

27 (1) Spring / printemps 2000

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



# N. B. Federation of Naturalists Fédération des naturalistes du N.-B.

277 avenue Douglas Avenue, Saint John, NB Canada E2K 1E5

The Federation is a non-profit organization formed in 1972 to encourage an understanding of nature and the environment, and to focus concern for the natural heritage of New Brunswick.

La Fédération est une organisation sans buts lucratifs formée en 1972 pour encourager une meilleure compréhension de l'environnement naturel, et pour éveiller le souci pour le patrimoine naturel du Nouveau-Brunswick.

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N.B. Naturalist / Le Naturaliste du N.-B. ISSN 0047-9551

Published quarterly by the N.B. Federation of Naturalists, c/o New Brunswick Museum, 277 Douglas Ave., Saint John, NB E2K 1E5. Canadian Publication Mail Product Sales Agreement No. 487716. Return postage guaranteed. Please send notice of change of address to the Membership Secretary. Subscription rates (renewable by Jan. 1): in Canada \$15; other countries C\$20; single issues \$4 a copy, plus postage. N.B. Naturalist carries articles and reports pertaining to the natural history of New Brunswick. Articles are invited in either English or French, and will be printed in the language in which they are received. The opinions expressed are those of the authors. Please send all submissions for the N.B. Naturalist to: **Irene Doyle, Apt. 3 (in back), 5 Prince William, Campbellton, NB E3N 1X1, tel.: home 789-7759, office 789-2397 <colector@mailserv.nbnet.nb.ca>** Ask for details of computer compatibility. Advertising rates available on request.

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Sincere thanks to our many volunteers who contributed to this publication.

Merci beaucoup à tous les bénévoles dévoués qui ont contribué à cette publication.

Please submit articles for future issues of *N. B. Naturalist/ Le Naturaliste du N.-B.* to:

S. v. p., soumettez les articles à la intention des numéros à venir de *N. B. Naturalist/ Le Naturaliste du N.-B.* à:

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<http://personal.nbnet.nb.ca/maryspt/NBFN.html>

Rendez visite à la page web de la FNNB

<http://personal.nbnet.nb.ca/maryspt/NBFN.html>

## RARE SIGHTINGS

*Allan Madden, Restigouche Naturalists' Club*

This series of articles is not about rare species or of species seen on unusual dates. Instead it relates to animal behavior we seldom get a chance to observe. After tallying countless hours in the natural world one is certain to experience, just by chance and probably for only a few seconds, a rare glimpse of behavior that he or she will never see again.

Near Allardville in October 1993, two bull moose were hopelessly entangled in the same piece of 9-gauge snare wire. One bull had walked into the poacher's snare and the other, I assume, later challenged it. The result was that only a half-metre of wire separated the heads of the two moose. When I entered the scene, both animals were standing in 1 metre of water, the larger bull towering over the smaller one which had a completely dislocated jaw. The strength of the larger bull was awesome, for it lifted the smaller one at least 0.7 of a metre (2ft) on a half dozen occasions. I borrowed a rifle from an onlooker and from about 15m aimed and fired at the wire, suddenly vertical and stretched taut. I saw the wire break, heard a shout "Get the \*#%\$ out of there." I did just that! Ranger Brian Hayden reported the next day that he followed the larger bull out of the area, but the smaller bull died on the spot. Ranger Jean Claude Hachey ensured that such poacher caused damage to moose was well covered in the local newspapers.



On November 3, 1972, I poled around a bend on the Little Southeast River only to see, in full sunlight, two male deer fighting in midstream with water up to their chests. I froze, and watched the larger deer push the smaller one, a 6-pointer, backward. The latter turned tail with the bigger animal in full pursuit. They exited the stream, climbed a one meter high bank and ran into the alders. I waited to see if the large buck would return. In 10 minutes it did, approaching to within 20 metres of me, at which point I noted one antler was missing, except for a 5 cm stub. It had apparently broken off in a fight.

In March, 1996, I saw through our kitchen window an adult Northern Goshawk strike a Rock Dove 5m above the ground, knocking several feathers from the dove. The hawk swung around and this time caught the dove in its talons and flew approximately 40m, landing on the snow behind a clump of spruces. I grabbed my camera, waited 15 minutes for the hawk to settle down, and then began to stalk. However, the hawk, still hidden from my view behind the spruces, took off while I was about 8 metres away. I examined the depression it left in the snow, saw a pigeon feather, and reached to pick it up. To my surprise the feather was solidly stuck to its owner beneath the snow! Yes, the dove was still there, fully alert, with only a drop of blood on its breast. I tossed it in the air and it flew strongly away.

## IN PRAISE OF VOLUNTEERS

*Rob Walker*

Did you you know that, on the average, each day of the year 7.5 million Canadians (almost 25% of our population) volunteer some of their time for the betterment of their community and their nation (among others, this includes 57,000 firefighters). As an example of vital community service, the Georges Dumont hospital in Moncton has a corps of 300 volunteers without whom this institution could not function effectively.

Our own organization, the New Brunswick Federation of Naturalists, functions entirely on the basis of volunteer effort. If any of the NBFN volunteers have not been recognized recently for their efforts, consider this to be a big, collective THANK YOU from all the members of the Federation.

I was pleased to take part at a Recognition Ceremony on June 9, 2000 at the Moncton Museum, organized by The Moncton Volunteer Centre du Bénévolat Inc. Recognized at this ceremony with Outstanding Volunteer Awards were Mary Majka and David Christie. The awards recognized over over 35 years of volunteer effort on the part of each of them in the areas of public education in all aspects of natural history, conservation of natural and historic sites and advocacy of environmental protection. On behalf of all the members of the NBFN, congratulations go out to Mary and David for their well-earned awards.

**CROSSWORDS FOR BIRDS**

John Gloekler

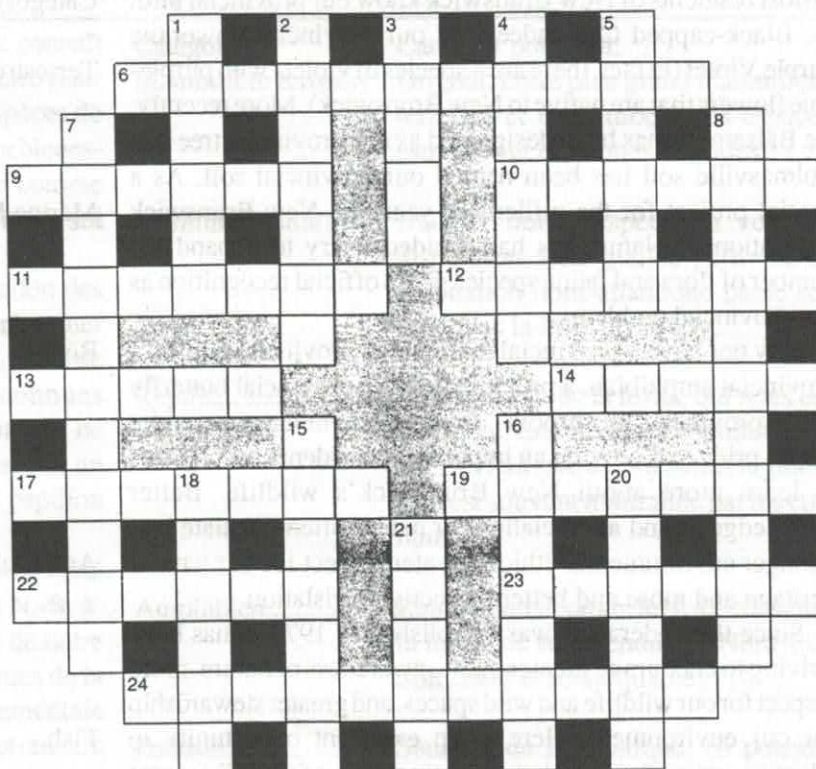
**Answers on page 22****ACROSS**

- 6 Largest eared owl (2 words)  
 9 (See #21 Down)  
 10 Another name for a cedar waxwing, \_\_\_\_\_ bird  
 11 The female *Centrocerus urophasianus* especially, is known by this name (2 words)  
 12 Largely eastern, crested, noisy corvid (2 words)  
 13 (See #20 Down)  
 14 A type of pelican, thrasher, and creeper all have this name  
 17 Close relative of the black-bird and grackle  
 19 Trogon formerly known as the coppery-tailed trogon  
 22 Fish-eating hawk

- 23 Another name for a white-winged scoter, \_\_\_\_\_ scoter  
 24 Another name for the anhinga (2 words)

**DOWN**

- 1 Baltimore is one  
 2 Scarlet is one  
 3 \_\_\_\_\_-billed dowitcher  
 4 Troupial family member  
 5 Bill of a ruby-throated hummingbird  
 7 Large waterfowl now resident in many areas.  
 8 Hawk of the eastern United States (2 words)  
 15 The black grouse has also been known by this name (2 words)  
 16 Semipalmated and snowy are types of these birds  
 18 Owl formerly called Richardson's owl  
 20 *Aquila chrysaetos* (2 words: #20 Down & #13 Across combined)  
 21 The ring-necked pheasant is this state's bird (2 words: #21 Down and #9 Across combined)



**Thanks to Bird Watcher'd Digest  
 (Skimmer, Vol.8, No. 4, August 2000)  
 for the use of this crosswords puzzle.**



## HELP WANTED IN EXPANDING OUR PROVINCIAL EMBLEMS

James P. Goltz

Most residents of New Brunswick know our provincial bird, the Black-capped Chickadee, and our provincial flower, the Purple Violet (in fact, there are 8 species of violets with purple-blue flowers that are native to New Brunswick). More recently, the Balsam Fir has been designated as our provincial tree and Holmesville soil has been named our provincial soil. As a special project for the millenium year, the New Brunswick Federation of Naturalists has decided to try to expand the number of flora and fauna species given official recognition as our provincial emblems.

Why not have a provincial mammal, a provincial reptile, a provincial amphibian, a provincial fish, a provincial butterfly and a provincial mushroom? Provincial emblems engender public pride and provide an impetus for residents and visitors to learn more about New Brunswick's wildlife. Better knowledge of and appreciation for nature often translate into stronger environmental ethics, greater respect for our natural heritage and more and better protective legislation.

Since the Federation was established in 1972, it has been striving to encourage greater public awareness of nature, more respect for our wildlife and wild spaces, and greater stewardship for our environment. Here is an excellent opportunity to advance our work through designating more of our wild plants and animals as provincial emblems. Readers of the *N.B. Naturalist* are encouraged to participate in the process of selecting additional species of plants and animals as emblems of New Brunswick.

Please send your opinions on the species and categories that you think should be given official recognition, as well as the reasons for your choices, to:

James P. Goltz  
126 Wilsey Road, Apt. 17  
Fredericton, NB E3B 5J1

Phone: 506-459-8685

E-mail: [marph@nbnet.nb.ca](mailto:marph@nbnet.nb.ca)

Also, if you wish, post your nominations on the NatureNB forum.

**Deadline for submissions: December 31, 2000.**

Once the results have been compiled, the Federation's Board of Directors will make recommendations to the Premier and the Minister of Natural Resources and Energy. To start off this consultative process, I am providing in the adjoining column a few thoughts about possible categories and candidates for new provincial emblems.

Category:	Possible Candidate:
Terrestrial Mammal.....	Moose: our largest land animal and a symbol of wilderness and wetlands.
Marine Mammal.....	Right Whale: endangered; much of the North Atlantic population summers in the Bay of Fundy.
Reptile.....	Wood Turtle: the familiar "tortoise" of New Brunswick; still reasonably common here but becoming rare elsewhere; often mistreated by humans.
Amphibian.....	Gray Tree Frog: reaches the northeastern limit of its range in New Brunswick; a distinctive songster.
Fish.....	Atlantic Salmon: a spectacular fish species with a long history of importance to the people of New Brunswick.
Butterfly.....	Maritime Ringlet: an endangered species found only near Bathurst, New Brunswick and on the Gaspé Peninsula.
Moth.....	Hummingbird Clearwing: The moth species that many people see in their gardens and mistake for a hummingbird.
Dragonfly.....	Broad-tailed Shadowdragon: this is a recently described species discovered here in New Brunswick.
Non-flowering Plant.....	Ostrich Fern: the familiar fiddlehead fern; a spring favourite of New Brunswickers.

These suggestions are meant to inspire you, not to skew the consultation process. Any nominations for terrestrial invertebrate, marine invertebrate, marine plant, mushroom, lichen, moss, wetland type, landform, mineral, rock, fossil, etc.? What other provincial emblems would you like to have?

## NOUS AVONS BESOIN DE VOTRE AIDE POUR CHOISIR DES EMBLÈMES PROVINCIAUX

James P. Goltz (Traduction par Maryse Mahy)

La plupart des habitants du Nouveau-Brunswick connaît notre oiseau provincial, la Mésange à tête noire, et notre fleur provinciale, la Violette cuculée (il y a en réalité 8 espèces de violettes originaires de la région qui portent des fleurs bleues-violettes). Récemment, le Sapin baumier a été choisi comme arbre provincial et le sol de Holmesville a acquis le titre de sol provincial.

Afin de célébrer le nouveau millénaire, la Fédération des naturalistes de Nouveau-Brunswick a décidé de s'embarquer dans un projet spécial qui a pour but d'identifier des espèces de plantes et d'animaux qui pourraient être reconnues officiellement comme emblèmes provinciaux. Pourquoi ne pas avoir un mammifère provincial, un reptile provincial, un amphibien provincial, un poisson provincial, un papillon provincial et un champignon provincial.

Les emblèmes provinciaux sont sources d'une grande fierté publique et encouragent les habitants et visiteurs du N.-B. à en apprendre plus à propos de la faune et de la flore de notre province. Une connaissance et une appréciation accrues de la nature mènent souvent à une conscience environnementale plus profondément ancrée, à un plus grand respect envers notre patrimoine naturel, et à des lois plus protectrices de ce patrimoine.

Depuis sa création en 1972, la F. N. N. B. a fourni beaucoup d'efforts afin de sensibiliser le public à la nature, de l'encourager à mieux respecter la faune et la flore et les espaces sauvages, et d'augmenter le sens des responsabilités des gens face à l'environnement. Nommer plus de nos plantes et animaux sauvages comme emblèmes provinciaux représente une occasion idéale de faire avancer notre travail. Nous encourageons les lecteurs du magazine *Le Naturaliste du N.-B.* à participer à ce processus de sélection.

Veuillez faire parvenir vos suggestions sur les espèces et catégories d'espèces que vous aimeriez voir devenir des emblèmes provinciaux, ainsi que les raisons de vos choix, à: James P. Goltz, 126 Wilsey Road, Apt. 17, Fredericton N.-B. E3B 5J1 (tél.: 506-459-8685) (courriel: marph@nbnet.nb.ca). Vous pouvez aussi envoyer vos suggestions au forum NatureNB..

**Date limite pour nous faire parvenir vos idées:  
le 31 décembre 2000.**

Dès que les résultats de cette consultation auront été compilés, le Conseil d'administration de la Fédération présentera des recommandations au Premier Ministre du Nouveau-Brunswick et au Ministre des ressources naturelles et de l'énergie. Afin d'engager le processus de consultation, adjacent sont quelques idées de catégories et de candidats potentiels pour nouveaux emblèmes provinciaux.

Catégorie:	Candidat potentiel:
Mammifère terrestre...	Original: notre plus grand mammifère terrestre et un symbole des espaces sauvages et des zones humides.
Mammifère marin.....	Baleine noire: espèce en voie de disparition. Une grande partie de sa population nord-atlantique passe ses étés dans la Baie de Fundy.
Reptile.....	Tortue des bois: la tortue qui nous est familière. Encore assez commune ici, elle devient rare dans d'autres régions. Elle est souvent maltraitée par les être humains.
Amphibien.....	Rainette versicolore: le N.-B. constitue la limite de son étendue au Nord-Est. Son chant is remarquable.
Poisson.....	Saumon de l'Atlantique: ce poisson spectaculaire a joué un grand rôle dans l'histoire des habitants du N.-B.
Papillon.....	Satyre fauve des Maritimes: une espèce en voie de disparition que l'on ne retrouve que près de Bathurst au N.-B. et dans la péninsule de la Gaspésie.
Papillon de nuit.....	Sphinx colibri: l'espèce de papillon de nuit que beaucoup de gens voient dans leur jardins et prennent pour un colibri.
Libellule.....	<i>Neurocordulia michaeli</i> : cette espèce a été décrite récemment et a été découverte au N.-B.
Plantes sans fleurs.....	Matteucie fougère-à-l'autruche: la fougère à têtes de violon qui nous est familière. Un délice que les habitants du N.-B. savourent au printemps.

Ces suggestions sont fournies afin de vous inspirer, elles n'ont pas pour but de vous influencer dans vos choix. Avez-vous des idées d'invertébrés terrestres, d'invertébrés marins, de plantes marines, de champignons, de lichens, de mousses, de types de zones humides, de formation géologique, de minéraux, de roches, etc? Y-a-t-il d'autres emblèmes provinciaux que vous aimeriez voir sélectionnés?

## THE FASTEST DECLINING BIRD

Eirik A. T. Blom

This article originally appeared in *Skimmer*, Vol. 7, No. 4, August 1999, a publication of *Bird Watcher's Digest*.

If you had to guess which bird has shown the greatest population declines in the last 50, and perhaps last 150 years, which would it be? A Neotropical migrant like the Bay-breasted Warbler? \*\*\* Or perhaps one of the rapidly declining grassland birds like Henslow's Sparrow? The real winner/ loser in this sweepstakes may well be a bird that has been almost entirely overlooked by conservation organizations: Rusty Blackbird. Many bird watchers in the eastern half of the continent have noticed that there seem to be fewer Rusties around in recent years, but the bird has not gotten the attention of other species in trouble.

In part it may be because the breeding range of Rusty Blackbird is beyond the limit of where normal monitoring programs reach, and in part because the Rusty is a blackbird after all, and blackbirds in general seem to be doing all too well. Determining population trends in a species that spends the summers in the boreal forest zone is difficult, but a recent paper summarizes the available evidence and brings some previously untapped sources of information under scrutiny. The results suggest a stunning decline \*\*\* ("On the Decline of the Rusty Blackbird and the Use of Ornithological Literature to Document Long-Term Population Trends." Russell Greenberg and Sam Droege, *Conservation Biology* 13(3):553-559). Greenberg and Droege used traditional methods to assess recent population trends, primarily the Breeding Bird Survey (BBS) data, Christmas Bird Count (CBC) data, and the Québec Checklists Program (EPOC) data.

The BBS only covers the southern edge of the breeding range of the Rusty Blackbird, but showed a population decline of 92.8 percent between 1966 and 1996. CBC data from 1958-1988 showed a decline of 89.6 percent. The EPOC data represents thousands of checklists submitted annually by bird watchers in Québec, each representing one day in the field. Although there are potential biases in data of this sort, an analysis of the EPOC records shows a decline of 92.1 percent between 1970 and 1995. The authors used these data sets to examine the potential value of other, less frequently used sources of information and to try and assess declines in the period before monitoring programs were in place. They examined 84 published state and regional accounts from central and eastern North America and divided the publications

into four periods: pre-1920, 1920-1950, 1951-1980, and post 1980. In each of these books, birds were described in almost universally used categories such as abundant, common, uncommon, etc. They also examined more than 300 checklists, regional summaries, and data from the Migration Card Program that ran from 1880 through the 1940s. \*\*\* Rusty Blackbirds were described as common to abundant in 88 percent of the pre-1920 sources, 81 percent of the 1920-1950 sources, but only 39 percent of the post 1950 sources. The data suggest that the declines started by at least the beginning of this century (1900), but have accelerated rapidly in recent decades and that the greatest period of decline was probably the 1970s. Although the methods used to assess earlier trends are not traditional, the

authors argue that the number of sources ameliorates possible bias and in fact, because of improved optics and identification skills, may actually underestimate changes.

Which leaves the question of why? That, Greenberg and Droege conclude, is uncertain. Rusty Blackbirds are a species that inhabits wooded wetlands at almost all seasons, and part of the reason may lie in the loss and degradation of that habitat. Logging and the conversion of wetlands to agriculture have led to the disappearance of a great deal of the bird's preferred habitat, but much of the breeding range has been untouched by such activities, and the loss of habitat on the wintering grounds is far less than the decline in blackbirds. In addition, much of the checklist data was collected in protected areas such as refuges, where the habitat has been largely preserved. Another

factor may be acid rain. The acidification of streams and smaller wetlands has been well-documented, but it is uncertain how this would affect the blackbirds. The most likely scenario involves a decline in the invertebrate wetland prey that Rusty Blackbirds depend on, and such species have been shown to be sensitive to acidification in other areas. Logging and the construction of large hydroelectric dams that flood thousands of acres of boreal forest may have also contributed. The final answer, though, is that we do not know, and we are not likely to find out until we learn a great deal more about Rusty Blackbirds. \*\*\* It is clear that Rusties have not benefited the way other blackbirds have, though, and that may be attributable to the fact that they generally shun agricultural habitats, including winter fields that supply so much food to other members of the family. It also seems obvious that if we don't begin to address the questions now we might never get the opportunity. Rusty Blackbirds are not rare yet, but the declines continue, although they seem to have slowed somewhat.



Illustration by  
Michael Digioorgio

## NEW BRUNSWICK BOTANICAL CLUB

## CLUB BOTANIQUE du NOUVEAU-BRUNSWICK

Hi to everyone who expressed an interest in learning more about New Brunswick's botanical legacy. The volunteers who agreed to form a steering committee didn't forget about trying to get a network together. As a matter of fact we had our first meeting on June 15 and this is what we propose as a framework for the club.

1. To have fun!
2. To provide expertise and opportunities for people to increase their knowledge (i.e. informal courses in identification).
3. To provide a mechanism for people with similar interests to get together and botanize.
4. To share and exchange knowledge.
5. To organize field trips.
6. To complete botanical surveys in areas that have not been previously surveyed.

How can we get together to have fun and learn more about New Brunswick's flora? We'd like to form an informal, non-political club which is open to people of all levels of expertise, from beginner to the "expert."

Since everyone knows their own backyard best, let's invite each other to come and explore. If you'd like to know what's growing in your area, then invite us to come and help you identify the plants found there. If you know of special places with rare or uncommon plants that you'd like to share with others, then extend an invitation for that. Don't be shy.

One way to extend invitations is to use the NATURE NB website. There is no fee and many naturalists are members. Another way is to contact Sean Blaney, with the Conservation Data Center in Sackville. Sean has graciously agreed to look after the e-mail list for our club, and he can post an invitation for you. He can be reached by phone at 506-364-2658 or e-mail at <sblaney@mta.ca>. If you don't have e-mail, don't worry; we will contact you by phone.

So let's have fun exploring New Brunswick! We hope to hear from you soon.

The New Brunswick Botanical Club Steering Committee consists of: Sean Blaney, Hal Hinds, Samantha Hines-Clark,

Bonjour à chacun(e) qui a exprimé un intérêt en apprenant plus au sujet de la flore du Nouveau-Brunswick. Nous qui avons accepté de former un comité de coordination n'avons pas oublié notre responsabilité. En fait nous avons eu notre première réunion le 15 juin et voici ce que nous proposons comme cadre pour notre club.

1. Bien s'amuser!
2. Présenter l'expertise et des occasions pour apprendre plus au sujet des plantes (c.-à-d. cours informel d'identification).
3. Fournir un mécanisme pour que les personnes avec intérêts semblables peuvent se réunir et herboriser.
4. Faciliter le partage des connaissances botaniques.
5. Organiser des excursions.
6. Contribuer aux inventaires botaniques, surtout dans les endroits les moins connus de la province.

Comment faire pour se rencontrer et pour apprendre plus au sujet de la flore du Nouveau-Brunswick? Nous proposons une administration simple (et apolitique) qui sera ouverte aux gens de tous les niveaux d'expertise, du débutant à l'expert.

Puisque chacun connaît mieux leur propre arrière-cour, s'invitons à venir et à explorer. Si vous aimeriez savoir ce qui croît dans votre région, alors invitez-nous à venir vous aider à identifier les plantes qui y sont trouvées. Ou bien, si vous connaissez des endroits spéciaux avec les espèces rares, des endroits que vous voudriez partager avec des autres, cela aussi sera une belle invitation. Ne soyez pas timide.

Les invitations pourraient être faites par moyen du réseau NATURE NB. Il n'y a aucuns frais et beaucoup de naturalistes en sont membres. Vous pouvez également prendre contact avec Sean Blaney, au CDC à Sackville. Sean a généreusement accepté de s'occuper de la liste de membres pour notre club, et peut signaler l'invitation pour vous. Son numéro de téléphone est 506-364-2658 et son adresse électronique est <sblaney@mta.ca>. Les personnes qui non pas d'accès au courrier électronique recevront des nouvelles par téléphone. Amusons-nous en explorant le Nouveau-Brunswick.

Le comité de coordination du Club botanique du N.-B. consiste de: Sean Blaney, Samantha Hines-Clark, Hal Hinds, Martin Marshall, Sara Richard, Julie Singleton, et Maureen Toner.

## "LIKE RAISING CHILDREN, BIRDING SURE KEEPS YOU HUMBLE" ...A WILDLIFE ENCOUNTER ON AN ICY EVENING

Katherine Bunker Popma

Overanxious for the spring migration to start, I headed out to Cape Jourimain on March 22 of this year in hopes of seeing a few early flocks of scoters and geese going by the Confederation Bridge. After a winter of scrounging birds, and having had few guests at my feeder, I guess I was getting a little starved for action. There had been reports of rafts of scoters off Nova Scotia so I thought some of them might be winging their way up the Northumberland Strait. After three years as a volunteer researcher, I was anxious to see what the new millenium might bring in terms of the reaction of seaducks to the presence of the bridge across their route.

According to the designers of the bridge, the Northumberland Strait is "ice-infested." There is a controversy as to whether or not the bridge holds ice in the strait or breaks it up. On this day there was solid ice out for a distance of about half-a-kilometre, stretching from Cape Tormentine west to Shediac. Further out the strait was open. When I arrived at my observation post, I set up "camp" and dutifully scanned the open leads looking for scoters. I didn't see scoters or anything else. Migratory movement was not really expected this early in the season, but I had thought that at least a few early birds might happen by. I had also expected to see or at least hear some land birds. At home in Sackville, a quick 40 minutes away, the Song Sparrows had been singing that morning. I knew that Yellow-rumped Warblers had overwintered at the cape. But there were no bird sounds to liven up the woods behind me. I admitted that the North Wind may have kept them from realizing that spring was nigh. As I stood at my scope, or rested in the car, or wandered a bit down the path, various vehicles stopped and people briefly looked at the bridge to P. E. I. but no one got out to chat.

Throughout the whole afternoon I saw only one duck approach the bridge, then turn back. My tally sheets read "nil", "nil", and "nil" for each hour I stood there. Not that I was complaining. Although I had to wear full winter gear, it was a beautiful sunny day. I had a thermos of coffee, a few snacks, and lots of pretty scenery. Only one essential ingredient was missing ... birds (to be honest, the occasional gull, crow, and raven did go by now and then and maybe a Rough-legged Hawk that was too far away to identify for sure). Two male Common Goldeneyes did rise up suddenly and go northwest over the bridge, but they didn't seem intent on migration. All in all, one would say that it was a day of "little movement."

So I looked at the ice, at the sky, at the bridge, at my empty data sheets, at P. E. I., and made various meaningless notes until it started getting dark at 6:15. I had told myself that although the hours from 3 to 5 had not been productive, the action would probably heat up between 5 and 6 ... that magic

hour before sunset when so much happens during migration. But sadly, no seabirds went by even late in the day, not even Canada Geese, my last resort. Negative data, again; it gets a little tiresome eventually. What was I doing out there anyway? Wasn't life too short and sweet to waste all this time?

One of the things I have enjoyed most about spending time out at the Confederation Bridge has been the chance to watch sunrises and sunsets. Point LePreau observatory has its luxury accommodation, Cape Enrage its height, but at Cape Jourimain we have ice sculptures, and a gorgeous exposure to sunrises and sunsets. The sun is behind the observer almost the whole time, but by the time it sets it has moved far enough over to the west that the light comes slanting in and all of a sudden everything looks very different than it has during the rest of the day. The setting sun puts a spotlight on the foreground with great inclined rays that create deep contrasts. Even if it has been cloudy, the setting sun often peeks out from between the edge of the clouds and the horizon for just a few moments changing the look of the land and water incredibly. The water turns colour, the pattern of light on the waves changes, and even the gray concrete bridge takes on a different mood.

This March afternoon was no different; it had been bright and clear, and as the sun went down, the ice forms in front of me changed their look. The various geometric shapes turned from being hard-edged cold blues and whites to softer golden-sided cubes and triangles with warm turquoise tops, like an Impressionist painter's palette. The sun reflected off the corners and ridges differently than it had all afternoon turning the ice pink and purple and even green. The crooks and crannies between the piled up ice cakes became mauve and teal blue. At least the sunset had lived up to expectations.

I decided to have one last look along the ice edge before packing up. Suddenly I noticed a gray-blue-white point on the top of one of the ice cakes which I hadn't seen before. It had a more organic shape. I had been rewarded. Not only was an actual bird sitting out on the ice where I had seen none before, but "holy shomoly," it was, of all things, an owl. It was hunkered down a bit, and almost at the end of the range of my scope, but there was the rounded head and triangular body-shape that I needed to see. As I watched it swivelled its head in that wonderful way that owls do (and birders love to see) and looked directly at me. I couldn't believe it. It was a Snowy Owl, the first that I had seen in 3 years (and I had never seen one at Cape Jourimain before ... and never expected to). I hadn't heard any reports of one in the area all winter, so this individual must have just stopped on its way north. Whatever, I couldn't take my eyes off it. At one moment it seemed just to be part of the ice-chunk, and at another moment it seemed

stick out so obviously and so owl-like. I wondered how I could have missed it earlier.

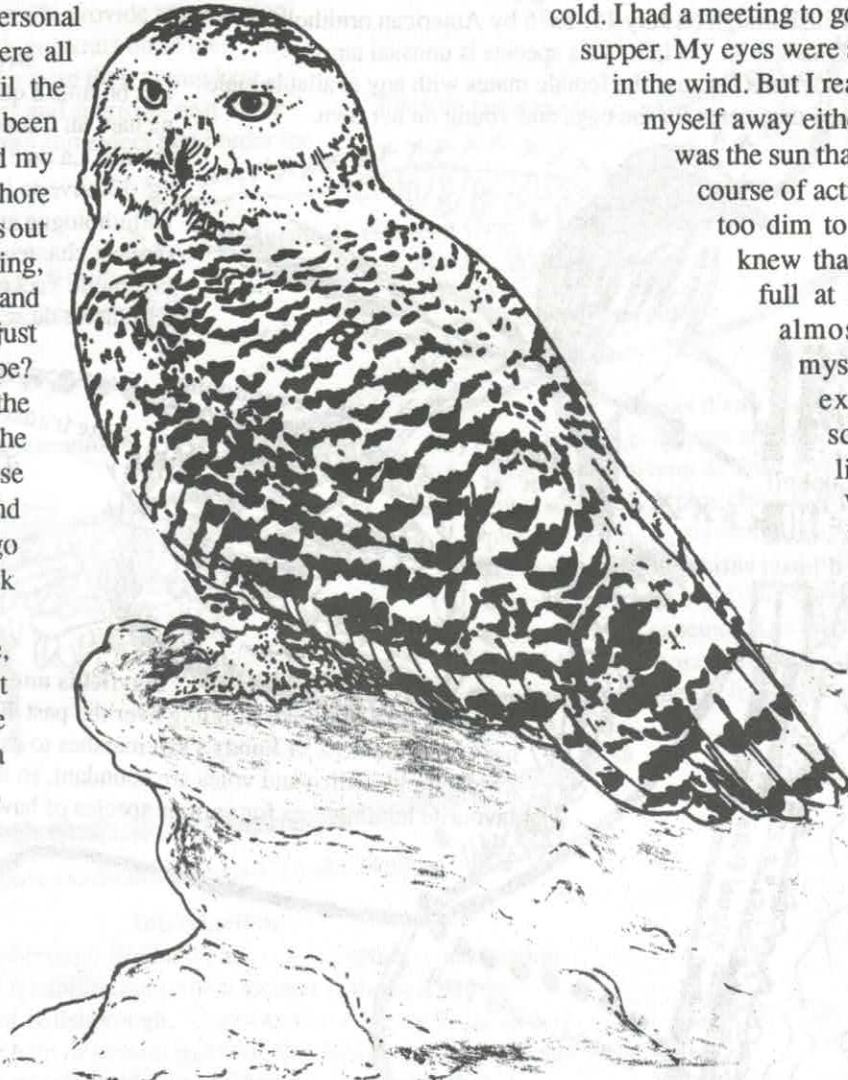
I live near the Tantramar Marsh and every winter I go out there in hopes of seeing Snowy Owls. Some years I see them, some I don't. I had been out there every Saturday this year with Ruth Miller and one of our quests had been a Snowy, but we had no luck. This bird is a special entity. I find them almost mythical, certainly one of my personal favourites. Could it have been there all afternoon watching me, and until the light and colours changed I hadn't been able to pick it out? Had it escaped my notice flying low out from the shore blending in with all the other whites out there? Could it be the Zen of birding, where I was so focused on the look and idea of seaducks that my mind just couldn't react to an owl-type shape? What was it doing staring out at the water? Was it too frightened by the mass of the bridge or the traffic noise to continue across Northumberland Strait? If I was brave enough to go out on the ice to get a closer look would it fly off?

Then, with the sun almost gone, out of the corner of my eye I caught a movement at the bottom of the scope's field-of-view. Moving it a tad to view a different patch of ice, I found myself looking into the faces of two gorgeous Red Foxes. Now where did they come from? A minute ago I had felt it had been a pretty lonely afternoon and now I felt as though there was wildlife all around. The light of the setting sun was turning the sky to magenta, and the tails of the foxes almost glowed ruby red. Their black legs and ear tips seemed inky. In constant motion, intent on their foraging, they gambolled up, down, and around one of the ice cakes about fifty feet away from the owl, and I am not sure they knew it was there. The owl certainly was watching them. What odd "bedfellows," two arch enemies, to be the only living things in sight. I don't know how they could have missed seeing me silhouetted on the cliff against the sun, but maybe they didn't care as I was so far away. One fox was about one third the size of the other, so I realized that I was watching an adult and a juvenile. I looked around for the rest of the family but didn't see any. And what were they doing way out there on the ice? I suppose there could have been a seal carcass, or other carrion, in one of the crevices. How had I missed their arrival on the scene too?

And where was everybody else? Where were all of my birding buddies. Where were those occasional cars that had been stopping? No one on the bridge could see this. I wanted to shout and tell everyone to stop and take a look. Of course I had no camera. I swear that whenever I see something exciting, I am almost always alone (when others are with me nothing much seems to happen).

It became darker and it was getting cold. I had a meeting to go to. I hadn't had supper. My eyes were starting to water in the wind. But I really couldn't tear myself away either. In the end, it was the sun that decided on my course of action as it just got too dim to see anything. I knew that the moon was full at this time and I almost convinced myself to stay and experience the scene by moonlight, but I didn't. Wouldn't it have been spectacular on this clear night. Instead I said a quick prayer for the safety of all wild creatures from traps, soft ice and other nasty things, and headed out, leaving the owl and the foxes to their night adventures.

On the drive home, Robert Frost's poem about crows shaking down snow and saving a day he had rued came to mind. So did the Great One's comment that 100% of the pucks you don't shoot don't go in. I had been given a gift, and had almost missed it. One has only to put in the time and energy and it will happen. If you don't go out, or if you leave early in disgust, or if you are impatient, you won't see it for sure. Keep an open mind. Be there, and they will come (maybe not what you are looking). Certainly you will be enriched in some way. Out at Cape Jourimain that first March of the new millennium, I realized I knew these things mentally. However, even after all the hours spent out there over the years, even I had forgotten them. Birding, like raising children, sure keeps you humble.



## HILLSBOROUGH'S NEW WETLAND PARK

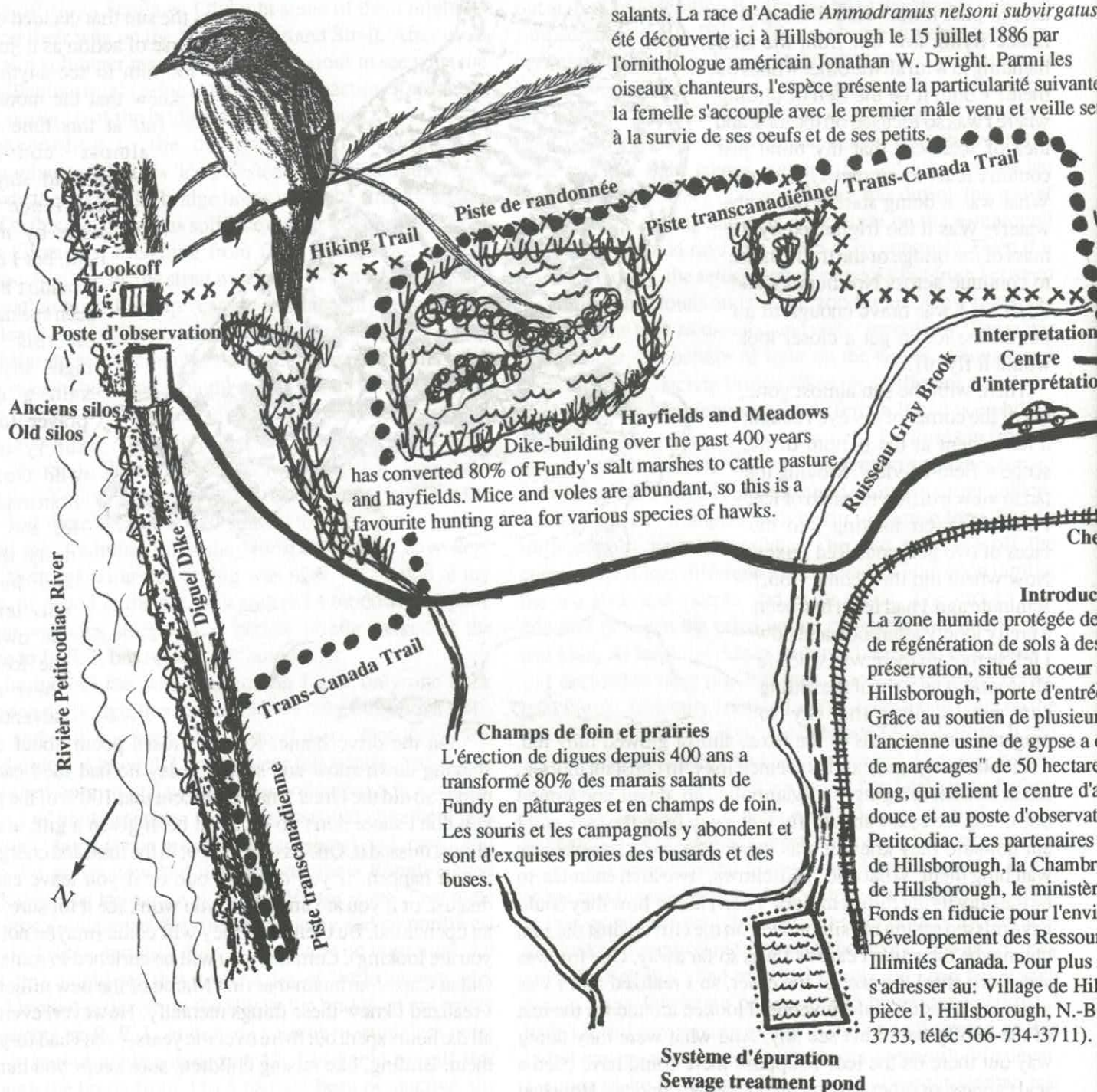
From the park brochure by Sue Hooper and Rob Walker

### Acadian Sharp-tailed Sparrow

Sharp-tailed Sparrows are the only songbirds nesting in Canada that regularly live in salt marshes. The Acadian race *Ammodramus nelsoni subvirgatus* was discovered at Hillsborough on July 15, 1886 by American ornithologist Jonathan W. Dwight. This species is unusual among songbirds because the female mates with any available male and then cares for the eggs and young on her own.

### Bruant à queue aiguë d'Acadie

Les bruants à queue aiguë sont les seuls oiseaux chanteurs nichant au Canada qui ne craignent pas d'habiter les marais salants. La race d'Acadie *Ammodramus nelsoni subvirgatus* été découverte ici à Hillsborough le 15 juillet 1886 par l'ornithologue américain Jonathan W. Dwight. Parmi les oiseaux chanteurs, l'espèce présente la particularité suivante: la femelle s'accouple avec le premier mâle venu et veille seule à la survie de ses oeufs et de ses petits.



**Champs de foin et prairies**  
L'érection de digues depuis 400 ans a transformé 80% des marais salants de Fundy en pâturages et en champs de foin. Les souris et les campagnols y abondent et sont d'exquises proies des busards et des buses.

**Introduction**  
La zone humide protégée de régénération de sols à des fins de préservation, situé au coeur de Hillsborough, "porte d'entrée" à la zone. Grâce au soutien de plusieurs partenaires, l'ancienne usine de gypse a été transformée en "marécages" de 50 hectares de long, qui relie le centre d'interprétation à la zone douce et au poste d'observation de Petitcodiac. Les partenaires de Hillsborough, la Chambre de Commerce de Hillsborough, le ministère de l'Environnement, le Fonds en fiducie pour l'environnement, le Développement des Ressources Humaines Canada. Pour plus d'informations, s'adresser au: Village de Hillsborough, pièce 1, Hillsborough, N.-B. A1A 1B1, 3733, téléc 506-734-3711).

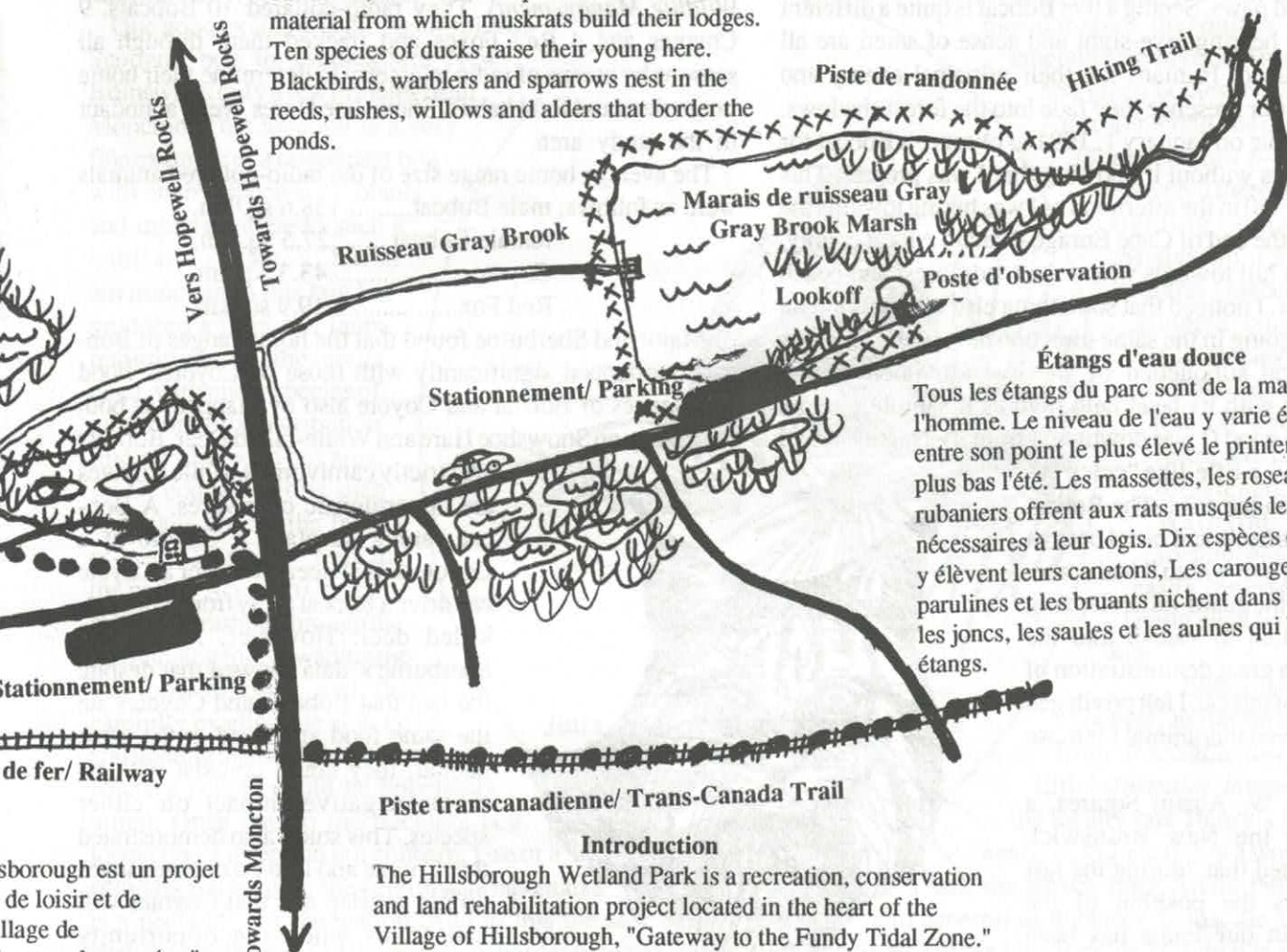
**Système d'épuration**  
**Sewage treatment pond**

## UNE NOUVELLE ZONE HUMIDE PROTÉGÉE À HILLSBOROUGH

On a tiré cet article d'un dépliant par Sue Hooper et Rob Walker

### Fresh Water Ponds

All of the ponds in the park are man-made. Water levels vary greatly, being highest in spring and lowest in late summer. Cattails, bulrushes, and bur-reeds provide construction material from which muskrats build their lodges. Ten species of ducks raise their young here. Blackbirds, warblers and sparrows nest in the reeds, rushes, willows and alders that border the ponds.



### Étangs d'eau douce

Tous les étangs du parc sont de la main de l'homme. Le niveau de l'eau y varie énormément entre son point le plus élevé le printemps et le plus bas l'été. Les massettes, les roseaux et les rubaniers offrent aux rats musqués les matériaux nécessaires à leur logis. Dix espèces de canards y élèvent leurs canetons. Les carouges, les parulines et les bruants nichent dans les roseaux, les joncs, les saules et les aulnes qui bordent les étangs.

### Introduction

The Hillsborough Wetland Park is a recreation, conservation and land rehabilitation project located in the heart of the Village of Hillsborough, "Gateway to the Fundy Tidal Zone." With the help of several partners, this former gypsum mill site has been transformed into a 50 hectare wetland park that features a 4 km network of trails that link the Interpretation Centre, 12 fresh water ponds and an observation deck overlooking the Petitcodiac River. The partners in this project are; Village of Hillsborough, Greater Hillsborough Chamber of Commerce, N. B. Department of Tourism, Environmental Trust Fund, Environment Canada, Human Resources Development, and Ducks Unlimited Canada. For further information contact: The Village of Hillsborough, 2849 Main Street, Unit 1, Hillsborough N. B. E4H 2X7 (tel. 506-734-3733, fax 506-734-3711).

Hillsborough est un projet de loisir et de développement de la zone des marées. Centenaires, ce site de marais a été aménagé en un "parc" avec des sentiers de 4 km de long. Il y a 12 étangs d'eau douce sur la rivière. Les partenaires du projet sont; le village de Hillsborough, la Chambre de Commerce régionale, le Tourisme N.-B., le Développement humain et Canards sans limites. Pour plus de renseignements, contactez le Village de Hillsborough, 2849, rue Main, Unité 1, E4H 2X7 (tél. 506-734-

## LYNX RUFUS, THE COMPATIBLE CAT

Rob Walker

The closest that I usually get to a Bobcat *Lynx rufus*, commonly called "wildcat," is to see its tracks. In snow or mud the footprints are easily recognized by the four toes that contact the ground, by the absence of claw marks and by the circular impression created around the pad marks by the densely-furred paws. Seeing a live Bobcat is quite a different matter. Their hearing, eye-sight and sense of smell are all very finely tuned. Humans are their principal enemy and upon sensing our presence they fade into the forest shadows.

I was fortunate on January 1, 1991 to observe a Bobcat for several minutes without it knowing that I was present. This took place at 3:30 in the afternoon as I was hiking towards the lighthouse at the end of Cape Enrage Road in Albert county. Descending a hill towards where the road, forest and beach come together, I noticed that something else was walking on the road and going in the same direction as myself. This was a large Bobcat silhouetted by the low afternoon sun. It walked along with its head held high as if sampling odors carried by the wind (I was downwind from it). Nearby a steel guard-rail gave a rifle-like "crack" as it contracted in the cold. The Bobcat wheeled on its heels and raced back in the direction from which it had come, slipped under the guard-rail and sprang across the ditch to vanish into the forest. What a great demonstration of the wariness of this cat. I felt privileged to have observed this animal for those few minutes.

In 1946 W. Austin Squires, a naturalist at the New Brunswick Museum, stated that "during the last hundred years the position of the two lynxes in our fauna has been reversed; the Canada Lynx was formerly so much the more common that it was the only one that came to the attention of many of the writers, whereas in late years it has become almost extinct in the province while the wildcat is now abundant." Only in areas where snow lies a metre or more deep in winter, such as Mount Carleton Provincial Park and Cape Breton Highlands National Park, does the Canada Lynx survive today in the Maritime Provinces. In these deep snow areas, favoured by its long legs and big snowshoe paws, the Canada Lynx has an advantage over the Bobcat. Everywhere else the Bobcat seems to be dominant. Or is it?

Starting in the 1970s, the Coyote has colonized all of New Brunswick and Nova Scotia. Does this mean that the Coyote is now "top dog" and that the Bobcat is no longer such a

successful species?

From 1979 to 1982 John T. Major and James A. Sherburne studied the interactions of Bobcat, Coyote and Red Fox in an area of conifer and mixedwood forest in western Maine (the results of their study were published in *The Journal of Wildlife Management*). They radio-collared 10 Bobcats, 9 Coyotes and 4 Red Foxes and tracked them through all seasons by means of radio telemetry to determine their home range sizes and food habits. Snowshoe Hares were abundant in the study area.

The average home range size of the radio-collared animals were as follows; male Bobcat.....138.6 sq. km,

female Bobcat.....27.5 sq. km,

Coyote.....43.3 sq. km,

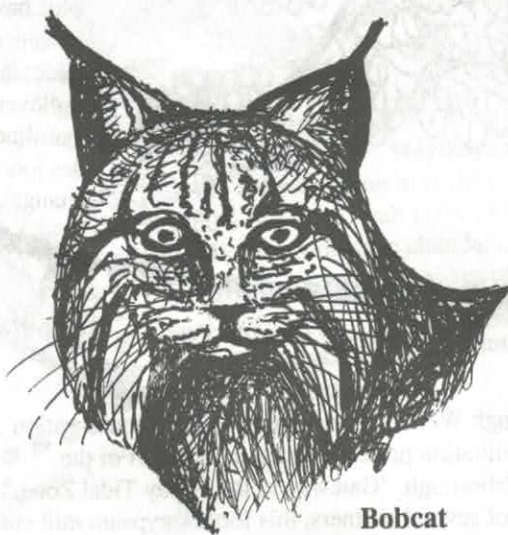
Red Fox.....19.9 sq. km.

Major and Sherburne found that the home ranges of Bobcats overlapped significantly with those of Coyotes. Food preferences of Bobcat and Coyote also overlapped, as both fed mostly on Snowshoe Hare and White-tailed Deer. Bobcats

are strictly carnivorous, while Coyotes are opportunistic omnivores. A Bobcat cannot supplant a Coyote at a Coyote-killed deer, however a Coyote can drive a Bobcat away from a Bobcat-killed deer. However, Major and Sherburne's data showed that despite the fact that Bobcats and Coyotes ate the same food and lived in the same habitat, they could co-exist with no major negative impact on either species. This study also demonstrated that Coyote and Red Fox home ranges do not overlap and that Coyotes will kill foxes when the opportunity arises. These data on competition between Coyotes and Bobcats may not apply in years of Snowshoe Hare

scarcity. Clearly the Bobcat and Coyote are using their shared range and food supply in slightly different ways, allowing them to co-exist.

In New Brunswick the Bobcat is trapped for its fur. Fortunately, a new controlled harvest system was introduced in 1996 to protect this species and its relative the Canada Lynx, which is sometimes caught in traps set for Bobcat. Previously there was little or no control of the number of Bobcats "harvested." The quota system established by the Department of Natural Resources will ensure that only legally tagged animals are marketed for their fur. It is encouraging to know that *Lynx rufus* is reasonably abundant in New Brunswick and that it can co-exist with the recently arrived Coyote.



Bobcat  
(*Lynx rufus*)

## INTERESTING PLACES TO VISIT IN NEW BRUNSWICK: THE NEW SCOTLAND BOG

Jim Edsall

Would you like to visit an exotic world full of rare and giant insects, beautiful orchids and carnivorous plants. Such places exist in New Brunswick but they are, unfortunately, seldom visited.

One good example is the beautiful New Scotland bog in southeastern New Brunswick, only a few minutes from Moncton. This location is a very fine example of a raised peat bog with many species of plants and insects unique to such a habitat. The harsh environment in this bog has produced a flora and fauna reminiscent of the arctic tundra, with many species of more northerly distribution finding a niche in our area.

Of course visiting such an area is not for the faint-of-heart. This is no "walk in the park." Access to the bog requires thrashing through the surrounding forest, wading the wet bog margins and then carefully evading the sink holes and floating mats of sphagnum moss where a person could be hopelessly mired. Once out on the trackless bog, losing one's direction is a concern. Use of a compass and keeping an eye on distant landmarks is a necessity for navigation. Add to this the lack of shelter from the sun and the persistent hordes of blood-thirsty flies and you get a picture of a day on the bog.

Is it worth it. Yes! The bog stomper will be rewarded with the feeling that you have entered a totally new and foreign world with different sights, sounds and smells. With every step you will see new plants and insects, dragon-headed orchids, cunning pitcher-plants, bladderworts and sundew, menacing damers, elusive arctics and elfins and magical emeralds and coppers.

The fauna of the New Scotland bog includes New Brunswick's largest and rarest dragonflies. Ten species of damer have been found around the ponds on the bog, including the very northern Zigzag Damer (*Aeshna sitchensis*) and the Muskeg Damer (*Aeshna subarctica*), first discovered in New Brunswick only two years ago. Also found on the ponds are

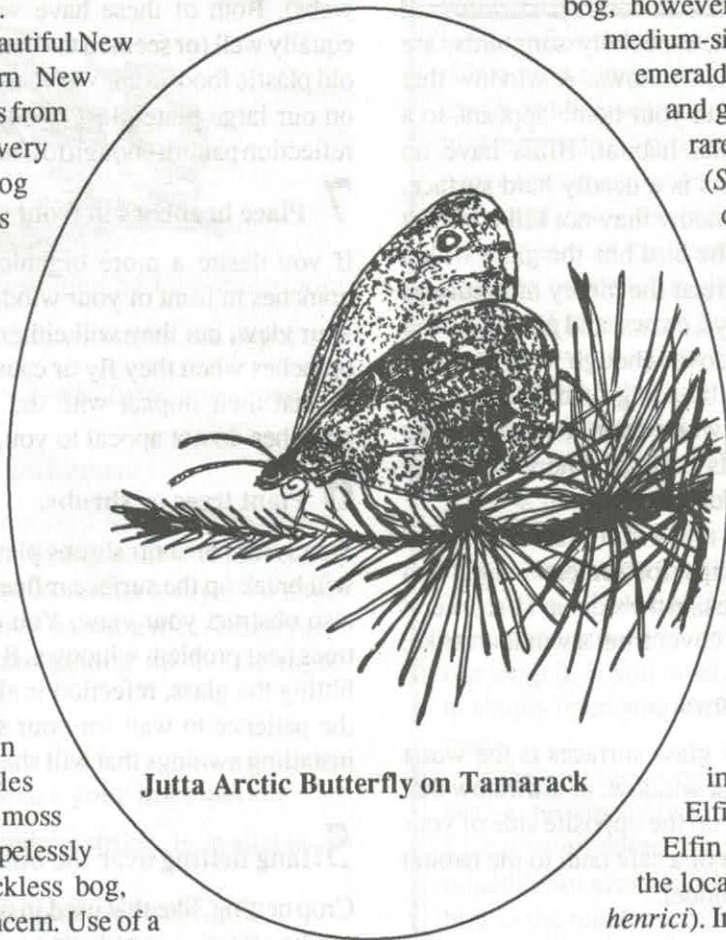
Amber-winged Spreadwings (*Lestes eurinus*), a beautiful and rarely found damselfly.

The dragonfly highlights of New Scotland bog, however, are the emeralds, small to medium-sized dragonflies with flashing emerald green eyes and iridescent bronze and green bodies. New Brunswick's rarest emerald, the Quebec Emerald (*Somatochlora brevicincta*), was discovered there in 1998, its first sighting outside of the Mistassini Lake region of central Québec, over eight-hundred kilometres away. This species is considered threatened because of its habitat specificity and restricted range. A near-threatened species, the Warpaint Emerald (*Somatochlora incurvata*) is easily observed mating and laying eggs on the sphagnum mat.

Butterflies on the bog include, in the spring, the Brown Elfin (*Incisalia augustinus*), Bog Elfin (*Incisalia lanoraieensis*), and the locally rare Henry's Elfin (*Incisalia henrici*). In June this is a wonderful spot to see the scarce Jutta Arctic butterfly (*Oeneis jutta ascerta*) as it dances amidst the Tamaracks and Black Spruce of the bog margins. In July it is replaced by the Eyed Brown (*Satyrodes eurydice*). Bog Coppers (*Lycaena epixanthe*) are common at New Scotland bog, and, with luck, you could spot our rarest breeding skipper, the Two-spotted Skipper (*Euphyes bimacula*).

As in the arctic, many bog moth species are day-flying. They are plentiful, colorful and easily confused with butterflies. One interesting moth *Exyra rolandiana*, uses the Pitcher-Plant (*Sarracenia purpurea*) as a larval food source, turning the tables on this insect-eating plant.

A day on the bog may not be everyone's cup of tea, but to the serious naturalist bent on learning all they can about the plants and animals that accompany us on our journey, this is one place you won't want to miss.



Jutta Arctic Butterfly on Tamarack

## TOP 10 WAYS TO PREVENT WINDOW STRIKES

Bill Thompson, III

This article originally appeared in **Backyard Bird News**, Vol. 3, No. 4. Summer 2000, a publication of **Bird Watcher's Digest**.

Each year millions of birds, especially songbirds, are killed when colliding with glass windows. A window that reflects the natural habitat around your home appears, to a bird, to be an extension of that habitat. Birds have no understanding that window glass is a deadly hard surface. Although flying into a glass window may not kill a bird, it almost always stuns it, unless the bird hits the glass with a glancing blow. Stunned birds are at the mercy of predators such as cats, hawks, and even jays, crows, and grackles. And although a stunned bird may recover enough to fly away, it may succumb later to internal bleeding or damage to the brain as a result of impact. In the worst cases, a window strike breaks a bird's bill, or crushes its skull, or otherwise causes major head trauma resulting in death.

What can you do to prevent this awful scenario in your backyard? Following are 10 tips for understanding and helping to prevent window strikes. In the sidebar I list several tips for helping a stunned bird recover from a window strike.

### 10 Identify problem windows.

Begin by noting which of your glass surfaces is the worst culprit. Most often it's the largest window, or a window that is aligned with another window on the opposite side of your house, thus creating the illusion of a safe path to the habitat on the other side of the visual tunnel.

### 9 Install windows facing down.

If you are installing new windows ask your contractor about installing them at a slight angle, facing downward. This type of positioning, just a few degrees from the vertical, does not affect your view from inside, but it does cause the outer surface of the window to reflect the ground rather than nearby trees or sky. Note, however, that some window manufacturers will void your warranty if your windows are not installed flush (i.e., vertical). Talk with your contractor or architect about ways you can minimize habitat reflection in your windows.

### 8 Use plastic wrap or stickers.

Avoiding collisions is all about breaking up the reflection, and there are many things you can stick onto the window glass to accomplish this. The traditional black plastic falcon, hawk, or owl silhouettes have worked for some people but

not for others. Some alternatives include commercially available semitransparent stickers, some with decorative bird designs on them, and another product that mimics a spiderweb pattern (the thinking is that birds avoid flying into spider webs). Both of these have worked for me. What worked equally well (or seemed to) but is not as nice to look at is plain old plastic food wrap. We've used three-foot-long sheets of it on our large plate glass windows and it has broken up the reflection pattern enough to cause birds to avoid the windows.

### 7 Place branches in front of your windows.

If you desire a more organic look, try placing dead tree branches in front of your windows. These will not eliminate your view, but they will either encourage birds to avoid the branches when they fly or cause them to slow down enough so that their impact with the window is not fatal. If dead branches do not appeal to you, read on.

### 6 Plant trees or shrubs.

Small trees or short shrubs planted in front of your windows will break up the surface reflection of the glass, but they will also obstruct your view. You can also plant shade-creating trees near problem windows. By reducing the amount of light hitting the glass, reflection is also reduced. If you don't have the patience to wait for your shade trees to grow, consider installing awnings that will shade your windows from above.

### 5 Hang netting over the outside of your windows.

Crop netting, like that used in orchards to keep birds off fruit, can be effective in reducing window strikes. If you use crop netting, use a small-mesh weave type so that birds do not get their heads or bodies stuck in it. At our former house in Maryland, we used old storm screens (purchased at a yard sale), suspended by light rope, to break up reflection and physically prevent birds from hitting the glass.

### 4 Hang mylar strips or CDs.

Strips of shiny reflective plastic, hung a few inches apart in front of the outside surface of your windows may work. They will flutter in the breeze and may encourage birds to steer clear. Other options include strips of black plastic garbage bags, aluminum pie pans, and even old computer software or storage CDs (such as the ones boasting 500 free hours of online time!). In some cases, there's no higher use for such a computer disk.

### 3 Spray fake snow.

Even if you're not dreaming of a white Christmas, this stuff still does the trick of reducing reflection. When spraying it on in June, I've found that humming Christmas carols helps. Imagine what your neighbors will think of your early jump on the holidays! If you've got competitive neighbors, you'll drive them crazy by starting your decorations so early.



Illustration by Julie Zickefoose

Though woodpeckers are built to withstand the impact of their bill on wood, they can be killed by flying into a window.

### 2 Move feeders and other enticements.

Changing the location of feeders, bird-houses, baths, and so on can reduce heavy bird traffic near problem windows and doors. Either move the attractions farther away from large glass areas, or move them closer. Moving them closer may help by preventing birds from getting up to full flight speed before hitting the window.

### 1 Get more information/ share your information.

Excellent information on window strikes is available at these websites:

migratorybirds.fws.gov/pamphlet/prob.html#3a  
www.flap.org  
www.wbu.com/edu/window.htm

### Helping Injured Birds

Here's what to do when you hear that sound of a bird hitting glass, and you look outside to see a stunned bird lying on the ground below one of your windows.

Technically it's illegal to touch a migratory bird without a permit, but if you don't mind being outside the law for a few minutes, carefully pick up the bird and put it in a brown paper bag with the top folded over or a cardboard box with flaps for a lid. Make sure that the bird is upright --- prop it up with a supporting circle of paper towels or tissues if necessary. If the weather is very cold, bring the bag or box inside to warm up the stunned bird. If the weather is warm, you can leave the bag/ box outside, but place it out of the reach of pets.

Do not try to give the bird food or water. Leave it alone in a warm, quiet, dark place for a couple of hours --- it may take this long for the bird to recover.

Once the bird recovers, you'll hear it scritch around inside the enclosure. Take the bag/ box outside before peeking in, just in case the bird gets out --- you don't want it fluttering around in your rafters. To release the bird, simply open the enclosure and let it find its own way out. Resist the urge to handle the animal any more than necessary, and don't toss it into the air when releasing it. If you must hold the bird before releasing it, simply open your hand and it will fly away when it's ready.

If the bird seems not to be recovering, contact your state or provincial fish and game or wildlife agency, or a local veterinarian for the name of a licensed wildlife rehabilitator near you who might take your bird. Get the bird to the rehab expert as soon as possible, because it will need food, water, and perhaps medical attention.

## OLDSQUAW NO MORE

Eirik A. T. Blom

From *Bird Watcher's Digest*, Vol. 23, No. 1, Sept. 2000.

The rumors started flying in the fall of 1999 that the AOU (American Ornithologists' Union) had agreed to change the name of Oldsquaw to Long-tailed Duck. \* \* \* The name Oldsquaw originated because it was thought that a group of the birds, when vocalizing, sounded like a gathering of "old squaws." \* \* \* The AOU may have voted the change, but until the publication of the next supplement to the *Check-List*, no one could be entirely certain what the situation was. Now we can, mostly.

\* \* \* It seems that the committee was petitioned by employees of the U.S. Fish & Wildlife Service working in

Alaska. Oldsquaw numbers there are declining and an effort is being made to stop the trend. The plan requires active participation from Native American groups in the region, and it was felt that the name Oldsquaw might be offensive to some of them.

The AOU, while affirming that it does not consider political correctness in assessing established bird names, acceded to the request this time, in part because the name Long-tailed Duck is the standard in the rest of the world. No matter what the motivation, the change brings us one bird closer to the goal of a standardized list of English names for the world's birds, and like other changes will be little remembered 25 years from now.

## BOTANY QUIZ: CAN YOU IDENTIFY THESE PLANTS?

Gart Bishop, Kennebecasis Naturalists' Society

In the spring as we head out to go fiddleheading, we often come across the mysterious remains from various plants from last year which make us question ... what was it?. It can be great fun trying to guess what some of these are, and then watching as the summer progresses to confirm our suspicions. See if you can guess the identity of the following parts found in the flood plain habitat in amongst this years growth of fiddleheads. The answers will appear in the next issue of the *N.B. Naturalist/Le Naturaliste du N.-B.*

The fern described in the Botany Quiz from the last issue [Vol 26 (4)] was Crested Fern or Dryoptéride accrétée (*Dryopteris cristata*).



A.



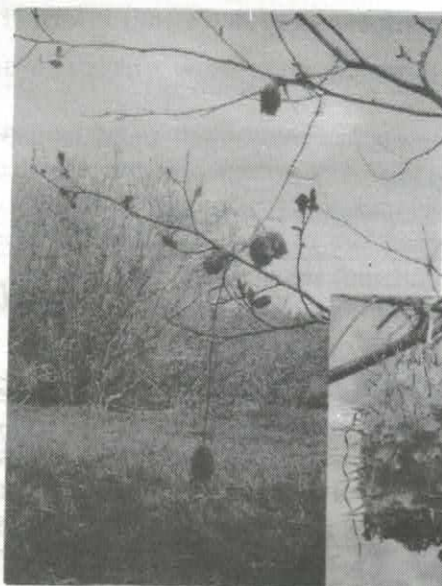
B.



D.



E.



C.



F.



G.

## AMERICAN SHOREWEED: A REMARKABLE AQUATIC PLANTAIN

James P. Goltz

While on a camping trip to Spednic Lake in late June in the early 1980s, Hal Hinds and his two sons found an unusual plant species that he couldn't identify. The plant formed a lush turf on the shore and was somewhat reminiscent of one of the rushes ... but it just didn't quite fit. Hal's dreams that night were no doubt tormented by this perplexing species. Early the next morning the lakeshore glimmered with a most amazing silvery sheen resulting from the sudden simultaneous eruption of masses of this plant's blooms. This was Hal's first encounter with American Shoreweed (*Littorella americana*) in flower.

American Shoreweed is a member of the Plantain Family (Plantaginaceae). Most of us think of plantains only as troublesome introduced lawn weeds. However, in New Brunswick, at least two species belonging to this family are native and aquatic. While Shoreweed doesn't match the Seaside-Plantain (*Plantago maritima*) (also known as Goose-tongue greens) for its importance to the Acadian cuisine or for its size, it is a fascinating little plant of great interest to serious botanists. When Cecil Johnston first saw this species, he is said to have been overwhelmed by its beauty.

How does one recognize American Shoreweed? It is most conspicuous when water levels recede, usually at some time between late June and August, exposing the plant to air and enabling it to flower. The male flowers occur on a long stalk (up to 4 cm), and have narrow filaments that may surpass the tiny four-lobed tubular flowers by a centimeter or more. It was the pollen-bearing anthers of these flowers that created the spectacle on Spednic Lake. The female flowers are most inconspicuous and located at the base of the plant.

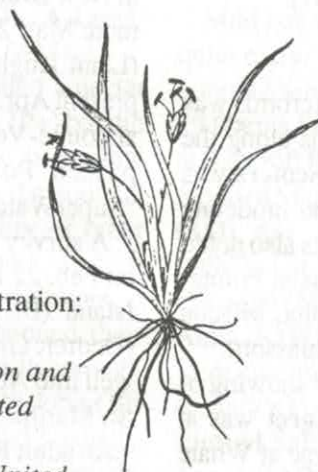
Much of the time the plant grows underwater, where few would be able to recognize it since it remains in its vegetative state and is not in bloom. Using mask and snorkel, Hal has developed quite a knack for finding it by virtue of its distinctive succulent green leaves which measure from 1 to 4 cm long and 1 to 2 mm wide, and look like little horns with a shape somewhat similar to those of an ox. A distinctive

feature is the presence of delicate stolons that give rise to new plants in a manner resembling the growth of strawberries.

American Shoreweed is considered to be a rare plant in New Brunswick, but is easily overlooked by virtue of its small size and aquatic habitat. It may well be more common than we think. Specimens have been collected from just over a dozen New Brunswick sites, all located in the western half of the province. Where it does grow, it is often exceptionally abundant. It has been found on open shores and in shallow water in lakes and rivers, where it may be rooted in sand, gravel, silt or mud substrates, or less commonly hidden within masses of flotsam. One of the most accessible sites to see American

Shoreweed is on the shore of Loch Lomond, where this plant forms a veritable lawn that may readily be seen during periods of low water.

The author would be most appreciative of information on any locations at which you find American Shoreweed. I encourage naturalists to learn more about New Brunswick's interesting array of aquatic plants and challenge them to hone their skills at finding diminutive plant species that most people would never notice. Don your bathing suit and dive in!



Source of illustration:

*The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada* (vol. 3, page 273)

by H. A. Gleason  
The New York Botanical Garden  
1968

American Shoreweed  
(*Littorella americana*)  
Life size

### Limerick For Lovers of Aquatic Plants

There once were some botanist fellas,  
who had little regard for umbrellas;  
they had no regret,  
though they often get wet,  
while searching for rare Littorellas.

## NATURE NEWS: MID-FEBRUARY TO MID-APRIL 2000

David Christie

Relatively mild weather during late February and March got spring off to an early start but it slowed down during more backward weather in April.

Last year a disease organism known as West Nile Virus was found for the first time in North America in the area around New York City. Transmitted by mosquitos, it affects a variety of birds and mammals, including humans. It is possible that the virus may spread to New Brunswick via migrating birds. Jim Goltz is seeking your help in monitoring local crow populations for mortality. Please report any observations of crow deaths to him at the Provincial Veterinary Laboratory [(506) 453-5412] or to Dr. Pierre-Yves Daoust of the Canadian Cooperative Wildlife Health Centre (located at the Atlantic Veterinary College) [(902) 566-0667].

### Birds

A coordinated "Superwatch" for migrating waterbirds was again carried out at more than a dozen locations along the coast on Apr. 15. A heavy migration of **Black Scoters** was noted, especially on the Acadian Peninsula, and moderate numbers of **Common Eiders**. Preliminary reports also noted a substantial movement of **Red-throated Loons** at Pointe-Sapin (c. 100—SIT, RAM, LC) and Wilson Point, Miscou Island (157—Michel Chiasson, Rose-Aline Chiasson).

Southerly winds produced a very strong early showing of southern herons. At Grand Manan a **Great Egret** was at Woodward's Cove Mar. 30+ (BED+) and also one at Whale Cove Apr. 1 (KRN+) and 2 at Bancroft Point Apr. 2 (BED). On the mainland, singles were reported at Grand Bay-Westfield Apr. 1-3 (Janet Whitehead+), St. George Apr. 2-4 (fide TD), Third Lake of the Loch Lomond lakes Apr. 9 (MJC+) and Mactaquac Apr. 11-12 (Richard Robinson; PAP, TP). A **Snowy Egret** was at Long Pond, GM, Mar. 31 (Otis Green) and 4 at various Grand Manan locations Apr. 12 (fide BED), while others appeared at Hammond River, Quispamsis, Apr. 6-15 (Joe Steele, JGW+) and Dipper Harbour Apr. 15 (JGW+). Associated with this movement was a **Glossy Ibis** at Cap Brûlé, Shediac, Apr. 2 (RAM).

An early, or perhaps overwintering, **Turkey Vulture** was seen at St. Andrews Feb. 28 (KRN). More normal arrivals were 7 at the Steele Farm vulture hotspot at Hammond River Mar. 30 (JGW), and 2 at Welsford (JE, BE) and one at Harvey, Albert Co. on Apr. 1 (NB,GB,GIB). This species also appeared in late March at Campobello Island, where 7 were present by mid April (Crystal Lahey).

Individual male "**Eurasian**" **Green-winged Teal** were noted among our North American birds at Bloomfield, Kings Co., Apr. 1-8 (JGW, JnW) and in the Jemseg area Apr. 8 (BJS). **Eurasian Wigeon** were seen at Lower Jemseg Apr. 5-8 (PAP+) and Cap Brûlé Apr. 6 (RAM).

**Redheads** again appeared at Calhoun Marsh, west of Riverside-Albert, with 2 to 3 seen Apr. 11 and 14 (DSC, EMM; RJW). There was also a male at Val-Comeau Apr. 15-17 (Robert Doiron). Adult male **Tufted Ducks** on the Saint John River at Oak Point Mar. 5 and 11 (JE, BE; DGG+) and Westfield Mar. 11 (DGG, PAP, SS) may have included Saint John's wintering bird that was seen at Marble Cove through Feb. 26 (JGW, JnW). A **Ruddy Duck** was seen Apr. 11 at Memramcook Lake (AC, Val Bourque).

A wintering male **King Eider** continued to be seen at St. Andrews through Apr. 3 and a female was there Mar. 20 (KRN). An unusual extended stay by King Eiders at Pt. Lepreau also included females, which are not often identified in New Brunswick. Three females and two immature drakes there Mar. 23 (JGW+) had increased to five and two Apr. 2 (Liam Hughes, Ernie Connell), and two and two were still present Apr. 20 (DJC). A beautiful adult male was a highlight at Pointe-Verte Mar. 31 and Apr. 2 (RG+). Single adult males passed Point Lepreau (TD+) and Cape Enrage on "SuperWatch" day, Apr. 15 (DSC).

A survey for **Harlequin Ducks** in the outer Bay of Fundy on Feb. 22 tallied 55 of them at Gull Rock, off White Head Island (BED), 40 at The Wolves and 15 at Pt. Lepreau (Dedreic Grecian+). Several Harlequins were seen frequently well into April at Pt. Lepreau and 3 were at Quaco Head, near St. Martins, Apr. 9 (Ted Sears).

An adult **Red-Shouldered Hawk** seen Mar. 5 at Woodside, near Port Elgin (NB,GB,LC), may have wintered since the area is only several kilometres from Shemogue where one has spent past winters.

A **Gyr Falcon** was reported at Tide Head in March and early April (fide MGD) and a white one was at Woodward's Cove, GM, Mar. 18 (fide BED).

One of 19 **Ring-necked Pheasants** seen during Kathy Popma's and Ruth Miller's Tantramar Marsh survey Apr. 8 had an "entirely emerald green breast and belly." Peter Hicklin reports feeding one of these male green pheasants all winter at his Sackville home. Apparently, green birds have formed a small percentage of the pheasant population in the Tantramar area for a couple of decades (fide Al Smith).

On Feb. 22 Brian Dalzell had a short look at a large, contrasty shorebird at White Head which he feels 90% certain was a **Willet** though there is a possibility it could have been a **Black-tailed Godwit**. A Willet would be most unusual in winter and that vagrant godwit has yet to be found in New Brunswick.

An adult **Laughing Gull** was a great rarity inland at Sheffield Apr. 9 (SS, JPG). Thirteen **Black-headed Gulls** at Blacks Harbour Feb. 20 (fide BED) is a very large concentration for our province.

**Lesser Black-backed Gulls**, now regular in New Brunswick but still few in number, were noted as follows; an adult at Hammond River Apr. 8-15 (JGW+) and one at Maugerville Apr. 16 (Jeremy Gullison).

Some people found that **Mourning Doves** numbers dropped considerably around their homes this winter, e.g. Shirley Sloat at Fredericton, David Owen at Riverview, Alma White in Moncton, John Hanson at Rothesay, Eldon Rogers in Miramichi, and myself at Mary's Point. Other people had continuing high numbers, such as 70 at Sackville about Feb. 13 (Kate Bredin), 42 at Frosty Hollow Feb. 27 (Nev Garrity), 35-40 daily at Memramcook (AC), and 25-30 at Shediack Bridge (NP), or only minor changes as at Blacks Harbour (KMacI) and Hartland (Kent Orlando).

Two of very few **Snowy Owls** this winter were seen Mar. 31 on an ice cake in the strait at Cape Jourmain, near Cape Tormentine, Mar. 21 (KP) and at Campbellton Apr. 9-12 (MGD+). A **Northern Hawk Owl** was a great find at Southwest Head, GM, Apr. 1 (KRN, SMO, TD). A **Long-eared Owl** was seen at Lower Jemseg Mar. 10 (AMacI).

A male **Ruby-throated Hummingbird** visited a nectar feeder at Saint John for some time late on Apr 6 (JP+) but did not re-appear. This individual was well ahead of normal arrivals here or at places hundreds of miles to the south. I haven't checked to learn whether the possibility of other species of hummingbirds was eliminated. Some western hummers migrate considerably earlier than Ruby-throats.

Wintering **Red-bellied Woodpeckers** continued their presence into April at Edgetts Landing near Hillsborough (DB), Saint-Joseph (Memramcook — RA), Saint John (JP) and at North Head, where the presence of a male and 2 females (BED) suggested that the first provincial nesting record might be found this year. A male was also seen Mar. 30 at Fredericton Junction (Fredrica Givan), where it had not been noticed since Dec. 15.

There were no March updates on the wintering **Tufted Titmice** at St. George and Woodstock and near Hartland, but there was an unconfirmed observation of one seen from the train at Bathurst Mar. 18 (Tony Bezanson). Wilma Miller checked the one reported in February at Nictau and found it to be a nuthatch — with a punk hairdo, I guess!

The **Townsend's Solitaire** that wintered at Riverside-Albert was last reported Mar. 16 (Ruth Rogers, Harriet Folkins). Another rare western visitor, a **Varied Thrush**, attended a feeder at Douglas, Fredericton, from the first week of February till about Mar. 14 (Neil Coy, DGG+).

The White Head Island **Brown Thrasher** was still present Mar. 29 (fide BED) and the one at Tracadie-Sheila was seen until Apr. 18 (Nicole Benoit).

"**Ipswich**" **Savannah Sparrows** were found at Alma Mar. 20 (RJW), at Southern Head Beach, GM (2—Carmen Roberts) and Castalia Marsh Mar. 25 (BED), and Pt. Lepreau Apr. 21 (DJC).

A male **Blue Grosbeak** made a brief appearance at a feeder

at Harvey Bank, Albert Co., Apr 16 (Ariane Inman+), while less unusual **Indigo Buntings** appeared Apr. 2-5 at Grand Manan (fide BED) and Apr. 16 at Mactaquac (SS).

Most of the flocks of **Common Redpolls** disappeared from southern New Brunswick in the first week of April but scattered small groups continued to be seen. Early spring **Hoary Redpolls** were distinguished at Taylor Village, Memramcook Mar. 10 (AC), Lower Jemseg March 12 (AMacI), Rothesay, Mar. 21 (John Hanson), Moncton in late March (Kathy Carter), Shediack Apr. 3 (2—BT), and St. Andrews Apr. 10 (KRN).

The **Long-tailed Rosefinch** (native to eastern Siberia, northern China, Korea and Japan) at Dave and Alice Baldwin's feeder at Second Falls, near Bonny River, began to call and to wander more about the neighbourhood in early March, and finally disappeared about March 15 (fide JGW).

## Amphibians

Mild late winter weather got amphibian activity under way quite early. Two frogs, presumed to be **Wood Frogs**, were hopping across the road in Albert County the evening of Feb. 29 (Denis Doucet), and 2 Wood Frogs were dead on the road at Bancroft Pt., GM, Mar. 2 (BED). Calling by this species was reported Mar. 25 at Bancroft Pt. (BED), Mar. 31 near Gagetown (SM), Apr. 3 at Alma (just 1—RJW), Apr. 7 at Mary's Point (DSC), Apr. 9 at Frosty Hollow (Nev Garrity) and Apr. 21 at Caraquet (MD). A single **Spring Peeper** was heard Apr. 3 at Alma (RJW) as was one at Caraquet Apr. 21 (MD) but there were choruses at Dieppe (RA) and Saint John (PMo) Apr. 5, at Mary's Point (DSC) and St-Joseph (RA) Apr. 7. A **Yellow-spotted Salamander** was crossing the road, near Gagetown Apr. 5 (SM).

## Plants

**Coltsfoot** flowers were reported in bloom Mar. 14 along Route 790, Lepreau area (Cecil Johnston), Mar. 29 at Milledgeville, Saint John (PMo), Mar. 31 at Fredericton (JPG), and Apr. 21 at Caraquet (MD). A single **Dandelion** began to bloom against a west wall at Saint John Mar. 27 (PMo). **Skunk Cabbage** at Upper Cape was just starting to open Mar. 29 (BT, OL).

## Abbreviations

AC Alain Clavette; AMacI Andrew MacInnis; BE Betty Evans; BED Brian Dalzell; BJS Bev Schneider; BT Bev Talor; DB Dwayne Biggar; DGG Don Gibson; DJC David Clark; DSC David Christie; EMM Mary Majka; GB Gisèle Belliveau; GIB Gilles Belliveau; GM Grand Manan; JGW Jim Wilson; JnW Jean Wilson; JPG Jim Goltz; KMacI Ken MacIntosh; KRN Kenneth Neilsen; JE Jim Evans; JP Joan Pearce; LC Léona Cormier; MD Marcel David; MGD Margaret Gallant Doyle; MJC Merv Cormier; NB Norm Belliveau; SMO Susanne Overgaard; PAP Peter Pearce; PMo Paul Mortimer; RA Ron Arsenaault; RAM Rose-Alma Mallet; RG Roger Guitard; RJW Rob Walker; SIT Stu Tingley; SM Scott Makepeace; SS Shirley Sloat; TD Tracey Dean; TP Theresa Pearce.

## ANNOTATED LIST OF SMALL MAMMALS FROM VICTORIA COUNTY, NEW BRUNSWICK

Jeff Bowman

I recently completed the field work for a four-year study of small mammal populations in the northern Appalachians of Victoria county. The project, a collaboration between the University of New Brunswick, Université de Moncton, and Fraser Paper Inc., is taking place at two sites within Fraser's freehold. The sites encompass the Haley Brook and Big Cedar Brook catchments, respectively. Other collaborators on the project are: Graham Forbes, Tim Dilworth, and Tony Diamond of UNB, and Marc-André Villard of U de M. Below I have included an annotated list of the small mammal species captured during more than 25,000 trap-nights from 1996 to 1999.

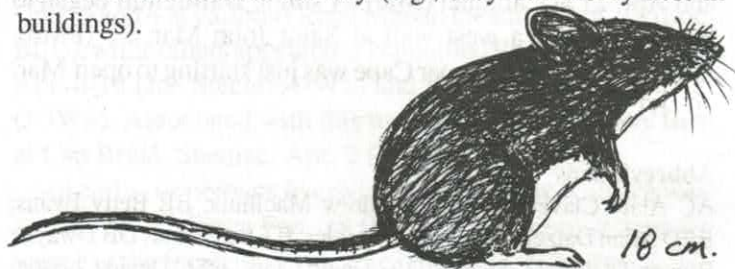
### Rodents

#### Red-backed Vole (*Clethrionomys gapperi*)

Very common (more than 2000 captures). Distributed throughout boreal North America, these voles were the most common species during the study. Primarily forest dwellers, Red-backed Voles were abundant in moist softwood stands with plenty of woody debris. Red-backed Voles use rotted stumps and logs for nesting, travelling, and foraging. Consequently, intensively managed sites lacking in structural diversity (e.g., plantations) were frequently without Red-backed Voles. A small number (less than 2%) of the voles captured were of a dark, or melanistic phase. One captured individual exhibited partial albinism.

#### Deer Mouse (*Peromyscus maniculatus*)

Very common (more than 2000 captures). With a continent-wide distribution, Deer Mice are true habitat generalists; we captured them in every type of site during the study, regardless of forest type or age. Habitat generalism allows this species to accommodate human activity (e.g., they commonly nest in buildings).



Deer Mouse populations demonstrated a tendency to irrupt during the study: year-to-year changes in abundance were as much as ten-fold. This species was recently implicated as a vector for Sin Nombre (hanta) virus.

#### Woodland Jumping Mouse (*Napaeozapus insignis*)

Common (more than 700 captures). The North American distribution of these mice is limited to the hemlock and spruce-

fir forests of the east. We found Woodland Jumping Mice to be abundant in shrubby sites with a softwood component. This mouse closely resembles the Meadow Jumping Mouse, but can be distinguished by its white-tipped tail.

#### Rock (or Yellownose) Vole (*Microtus chrotorrhinus*)

Rare (9 captures). Rock Voles are uncommon across much of their range, which is coincident with the boreal forest in North America. Rarity is likely due to habitat specificity: Rock Voles are thought to be associated with rocky sites. We captured these voles primarily in softwood riparian sites. Several were captured at one site on the side of a steep ravine. No association with rocks was detected during our study.

#### Southern Bog Lemming (*Synaptomys cooperi*)

Rare (8 captures). Southern Bog Lemmings are distributed throughout southeastern Canada and the northeastern United States, but are uncommon throughout much of this range. We captured this species in moist, softwood sites.



Physically, Southern Bog Lemmings resemble Red-backed Voles and Meadow Voles but are differentiated by smaller size and a short tail which is less than the length of the hind legs.

#### Meadow Vole (*Microtus pennsylvanicus*)

Rare (6 captures). Commonly distributed in grasslands across much of North America, these voles were rarely captured in our forested study area.

Meadow Voles eat grass seed, and this limits their distribution to sites where this type of forage is available. The Meadow Voles that we captured were in grassy, creekside sites, or in recently disturbed sites.

#### Meadow Jumping Mouse (*Zapus hudsonius*)

Rare (2 captures). Meadow Jumping Mice are widely distributed across the boreal forest region of Canada and the northern United States, however they are associated with sites having grassy or herbaceous cover. Both individuals captured during our study were in the same White Spruce plantation, which had a thick layer of grass.

## Insectivores

*Sorex* shrew captures were incidental because our trapping methodology was not designed for their capture. I expect that the *Sorex* species listed below were more abundant than our data suggest. Identification of our captured shrews to date is based on external morphology, rather than on skull and dental characteristics. For this reason, numbers of captures should only be considered as estimates.

### Masked Shrew (*Sorex cinereus*)

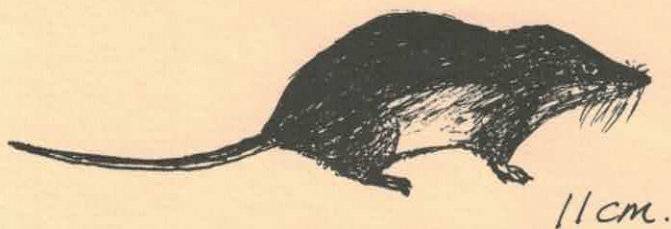
Common (more than 40 captures). This is the most common *Sorex* shrew across most of the northern United States, Canada and Siberia. Occasionally we captured Masked Shrews in moist riparian sites, however they were frequently associated with softwood plantations. Other researchers have speculated that Masked Shrews succeed in plantations because these sites offer a high density of insects.

### Smoky Shrew (*Sorex fumeus*)

Common (more than 20 captures). The distribution of Smoky Shrews is limited to the northeastern United States and southeastern Canada. Through much of this range these shrews occupy deciduous sites with abundant leaf litter. This species is likely more common in the study area than our captures indicate.

### Arctic Shrew (*Sorex arcticus*)

Rare (less than 10 captures). Arctic Shrews, widely distributed through the northern United States, Canada, and Siberia, are easily differentiated from other shrews by their tricoloured markings.



We captured a few specimens which are archived at the University of New Brunswick, but these shrews were probably more abundant in the study area than our sample suggests. Arctic Shrews occupy moist forested habitats and are important predators of insect larvae.

### Pygmy Shrew (*Sorex hoyi*)

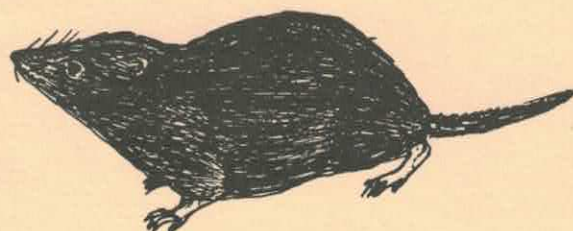
Rare (less than 10 captures). The smallest mammal in North America, Pygmy Shrews are widely distributed across the northern United States and Canada. They inhabit moist, grassy sites within forests. Based on their external morphology, we believe that a small number of these tiny shrews were included in our captures.

### Gaspé Shrew (*Sorex gaspensis*)

Rare (less than 10 captures). This species is listed as vulnerable (COSEWIC 1997), largely because it has a range that is restricted to the northern Appalachians. Gaspé Shrews are similar to the Long-tailed Shrew (*Sorex dispar*) of the more southern Appalachians, both species occupying moist talus slopes and stream beds. Based on external features, I suspect that we captured a few Gaspé Shrews, although this cannot be confirmed until skull features are analyzed. Skulls are archived at the University of New Brunswick for further investigation.

### Short-tailed Shrew (*Blarina brevicauda*)

Very common (more than 2000 captures). Widely distributed across boreal and temperate North America, these shrews were abundant in a variety of sites during our study. However,



Short-tailed Shrews were most closely associated with hardwood sites: it was apparent that hardwood leaf litter made a good substrate for burrowing. Short-tailed Shrews are notable for using echolocation, and for having toxic saliva which can incapacitate prey.

### Species not captured

There are a couple of species whose distributions are thought to coincide with our study area, namely the Water Shrew (*Sorex palustris*) and the Star-nosed Mole (*Condylura cristata*), but they were not captured during our study. Our study design was not intended to capture these two species: they are undoubtedly in the area despite not being captured in over 2500 trap-nights.

### References

- Banfield, A. W. F. 1984. The mammals of Canada. University of Toronto Press, Toronto, Ontario, 438 pages.
- Dilworth, T. G. 1984. The land mammals of New Brunswick. T. G. Dilworth. Fredericton, New Brunswick, 228 pages.

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## THE GREENING SCHOOL GROUNDS PROGRAM

Rhea Dawn Mahar

I'd like to share with you the news of an exciting new partnership. The **Tree Canada Foundation** is looking for school projects that propose innovative, action-oriented ways to educate Canadians on the environment.

The Tree Canada Foundation is inviting school communities to participate in the **Greening School Grounds Program**. The Foundation will provide, to successful applicant schools, education information, technical advice, and financial support up to \$5000 towards the implementation of an action plan to transform their school grounds into an environmentally enriched learning landscape.

The Tree Canada Foundation now has an office with the Nova Scotia Department of Education, located in the Trade Mart Building at the corner of Brunswick and Cogswell streets in Halifax, in the GED/Workplace Education section. The Greening Grounds Program is national in scope and the Nova Scotia office will serve all of the schools in the Atlantic provinces.

To assist all schools, we intent to establish a network of volunteer specialists who will act as Local Resource Persons for the schools in their area. A Local Resource Person should have one or more of the following skills or interests: landscape architecture, botany, natural history interpretation, wildlife biology, gardening, knowledge of medicinal uses of

native plants, knowledge of soil rehabilitation, horticulture, and environmental education.

Please pass this message along to any friends or colleagues whom you feel would be able to assist or participate in the program in any way.

We look forward to transforming our schools into attractive and environmentally friendly play and learning areas for our students and their neighbours. Please feel free to contact me at:

**Tree Canada Foundation  
Greening School Grounds  
Atlantic Region  
P. O. Box 2211  
Central CRO  
Halifax, NS B3J 3C4**

**Tel.: (902) 424-3107**

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