

# NOVA SCOTIA MUSEUM NEWSLETTER



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NOVA SCOTIA MUSEUM NEWSLETTER

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DEPARTMENT OF EDUCATION

MINISTER

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Birds being what they are and behaving as they do, it is no wonder that they receive more attention from us than any other form of wild life. Bird-watching is on the increase, perhaps because the birds are on the decrease. Although we know that the birds have a place in nature that could not be filled by other animals, our impatience has led us to take on part of their job ourselves, and our massive poisoning operations may have hit the birds harder than the intended targets, the insects.

Interest in birds has always run high in Nova Scotia, and a few years ago led to the formation of the Nova Scotia Bird Society. Now, with the publication by the Nova Scotia Museum of Mr. R. W. Tufts' *Birds of Nova Scotia*, students of bird life, from tyro to expert, have the means to enjoy their avocation to the fullest.

For its part, the Museum has hopes of expanded facilities which can lead only to increased awareness by the public of our natural history and its problems, and which will, quite surely, increase still further the numbers of binocularized bipeds observing those other bipeds which are at their best when their feet are not on the ground.

*Donald K. Crowdis*  
*Director, Nova Scotia Museum*

# A SPRING VISIT TO THE EASTERN SHORE BIRD SANCTUARY

*by Garrett C. Clough*

The Eastern Shore Bird Sanctuary, a group of islands leased by the Nova Scotia Bird Society, has much to offer the professional biologist and the person who just enjoys and appreciates wild animals. My first trip to these islands, made with my wife, from May 23 to 25, 1962, was to survey the vertebrate life, especially the nesting sea birds. During the 3 days of our stay we learned much of general interest which may be helpful to anyone considering a trip to the area.

We arrived in Necum Teuch, along the eastern shore, 90 miles east of Halifax, late Tuesday evening and spent the night very comfortably at the Belmont Inn there. Previously we had contacted Mr. Norman Smith, also proprietor of the inn, to ferry us out to the islands. Mr. Garnett Snow of Harrigan Cove may also be engaged for boat transportation. After breakfast on Wednesday morning we drove about  $\frac{1}{4}$  mile to Smith's dock, piled our gear at the end and waited. Soon we could see his white, open boat returning from the early dawn round of checking lobster traps. We loaded two knapsacks of camp equipment and food, a five-gallon plastic jug of fresh water, a large pack containing a folding kayak and, then last of all, our little three-month old puppy. It was a fine clear day with a warm sun.

It took less than an hour to reach the Halibut Islands. The boat took us down the Necum Teuch Inlet where a few Greater Yellow Legs were feeding along the shore, a few Cormorants, Black-backed and Herring Gulls were resting, and a lone Loon flew over. Then we passed among a series of islands. Smith pointed out the ones which make up the Bird Sanctuary. We were heading for the Halibut Islands; actually 3 separate ones close together, Inner, Middle and Outer Halibut, with a few rock ledges lying between the latter two. The Halibut group was  $2\frac{1}{2}$  to 3 miles from shore. About 3 miles to the northwest, closer to the shore, was Gold Island. Bird Islands could be seen only as low gray objects lying on the southern horizon. These are a group of treeless islands further out to sea.

Our landing had to be accomplished without benefit of a dock. This is true for all the islands and means that the sea must be fairly calm before you can go ashore on any part of the sanctuary. However, we managed to unload our supplies



*View from Middle Halibut Island seaward, toward Outer Halibut Island.*

and then waved good-bye to Mr. Smith. We had come ashore on Middle Halibut. There was such an abundance of birds around us that we did not know which way to look first. Across a few hundred yards of water on Inner Halibut there were Double-crested Cormorants by the dozens perched in the bare branches of a stand of dead spruce trees. Male and female Common Eider Ducks were all over, swimming near the island in small groups and resting on the rocks and grassy edges of the land. Herring Gulls and Great Black-backed Gulls circled over us.

We started out by making a general tour of the island. It is about 800 yards long by less than 200 yards wide. The center is covered with spruce trees which grow to a height of 25 to 30 feet. The edges and the narrow eastern tip of Middle Halibut are treeless, covered either by grass and sedge or by sphagnum moss, cranberry, fox berry and crowberry. There were currant shrubs growing at the edge of the trees and in openings in the woods. We found nests of Eiders, Cormorants, Gulls and Petrels. Each species of bird had picked a different type of habitat.

The gulls laid their eggs in grass-lined depressions in low vegetation on the open edge of the island. Their nests were exposed to full view from above but the dark marks on the eggs camouflaged them partially. The eider nests were all located under the shade and cover of trees except for one under a large

currant bush. Most eider nests were near the outside of the woods but a few were in the middle of the island. The cormorant nests, a mass of small sticks a foot and a half in diameter, were built near the top of spruce trees. The petrels went underground, in horizontal burrows extending back nearly two feet, close under the surface. These were all at the edge of the woods either under the outside trees or near the outer dense shrubby vegetation.

No gulls were seen incubating but since the Great Black-backed Gulls were generally closest to the nests and because the eggs were of such large size we judged that it was this species which owned them. In mixed gull colonies in Maine I have noted that the Herring Gulls are later than the Black-backs in the whole breeding cycle. Many Herring Gulls frequented this island and perhaps would soon start building nests. Some of them were in the courtship stage of breeding activity. A female Herring Gull performed her proposal dance, with neck lowered and head outstretched, as she circled around a male.

As we trespassed over the Black-backed Gulls' territories they uttered loud alarm calls but on the whole made little



*The author on Middle Halibut Island. Eiders were found nesting under the spruces in background.*

disturbance. They become more active in their defense later when the chicks are hatched. We counted 10 nests with the full clutch of 3 eggs and 1 nest with 2 eggs. One nest contained an empty sea urchin shell along with its eggs. We counted 5 broken gull eggs around the island but found no clue about the destroyer.

The incubating eider usually gave us the first clue to the location of an eider nest by catapulting away at our approach and then half running, half flapping her way through the underbrush into the sea. It was always the female bird which was incubating. As she left the nest she usually voided fresh excrement which gave the vicinity of the nest a strong, rank odor not quite like anything I had smelled before. The nest consisted of a depression filled with gray down feathers. Sometimes the pale olive-green eggs were left partly concealed by the loose down. We found 12 eider nests but this represents the minimum number present. One had one egg, two had two eggs, eight had 5 eggs and one had 6 eggs. I found only one broken eider egg on the island. Eiders of both sexes swam near the island in small flocks. Once I saw 12 males and 12 females together, another time 23 males and 18 females and 1 partly white individual who was probably a yearling male late in his winter moult.

All of the cormorant nests were concentrated in one colony near the island in small flocks. The whole group of birds left with noisy squawking as we came close to them. The nests were crowded close together, sometimes 3 feet apart in the same tree. The leaves of these trees were dead or dying and the branches white-washed with the cormorant droppings. The odor was not too pleasant but we managed to adapt to it and soon witnessed the return of these strange-looking birds. They settled awkwardly into their nest or on the bare branches. A newcomer often stimulated aggressive action; long necks darted out and wings were raised until one bird moved away. I counted 30 cormorants and about as many nests but there was no way of knowing if all the nests were being used this year. At another time there were at least 50 cormorants in a group in the water and on the rocks near Inner Halibut Island. This little island had once been the nesting site of the birds. The entire colony must have recently changed its nesting site en masse after killing all of the trees supporting them. It will be interesting to see where they go next. In some places cormorants build their nests on rocky ground, but even then may move periodically.

In the afternoon we paddled along the shore to the larger Outer Halibut Island. About 100 eiders in 3 loose flocks swam in the water on one side of this island. Some lone female eiders came precipitously out from the edge of the trees as we pad-

dled close along the shore. Twenty-five or thirty Black-backed Gulls and a few Herring Gulls sat or flew near the eastern end. We saw and heard a pair of Loons in the water further out to sea. A Great Blue Heron appeared from over Middle Halibut, pursued by a Herring Gull. As we came back we counted a dozen Terns chattering over the area. We had not seen any signs of their nests at all.

Other birds occupied Middle Halibut Island. Song Sparrows were singing, at least two pairs of Myrtle Warblers flitted about the shore and Brown-capped Chickadees were in the woods. The next morning a male Blackpoll Warbler was singing. A few crows landed on the island. The Leach's Petrels finally appeared in the middle of the night, back from their day at sea.



*Leach's Petrel. Photographed on St. Paul Island.*

The petrels woke us up with their low persistent courtship song. They seemed to be all around our tent, under it and above it. I crawled out into the cool starry night to see them. Their little dark forms flitted near my head, silhouetted against the starlight; their voices issued from the dark bushes all around me. It was one of the rare memorable experiences which come from being an unnoticed observer in the midst of animals intensively carrying on their own important affairs.

Later on in the season one bird of each pair stays in the burrow all day to incubate the single egg. It takes 5 to 6 weeks to hatch the egg and then at least 2 months before the young petrel leaves the burrow. None of the burrows which I examined had eggs yet. You would be able to find young petrels here throughout the summer until mid-September at least.

The morning was clear and cold; in fact there was ice in our water jug. I had been quite interested in learning what small mammals lived here so had set some mouse traps the evening before. I found them all empty in the morning. There had been none of the signs: the runways, cuttings of plants or droppings, which usually indicate the presence of mice. We did uncover some Red-backed Salamanders (*Plethodon cinereus*) from a damp rotten log and moist soil. By some chance they had succeeded in crossing the water from the mainland while mice and shrews had not.

We packed the supplies into the kayak with the dog nestled among them and started off to Gold Island. On our way a lobsterman approached with an offer of aid but we told him, no, our motor had not failed, we were paddling by choice. These folding kayaks are quite well suited for such a trip. Tinbergen, the great European ornithologist, had used one on the coast of Greenland. We crossed  $2\frac{1}{2}$  miles to Gold Island in less than an hour. On the way we passed a loon sitting in the water and saw a flock of 30 to 40 guillemots fly by. They nest on Bird Islands, whose bare slopes appeared about  $3\frac{1}{2}$  miles to the southwest of our route. Later they would lay their single egg on bare rock in a protected crevice just above the high tide line.

Gold Island is about the size of Middle Halibut but round in shape. The best camp spot is a flat meadow near the north end which extends right across the island. It is a low neck of land connecting two high rocky parts. Gold Island has both Black Spruce and Balsam Fir in its central woods with wide open edges on the cliff tops of grass and dense crowberry.

On a tour around the edge of the island we found no gull nests but many eider nests. In the five nests I inspected there were three with 3 eggs and one each with 4 and 5 eggs. At least seven more female eiders fled from the woods before me indicating that they had been incubating. This count again represents the very minimum since it was made on a very hasty survey. I found a number of broken eggs lying about the area.

The other birds we saw were Crows, Brown-capped Chickadees, Myrtle and Canada Warblers, Song and Savannah Sparrows, a pair of Spotted Sandpipers, both species of gull, and a pair of Ospreys. The Osprey gave me quite a surprise by flying up from the woods as I made my way around the edge of a

rocky point. It circled over me calling weakly. Soon another Osprey came into the scene. It had a fish hanging in its talons. It set up a loud piercing cry and joined the other in flying about me. Then I saw their nest, a flat pile of sticks about 3 feet in diameter, 20 feet up, in the top of a dead spruce at the eastern edge of the island.

All along the open edges of land there were runways and droppings of mice. Once I even saw one darting beneath the vegetation. Later I managed to collect three specimens. They were all the meadow vole, *Microtus pennsylvanicus*. Usually these animals inhabit grassy fields or marshes. I had never before heard of them living in heathy shrubs at the edge of a spruce-fir woods as they do on Gold Island. They certainly were successful here because these individuals were exceedingly large for the species. There were also signs of rabbits on the island. We could not find any salamanders here.

The mice may keep the petrels from nesting here. Some men who have studied petrels for many years have never found them on islands inhabited by mice but this isn't proof that it may not happen nor that it is the mice which keep off the birds. Such a question of interspecies effects could be well studied by long-range experiments on this series of islands. A few petrels did visit Gold Island that night. Would they stay to nest another year if the mice were all removed?

We went to sleep that night expecting to be picked up by Smith in the morning. During the night wind and rain descended on Gold Island with force. The morning sun never appeared; it merely became slightly lighter. The sea was roaring and the fog hung over us. The rain ceased long enough for us to get breakfast but then came back in force during the morning. We moved about slowly, managing to stay dry in rain suits. Our dog was not so fortunate and soon was wet and shivering. We hopefully packed up the tent thinking that if Smith could manage to come out later when the sea calmed we should be ready. But the fog did not lift all day and the sea did not calm. We kept such a roaring fire going that we could dry out the wood as we used it. Our two-day supply of food was about gone but we did have enough extra oatmeal for dinner.

This unplanned lengthening of our trip gave us more time to watch the Eider Ducks. Small groups came into the protected water near the meadow area. Sometimes there were 5 or 6 males and one female, sometimes an equal number of both sexes. The courtship was still going on with the males performing their ritual displays.

This type of behavior may be as characteristic of the species as its structure and color. Certain behavior patterns are



*Eider duckling 2 or 3 weeks old. A particularly thick coat of down protects these chicks in cold water. Photographed in Maine.*



*Nest of Great Black-backed Gull containing full number of eggs.*



*Young Herring Gull, 16 days old, still in downy stage. Photographed in Maine.*

used by the biologist today to help understand the evolutionary relationships of the species. Generally the species most closely related have the greatest similarity in their fixed or instinctive behavior patterns.

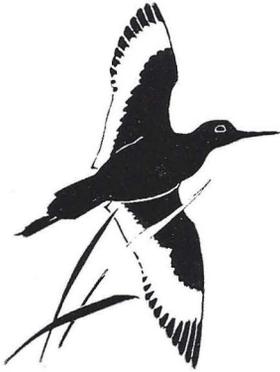
An early stage of this behavior in the Common Eider drake seemed to be head-bobbing, when one or more males of the group put their bills almost into the water close to the breast and then pointed the head upwards. This was repeated rapidly for minutes. The females performed this action a few times, and when they did, it seemed to stimulate the males into greater activity. The next display of the males started in a similar way but with the whole head tucked down and then kept in that position while the entire body was arched up nearly out of the water. The Eiders did very little of the ritualized wing preening which plays a large part in the courtship of some ducks such as the Mallard. A few times we saw an incubating female come flying from her nest nearby and join in the activities of a displaying group of males.

There was considerable aggression among the males of such a group of displaying ducks. A drake would charge at another with lowered head and outstretched neck. If the other male did not flee there was a flurry of water as they met and exchanged pecks. Often during or right after a fight one of the birds would shake his tail back and forth. Sometimes they would nearly rise off the water by flapping their wings vigorously. While all of this was going on the whole group swam slowly through the waves. Out where the wind tossed white water about, however, the birds merely bobbed around like corks. Some of them tucked their heads under their wings and rode out the storm.

We went to sleep that night slightly hungry, with uncertainty about what the morning would bring. Fortunately the weather calmed and we were saved from any hardship. These sanctuary islands certainly are fascinating but when we saw the lobster boat coming to take us off next morning we both felt happy and relieved.

*This article was submitted for publication in September, 1962. We regret that due to unforeseen delays it is only now being published. Dr. Clough was at that time Assistant Professor of Biology at Dalhousie University, Halifax, N.S. He is now in Norway, where he is studying lemming behavior, with the co-operation of the University of Oslo.*

## THE BIRDS OF NOVA SCOTIA



A little over a year ago the Nova Scotia Museum announced the publication of *The Birds of Nova Scotia* by Robie W. Tufts of Wolfville, N.S. The book, to date, has aroused a great deal of interest and has been extremely well received. Many of the copies sold have gone to New England and the mid-western states and orders have come from such distant points as Alaska, Great Britain, Norway and New Zealand.

Mr. Tufts, who was at one time Chief Federal Migratory Bird Officer for the Maritime Provinces, is the author of a previous smaller volume, well known in the province—*Some Common Birds of Nova Scotia*, published in 1934. In his more recent volume which is approximately 500 pages in length, 348 species are described, 221 being illustrated in full color. Illustrations are by Roger Tory Peterson, well-known ornithologist and painter of birds, and John Crosby, staff artist of the Zoology Department, National Museum of Canada. Line drawings are by John H. Dick, illustrator of *A Gathering of Shore Birds*. His drawing of a Willet is seen here and on our cover.

Anyone not already owning a copy of *The Birds of Nova Scotia* and wishing to do so, may order directly from the Nova Scotia Museum, Spring Garden Rd., Halifax, at a cost of \$7.50 plus 25 cents to cover postage and handling.

### MUSEUM NEWS

The Museum of Science is fortunate in having procured the services of Dr. A. A. Mills of the Institute of Oceanography, Dalhousie University, as part-time planetarium operator. During the summer months particularly, shows were drawing capacity audiences. Lieut. Mary King (RCN) has been instructing Girl Guides working toward their astronomy badges and although these sessions are now over, it is expected that they will be resumed in the spring.

Dr. K. N. H. Greenidge, formerly Associate Professor of Botany at Dalhousie University, and now on the staff of St. Francis Xavier University, has devoted considerable time to checking herbarium records and bringing distribution maps up to date in his capacity of Research Associate of the Museum.

The Nature Trail in Point Pleasant Park, which a year ago was converted to a seasonal trail, has aroused a great deal of interest and has had visitors continuously. Art work for the present series was done by Rick Robertson, with research by Mrs. Jane Take.

A popular exhibit in the Science Service Centre at the Museum of Science is an observation hive of honey bees, which was installed last summer. Through the winter months the bees are not foraging, but still active and moving around in the hive they are a continual source of interest to visitors.

In June, 1963, a conference of regional museum personnel was held at Citadel Hill. The meetings were organized by the Nova Scotia Museum in co-operation with Mr. H. A. Johnson, Superintendent, Halifax Citadel National Historic Site. Sessions were held June 13th and 14th with the opening session Friday evening. Mutual problems were discussed and tentative arrangements made for further meetings. Approximately fifty persons attended the opening meeting, including a number of representatives from the Dartmouth Museum Society. Representatives came also from the New Brunswick Museum and the Newfoundland Naval and Military Museum as well as from fourteen out-of-town museums. The agenda dealt with financial relations with governments, paid admissions, security, inter-museum relations, reception of visitors, technical problems, security, communications, and tourism and the museum. Mr. Johnson and Mr. D. K. Crowdis, Director of the Nova Scotia Museum, acted as co-chairmen.

New staff members at the Museum include Miss Mary Higgins, secretary, who replaces Mrs. Claudia Rougeau who left the staff in July; Mr. Gary Rhindress on duty in the Science Service Centre; Mr. Kenneth Gilmour, graduate of the Nova Scotia College of Art, who is now a preparator at the Historical Branch, Citadel Hill; and Mr. Azor Vienneau, also a graduate of the Nova Scotia College of Art who had been studying for the past two years at the Montreal Museum of Fine Arts and last year taught art at Lower Canada College. Mr. Vienneau has been appointed as staff artist and has, with Mr. Gilmour, been a member of the Museum's summer staff for the past several years.

#### *NOVA SCOTIA BIRD SOCIETY*

At the Annual Meeting of the Society held in November, Mr. Fred Payne of the Provincial Wildlife Service discussed the status of waterfowl in Nova Scotia. He told the Society that ground surveys had been made of 150 acres in the province, to study habitat, concentration of water fowl, and breeding

populations. He said attempts have been made to establish breeding colonies in suitable places, for example, 15 young Canada Geese were released at Nyanza, and more are to be released next year. Five hundred Mallards were also released, but no successful colony has been established. A thorough study has been made of 6,000 acres of marsh in Cumberland County in regard to soil, water, and wildlife population, as a possible protected breeding area, and several more sanctuaries have already been set up.

A current project of the Society is the collection of color slides from members who may have extra copies, in an effort to establish a reference file on Nova Scotia bird life.

Officers for the year 1963-64 are as follows: President, Dr. Lloyd B. Macpherson; Vice-President, Mrs. Victor Cardoza; Secretary-Treasurer, Miss Sylvia Fullerton; Editor, Mrs. J. W. Dobson; Executive members, Mr. Jack Brayley, Mr. C. R. K. Allen, Mr. W. J. Mills, Honorary Solicitor, Mr. R. A. Kanigsberg, Q.C., and Auditor, Mr. F. A. Lane.

#### *ROYAL ASTRONOMICAL SOCIETY, HALIFAX CENTRE*

Monthly meetings this season will feature a planetarium demonstration of naked eye and telescopic observations that might be made during the following month. Planets, satellites, meteors and variable stars will be covered in this program. Weather permitting, star parties for general viewing and for specific events, such as meteor showers, will be organized. The centre will continue to give encouragement to the making of telescopes and other observing equipment, and to the enjoyment of astronomy as a hobby.

Officers for the year are: President, Dr. A. A. Mills; Vice-President, Dr. W. L. Orr; Treasurer, Mr. V. W. Bowers, and Secretary, Dr. R. L. Aikens.

#### *NOVA SCOTIA MINERAL AND GEM SOCIETY*

The Society holds its regular meetings the last Saturday of every month at 8 o'clock in the Nova Scotia Technical College. The November meeting featured an auction of materials brought in by members and 10% of the proceeds of their sale are to go toward buying equipment for the use of members. It is hoped that the Society can find a permanent location where this equipment, once acquired, can be set up. This project will continue throughout the year.

Officers for the current year are: President, Mr. Sherman Bower; Vice-President, Mr. A. R. Feltrin; Secretary, Mrs. George Phillips; Treasurer, Mrs. M. G. Rickard; Newsletter Editor, Mrs. K. R. Coldwell; Councillors, Mrs. G. C. Milligan, Mr. Carlos Ripley and Mr. Ralph Thompson.

*Photographs by G. C. Clough*  
*Leach's Petrel by D. C. Ferguson*

*Cover: Line drawing of Willet by John H. Dick*

### MUSEUM HOURS

Science exhibits, office and library, Spring Garden Road,  
Halifax, N.S.

MONDAY TO SATURDAY inclusive 9:00 a.m. to 5:00 p.m.

SUNDAY ----- 2:30 p.m. to 4:30 p.m.

TUESDAY EVENING ----- 7:00 p.m. to 9:00 p.m.

Planetarium Showing 8:00 p.m.

OFFICE HOURS ----- 9:00 a.m. to 5:00 p.m.

Historical Exhibits, Citadel Hill Branch

EVERY DAY including Saturday and Sunday.

9:00 a.m. to 5:00 p.m.

Copies of each number of the Newsletter are available at  
the Museum at 10c each.