1).....	Mar. 20		Apr. 11	
SHELBURNE (4).....	Mar. 13	Mar. 24	Apr. 8	Apr. 21
YARMOUTH (5).....	Mar. 20	Mar. 24	Apr. 11	Apr. 17
	Ruby-throated Hummingbird		Nighthawk	
	Ist.	Av.	Ist	Av.
ANNAPOLIS (4).....	May 13	May 16	May 20	May 21
ANTIGONISH (1).....	May 22		—	
CAPE BRETON (1).....	June 1		—	
COLCHESTER (1).....	May 22		May 24	
CUMBERLAND (5).....	May 18	May 25	May 19	May 25
GUYSBORO (1).....	—		—	

	Hummingbird		Nighthawk	
	1st	Av.	1st.	Av.
HALIFAX (17).....	May 14	May 19	May 10(?)	May 25
HANTS (3).....	May 13	May 17	May 22	—
INVERNESS (1).....	June 1	—	—	—
KINGS (16).....	May 12	May 17	May 23	May 24
LUNENBURG (4).....	May 16	May 16	June 14	—
PICTOU (1).....	May 25	—	May 25	—
QUEENS (1).....	—	—	—	—
SHELBURNE (4).....	—	—	May 25	—
YARMOUTH (5).....	May 13	May 19	May 28	June 1

R. W. TUFTS,
President, N. S. Bird Society.

Only tentative statements of migration routes can be based on these observations of migration in a single spring.

It is probable that robins recorded on March 13 in Halifax and Shelburne Counties were either erratically early migrants or birds that had wintered in the province. The general indication of the remaining records is that this species first arrived in numbers in the southwestern counties, Yarmouth, Shelburne and Queens. To reach those counties before others, the birds probably flew across the Gulf of Maine from southeastern New England. Some, at least, of the robins bound for regions farther northeast are seen to pass through these counties.

Records of tree swallow arrivals also indicate that, in general, this species arrives first in the southwestern counties, probably by a flight across the Gulf of Maine. In Shelburne County, at least, transient tree swallows have not been recognized.

Evidently the migration route of the ruby-throated hummingbird, spring arrival of which is not reported from Shelburne and Queens Counties, is quite different. Earliest reported arrival of this species is in Kings County, with Yarmouth, Annapolis and Hants Counties following closely. Cumberland County is 5 days later still. A migration route across the Bay of Fundy from New Brunswick and possibly eastern Maine is indicated.

In the case of the nighthawk, Cumberland County appears well out in front, with Annapolis, Hants and Kings following. The probability is that this species reaches this province by crossing the upper waters of the Bay of Fundy or its branches.

It is felt that the Society should study the spring migration of these species for several years, in an endeavour to make our knowledge of the subject clearer and more certain. Possibly a few additional species will be added to the list to be studied. Because of its situation, Digby County is a key area and the lack of reports from it is keenly felt.

HARRISON F. LEWIS,
Editor, N. S. Bird Society.

RARE AND UNUSAL BIRDS OBSERVED DURING 1955

Several of our members have reported rare and unusual birds which they have seen since this Society was organized last January. The most outstanding of these is the Green-tailed Towhee (the second record for Canada), which was picked up dead on Cape Sable Island on May 14 and reported by Mr. S. F. Smith. Details regarding this accidental visitor have already been given wide publicity. What was left of this bird was preserved as a specimen and may be seen in the Nova Scotia Museum of Science at Halifax. Other observations which are worthy of inclusion in this report are: European Teal, April 26, near Amherst, Cumberland County (George Boyer); Eastern Cowbird on May 13, at Sydney (E. Swailes); Eastern Bluebird on May 23 at Debert (Martin McNally); Turkey Vulture on March 21, at Port Williams, and young of Prairie Horned Lark at Grand Pre, on May 6 (R. W. Tufts); Turkey Vulture, taken at Barrington on February 19, and Phoebe at Sable River May 19 (H. F. Lewis); Phoebe, May 26, Indigo Bunting, June 4, and a Yellow-crowned Night Heron on May 31, all on Bon Portgage Island, Shelburne County (Mrs. Evelyn Richardson). Mrs. Richardson also reports having seen an Oregon Junco on May 1st and mentions that her son-in-law had a Vermilion Flycatcher come aboard his fishing-boat near Seal Island, Yarmouth County on May 25th, but these it is felt had better be placed on our hypothetical list for the present, since neither has heretofore been recorded in Nova Scotia.

ROBIE W. TUFTS, President

N. S. Bird Society.

Wolfville, N. S.

June 26, 1955.

NATURE CLUB

Five years ago, when a group of Junior High School Students was found in the museum exhibit area taking notes on the exhibits, they were offered help by Mr. J. L. Martin, museum biologist. From this chance group, a regular nature club was formed with Mr. Martin as leader. On his departure, E. J. Longard became instructor, and later, Mrs. J. Jenkins.

The nature club held meetings once a week. Last year this type of educational work was extended by Mrs. Jenkins to include a summer group of young naturalists. She, with the aid of three former High School members of the nature club, Robert Gray, Jack Zinck, and Ken Beanlands, and at times nearly all the Museum staff, instructed a class of about twenty grade seven students, from many different Halifax schools. This summer branch of the nature club had three instructive periods and one field trip a week for four weeks. Each week was devoted to one line of study, commencing with a bird week, then a plant week, a sea-life week, and a geology week.

A lecture, supplemented by a film, was the usual method of instruction. Whenever possible, specimens were shown the children. For example, birds, amphibians and mammals were dissected by instructors and the internal anatomy was explained. The children were encouraged to do things for themselves. They drew and painted mounted birds, made leaf prints, mounted collections of shells and minerals.

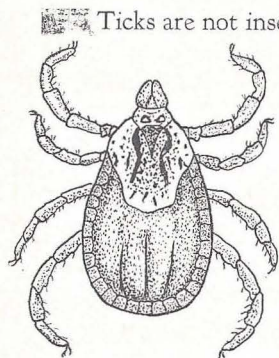
A quiz on each week's work showed that the children were benefiting from the opportunities available to them. It is evident from the promising young naturalists in our midst, that the individual attention afforded to these young people in the Museum, not only helps to guide their steps towards the study of Natural History, but also serves as valuable early training in their chosen field.

ROSEMARY LANE.

THE AMERICAN DOG TICK OR WOOD TICK IN NOVA SCOTIA

It is rather unhappily that we report on the establishment of the dog tick (*Dermacentor variabilis*) in Nova Scotia. This is one of those ticks that attack man as well as other mammals, and is of special importance because, like its western cousin the Rocky Mountain fever tick, the dog tick is able to transmit spotted fever and tularaemia, both serious diseases of man. The introduction of this pest into Nova Scotia will be a potentially serious annoyance to all who enjoy our out-of-doors during May, June and July.

So far, the tick is confined to the south-western end of the province, mainly in Shelburne and Yarmouth counties, but is spreading gradually through Queens and Digby counties. There have even been reports of its appearance in Lunenburg county. In some of these areas where it has become locally familiar, the tick is erroneously associated with moose and called the moose tick.



Ticks are not insects. As they have eight legs, they are more closely related to the spider. Their habits, however, at once set them apart from spiders and their life histories are complex and often most remarkable. The adult dog tick measures about $\frac{3}{16}$ of an inch, is brown in color with whitish markings. The young ticks hatch in the Spring from the 3000 to 6000 eggs deposited on the ground by each female the previous summer. These attach themselves successively to three different hosts, beginning with small rodents such as mice. After engorging on the blood of the mice, they drop off, digest the meal, molt, and climb onto low vegetation to await the passing of another rodent, this time perhaps a squirrel or a rabbit. The eight legs of the tick terminate in minute hooks that seize the hair of the first animal that brushes past, and it thus acquires a new host. The ticks have become adults by the time they are ready for the third host, but this final meal is necessary before the eggs can be laid. The adults climb higher up on shrubbery and tall grass, and prefer to attach themselves to larger mammals such as dogs, racoons, foxes, deer, horses, cattle, bears and man. In Nova Scotia, development is completed by late May, but the adults may be encountered in diminishing numbers until late July. From July 15 on, the season may be regarded as relatively tick free.

In attacking man, ticks do not bite immediately, but may crawl around for hours, finally settling in some protected place such as the armpit or behind the ears. For this reason the best precaution when traveling in tick-infested territory is to examine oneself with care from head to foot periodically, such as before going to bed every night. The ticks can usually be discovered and removed before they have become firmly established. They attach themselves by burrowing painlessly right into the skin where they remain for some time: they can do this without being felt at all. The services of a physician are often required to have them removed, as the head, if left in, tends to start an infection. Numerous emergency methods of doubtful dependability have been advocated, such as touching the tail end of the tick with a hot needle or cigarette butt to make it release its hold. An application of olive oil has also been recommended, the object being to clog the tick's respiratory apparatus. Some think it best to wait until it has finished feeding and backs out voluntarily.

Just how the dog tick was transported to Nova Scotia, and when this took place is a mystery, although it could readily have come on dogs or other domestic animals from almost anywhere in the eastern U. S. from Massachusetts southward. I first met it in extreme abundance on the Island of Martha's Vineyard, off Cape Cod in 1947, and last Spring renewed the acquaintance at Oak Park, near Barrington Passage. Its eventual dispersal throughout the mainland of Nova Scotia is probably only a matter of time. There is no known means to combat the tick menace short of exterminating the animals upon which they feed—a drastic step to say the least.

Although the dog tick can be a serious carrier of disease, bear in mind that a tick must first bite an infected host, then survive to lay its eggs through which the infection is transmitted to the succeeding generation. It is likely that none of the ticks here have been so infected. The situation resembles that concerning the *Anopheles* mosquito, vector of malaria. Several species of *Anopheles* have always been with us, but so far there has never been an outbreak of malaria in Nova Scotia.

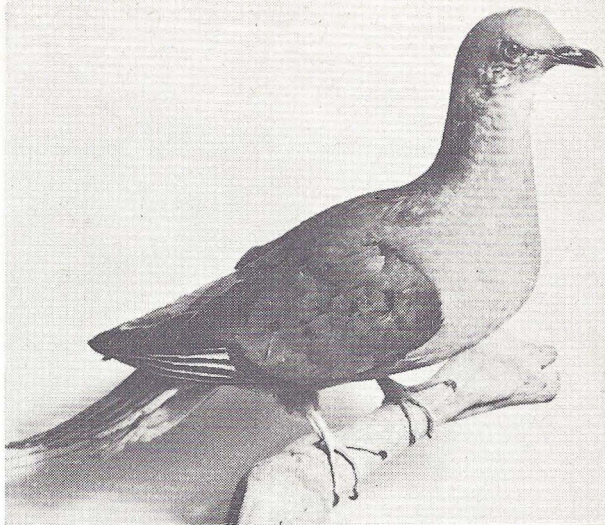
DOUGLAS C. FERGUSON

Animal-Vegetable- Mineral

THE PASSENGER PIGEON

(*Ectopistes migratorius*)

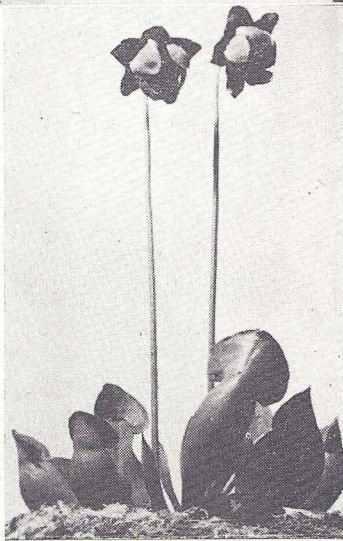
Unfortunately, you will not see this bird on your bird watching trip, because man has seen to its extinction. As late as 1888 their numbers blackened the skies, but by 1914 they were no more. It was native to the United States and Southern Canada including Nova Scotia, had lovely blue-gray plumage with reddish-brown throat, wedge-shaped tail, long pointed wings, and a rapid flight. The specimen photographed here is on view at the Museum and was donated by Mrs. G. Grant, 17 Robie Street, Halifax, N. S.



THE PITCHER PLANT

(*Sarracenia purpurea*)

The Pitcher plant or Indian Cup, a carnivorous plant commonest in peaty bogs in the southern counties of Nova Scotia and in northern Cape Breton, is an extraordinary plant whose leaves are its main fascination, although the flower is also very striking both in colour and form. These pitcher leaves grow 3 to 12 to a root, the tall stem of the flower rising from their midst. Inside the lid of the pitcher there is a sticky substance, as well as countless stiff hairs that grow downwards, so that it is very easy to crawl down, but, there is no way out for the unsuspecting insect. The pitcher secretes a liquid which the rain augments, and in this the insects decompose. This provides the plant with nitrogenous food which is necessary to the plant, but which is not provided by the peaty nature of its habitat. There are some insects, however, for whom the pitcher is home. In "A Multitude of living things" by Lorus J. and Margery J. Milne, there is a fascinating account of those insects, which actually depend on the pitcher plant for their very existence. According to notes written some 116 years ago, the liquid from the pitchers was used with success "for the ailment called jaundice."



QUARTZ CRYSTAL

This is a crystal of quartz. These crystals resemble cut glass ornaments on old-fashioned chandeliers, and the natural faces or facets often have a polish as perfect as any that man can devise. However, Nature lacks man's versatility in this instance, for she always makes quartz crystals in the same six-sided pattern. Six flat sides end in six triangular faces which meet at a sharp point. Quartz crystals are among the commonest types of crystal to be found in nature and they may be found in many places in Nova Scotia. Depending upon whether the crystal is clear, milky, amber, brown, or purple in colour, we have the varieties—rock crystal, milky quartz, citrine, smoky quartz, and amethyst.



News Items

We are sorry that Mr. D. K. Crowdis, the Director, has had to undergo an operation which is enforcing his absence from the Museum at present. He is making an excellent recovery, however, and we look forward to his return in the early fall.

We were delighted by the visit of Mr. Roy C. Coy, Director of the St. Joseph Museum, Missouri, accompanied by his assistant Mr. Donald Reynolds, and a friend Mr. Magoon and his son, also from St. Joseph, Missouri. They were here to photograph Nova Scotian wild life, shore birds, the fishing activities around these shores, scenic views and historical spots. This film will be shown in various towns and cities in the United States.

Joseph Purcell, the well-known and very talented Nova Scotian artist has completed the painting of the background scene for an exhibit depicting two wild cats fighting on the snow-covered floor of a moonlit forest. The cats were mounted by the Museum taxidermist Lloyd Duncanson. This exhibit will soon be on view to the public.

Douglas C. Ferguson, entomologist on the Museum staff, and a graduate of Dalhousie University, is to be away on a year's leave of absence. He has been granted a scholarship to pursue post-graduate studies on systematic entomology at Cornell University, Ithaca, New York.

The Museum staff has increased considerably with the employment of students who help with the annual collecting in the field, which is in now full swing.

The Director and staff of the Nova Scotia Museum of Science pay tribute to the late Mr. Harold St. Clair Silver, age 96, who was fatally injured in a street accident on the afternoon of Tuesday June 28, 1955. Mr. Silver, who had led a very active and interesting life, was employed for many years in the Museum, and was a well-known Halifax figure. We all feel his passing very deeply.

This is a publication of the Nova Scotia Museum of Science

MUSEUM HOURS

MONDAY through FRIDAY / / / / 9 a.m. to 5 p.m.

SATURDAY / / / / / / 10 a.m. to 1 p.m.

SUNDAY / / / / / / / 2 p.m. to 4.30 p.m.

OFFICE HOURS / / / / 9 a.m. to 5.30 p.m.

Vol. 1 of the Museum Newsletter will consist of 5 numbers to appear throughout the year.

Copies of each number will be available at the museum at 10c each.