

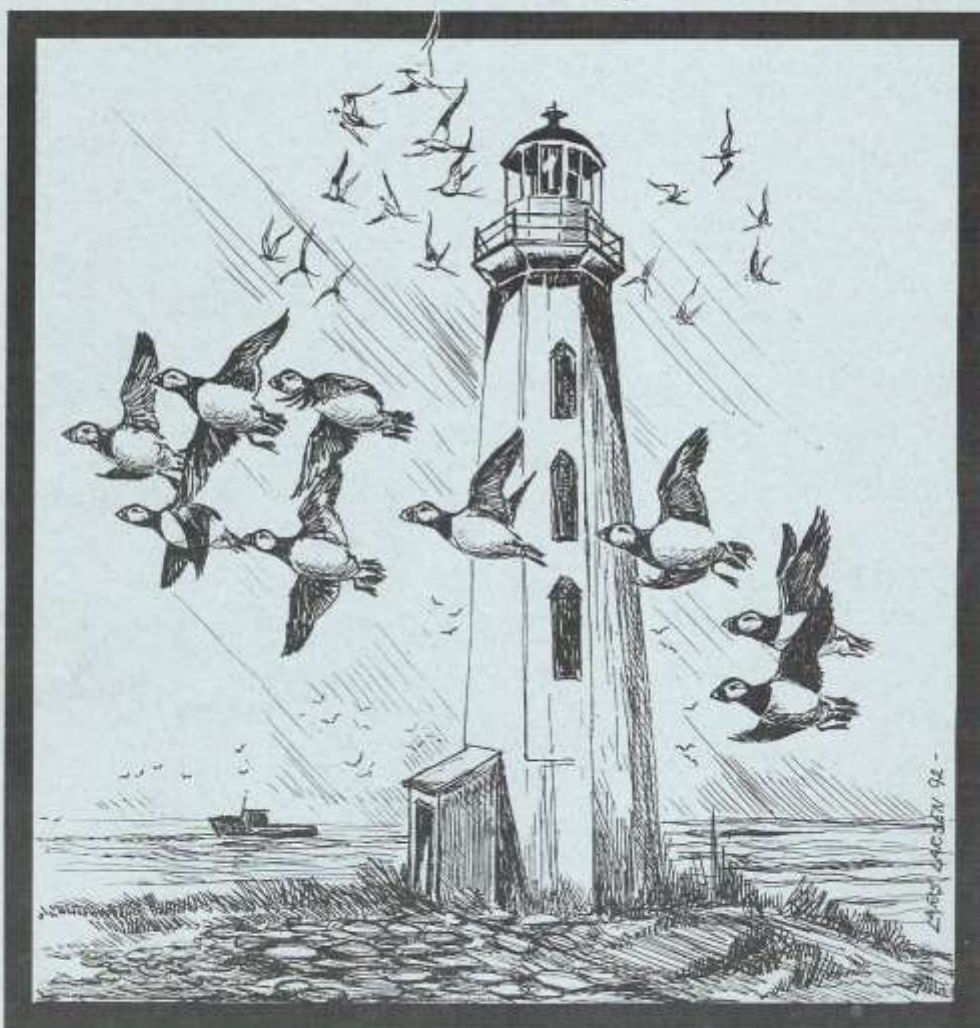
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18 (4) December / décembre 1991

N. B. Naturalist

Le Naturaliste du N.-B.



New Brunswick Federation of Naturalists
277 Douglas Avenue, Saint John, N.B. E2K 1E5

La Fédération des naturalistes du Nouveau-Brunswick
277, avenue Douglas, Saint John, N.-B. E2K 1E5 Canada

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Prototype Quillwort (*Isoetes prototypus*): A New Plant Species for New Brunswick—and the World!

Jim Goltz

While attending university in Guelph, Ontario, I had the great fortune to meet Dr. Donald M. Britton, one of Canada's leading experts on ferns and fern allies. Dr. Britton is a keen field botanist and has a sharp eye for interesting and unusual plants, including hybrids. He is a tireless researcher and is always tackling some perplexing or fascinating botanical problem. Needless to say, I was thrilled when he planned a visit to New Brunswick in late September 1988, in quest of hybrid quillworts.

Quillworts, or *Isoetes*, are aquatic plants that taxonomically have a close alliance with ferns. They look totally unfernlike and more closely resemble small tufts of grass. Most species in eastern North America are usually rooted under water, sometimes at depths of up to 5 metres or more. A characteristic distinguishing feature of the quillworts is the pronounced swelling at the base of each quill-like leaf. It is an easy matter to be sure that one has found a quillwort by performing the "thumb test" or gently pinching the plant just above the roots in order to feel the swollen leaf bases which contain the plant's spores.

The quillworts have plagued field botanists for years, since most species closely resemble one another and cannot be accurately identified in the field. Currently, most species can only be conclusively identified in the laboratory using scanning electron microscopy and cytogenetic studies, techniques not readily available to most of us. To complicate matters, scientists like Dr. Britton have been finding that many of the species hybridize, or interbreed with other species. Although the hybrids often exhibit "hybrid vigour" and may be larger than either of the parent species, and often have many misshapen megaspores that are not uniform in size, many good field botanists have little confidence in their ability to recognize the known species, let alone the hybrids. For the serious student of quillworts, it is very useful to have an ally like Dr. Britton.

In his *Flora of New Brunswick*¹, Hal Hinds mentions reports of 6 species of quillworts and one hybrid in New Brunswick. According to Hal, several of the rarer species and varieties of quillworts apparently were more or less confined to a small lake near Harvey Station. Known by several names, including Bald Mountain Pond, Tower Lake and Holland Lake, it is a popular spot for local people to cool off on a hot day. Since this lake is a "hot-spot" for New Brunswick quillworts, it became a focal point of Dr. Britton's visit.

1 Hinds, H.R. 1986. *The Flora of New Brunswick*. Primrose Press, Fredericton. 666 pp.

2 Britton, D.M. and J.P. Goltz. 1991. *Isoetes prototypus*, a new diploid species from eastern Canada. *Canadian Journal of Botany* 69: 277-281.

On 24 September 1988, Dr. Britton and I found ourselves on the shores of Holland Lake, thanks to Hal's excellent directions. A cool autumn wind and the cold spring-fed lake greeted us upon arrival. It was definitely much too cold for swimming in this "hot-spot." This created a problem. How does one find aquatic plants that root on the bottom of a lake when it is too cold to swim for them? Fortunately, some unknown animal inhabitant of the lake had taken a fancy to quillwort corms and the southwest corner of the lake contained many floating plants that had been uprooted. Most of these "floaters" had long, straight, lustrous dark green leaves, measuring up to 15 cm in length. These were dubbed "big quills" and a number of them were taken back to Dr. Britton's lab for further study.

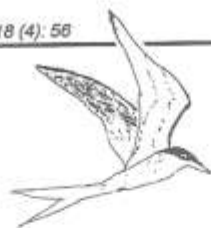
It came as a great surprise that the "big quill" quillworts were a new species that had never before been described. This species has two sets of chromosomes and also has relatively small megaspores (averaging 0.5 mm in diameter) in which the ornamentation is not especially pronounced. These features make this species unique!

Study of herbarium specimens and additional field work in 1989 revealed that the "big quills" were indeed a new species and that this species also occurred in three lakes in Nova Scotia. Although it had had been previously collected in both New Brunswick and Nova Scotia by several different field botanists, none had recognized it as a new species. Dr. Britton named this new species *Isoetes prototypus*, the Prototype Quillwort, since it may possibly be ancestral to several other known species of quillworts².

So the Prototype Quillwort joins Furbish's Lousewort as one of a select group of plants whose home is evidently restricted to our part of the world. Scientists call these plants "endemics." As Dr. Britton says "N.B. means important, right?"

It is the secret dream of many naturalists to discover a new species. Dr. Britton and I were extremely fortunate to fulfill this dream in a part of the world where the flora has been well studied. The Prototype Quillwort may not be the showiest plant in the world, but it is special to us and to the select group of people who take an interest in quillworts. Keep an eye out for this species while indulging in your favourite aquatic summer pastimes. There are only two other near look-alikes with similar long straight "quills." It's good to have a friend like Dr. Britton.





Journal of a Castaway Birder:

Three Weeks on Machias Seal Island

Brian Dalzell

I couldn't believe my good fortune. It was the night of August 18 and I was in the light-keeper's house on Machias Seal Island (hereafter MSI) listening intently to radio reports of the progress of Hurricane Bob as it made its way up the Atlantic coast. With any luck at all it would pass directly over the island.

Directly over the island? The man must be daft you say. Who would want to place himself directly in the path of a hurricane that had passed near Martha's Vineyard, Massachusetts, with sustained winds of more than 87 knots (160 km/h), causing millions of dollars worth of damage? Only a madman would look forward to such an event... or perhaps a birdwatcher.

I certainly wasn't mad, but I could see visions of Sooty Terns and White-tailed Tropicbirds floating gracefully over the island in the aftermath of the hurricane. Perhaps some Black Skimmers, Brown Pelicans or the odd rare tern would be thrown (blown?) in for good measure.

Getting caught in the path of a hurricane was not on my mind when I had set out for the island some 10 days previously. My main concern was just getting there. As it turned out I should have been worrying more about how I would get off, but more on that later. Preston Wilcox was making his last trip of the season to the island on August 9, so I had spent the day before scurrying about buying supplies for what I thought would be a two-week stay.

I had been to MSI twice before, in early July of 1974, and again in early August of 1983 leading a field trip for the Canadian Nature Federation. Those short visits had whet my appetite to return when I could spend a few days leisurely birding the island. It had taken a little more than 17 years to realize my dream.

As we neared Machias Seal, some of the birdlife that draws visitors from all over North America became evident. We encountered the first Arctic Terns about a kilometre from the island, but we were almost to shore before we saw any of its most endearing residents—the Atlantic Puffin. Before the day was out I estimated there were as many as 2,800 terns and 1,800 puffins present.

Anyone who has visited MSI will probably recall that landing is only possible when the seas are relatively calm. There is no wharf, only an ancient, rusting tramway that was used to haul boats ashore. The tide was so low when we arrived that it could not be reached, so we had to scramble over seaweed-covered rocks. That's not too hard if all you have is a camera, but more difficult if you're carrying two

weeks worth of food, clothing, bedding and other supplies.

Fortunately, the light-keeper was on hand to greet us and offered to lend a hand. With the help of a wheelbarrow, I got everything to my quarters in only three trips. The accommodations were more than I could have hoped for. Electricity, central-heating, hot and cold running water, a shower and a flush toilet—what more could one ask?

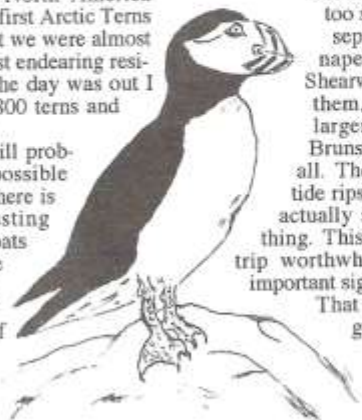
Having been to Kent Island in September 1980 (see *N.B. Nat.* Vol. 11, No. 4, p. 81-84) and experienced the more Spartan facilities at the Bowdoin Scientific Station there, I was pleasantly surprised with the conditions on MSI. After unpacking and settling in, I saw Preston and Peter Wilcox and their passengers off and made a cursory tour of the island. It was not as I had remembered.

Many of the buildings that had stood during my last visit were gone, victims of the Canadian Coast Guard's modernization program. Where there were once seven manned lights in the Grand Manan area, only two remain, MSI and Gannet Rock. For political reasons, MSI will likely always be manned, but the Coast Guard is making determined efforts to fully automate Gannet Rock.

As part of their modernization program on MSI, a new building containing six 9,000-litre fuel tanks was built to provide fuel for the generator. The old tanks were taken away and a number of buildings put to the torch. All that remains is the light tower itself, the new oil storage shed and two large dwellings, one for the keepers and the other for visiting work crews, seasonal wardens and guests.

Just before dark, while counting puffins on the water at the south end of the island, I noticed that some were different. Closer examination revealed they were shearwaters and I immediately assumed they were Greaters. I was wrong—they were too small and did not have a black cap separated by a light band across the nape, so I knew they were Manx Shearwaters. Before I was done counting them, I realized I was watching the largest such flock ever seen in New Brunswick waters—about 300 birds in all. They appeared to be feeding in the tide rips, but through my scope I could not actually see them catching or eating anything. This discovery had already made the trip worthwhile, but there were many more important sightings waiting to be made.

That night I spent a couple of hours getting acquainted with the light-keepers, a father-and-son team. Jim Smith and son Jamie hailed



from Glenwood, Nova Scotia. I was pleased to find that Jim was interested in birds and had been keeping a record of what he had seen on MSI since 1989.

Jim had got his interest in birds from his uncle, Sidney Smith, the light-keeper at Cape Sable Island for many years. Sidney's mother-in-law, Evelyn Richardson, was an accomplished bird student and author of several books about her life on Bon Portage Island. I can highly recommend her book, *We Keep a Light*, the classic story of family life at an isolated Nova Scotia lighthouse.

While not a serious birder, Jim knew most of the common birds. Most of the ones he didn't know cause birders problems when they are getting started: Northern Orioles in fall plumage, the "peep" sandpipers and the confusing fall warblers. Armed only with a Reader's Digest book on 200 common species of North American wildlife, he had done an admirable job of recording most of the birds he had seen over the past couple of years. I was so impressed with his efforts that I immediately gave him my dog-eared copy of *A Field Guide to the Birds*.

Sleep came easily that night, despite the slight disorientation one feels when spending a first night away from home. That sleep quickly dissolved at exactly 4:45 a.m., when the foghorn went off less than 50 m away. Thankfully, it only went on for half an hour and I was able to get back to sleep shortly after. However, living with the unpredictable horn soon turned into somewhat of a nightmare.

Despite a nearly fogless summer on nearby Grand Manan, fog was an almost daily occurrence on MSI¹. Usually it came in at night when you were asleep. The light-keepers had complained about the noise of the foghorn, about 120 decibels inside their house. The solution was to move the foghorn so it did not point directly at their residence, but at the guest house! While the result was to drop the sound level to an acceptable 87 decibels for them, it was a full 120 decibels for me.

Even though I moved to the farthest end of the house, inserted Coast Guard supplied earplugs and stuck my head under a pillow, there was no escaping the horn. Every 45 seconds it made itself known, so strongly that the house vibrated noticeably, even my teeth if I held them together. I ended up sleeping

during the afternoon to avoid the noise and staying up on foggy nights to watch television, read, write in my journal and do other paperwork.

My first full day on MSI was August 10. The local terns, puffins, Yellow Warblers, Common Yellowthroats, Brown-headed Cowbirds, Savannah Sparrows, Spotted Sandpipers, Common Eiders, Black Guillemots, Herring and Great Black-backed Gulls and Barn Swallows were all present, but migrating birds were few. The most interesting experience was watching Short-billed Dowitchers feeding on the lawn. The lawns are kept closely-mown and, because of frequent fog and rain and years of accumulated bird droppings, are very soft. The dowitchers had no problem searching for food in their sewing-machine fashion, something I had only seen them do before in mudflats. Perhaps this is where one of their local names, robin snipe², originated.

The next few days were somewhat quiet, except for the constant noise of the terns, which flew about even at night in the fog. How they kept from flying into one another only they know. There are several blinds on the island and after the tourists had left for the day I had them all to myself.

Having been to MSI and seen the puffins before, I assumed there was no point in bringing a camera—a bad mistake. Many times I silently bemoaned my decision. I had forgotten just how engaging they can be with their rather comical appearance and gentle manners. They came so close I could have taken frame-filling shots with a 50 mm lens. If you ever visit MSI, be sure to take a camera!

The lack of landbirds was compensated by a good variety of shorebirds, many of which were spending time on the island fattening themselves for their south-bound journeys. Most days I found about 10 species, with 14 on August 23 being my top day. The best were two Purple Sandpipers on August 13. I assumed they were recent arrivals from the arctic, judging from the worn condition of their feathers. A Buff-breasted Sandpiper on August 21 and a Baird's for four days near the end of the month were also exciting finds. Both fed on the lawn.

On August 12, three days after arriving, I again noted many Manx Shearwaters sitting on the water and flying around the island. This time I counted 600 birds. I could scarcely believe my eyes, and counted several times, getting anywhere between 575 and 630 birds. Previously, no more than 50 had been seen together at one time in the Bay of Fundy. On the 14th they appeared once more, but only about 150 birds. I never saw them again. Where they came from and where



¹ The small size of the island kept the day-time temperatures remarkably consistent and cool. At night it was between 11° and 17°; during the day from 14° to 20°. During the last two weeks of August, the day-time temperature was always 17° or 18°, regardless of whether it was sunny or overcast.

² The reason for this name is usually attributed to the reddish breast of its breeding plumage.

they were going is a mystery. Even their presence at MSI is hard to explain, for try as I might, I didn't see them catch food of any kind.

It became apparent that on clear nights, landbirds were overflying the island. The best fallouts occurred on nights with northwest winds accompanied by fog or rain. The most common visitors were Yellow Warblers and Bobolinks, which were encountered daily feeding in the dense covering of weeds and herbs.

There are no trees on this 6-hectare rock, except two that had washed ashore the previous winter at the northern tip. It was there the warblers would congregate, usually about an hour after sunrise. Despite the fact the skeletons of the two spruce trees had been picked clean of all insects, they were the closest thing to a forest on the island and the birds naturally gravitated to them.

Some birds were definitely out of place. A Red-breasted Nuthatch came aboard³ on August 13 and stayed four days. While it was there it could be seen creeping about the eaves of the houses and up and down the flagpole. A Downy Woodpecker was seen on the 14th and perhaps another on the 23rd. While this species stayed away from the houses, its habit of feeding on the boulders was something I had never seen before. It would fly to the base of a large rock and hitch itself to the top in a spiral path, as if it were working up a large tree. Jim also saw a Brown Creeper inspecting the concrete foundation of the fuel storage building for half an hour on August 21.

Birds weren't the only interesting creatures about. More than once, large flights of Monarch butterflies came drifting like autumn leaves out of the north, and as quickly as they came, fluttered away to the south. A few stopped to probe flowers, but within an hour or two they would all be gone.

The only mammals present on the island were a few Little Brown Bats that had found somewhere to spend the bright daylight hours out of sight. It wasn't until we decided to check the



cistern that we discovered where they had taken up residence. Both of the dwelling-houses have 23,000-litre concrete cisterns built into the basement. In fact, they take up about a third of the base-

ment. The water is used for drinking, bathing and washing clothes, as the island water is an unsightly brown colour. One of the access covers for cleaning was loose and the bats had got inside the cistern. As soon as the cover was taken off they poured out. Jim and Jamie, not fond of bats, withdrew to a safe distance while I instinctively began to count them as they emerged. I tallied about 15 and, reaching inside, removed about 10 more, for a total of around 25. The most I had seen at night was five or six, so we were surprised to find so many. After the cover was replaced most of them slowly returned to their cool and dark hiding place.

Vegetation on Machias Seal Island

I'm only a budding botanist (no pun intended), but apparently some 30 species of vascular plants dominate MSI. The tallest were of course the most noticeable: Tall Meadow-rue, Seacoast Angelica, Cow Parsnip, Curled Dock, New York Aster, Timothy and Canada Thistle. In a sense they form the "forest" of the island. Along the shore, the most common plants are Seaside Plantain, Sand Spurrey, Toad Rush, Wild Morning-glory, Roseroot, Silverweed, Common Chickweed, and Spotted Touch-me-not. In from the shore, some of the more obvious ones are Sheep Sorrel, Yellow Rattle, Eyebright, Couch-grass, Yarrow, Cow Vetch, Cinnamon Fern, Common Buttercup, Fall Dandelion, White Clover, and Purple-stemmed Aster.

The most colourful plant by far is the bright orange lichen (*Xanthoria*) growing on every available rock, concrete foundation and piece of driftwood. I suspect its abundance is due to the dampness and the ample supply of nitrogen from bird droppings. — B.D.

The other visitors to the island were of the two-footed variety. While Preston had elected to go whale-watching after August 9, a couple of tour operators from Maine continued to deliver customers until August 24, when most of the puffins had left anyway. One was Barna Norton (now with his son John), who has been coming to the island from Jonesport since the 1940s. The other operator was a jovial young fellow from Cutler by the name of Andy Patterson.

On August 15, I witnessed an event I had read about in the Bangor *Daily News*. It was Barna's annual flag-raising and media event, when the American flag is raised on the helicopter pad, and MSI, Gull Rock and North Rock are claimed as U.S. territory. He had brought a couple of newspaper reporters who looked rather seasick and uninterest-

ed. Jim had warned me to avoid them, as it was Coast Guard policy not to interfere in that odd ritual. The light-keepers had explicit instructions to stay inside and keep their opinions to themselves. That sounded like good advice, so I complied.

On Sunday, August 18, we got our first news reports that Hurricane Bob was about to hit North Carolina and, like "Carolyn" in 1954, might next hit Long Island and then push into New England. On Monday, the news was that Bob would likely run right up the Bay of Fundy. Jim and I managed to get all the storm windows up before dark and then we gathered around the radio to monitor the progress of the hurricane.

At noon the storm had been 200 km south of Cape Cod. By 7:30 p.m. the wind began to pick up. By 10:30 the barometer dropped to 988 millibars and the wind was blowing up to 33 knots (60 km/h). But then

³ Jim was in the habit of referring to the island as a ship, and it rubbed off on me.

the bad (?) news came: Bob had gone ashore in southern Maine and its winds were down to 75 knots (138 km/h). Somewhat disappointed, I decided to call it a night and retired about 11 p.m. Jim, who was up most of the night, reported a peak gust of 67 knots (123 km/h) about 90 minutes later.

While the main force of the hurricane had missed us, I failed to consider there would be a storm surge some hours after it had passed. About 7 a.m. on Tuesday morning I was awakened by the sound of a large gravel truck thundering by outside. Gravel truck? I went to the window and gazed out toward the coast of Maine. The surf was immense, at least four to five metres in height, and pounding the southern end of the island with incredible force. Most of the rocks rise straight from the sea at that end, and when the waves hit they shot up to a height of 20 metres or more. With each wave the island shook, the glass rattled in the windows and the whole house vibrated.

It was still raining and blowing so I decided not to venture out until it died down a bit. By noon I was out looking for signs of stray birds, but there was nothing out of the ordinary. The sun actually came out later in the day and, except for the surf, there was no indication that a hurricane had come within 225 km of us. It was Wednesday before heavy rain hit us. At 9 a.m. I was amused to see Jim come by in his yellow rainsuit and soap up all the windows with a long-handled mop. He had learned from experience that the best time to get salt off them is when it rains hard.

Besides coating the windows, the salt spray had the immediate effect of turning most of the green plants on the island brown. The most damage seemed to have occurred to the New York Asters, which were the most common plants, but Blue Flag was also hard hit. Around the perimeter of the island, where the vegetation had not found a good purchase on the rock, the storm surge had rolled it up into large mats.

The only noticeable bird casualties were two adult puffins that Jim found at the entrance of their rock burrows on the southwest corner of the island. The mountainous seas had no doubt trapped and drowned them. It was fortunate that the storm had not occurred a month earlier, when many chicks were still in the burrows. Early in my stay I encountered many young puffins at night in the beam of the lighthouse as they scurried across the lawn, heading for the ocean.

Despite intently scanning the surrounding waters for a few days following the storm, there was no sign of the expected storm-blown seabirds. I was disappointed, and even more so when my brother contacted me by radio to inform me that Royal, Sandwich and Forster's Terns had been found at Grand Manan. To add insult to injury, one Royal Tern had been found within a one-minute walk of my cabin! It was if someone had come all the way from North Carolina to visit me and I wasn't home. Never can I recall having been so depressed about missing a chance to add some rare birds to my list. My feelings were heightened by

being trapped on a suddenly desolate chunk of rock anchored in a rolling gray sea.

Apparently having spent more than 48 hours at the mercy of winds they could not prevail against, the exhausted terns wanted only to return to land and seek shelter. Machias Seal Island did not fit the bill. However, as if aware its reputation was at stake, MSI was about to lay out a table of rare avian delights such as I had never experienced.

The morning of August 23, appeared no different from most that had passed since my arrival. But at 10 a.m. I found a juvenile Lark Sparrow at the head of the tramway, and within two hours a Yellow-billed Cuckoo, Blue-gray Gnatcatcher, Seaside Sparrow, Yellow-breasted Chat, four Prairie Warblers and a Lesser Golden-Plover. While not as sensational, a Black-billed Cuckoo, two Pectoral Sandpipers, a Mourning Dove, a Common Nighthawk and a Sora were the only members of their species I saw during my stay. My final tally was 52 species, the best one-day total.

The next day I saw a first-year Lesser Black-backed Gull circling the island, and on the 27th a second-year bird of the same species. I speculate that someday this European gull will be found breeding on an island in the Gulf of Maine.

Other good birds come to mind. An immature Yellow-crowned Night-Heron, which I first noticed August 15, stayed for nine days. It patrolled areas where the vegetation was sparse, no doubt searching for tern chicks and eggs to eat, as whenever it took flight, it was accompanied by a cloud of angry terns.

The gulls became bolder as the month wore on and the number of terns began to drop. When I first arrived only occasionally could a gull be seen braving the hordes of dive-bombing terns in search of unguarded chicks. It is doubtful that any chick hatched after the beginning of August survived to fledge. Although I found at least a dozen late nests (with 2 to 3 eggs each), I believe all of them failed. If the gulls or the heron didn't get them, the torrential rain on August 21 killed any young less than half grown.

In stark contrast to the fragility of the young terns was the resiliency of Common Eider chicks. The day after the hurricane, quite a few were separated from their creches and carried to shore by the surf where they were swept mercilessly against the rocks. During the lull between waves they would dive and struggle desperately to get back out to sea where their mothers were calling to encourage them. I watched one for more than an hour before it broke free and rejoined its family, seemingly none the worse for the punishment it had taken.

Another out-of-place visitor was a Blue-winged Teal that arrived on August 18 and stayed four days. At first it tried to hang out with the eiders, but after being unceremoniously dunked by crashing surf for about an hour, decided to go



elsewhere. There are no freshwater ponds on MSI, but the teal found the next best thing. It fed in stagnant pools of rainwater amongst the rocks on the western side of the island, quite unconcerned by the foul concoction of bird guano, green slime, feathers and sludge it was living in.

I had planned to leave the island when Preston came to collect his mooring anchors, which he attempted to do on August 16. The swell was so high he left without them. That was fine with me as I wasn't ready to leave then anyway. He never did make it back and by the 24th I decided it was time to put my backup plan into action. I contacted a friend with a fishing boat who had promised to get me if just such a situation arose. Unfortunately, he was doing quite well fishing and was not willing to miss even a day to pick me up.

Concerned about the prospect of being stranded, I decided to call some other friends who might respond to my plea for assistance. However, by the 27th it became evident I was well and truly stranded. I put my finger on the panic button and pushed long and hard. Still no response. Finally, I hit upon a desperate plan. The Coast Guard helicopter was scheduled to take Jim and Jamie off on the 29th. Perhaps if I faked an injury they would take me along.

The main problem was that the pilot was not allowed to carry civilians, because of the legal implications should a non-government employee be hurt while on the helicopter. On the off-chance he would change his mind I arose early on the morning of the 29th and packed my belongings, leaving behind all but the essentials.

I had made my plight known to Jim. When the helicopter arrived, he went out and talked to the pilot for a long time, while I silently prayed that he would relent and take me. I did not look forward to paying someone hundreds of dollars to rescue me. Besides being expensive, it would be embarrassing. Finally, Jim came running over and said that if I could be ready to go in five minutes the pilot would drop me at the Southern Head lighthouse on Grand Manan. I could never have packed in that amount of time, so my foresight in preparing to leave was justified.

It was only the second time I had been in a helicopter and it was no less impressive than the first. Rising straight up into the air at full power to avoid hitting any terns, we were at our destination in 10 minutes, in contrast to the two-hour trip over by boat. My luck held and I was able to get a lift up the island

with the wife of one of the keepers who was being ferried out to Gannet Rock. Imagine my surprise (and his) when I encountered my brother Halton birding at Deep Cove, just 3 km down the road! He had no idea I was coming.

My final tally of birds recorded on the island came to 86 species⁴. Now, more than ever, I know I must return. As far as I can determine, I was only the third person to visit MSI for an extended period with the sole intention of studying all its birdlife. The first was Sewall Pettingill from July 2 to 28, 1937. The other was Glen Woolfenden, who spent most of August 1951 on the island. He reported the first Prairie Warblers for New Brunswick on August 19, 1951, and almost 40 years later I found MSI still the best place in the province to find them.

The potential for finding vagrant and migrant birds on the island is obvious. There is a fair volume of bird records for May to August for the past 20 years, but very little for the rest of the year. If the island were studied regularly later in the fall, I believe that many new species would be added to the provincial list. Because of its small size, the island is very easy to bird. Also, the lighthouse attracts passing birds from as far away as 50 km and perhaps much farther at high altitudes. The effect is somewhat akin to having your lunch spread on a table before you, instead of hidden somewhere in the woods.

I am already making plans to spend next September on Machias Seal⁵. I believe it will be the best time for avian vagrants. I also hope to visit during October of 1993 and November of 1994 to help fill out the picture of fall migration. The island has many secrets to yield, and I feel fortunate indeed that I was privileged to spend so much time in this most unusual part of our province.⁶



Amphibian Populations Declining?

There is growing concern about a possible world decline in amphibians. Observations have indicated reduced populations in several parts of the world. Diseases, acid precipitation, other pollutants, and habitat loss are possible causes. Canadians joined the international effort to better monitor and evaluate the reality, extent and causes of amphibian declines, when herpetologists met in October to develop a national monitoring strategy. National, regional and provincial task forces were set up. Donald McAlpine of the New Brunswick Museum is the task force coordinator for eastern Canada and for New Brunswick.

⁴ If you would like a complete list of the birds I saw at MSI Aug. 9-28, please send a stamped envelope, to the address below.

⁵ If you would be interested in spending a month on Machias Seal Island to study the birds, contact me at P.O. Box 145, Castalia, Grand Manan, N.B. E0G 1L0.

⁶ I wish to thank Bob Boudreau of the Canadian Coast Guard in Saint John for permission to stay in the guest house, and Colin MacKinnon of the Canadian Wildlife Service in Sackville for letting me visit this Migratory Bird Sanctuary.

* Illustrations with this article drawn by Mary Majka.

L'Engoulevent d'Amérique

Gisèle Thibodeau

Durant l'été 1989, j'ai vécu une magnifique expérience que je veux vous faire partager.

Vers la fin du mois de juin, des employés de Fraser à Edmundston découvrent sur le site de l'usine un oiseau couvant ses oeufs à même le sol. Le 4 juillet, quelques membres du Club des ornithologues de la région obtiennent la permission de se rendre sur place pour constater que c'est un Engoulevent d'Amérique soit un mâle reconnaissable par sa queue traversée d'une barre blanche.

Le 7 juillet on trouve l'oiseau mort à proximité des oeufs qui sont laissés à découvert pendant toute la journée par une température d'environ 28° C. En revenant de son travail chez Fraser, ce soir-là, mon époux Martin m'apporte les oeufs et l'oiseau. Je dépose ces deux oeufs gris tachetés dans un panier garni d'un vieux tricot de laine et les mets à couvrir sous un abat-jour muni d'une ampoule «blanc doux» de 15 watts qui dégage une agréable chaleur.

La fin de semaine passe. Soir et matin, je tourne les oeufs qui sont placés à quelques 12 centimètres sous l'ampoule et vérifie leur température. Le lundi à midi, alertée par des cris d'oiseaux, je découvre sous l'abat-jour un oisillon à peine sorti de sa coquille et qui ne cesse de se débattre. Tout en déposant le nouveau-né dans une boîte doublée de tissus de lainage, au-dessus de laquelle est suspendue une lumière, je le recouvre d'une flanelle pur lui donner un peu plus de chaleur. J'ai la chance de trouver au plus proche «pet shop» de la nourriture pour les animaux insectivores. Trois heures après sa naissance, je réussis à nourrir ce protégé de quelques mouches séchées trempées dans de l'eau tiède.

Le soir venu, je tourne l'autre oeuf. De faibles cris se font entendre à travers la coquille annonçant une seconde naissance. Le jour suivant en après-midi, j'assiste émerveillée à cette éclosion qui dure environ deux heures. Heureusement, je peux me procurer des mouches et autres insectes en abondance auprès des propriétaires de chalet de la région qui utilisent des lampes-pièges électroniques. Mais l'ainé manque d'appétit et n'est pas si vigoureux que le dernier-né. Il ne vécut d'ailleurs que trois jours.

On doute que l'autre oisillon puisse survivre. Mais assez tôt, cet orphelin développe ses propres habitudes. On s'aperçoit qu'il préfère être alimenté aux deux heures, ensuite aux trois heures. Il réagit assez vite à ma voix et ouvre grand le bec s'il a faim. Quand il est rassasié, il vient se blottir au creux de ma main ou vient se serrer contre mon bras pour y dormir. En le plaçant dans sa boîte, je prends soin de la recouvrir d'une flanelle. Il ne dort pas sans ce bout de

tissu qui paraît lui donner une certaine protection et reste ainsi toute la nuit.

La croissance de ce petit volatile fut très rapide. À sept jours, il pèse 25 grammes. J'ajoute à sa ration quotidienne une diète de viande mêlée de nourriture à volaille et de vitamines. Son appétit augmente graduellement. Déjà le bout de ses ailes se dessinent et la queue commence à paraître. De petites plumes garnissent le dessus de sa tête et sa poitrine, ce qui lui donne un drôle d'air. Il déploie ses ailes et apprend à lisser ce nouveau plumage faisant ainsi se détacher de toutes petites écailles blanches qu'il a un peu partout sur son corps. Puis, en grandissant, on remarque une malformation au bec qui fait que la partie supérieure de celui-ci pousse vers la gauche. Il a 11 jours et ce même temps j'enlève la lumière qui le tient au chaud depuis qu'il est né.

Bientôt l'oisillon trotte un peu partout et apprend à voler. Il est nécessaire de recouvrir le plancher et les murs de la pièce qu'il occupe. Il a maintenant 18 jours et abandonne sa boîte et sa flanelle. Son poids est de 75 grammes. Aux 20 et 28ième jours des plumes lui poussent sur le cou et le dos jusqu'à alors dégarnis et des taches apparaissent sur ses longues ailes élançées. Le 13 août on le fait baguer à la patte gauche par un biologiste de la région. Son plumage se complète par l'apparition d'un léger duvet sous les ailes.

C'est à partir du 25ième jour qu'on exerce l'engoulevent à voler. Aux premières tentatives il vient se poser à mes pieds.

En peu de temps il réussit à décrire de grands cercles au-dessus de nos têtes.

Un jour, croyant que l'oiseau est prêt à s'envoler pour de bon, on l'emmène dans un endroit désert proche d'un boisé. On réalise qu'il est incapable de voler sur de longues distances. Le temps passe et ses semblables se regroupent déjà pour la migration. Sera-t-il du voyage?

L'oiselet atteint 98 grammes 34 jours et son apprentissage se poursuit. Il peut alors s'élancer plus haut dans les airs et ces multiples essais l'éloignent de nous davantage. Celui-ci possède un étonnant sens de camouflage et il devient dès lors difficile pour nous de le retrouver. Que ce soit sur un sol de gravier, parmi des feuilles et des branches sèches où sur toutes autres surfaces, il réussit à passer inaperçu en se confondant avec son entourage. À notre approche il siffle et hérise ses ailes. Ce fidèle compagnon est de plus en plus attachant. Afin qu'il puisse se familiariser avec les choses et les bruits qui l'entourent, nous lui avons installé une plate-forme sur un séchoir à linge. Il y passe de longues heures, immobile. De ma fenêtre je l'observe à loisir.





L'été s'achève et mon protégé est devenu adulte. Il s'agit soudain, perd l'appétit et semble nerveux. On devine qu'il est prêt pour le grand départ. Il a 45 jours et son poids est de 105 grammes. Le soir du 25 août vers 6h00 par un temps frais et venteux, je le mets en cage. Martin et moi nous nous rendons vers de vastes champs déserts à quelques kilomètres d'Edmundston en bordure de la rivière Saint-Jean. Je sors l'oiseau de la cage. Émue, je lui donne une dernière caresse.

Celui-ci est indécis un court instant puis il quitte ma main pour s'élever très haut dans le ciel. Il redescend au ras du sol et recommence. On dirait qu'il cherche à s'orienter. Ivre d'air pur et guidé par son instinct, ce petit voyageur solitaire se laisse porter par le vent du nord. Une dernière fois de son vol irrégulier il survole notre auto. Puis, sur les ailes de la liberté l'Engoulevent d'Amérique disparaît à l'horizon du sud afin de rejoindre les siens. «Bon voyage petit ami!»

Ce fut pour moi un immense plaisir que de vous avoir fait partager cette merveilleuse expérience. (Reproduit de la revue *Le Harfang*, juin 1990.)

From the Editors

It is with satisfaction that we see each issue of the *N.B. Naturalist / Le Naturaliste du N.-B.* from our desks and computer and on its way to you. We hope you are equally satisfied to receive it.

The Federation's Board of Directors and Editorial Committee have been considering how the magazine should best serve the membership and how to better distribute the workload and streamline procedures to achieve a regular publication schedule. As part of this process, a reader survey has recently been sent to about 15% of our members to learn their preferences concerning the content, format, frequency, and cost of the magazine, and also to see if they are willing to help out by writing or providing illustrations. If you received one of these questionnaires we hope you will complete it and send it back soon. If not, and you're feeling left out, please send us your opinions anyway. Tell us what you'd like to see in the *N.B. Naturalist / Le Naturaliste du N.-B.* Are there illustrations, articles or reports you would like to prepare?

In our last issue we reported that Harold Hatheway's bear story had been provided on disk, the first in response to our request to authors who use a computer. So as not to offend them, we must acknowledge that earlier both Chris Majka and Paul Bogaard had provided material on disk from their Macintoshes; Harold was the IBM-compatible pioneer. Now three other authors have sent disks with articles for upcoming issues. Thanks folks, it helps reduce the risk of carpal tunnel syndrome each time we're putting a magazine together.

David and Mary

Une Pie-grièche grise

Claude Ouelette

Ce lundi, 4 février 1991, par une température de -10°C, une Pie-grièche grise arrive aux mangeoires et essaie d'attraper une Mésange à tête noire, mais elles se sauvent.

Tout à coup, elle aperçoit un Étourneau sansonnet sur un branche. Elle se lance sur lui, l'attrappe par le cou et le jette en bas. L'Étourneau se défend, mais la Pie-grièche le tue en lui serrant le cou. Il est 14:40 h.

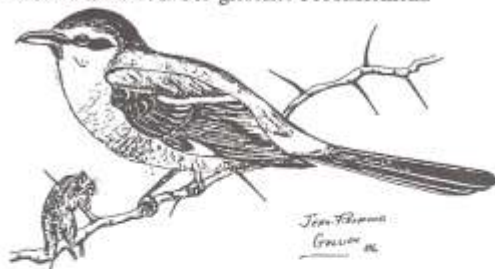
Elle l'emporte une vingtaine de pieds plus loin, lui plume le cou, le sectionne et lance la tête à un pied plus loin. Elle le transporte encore un peu plus loin, le dépose entre une fourche d'arbre à environ 10 cm du sol et se met à le déguster.

Entre temps, un écureuil vient voir ce qui se passe, la Pie-grièche le poursuit et l'écureuil disparaît. La Pie-grièche revient manger. Une Mésange à tête noire s'approche à 2 ou 3 pieds et regarde la scène avant de s'envoler. Deux Geai bleu sont venus à leur tour épier ce qui se passait.

La Pie-grièche mangea durant 1 h et 45 sans interruption et s'en alla. Vingt minutes plus tard, elle était de retour et continua son festin et y resta encore 45 minutes environ.

Le lendemain à 8:00 h. elle était revenue. Après avoir mangé durant 20 minutes, elle s'envola pour revenir vers 9:45 h., cette fois elle emporta quelques restes. À 11:45 h., elle revint manger et transporta le dernier morceau qui restait.

Le surlendemain, durant l'après-midi, j'ai constaté que la tête de l'Étourneau qui était demeurée sur la neige, avait disparu. Un oiseau est venu s'en emparer car il n'y avait aucune trace, à l'exception de pistes d'oiseaux. Était-ce la Pie-grièche? Probablement.



WANTED:

Your Life-list for New Brunswick

Do you keep a list of birds you have seen in New Brunswick? As in 1990, Rose-Aline Chiasson has volunteered to compile the names of the people with the largest life-lists. Please write to Rose-Aline Chiasson, C.P. 421, Lamèque, N.B. E0B 1V0, telling her how many species of birds you have identified in this province, as of December 31, 1991.

Nature News

Autumn 1991

David Christie



With a few exceptions this report covers the months of September through November, and there's a very good reason why such a large proportion of the observations were provided by two observers. Stuart Tingley and Brian Dalzell both spent a lot of time watching birds and submitted detailed summaries of their observations.

Flora, Fungi, Amphibians

1991's weather must have been particularly good for the production of wild fruits. The impressive quantity of **Riverbank Grapes** in the Fredericton W.M.A. had never been approached in the five years I studied at U.N.B. That was a local phenomenon compared to the bumper crop of **mountain-ash** berries across southern N.B. Such abundance would affect fruit-eating birds throughout the fall and well into the winter, since many trees remained heavily laden at the end of November.

The Fredericton Nature Club were joined by visitors from the Acadian Peninsula for "mushroom magic" at Odell Park Oct. 12. Barry Monson reports that leader Hal Hinds seemed to be able to find a mushroom in every square foot of the park, including masses of edible **Wood Blewits** growing on piles of grass clippings. Barry was particularly intrigued by "the appropriately named **Almond Mushroom**, the **Coconut Milkcap**, and the 'egg' of a stinkhorn, which cut open revealed a marvellous gelatinous layer surrounding the spore package." The MNC also had a productive mushroom foray, at Lutes Mountain Oct. 9. Leader Nelson Poirier reports that about 40 species were seen, of which the most abundant were various kinds of **waxy caps** (*Hygrophorus*) and the most interesting some **Black Trumpets** found by Jim Brown. Finds included such edibles as **Chanterelle**, **Horse Mushroom**, **Oyster Mushroom**, and **Shaggy Mane** and enough poisonous **Amanitas** and **webcaps** (*Cortinarius*) to enforce Nelson's warning, "Do not eat unless you are absolutely certain of the identity. If in doubt, appreciate its beauty and throw it out!"

Red-backed Salamanders had a good year at Fundy Nat'l Park, where it was "the best fall ever" (John Brownlie). On "banana-belt" Grand Manan, the fall chuckling of **Wood Frogs** continued until Dec. 2 (BED)!

Birds

The truism that things are not always what they seem to be was demonstrated at least twice this fall. A couple of suspected ptarmigan at Melrose Nov. 9 turned out to be albino quails or pheasants that had escaped from a nearby aviculturist. Later, two "white-fronted geese" in Bathurst Harbour Nov. 28-29 turned out to be domestic geese with white faces.

Red-necked Grebes arrived

as early as Aug. 25, when two adults were seen off Long Pond, G.M.; 16 were there Sept. 15 (SIT) and 40 on Nov. 10 (BED), and another early one at St. Andrews Sept. 7 (DSC & MM). This species seems to have been more widespread than usual; there were several inland and eastern reports: 2 at Woodstock (450-DUCK, Oct. 8 tape), 7 at Fredericton Oct. 18 (DSC), one at Port Elgin Oct. 19 (MNC), and 2 at Inkerman (Marcel David) and one at Le Goulet (GB) Nov. 23. Two **Horned Grebes** at Long Pond Sept. 15 (JGW *et al.*) were the earliest; one at Moncton Oct. 20 (BED) was unusual there. An adult **Red-throated Loon** was at Fundy National Park Sept. 15 (DSC) and one at Partridge Island, Saint John, Sept. 28 (SJNC). On Oct. 20 small flocks were moving SE all along Northumberland Strait between Shediac and Cape Jourimain, where Brian Dalzell saw about 30 (and 20 **Common Loons**) pass during an hour's watch.

Following a southerly gale, a light phase **Fulmar** was seen from the Grand Manan ferry Sept. 27 (SIT). The next day the Moncton Naturalists' Club's whale-watching trip was treated to about 3000 **Greater**, 1000 **Sooty** and 15 **Manx Shearwaters**, 150 **Gannets**, a **Parasitic** and 5 **Pomarine Jaegers**, and 2000 **Black-legged Kittiwakes** in waters east of Grand Manan. There was some controversy about the identity of an albino shearwater—all white with pink feet and bill—off Grand Manan in late August and early September, but those who saw it well agree that it was a Sooty (SIT). **Gannets** were still numerous in the Tracadie area Nov. 10 (CNPA) and the Grand Manan Channel in mid November (Angus MacLean). A juvenile in trouble was wandering on a road at Richibucto Cape Nov. 3 (Mrs. Kenney).

A stray immature **White Pelican** was seen at the mouth of the Napan River east of Loggieville Sept. 3-4 (Harry Walker *et al.*). This, the latest in a series of reports along our Gulf of St. Lawrence shore during the last ten years or so, was followed by a first provincial record—perhaps the same bird—on Prince Edward Island Sept. 22-23 (*Island Naturalist*, Nov-Dec. 1991).

Five **Cattle Egrets** were seen: 2 at Hammond River Oct. 22 (JGW) and singles at Astle Oct. 25 (Bill Page), Mouth of Keswick on the weekend of Nov. 9-10 (450-DUCK), and Riverview Nov. 14 (Doug & Phyllis Whitman). No other southern herons were seen.

A single **Snow Goose** at Longs Creek, York Co., remained near the Trans-Canada Highway from Oct. 29 through the first week of November (David Myles) and there was an immature in Bathurst Harbour Nov. 29 (SIT *et al.*). A flock of feral **Canada Geese** at Grand Harbour has grown to about 125 birds over the

last decade. Brian Dalzell notes that only a few are shot each fall because they feed out of gun range on the mudflats and roost too close to houses in the village.

An adult male **Canvasback** in the St. John River at Manguerville Nov. 10 (Moir Campbell) was the rarest duck reported. **Lesser Scaup** again demonstrated its affinity for sewage lagoons, where there were one (accompanied by 5 Greater) at Dorchester, 2 at Port Elgin, and 14 at Cap Brulé, near Shediac, Oct. 19 (MNC), and 2 at Buctouche Nov. 29 (SIT). This species was seen in the Tracadie area Nov. 10 (CNPA). There was also an adult male **Ruddy Duck** at the Dorchester sewage lagoon Oct. 19 (MNC).

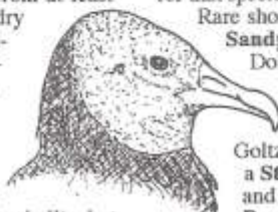
Returned for the winter were a male **King Eider** at the Deer Island ferry Nov. 16 (SJNC), a male **Harlequin Duck** at Pocologan Oct. 19 (JE), and a male **Barrow's Goldeneye** at Shediac Bridge Oct. 15 (SIT). A starving **Oldsquaw**, picked up on the road at Waterside Sept. 1 (Kelley MacLean), may have spent the summer here. Because it didn't moult its tattered plumage in September, as it should have, we are holding it for release in the spring.

A **Black Vulture** at Grande-Anse from at least Nov. 19 into December (Rodrigue Landry *et al.*) was a highlight of the fall, particularly because it was our first one cooperative enough to be seen by a lot of people. The more usual **Turkey Vulture** was much less noted than in the spring; it was probably the same one that was seen at Keswick Ridge in the second week of October (450-DUCK) and at Mactaquac Park Oct. 19 (Moir Campbell), but another was at Cape Enrage Oct. 20 (Ron Steeves).

The rare **Cooper's Hawk** was identified three times on Grand Manan: at Deep Cove Sept. 2 (BED), Ox Head Sept. 17 (Don Baldwin) and Southwest Head Oct. 9 (PAP). The earliest **Rough-legged Hawks** were at Castalia Nov. 2 (BED) and at Jemseg about the same date (450-DUCK). They were widely reported the following week (450-DUCK).

Two **Merlins** that were chasing sandpipers at Mary's Pt. Sept. 2 were catching dragonflies as well. An **American Kestrel** also attracted by the numerous large dragonflies was promptly chased from the area by one of the Merlins (DSC & MM). Several **Peregrine Falcons** were reported along the Bay of Fundy and two at Baie-du-Petit-Pokemouche, near Le Goulet, Sept. 21 (GB). Three **Gyr Falcon** reports suggest a bigger winter flight than usual: a dark bird at Castalia Oct. 29 to Nov. 23 (BED), one at Tabusintac Nov. 16 (Jean-Guy Robichaud), and a gray bird at Bathurst Nov. 29 (SIT, Ron Steeves, & Pearl Colpitts).

Two **Spruce Grouse** on the Dark Harbour Road, G.M., Sept. 16 (visitors from New York, *vide* SIT and Don Baldwin) are the third record on Grand Manan Island since 1988. Brian Dalzell believes they arrived by flying across the channel from coastal Maine, where the 1990 Christmas Bird Counts indicate an increasing population.



The peak number of **Black-bellied Plovers** at Castalia, 200+ in the first half of October (BED), must have been mostly juveniles. By contrast, at Mary's Point the largest counts, 180+ on Aug. 13 and 160 on Sept. 2 (DSC) were mostly adults. This species was still in the Tracadie area Nov. 10 (CNPA) and the last on Grand Manan was seen Nov. 20 (BED). The largest groups of **Lesser Golden-Plovers** were 41 at Salisbury Sept. 27 (MNC) and 18 at Middle Sackville Sept. 9 (Sandy Burnett).

A sizable group of **Whimbrel** were 45 at Miscou Island Sept. 2 (SIT). **Hudsonian Godwits** included as many as 6 at Courtenay Bay, Saint John in early October (450-DUCK, Oct. 8 tape). Two nice flocks of 50 **Pectoral Sandpipers** each were at White Head Island Sept. 20 (SIT) and Harrisville, near Moncton, Oct. 9 (Bob Cotsworth).

Purple Sandpipers in the northeast, where they are much less numerous than around the Bay of Fundy, were one at Miscou Island Oct. 13 (Robert Doiron & Roland Chiasson) and another at Lamèque Nov. 3 (GB). Five **Red-necked Phalaropes** at Deer Island Point Nov. 16 (JGW & SJNC) were very late for that species.

Rare shorebirds were represented by a **Western Sandpiper** at Miscou Island Oct. 13 (Robert Doiron & Roland Chiasson); two **Baird's Sandpipers** at Long Pond Beach, G.M., Sept. 6 (BED) and singles at Deep Cove, G.M., Sept. 7-8 (Jim Goltz, SIT) and Saints Rest Sept. 30 (MNC); a **Stilt Sandpiper** at Castalia Sept. 6 (v.o.) and 2 there Oct. 9 (PAP); 2 **Long-billed Dowitchers** at the Sackville Waterfowl Park for a few days from Sept. 20 (BED *et al.*) and one at Baie-du-Petit-Pokemouche Oct. 2 (GB).

Little Gulls continued to be found among the many Bonaparte's Gulls at Deer Island Point. Two were seen Oct. 19 (JE) and one Nov. 2 (DG). There was also one at the Long Eddy, the strong tidal current off the north end of Grand Manan, Sept. 27 (SIT). **Common** [but not here!] **Black-headed Gulls** were found at Deer Island Pt. Nov. 2 (DG), Pte-Alexandre, Lamèque, Nov. 9 (2—Hilaire Chiasson), and Buctouche sewage lagoon Nov. 29 (SIT *et al.*). An adult **Lesser Black-backed Gull** at Fredericton Oct. 23 (JE) stayed about three weeks around the river, dump and agricultural research station.

A few **Iceland Gulls** had returned to the river at Fredericton in the last week of October (450-DUCK, Oct. 25 tape), and at Saint John West Nov. 16 (SJNC). A **Glaucous Gull** at The Whistle, G.M., Sept. 14 (JE) was far too early for a normal migrant, so it may have spent the summer in southern Canada (BED).

A few **Caspian Terns** were spotted during their southward passage: at Cape Jourmain Sept. 1 (DSC & MM), Castalia Sept. 11 (SIT), Port Elgin Oct. 1 (2—SIT), and The Whistle, G.M., Oct. 9 (2—PAP). More than 10 **Common Terns** were still at Shediac Bridge Oct. 15 (SIT) and a late **Forster's Tern** at the Swallowtail, G.M., Nov. 11 (BED).

Common Murres continued to be seen regularly from the Grand Manan ferry (v.o.). Stu Tingley writes

that his maximum count for several trips during August and September was 24 on Aug. 24. In our last issue, when I mentioned observations of young murre in the channel and at Grand Manan I wasn't aware that seabird biologist Dr. Dick Brown had seen 2 adults, each accompanied by a well-grown chick, at the Letete ferry dock Aug. 22, "a sign that the Fundy population... is gradually making a comeback." Another noteworthy bird there that day was a **Long-tailed Jaeger**, "in perfect plumage," that Dick believes must have been a refugee from Hurricane Bob.

A single late **Black-billed Cuckoo** was reported, at The Whistle, G.M., Oct. 9 (PAP). **Yellow-billed Cuckoos** were especially numerous this fall. Brian Dalzell thinks there were at least 20 and likely more at Grand Manan. Between Sept. 8 and Oct. 13 they were reported from at least The Whistle, White Head Island, Anchorage Prov'l Park, the North Head area, and Deep Cove. Some Ontario birders told Stuart Tingley of seeing a surprising 8 to 10 near the Swallowtail Sept. 18. Stu himself saw two there that day. Last of the season was one at Castalia Nov. 8 or 9 (David McCurdy). At the opposite corner of the province Hilaire Chiasson reports a total of 7 or 8 at various places on the Acadian Peninsula from September through Oct. 7, including an injured one picked up at Néguaic Sept. 27 and released the next day (Roland Chiasson). Other reports came from Salem, near Hillsborough, Sept. 21 (David Clark), Shediac Bridge Oct. 1 (*vide* SIT), Buctouche Oct. 5 and Sackville Oct. 11 (both by Nev Garrity).

The earliest of a good flight of **Snowy Owls** were noted Oct. 29 at Grand Manan (individuals at two locations, *vide* BED) and about the same time in Restigouche County (two reports, *vide* Alan Madden). During November there were reports from Le Goulet (Jacques Guignard), Tracadie area Nov. 10 (CNPA), Boiestown (450-DUCK), Havelock and Riverview (MNC, Dec. Newsletter), Moncton (probably shot, *vide* Lori Jodrey), Dieppe (Oscar Duguay), Jemseg (Pat Kehoe), and Saint John (SJNC, Jan/Feb Bulletin).

Three **Hawk Owls** were also indicative of somewhat of a flight: at Miscou Island Nov. 9 (Robert Doiron), Inkerman Nov. 10 (Hilaire Chiasson) and Mechanics Settlement Nov. 22 (Barbara Curlew). An unfortunate **Boreal Owl** was found covered with grease on a fishing boat at Lamèque Oct. 28; attempts to rehabilitate it were unsuccessful (H. Chiasson). Another allowed Eben Gaskill to approach within arm's length at Eel Lake, G.M., Nov. 16 (*vide* BED). It was the first reported at Grand Manan for many years.

It was a poor season for **Red-headed Woodpeckers**; the only one was an immature at Fredericton W.M.A. Oct. 7 (JE). Although frequenting the same trees and feeders as one in May, a **Red-bellied Woodpecker** at Fundy Nat'l Park Nov. 18-21

(Anne Bardou *et al.*) was a different individual (or had undergone a sex change!).

An **Eastern Wood-Pewee** was very late at Pt. Wolfe, Fundy Nat'l Park, Nov. 10 (RJW *et al.*). It and a **Great Crested Flycatcher** at Waterside Nov. 9 (Barb Curlew & Rick Elliott) may have been brought here by the same weather. Another Crested was The Whistle Oct. 9 (PAP). A **Western Kingbird** at The Whistle, G.M., Nov. 22 was quite late but was perhaps more unusual for being the only one of the fall.

In Saint John West, a **Carolina Wren** seen regularly at Dorothy Peterson's, where one spent last winter, was joined by a second bird in the last week of November. Another was seen in Fredericton Nov. 18 (Inge Erickson). A **House Wren** was at The Whistle Sept. 15 (JE *et al.*) and one at the Fredericton W.M.A. Sept. 30 (PAP).

The large flight of **Blue-gray Gnatcatchers** that began in August continued at North Head and The Whistle Sept. 8, Long Pond, G.M., Sept. 12 (all by SIT), Swallowtail Road, G.M., Sept. 27 (MNC), and Mary's Pt. Sept. 24 and 30 and Oct. 23-24 (DSC & MM).

The large crop of mountain-ash fruits probably caused a more extended migration of fruit-eating birds than usual. **Flickers** were most conspicuous during September, when 50+ were seen on the northern end of Grand Manan Sept. 15 (JGW *et al.*), but there were also 25 at White Head Island Oct. 11 (BED), and a few were still about during November. **American Robins** were prominent throughout much of the fall, but the peak at Grand Manan was not until about Nov. 8, when there were 500 at Bancroft Pt. (BED). A very early **Bohemian Waxwing** was seen on the Whistle Road, G.M., Sept. 14 (JE). The next ones were 4 at Mary's Pt. Nov. 5 (DSC & MM), after which they were widely reported (450-DUCK). **250 Cedar Waxwings** at White Head Island Sept. 9 and about 500 on Grand Manan Sept. 17 500 (SIT) represent its main migration, but some flocks stayed into November along the Fundy coast (v.o.). At Aulac Nov. 30, the abundant crop of mountain ash fruits attracted 200 Robins, as well as 3 Bohemian and 50 Cedar Waxwings (SIT).

Mockingbirds included as many as nine at Grand Manan during the second week of October (450-DUCK) and one at Bathurst Nov. 29 (SIT *et al.*). A **Brown Thrasher** was seen frequently at the Armstrongs' in Mactaquac Heights at the beginning of November (450-DUCK); another was at Kinnie Brook, F.N.P., Nov. 10 (Sedgewick Sinclair).

The return of the **Northern Shrike** was first reported from the Old Shepody Road, F.N.P., Oct. 20 (Barbara Curlew) and at Grand Manan Oct. 24 (BED). Soon after they were seen at several places (450-DUCK, Nov. 4 tape).

Very rare was a **Yellow-throated Vireo** at the Whistle Road dump, G.M., Sept. 15-16 (JGW *et al.*). Two **Warbling Vireos** were seen at Deer Island Pt. Sept. 9 (BED) and four **Philadelphia Vireos** on Grand Manan Sept. 10-19 (SIT). The peak of **Red-eyed Vireos** was 30 at Grand Manan Sept. 17 (SIT).



The warbler highlight of the fall was a female **Hooded** at Southwest Head, G.M., Sept. 29 (SIT & MNC), the fourth provincial record. Almost as rare—and much more cooperative—were a **Golden-winged Warbler** at the Swallowtail Road Sept. 17-20 (JE *et al.*; first photographic documentation for the province by SIT) and the third **Yellow-throated Warbler** of the year, at Mary and Ron Gauthier's feeder in East Bathurst from Nov. 13 to Dec. 7, when it was captured in a weakened condition. It died a few days later.



Alert observers identified perhaps as many as four **Orange-crowned Warblers** at Grand Manan: at The Whistle Sept. 16 (SIT), Eel Lake Sept. 18 (SIT), The Whistle Oct. 9 (PAP), and Pettes Cove Oct. 13 or 14 (PAP); there was also one at the Fredericton W.M.A. Oct. 7 (JE). The good flight of **Prairie Warblers** at Grand Manan continued with individuals seen at North Head Sept. 16, the Dock Road Sept. 17 (SIT), and Swallowtail Road Sept. 29 (SIT *et al.*). Three **Yellow-breasted Chats** were found: at Long Pond, G.M., Sept. 12 (SIT), Pt. Wolfe, F.N.P., Nov. 7 (Sedgewick Sinclair) and Ingalls Head, G.M., Nov. 26 (a roadkill—BED).

Each year **Pine Warblers** are becoming more and more routine in New Brunswick: Swallowtail Road Sept. 29 (SIT), Harvey Bank Oct. 14 and Nov. 5 (2 imm. females on the latter date, RJW *et al.*), Fredericton Nov. 10 (DG), Fundy Nat'l Park Nov. 20 (Anne Bardou), East Bathurst Nov. 22 (David Myles), Caraquet Nov. 22-23 ("eating sunflower seeds!" Jeannine and Serge Dugas), and Tracadie Nov. 27 (Jean-Yves Paulin).

A **Blue Grosbeak** at West Saint John Nov. 20 (Stephen Clayden) was the only one reported this fall. As usual there were a good number of **Indigo Buntings**. Seen until Oct. 24, they included at least 10 on Grand Manan the weekend of Sept. 28-30 (SIT). They were also reported at Letete (450-DUCK), Alma (Doreen Rossiter), Mary's Pt. (DSC & MM), Harvey Bank (3 on Oct. 9—RJW), and Cape Enrage (SIT).

A considerable number of **Dickcissel** reports included Swallowtail Road Sept. 18 (SIT), Mary's Pt. Sept. 23 (DSC), Alma Oct. 28-Nov. 3 (2 at first—Doreen Rossiter), Harvey Bank Oct. 14-Nov. 2 (3 on Oct. 19—RJW *et al.*), Letete Oct. 19 (3—JE), Caraquet Oct. 30-Nov. 4 (Édithe Robichaud), and Herring Cove, F.N.P., Nov. 9 (Barbara Curlew & Rick Elliott).

Rufous-sided Towhees were at Harvey Bank Oct. 14 and 16 (RJW), Bathurst in mid November (Mary Gauthier), Fredericton beginning Nov. 22 (DG), and Chatham late fall till Nov. 30 (Winston Churchill, *vide* Harry Walker).

Clay-coloured Sparrows, which are expanding their breeding range towards us, seem to be increasing here: at The Whistle, G.M., Sept. 15-16 (SIT), a different bird along the Whistle Road Sept. 17 (SIT), Castalia Sept. 30 (SIT), Fredericton for a few days from Oct. 16 (DG), and Harvey Bank Oct. 14-21 (RJW

et al.). On the other hand, **Field Sparrows** have been less frequent recently; there was just one bird, at Alma Oct. 21-23 (Doreen Rossiter). Two **Lark Sparrow** observations were two months apart at Grand Manan, at The Whistle Sept. 8 (DG *et al.*) and Whistle Road Nov. 8 (BED). A **Grasshopper Sparrow** was flushed from a brushpile at Harvey Bank Oct. 24 (SIT). A juvenile **Seaside Sparrow** was at Ox Head, G.M., Sept. 6 (BED).

A **Vesper Sparrow** at North Head Sept. 19 (SIT) may not have been the only sighting, but it was the only report of a species that nests here and has declined noticeably over the last decade.

Three yellow-faced *alpestris* race **Horned Larks** (i.e. winter larks) were at Dorchester Oct. 19 (RJW *et al.*) and 18 at Grand Manan Nov. 2 (BED). **Water Pipit** reports extended from Sept. 14, when 12 were at Saints Rest (SIT) to Nov. 3, five at Grand Manan (BED). **Lapland Longspurs** returned in October with two at Shediac Bridge Oct. 5 (SIT), 25 at Harvey Oct. 9 (DSC & MM) and 6 at Fredericton Oct. 29 (JE). The first **Snow Buntings** were seen at Harvey Oct. 8 (Bob Cotsworth) and Grand Manan Oct. 24 (BED).

A **Yellow-headed Blackbird** attended a Moncton feeder for a week in September (Allan Gregoire). In the north, two **Northern Orioles** were at Baie-du-Petit-Pokemouche Sept. 26 (GB). A maximum of 10+ were seen along the Swallowtail Road Sept. 29 (SIT) and several appeared at southern N.B. feeders in late October and early November. Most interesting was a bird of the western "Bullock's" race at Bayside, near St. Andrews, Nov. 9-18 (Carlotta Cummings).

Surprisingly, **White-winged Crossbills** that had been common on Grand Manan during the summer did not remain to breed "despite an overwhelming spruce cone crop"; numbers dropped quickly during the fall so that only the odd small flock was seen in late November (BED). By contrast, breeding was noted and numbers remained high in the hills of Albert County (RJW *et al.*)

A strong flight of **Common Redpolls** commenced with sightings at Mary's Pt. Oct. 20 (DSC), Harvey Bank Oct. 24 (SIT), and Caraquet Oct. 30 (Édithe Robichaud). Large numbers were being seen by Nov. 15 (450-DUCK). Large flocks of **Pine Siskins** and **Evening Grosbeaks** appeared at Fredericton Oct. 29 (450-DUCK) and remained there throughout the first half of November. At Grand Manan a peak of 500 siskins was reported Nov. 10 and the first Evening Grosbeaks were seen Oct. 23 (BED). Brian Dalzell notes that throughout November small flocks of grosbeaks were seen moving NW, "Probably coming out of Nova Scotia and heading for Maine," and I wonder if they were the same grosbeaks that had been flying east (towards Nova Scotia) at Mary's Point from Oct. 19 to Nov. 5.

Late dates reported for an assortment of species were: **Pied-billed Grebe** Great Pond, G.M., Nov. 15 (2—Gloria Hobbs); **Sanderling** (12) and **Dunlin** (90)

at Mary's Pt. Nov. 24 (DSC); **White-rumped Sandpiper** Castalia Nov. 22 (BED); **Common Nighthawk** Castalia Sept. 18 (SIT); **Ruby-throated Hummingbird** Quispamsis Sept. 25 (Kathy Haslett); **Olive-sided Flycatcher** White Head Island Sept. 9 (SIT); **Tree Swallow** White Head Island Oct. 11 (BED); **Northern Parula** during the week of Oct. 25 (450-DUCK); **Magnolia** and **Canada Warblers** Partridge Island Sept. 28 (SJC); **Cape May Warbler** Mary's Pt. Oct. 22 (DSC); **Black-throated Blue Warbler** Harvey Bank, **Black-throated Green** Mary's Pt. and **Blackpoll** Cape Enrage Oct. 21 (SIT & Ron Steeves); **American Redstart** at Harvey Bank Oct. 24 (SIT); **Mourning Warbler** at Swallowtail Road Sept. 19 (SIT); **Chipping Sparrow** Fundy Nat'l Park Nov. 18 (RJW); **Bobolink** Grand Manan Nov. 4 (BED).

Abbreviations

450-DUCK	N.B. Bird Information Line
CNFA	Club des naturalistes de la Péninsule acadienne
MNC	Moncton Naturalists' Club
SJC	Saint John Naturalists' Club
BED	Brian Dalzell
DG	Don Gibson
DSC	David Christie
et al.	and others
fide	according to
F.N.P.	Fundy Nat'l Park
GB	Gérard Benoit
G.M.	Grand Manan
JE	Jim Edsall
JGW	Jim Wilson
MM	Mary Majka
PAP	Peter Pearce
RJW	Rob Walker
SIT	Stuart Tingley
v.o.	various observers
W.M.A.	Wildlife Mgmt Area

Fenitrothion Review Coming Up

Agriculture Canada, the agency responsible for approving and registering all pesticides used in Canada, has recently announced that it will be reviewing fenitrothion, based on the environmental effects of forest spraying. Should these effects be considered unacceptable, fenitrothion could be deregistered and its use banned.

Fenitrothion has been used as a pesticide for approximately 20 years and is still being sprayed in New Brunswick to control spruce budworm, hemlock looper, and other forest pests. Its major drawback is that the chemical is non-selective; it can kill all insects, other invertebrates, birds and mammals, and it even affects some plants. For this reason, other provinces use *Bacillus thuringiensis*, also known as B.t., a biological pesticide that attacks only the Lepidoptera, or moths and butterflies.

Scientists have found that fenitrothion causes marked reductions in the populations of pollinators like honey bees, as well as other insects, and that these populations can take several years to recover. A lack of insects necessarily has a negative impact on the reproductive ability of plants that require insect pollinators. To make matters worse, fenitrothion also directly impairs pollen, pistil, and embryo development in addition to other stages of plant sexual reproduction. This affects fruit growers by reducing crops, and consumers subsequently have to pay higher prices for fruit. It also makes life more difficult for fruit- and seed-eating wildlife.

Studies on songbirds have shown that their mortality is likely much higher than indicated by the number of dead birds found after a fenitrothion application. This is because sublethal doses affect the birds' behaviour and ability to feed themselves, thus making them more vulnerable to predation and to various natural stress factors. In addition, scientists found that spraying resulted in "severe reproductive

impairment" in the White-throated Sparrow, and probably in other songbirds as well.

Other studies looked at streams. While they turned up few aquatic invertebrates killed by spraying, and found that these populations usually recovered quickly, in sensitive environments like bog ponds, mortalities of up to 50 percent of total invertebrate populations were recorded. These populations required more than a year to recover.

As a result of such findings, *Environmental Effects of Fenitrothion Use on Forestry*, a comprehensive review published by Environment Canada, concluded that "large scale spraying of fenitrothion at registered dosage rates is environmentally undesirable."

Now that the chemical is slated for review by Agriculture Canada, some form of public consultation is likely to occur in early 1992. However, the forestry industry is expected to lobby hard to keep the chemical; and if fenitrothion is approved this time, there is apt to be a push to extend its use to other provinces, particularly Quebec and Ontario. Thus, it is important that all groups and persons concerned about this broad spectrum pesticide be aware of the review and take time now to prepare well-documented submissions. (From *Nature Alert*, published by Canadian Nature Federation.)





Federation News

Federation Projects

For a good number of years our Federation has been working on nature-oriented projects which improve and protect the New Brunswick environment.

In 1977 it became apparent that the newly established national wildlife area at Mary's Point would require protection and management. The Federation took on those duties in cooperation with the Canadian Wildlife Service. We have promoted the understanding of natural phenomena, especially the migration of shorebirds and the need for their protection, by developing an interpretive program and building two trails. Local residents, thousands of visitors and hundreds of thousands of shorebirds have benefited from this program.

With similar aims in mind, since 1989 we have supported an important project on our Gulf of St. Lawrence shore, namely the protection of the endangered Piping Plover. There, in liaison with the Club des naturalistes de la péninsule acadienne, World Wildlife Fund Canada, and other organizations we have established a program of education about, and protection for, the Piping Plover.

Both projects are flourishing. In 1992 a new dimension will be added. At Mary's Point two new trails to interpret salt and fresh water marshes will be added. As well an interpretive centre will be developed at the entrance to the hemispheric shorebird reserve. On the Gulf shore, the danger of toxic wastes will be a new subject, and collection of those substances will be arranged for coastal communities. Watch future issues for more on these Federation programs. MM



Cover Illustration / Illustration de la couverture

Machias Seal Island by Lars Larsen /
Île Machias Seal par Lars Larsen

Events

April 1, 7:30 p.m., Fredericton Nature Club

Doug Eidt: Bees, Wasps, Hornets—They all sting or bite or whatever, so what's the difference? N.B. Craft School, Queen St. near York.

April 11, Saint John Naturalists' Club

Great Horned Owls in Rockwood Park with Paul Mortimer. Call 648-9853.

April 12, 7:30 a.m., Moncton Naturalists' Club

Seabirds at Dipper Harbour and Maces Bay. All-day trip. Champlain Place by Burger King.

April 18, Saint John Naturalists' Club

Spring migrants up river to Jemseg with Peter Wilshaw. Telephone 849-2082.

April 25, Saint John Naturalists' Club

Amphibian trip with Don McAlpine. Call 849-2082.

April 26, 8 a.m., Fredericton Nature Club

Jemseg spring waterfowl migration with Peter Pearce. N.B. Craft School, Queen St. near York.

May 4, 7:30 p.m., Fredericton Nature Club

Cecil Johnston: Nature, Generally Speaking. N.B. Craft School, Queen St. near York.

May 7, 7:30 p.m., Chignecto Naturalists' Club

John Gilhen: salamanders, followed by a field trip, weather permitting. Sackville Public Library.

May 22-24, N.B. Federation of Naturalists

Annual Meeting Weekend. Sugarloaf Prov'l Park.

*N. B. Naturalist /
Le Naturaliste du N.-B.*

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