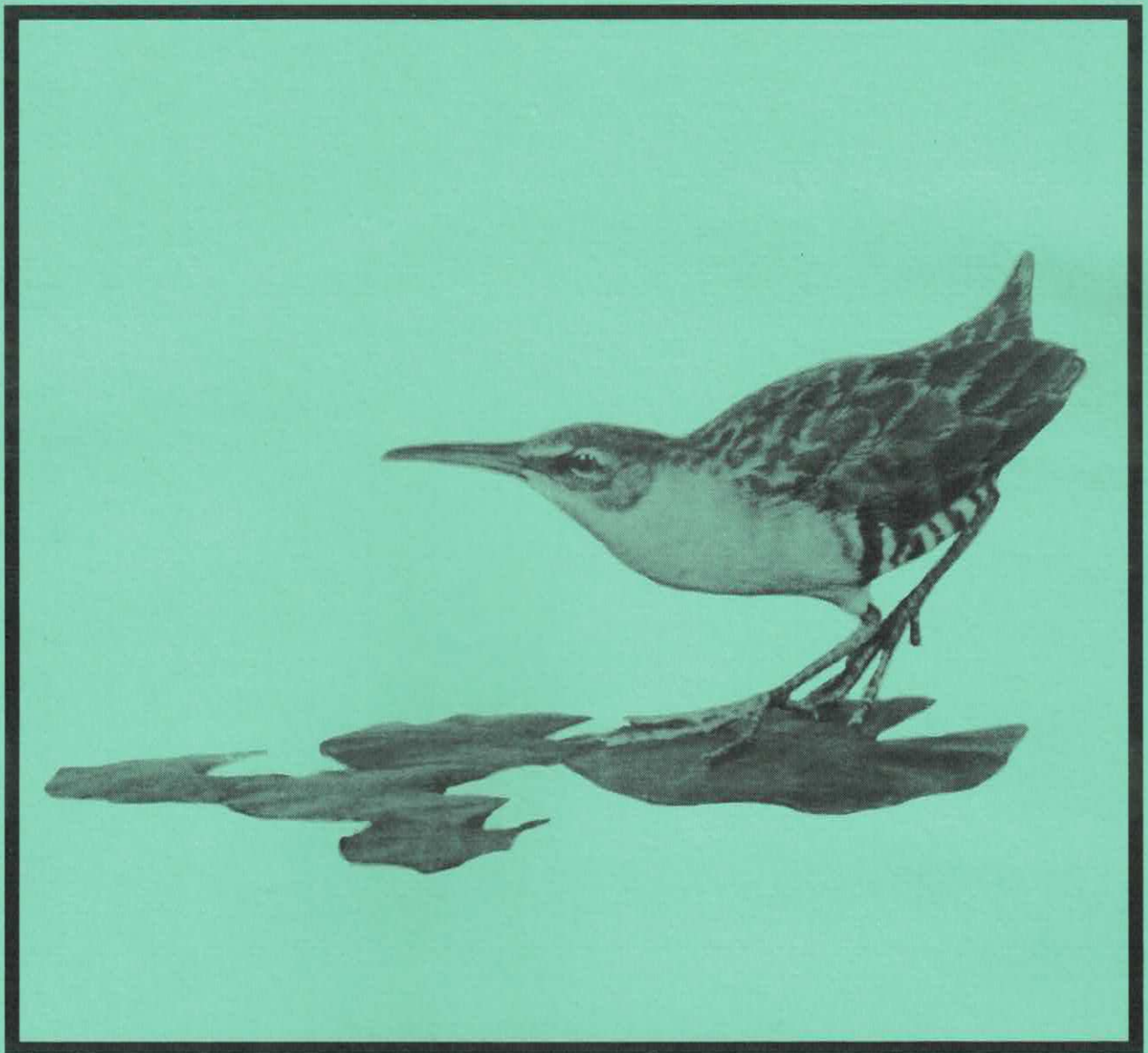




26(4) Winter / Hiver 1999-2000

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, N. B. E2K 1E5 Canada

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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Chignecto Naturalists' Club, c/o CWS, Box 6227, Sackville, NB E0A 3C0; 536-2333; meets Sackville Public Library, 7:30 pm, 1st Thur., Sept.-June.

Club des Naturalistes de la Péninsule acadienne, C.P. 2041, St. Simon NB E8P 1L8; courriel: cpna@francophone.net site web: <http://www.francophone.net/cpna>; ré à Landry proche de Pokemouche, 1er mercredi, sept. à juin; *Le Gobe-mouche* mensuel.

Club d'ornithologie du Madawaska Ltée, a/s Musée historique du Madawaska, 195 boul. Hébert, Edmundston NB E3V 2S8; Gilles Roussel (dom. 735-5430; bur. 735-2035); courriel: gilles.roussel@ext.gov.nb.ca; réunions à 19h30, 2ième mercredi, sept. à juin, Musée du Madawaska; *Le Jaseur* bimestriel.

Club l'Envolée Chaleur, 732 Rue Mario, Petit-Rocher, NB. E8J 1V6; 783-4336; réunions à 19h, 1er lundi, sept. à juin, salle d'activités (au sous-sol) de la Bibliothèque de Beresford.

Club Les ami(e)s de la nature du sud-est, a/s Gilles Bourque, 407 Rue High, Moncton NB. E1C 6E3; 532-2873 (ligne d'information); réunions alternant entre Dieppe et Shédiac, 1er lundi de chaque mois; excursions

3ième samedi ou dimanche; *La plume verte*.

Ford Alward Naturalist Association, c/o Elizabeth McIntosh, 560 Kenneth Road, Glassville, E7L 1B3; 246-5572; meets Florenceville Town Hall, 7:00 pm, 1st Tues., Sept.-June; meetings advertised in local newspapers.

Fredericton Nature Club, Box 772, Station A, Fredericton, NB E3B 5B4; 455-0569; meets Odell Park Lodge, at Odell Park, 7:00 pm, 2nd Wed., Sept.-May; monthly *Newsletter*.

Kennebecasis Naturalists' Society, c/o Ms H. Folkins, 827 Main St., Sussex, NB E4E 2N1; meets St. Paul's United Church Hall, 7:30 pm, 4th Mon., Sept.-June; quarterly newsletter.

Moncton Naturalists' Club, P.O. Box 28036, Highfield Square, Moncton, NB E1C 9N4; 384-6937 (information line); meets Church of the Nazarene, 21 Fieldcrest Drive, 7 pm, 2nd Wed., Sept.-June; monthly newsletter.

Restigouche Naturalists' Club, c/o Campbellton Library, Box 130, Campbellton, NB. E3N 3G9; 684-3258; meets Campbellton Centennial Library, 7 pm, 1st Monday

Saint John Naturalists' Club, P.O. Box 2071, Saint John, NB. E2L 3J5; meets N.B. Museum at Market Square, 7:30pm 2nd Wed., Sept.-May, elsewhere in June; monthly newsletter.

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On peut lire dans *Le Naturaliste du N.-B.* des rapports touchant l'histoire naturelle du Nouveau-Brunswick. Les articles seront acceptés en français ou en anglais pour être reproduits dans la langue d'origine. Les opinions exprimées sont celles de leurs auteurs. **Veillez faire parvenir toutes articles pour Le Naturaliste du N.-B. à: Irene Doyle, 6 Van Horne Cr., Campbellton, NB E3N 3K3; tel. (506) 789-7759, colector@nbnet.nb.ca** Demandez les détails de compatibilité d'ordinateur. Tarifs publicitaires disponibles sur demande.

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In This Issue / Dans ce numéro

Cover: Virginia Rail Carving by Jim Edsall, judged "Best of Show, Open Class Division, NSWCAA Competition 99."

A Message From The President / Un Message De La Présidente	92
Botanists of New Brunswick / Les Botanistes du Nouveau - Brunswick	93
2000 - Year of the Ptarmigan	94
Christmas Bird Count - 1999-2000	96
Nest utilization by Bald Eagles in New Brunswick	107
Mary's Point shorebird reserve	110
Minutes of NBFN Director's meeting	112
NBEN Environmental Fair / RENB Foire d'éducation environnementale	115
Botany Quiz	116
Un coin de ma région	117
Round-headed Bush-clover	118
A Birder's Folly	119
New Vascular Plants for the Province	120
Un Gros Merci / A Big Thank You	122
Nature News	123
Fundy Model Forest - Partners in Sustainability	127

Important Dates: NBFN AGM: June 2-4, 2000

Dates Importantes: AGA de la FNN-B: 2-4 juin, 2000

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 the next issue by April 1, 2000

S. v. p., soumettez les articles à l'intention du prochain numéro avant le 1^{er} avril, 2000.

to / à: Irene Doyle, 6 Van Horne Cres.

Campbellton NB E3N 3K3

(506) 789-7759

colector@nbnet.nb.ca.

A MESSAGE FROM THE PRESIDENT - UN MOT DE LA PRÉSIDENTE

Pierrette Mercier

In the early 90's an idea was conceived to convert abandoned railway lines into a multi-use trail system for the public to enjoy. One of the goals of this project was to encourage people to get out and exercise while enjoying our natural heritage and promoting family activities. A part of this trail system would also become part of the Trans Canada Trail. It was a great idea and people donated money and time to build these trails. Rail ties were pulled, gravel was shovelled, trees and flowers were planted where the trails passed through communities. Once completed the trail system will measure close to 2,000 kilometres in length covering all parts of the province.

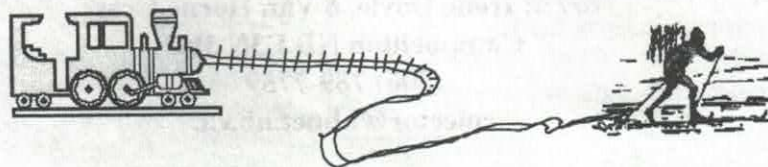
People had free use of the trails for walking, hiking, cycling, horseback riding, cross country skiing and snowshoeing. It was great. However, since last year, the NB Federation of Snowmobile Clubs (NBFSC), started leasing parts of the Sentier-NB-Trails system for their exclusive use from November 15 to April 15. This means that 5 months of the year the NBFSC can require any trail user to possess a trail permit and prohibit any other use of the trails other than snowmobiles. This year, the NBFSC has leased over 800 kilometres of the trail system for their exclusive use. I don't believe the NBFSC would go so far as forbidding people to walk on the trails during the winter months but have you ever tried walking on a narrow trail with your toddler or your golden retriever with snowmobiles whizzing by at 90 km/hr?

A trail passes in front of my house where I have taken my 3 dogs (one of which is deaf) for their daily run for the past 10 years. In winter the snowmobilers use the trail. The snowmobilers I have met on the trail have always been courteous and slowed down, but on the weekend when over 100 snowmobiles are out on the trail, it becomes dangerous to walk and very noisy. So in winter, I've given up walking on this trail. This trail is not part of the Sentier-NB-Trails system so I have never complained but when they are permitted exclusive use of the Sentier-NB-Trails System I find it unfair to those supporters that gave their time and money for a trail that is restricted to a small portion of the population for half of the year. I understand that snowmobilers bring a lot of tourism dollars to the province but to the inconvenience of the rest of the population.

Au début des années 90', une idée a été conçue de convertir les lignes ferroviaire abandonnées en système de sentier à usage multiple pour le public. Un des buts de ce projet était de promouvoir l'esprit de famille et de communauté ainsi que encourager les gens à faire de l'exercice tout en appréciant notre patrimoine naturel. Une partie de ce système de sentier ferait aussi partie du Sentier Trans-Canadien. C'était une bonne idée et les gens ont fait des dons de temps et d'argent pour construire les sentiers. Une fois complété, le système de sentiers couvrira proche de 2,000 kilomètres.

Le public a toujours eu accès libre aux sentiers pour la marche, le cyclisme, l'équitation, le ski de fond, la raquette, etc. Cependant, depuis l'an dernier la Fédération des clubs de motoneigistes du NB (FCMNB), loue des sections du réseau Sentier-NB-Trails pour leur usage exclusif du 15 novembre au 15 avril. Ceci signifie que pour une période de 5 mois par année, la FCMNB a le droit d'exiger que tout usager doit détenir un permis pour utiliser les sentiers et d'interdire tout autre usage sauf les motoneiges. Cette année, la FCMNB a loué plus de 800 km de sentiers faisant partie du réseau Sentier-NB-Trails. Je ne crois pas que la FCMNB empêcherait une personne de marcher sur les sentiers, mais ce n'est pas trop intéressant de marcher avec un bambin ou notre petit chien lorsque des motoneiges voyagent à des vitesses excédant 90 km/hr passent à quelques pieds de nous.

Un sentier passe proche de ma maison, où depuis 10 ans je marche avec mes 3 chiens. En hiver, les motoneiges utilisent ce sentier. Les motoneigistes que je rencontre sont toujours courtois et ralentissent aussitôt qu'ils me voient; mais les fins de semaines, j'ai déjà compté au delà de 100 motoneiges en une journée, le sentier devient trop dangereux et bruyant pour moi alors en hiver, je marche pas. Ce sentier ne fait pas partie du réseau public de Sentier-NB-Trails alors je ne me suis jamais plaint mais je trouve ça injuste pour ceux qui ont participé au développement des sentiers publics en croyant qu'ils en auraient toujours accès pour leur activité et que aujourd'hui seulement un groupe restreint des Néo-Brunswickois en ont accès pendant presque la moitié de l'année. Je suis consciente que les motoneigistes apportent de tourisme et d'argent à la province mais est-ce que ce doit être au détriment de la majorité de la population?



Inaugural Meeting/ Réunion inaugurale
Botanists of New Brunswick
Les Botanistes du Nouveau- Brunswick

featuring/avec présentation bilingue

Stalking the Imperiled! A la quête des espèces en péril!



Pinedrops

(*Pterospora andromedea*)

One of New Brunswick's
Endangered Plants

Drawing by Karl Urban,
Umatilla National Forest, OR

The Loch Ness may have its mystery, but the corners of New Brunswick harbour their own secrets and treasures. Tucked away in our waters, wetlands and forests are eight elusive species of vascular plants - so elusive, that few people can claim to have seen all of them. Join us on an armchair adventure as we stalk the habitats of Big Quills, Pinedrops, Parker's Pipewort and others. We will visit each of these eight endangered species through slides and anecdotes - no bug repellent required.

This presentation and the following discussion will constitute the inaugural meeting of Botanists of New Brunswick (BNB) - an organization geared towards promoting the enjoyment and knowledge of field botany in the province. Whether you are a novice looking for an opportunity to get your feet wet, or an experienced professional looking to network with others, we hope that BNB will provide a forum for your interests.

As a sample of other possible activities, we are planning two field trips for the summer, led by local experts. The first, (tentatively July 8) is scheduled to catch bog orchids in peak bloom in the northeastern corner of NB. The second, August 12, will complement efforts to locate populations of rare plants along the middle St. John River.

Les Botanistes du Nouveau-Brunswick

On vous invite à la réunion inaugurale des Botanistes du Nouveau - Brunswick (BNB), un nouveau organisme visant la promotion de la botanique dans la province. Que vous soyez novice ou expert, le BNB peut offrir des activités à vos goûts. Parmi des possibilités on compte des excursions pour botanistes de tous les niveaux, ainsi que l'établissement d'un réseau pour le partage des connaissances de la flore de la province.

Pour bien commencer, nous vous offrirons trois activités, dont une présentation bilingue et deux excursions d'été. La présentation fera partie de la réunion inaugurale. A l'aide des diapositives et des anecdotes nous visiterons les recoins où se cachent les 8 espèces de plantes vasculaires en danger de disparition de la province. Une excursion sans moustiques - on vous le garantit.

Le 8 juillet nous visiterons des tourbières de la Péninsule Acadienne. Nous avons choisi cette date pour capter les orchidées en pleine fleur. Le 12 août nous participerons à l'inventaire des plantes rares de la vallée de la rivière Saint-Jean, en botanisant des endroits pré-sélectionnés.

Saturday, April 15,

1:00 to 4:00

**Ancillary Building, Hugh John Flemming
Forestry Complex, Fredericton**

le samedi 15 avril

13h00- 16h00

**Bâtiment annexe, Le Centre Forestier Hugh
John Flemming, Fredericton**

Contact person/Personne -ressource: Sean Blaney sean.blaney@ec.gc.ca Téléphone 364-5047/536-2187.

2000 - YEAR OF THE PTARMIGAN

Cheryl Davis, Wabush, Labrador, (formerly of Riverview, N.B.)

In 1997, during our first winter in Western Labrador, a friend of mine told me stories of a huge Willow Ptarmigan invasion that she had experienced during her first winter in Labrador. When relating her story, she also told how a huge number of the birds were hunted and how such quantities were never seen in the winters that followed. Not knowing much about the Ptarmigan, it was easy for me to think that over hunting had simply depleted the species.

Now, two winters later and 10 years after my friend first moved here, the Willow Ptarmigan is back in unbelievable numbers. So what happened? How can a bird like the Ptarmigan be barely around one winter and then appear in the thousands only a few years later?



Willow Ptarmigan
Photo by Cheryl Davis

While we lived in N.B., I was used to seeing the Ruffed Grouse, a bird which usually scared the day-lights out of me if flushed while I was walking in the woods. The Willow Ptarmigan, part of the grouse family, doesn't remind me a bit of its cousin while in flight. It has a beautiful, graceful flight and is fully capable of staying together in small flocks while flying over trees, houses and large areas looking for willows. In size, it is a little smaller than the Ruffed Grouse. The big difference is in winter, when the Ptarmigan changes to pure white, except for its coal black eyes and beak, as well as two small patches of black on its tail feathers that can only be seen when the bird fans its tail. When the Ptarmigan settles down in the snow it is almost impossible to see unless moving.

At one point during my search for more information

about the Ptarmigan, I found out that their population cycle peaks in Newfoundland every 10-11 years. Now my friend's story was starting to make more sense. Her first winter here was 1989-90.

Did the population simply explode from the 1998-99 winter to the 1999-2000 winter? Yes and no. During the 1997-98 winter, Ptarmigan were far and few between and I never saw one. Last winter on our 1998 Christmas Bird Count (CBC), I saw my very first and our group total for the day was 17. During the most recent CBC of 1999 our group total for the day was 388. So it appears that once the population crashes it slowly builds up over 10 years to what we have seen this winter. Next winter I'm expecting about the same numbers that we had last year, then hardly any birds for several years to come.

What I don't know is why their great numbers seem to be only in Western Labrador. The Happy Valley - Goose Bay CBC, 526 km to the east of us only had one Willow Ptarmigan counted. A wildlife officer travelling from Goose Bay towards Wabush just prior to Christmas didn't encounter Ptarmigan until Churchill Falls, 238 km to the east of us, but really didn't see a lot of birds on the road until 15-20 minutes outside of Wabush. So it seems that the abundance of this species is restricted to this area for this winter. Since Western Labrador is virtually uninhabited except for Labrador City, Wabush and the private cabins in the outlying region, it is hard to know exactly the scope of the invasion.

What I do know for sure is that these birds are simply a joy to watch. Depending on conditions, they either plow through or over the snow like chickens on snowshoes. While they are feeding in and around willow bushes, they are in no rush. But when they are on open snow and see cover they tend to stick out their necks and take off at full speed for the nearest bush.

Sometimes I can hear them crunching on the willows long before I can see them. They are never in a hurry to stop picking up grit off the road, which sometimes results in a serious injury or death. I have also noticed that when a bird is separated from the others, it has a hen-like soft cooing call and while feeding, it makes a grunting or wheezing noise that is hard to describe.

On some days the local airport has seen large flocks of over 50 birds arrive to feed on the willows skirting the airport property. Eventually the birds make their way to the runway looking for grit, creating a dangerous situation for incoming and outgoing aircraft.

On December 1, 1999 from my living room window, my

son and I saw our first Willow Ptarmigan for this winter season and since that date I have seen a Ptarmigan almost everyday until the end of February when this article was written. Wildlife officers and individuals who lived in the area 10 years ago, all agree that the Ptarmigan invasion into the Towns of Wabush and Labrador City surpass the invasion my friend remembered. Still, I don't want to give the impression that there was a Ptarmigan sitting on every snowbank and in every willow bush, at any time of the day, all winter long. On average, small flocks of 20-50 birds were seen here and there but not everywhere all the time. On the odd day, not a single bird was to be seen.

I don't know whether it is because most people I know are familiar with my interest in birds or because the Ptarmigan have been so widely seen by so many local residents, but everyone has enjoyed telling me their Ptarmigan stories. "There was a flock of Ptarmigan on the road today." "A Ptarmigan was sitting on my truck today." "I got pictures of the Ptarmigan in our yard today." One way or another the charming Ptarmigan have made their impression on the local human population.

My husband became accustomed to seeing me tear out the door with camera in hand, to try again and again for that "perfect Ptarmigan photo". It isn't easy to get a decent picture of a white bird on snow.



Willow Ptarmigan
Photo by Cheryl Davis

Most of my Ptarmigan observations have been made in and around our yard. On some days it was not uncommon to see Ptarmigans feeding on the willows behind our fence, and then to have them land in the yard, driveway or coming up the walk. Sometimes it was comical to have one arrive in the backyard when there was still a couple feet of the fence poking up through the snow, for though the Ptarmigan could

see through the slats and knew that it wanted to be on the other side of the fence, it couldn't figure out how to obtain its goal. One day I watched a bird pace back and forth like a lion in a cage for over 20 minutes before it dawned on him to simply fly over the pickets.

I never grew tired of watching the birds in action. One day a flock of over 30 appeared on the side hill across from our house. Besides bobbing up and down while feeding on willows near ground level or hanging off twigs 6 feet in air, four of them were feeding 30-40 feet up on what appeared to be a poplar tree. This made me ask such questions as, ... is there enough native food in the area to sustain such a massive invasion until spring migration? Will there be enough food between here and their breeding grounds? And what will cause their eventual crash? Food shortage, disease or predation? And, are they finding other food sources as willow buds become more scarce or do they just like a change of diet? For the first time the other day a lone Ptarmigan in our yard appeared to be picking up and eating black-oil sunflower seeds that were scattered on the snow.

Unfortunately, because these trusting souls have no fear of man or machine, many Ptarmigan have landed in a stewing pot. With a bag limit of 25 birds per day per person, it is hard to say how many Ptarmigan have been harvested. Time will tell as to whether or not garbage bags of discarded birds will arrive at the local incinerator to be destroyed when people decide to clean out their freezers over the next 6 months.

No doubt that besides man, the Ptarmigan were being hunted by the Northern Goshawk seen during our CBC count week. Other predators would also include the local fox and wolf populations. Not long ago an Arctic Fox was hit and killed on the Trans Labrador Highway somewhere around Churchill Falls. Was this beautiful white fox, which is an exceptionally rare find in this area of Labrador, following and hunting the Ptarmigan?

The year 2000 will be remembered for many things by many people, but for me it is the "Year of the Ptarmigan". A year that I will never forget and one that I feel privileged to have experienced.

Gotta go! Just saw a Ptarmigan waddle up to our yard. Maybe he's looking for more sunflower seeds.

Editors note: "Cheryl lives in Wabush with her husband Clark and their two young sons Benjamin and Zachary. They moved to Wabush from Riverview N.B. when Clark was transferred to the local airport as a Flight Service Specialist with NavCanada. Cheryl is a homemaker when she isn't bird watching, taking photos, or doing the MNC monthly Newsletter.

CHRISTMAS BIRD COUNT — 1999-2000

David Christie

Forty-five Christmas Bird Counts were conducted in New Brunswick this winter. Mild weather conditions from mid November through mid December contributed to a large variety of species reported. The counts reported here tallied 154,781 birds of 137 species (plus 8 additional during count period). Two more, **Dunlin** and **American Woodcock**, were found on the Lepreau count (for which the final report has not been received) making a record 139 species on count day.

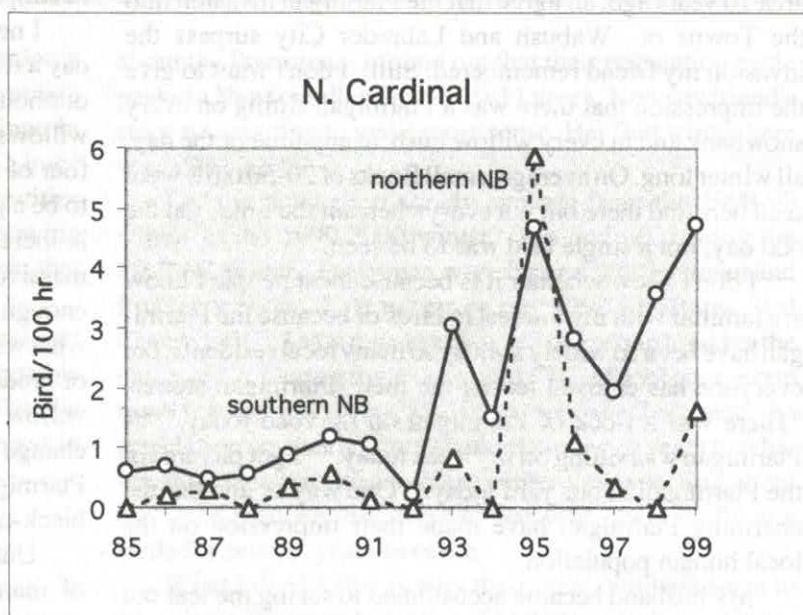
A lot of places found more species than they normally do. This was especially true along the unusually ice-free east coast, where 7 of 9 counts from Cape Tormentine to Caraquet established new records.

A **Long-billed Dowitcher** (Saint John) and a **Cattle Egret** (Grand Manan) during count period were the first mentions for New Brunswick counts. Two other species, **Northern Shoveler** (Shediac) and **Turkey Vulture** (Cambridge-Narrows), were found for the first time on count day. There were also count period records of each. Probably it's the beginning of trend for the vulture which is increasing northwards. A **Rose-breasted Grosbeak** (Restigouche) photographed at a feeder during count period is the first well-documented record in New Brunswick during winter, but one was at a feeder in the American portion of the Eastport-Campobello count in 1978. A **Yellow-headed Blackbird** (Moncton) was also a second record for our counts.

Each winter brings invasions and withdrawals. A general scarcity of tree seeds across eastern Canada sent most of our nesting finches, such as **Pine Siskin** and **American Goldfinch**, well southward while we received northern ones in their place: **Common Redpoll** and **Pine Grosbeak** (but fewer grosbeaks than had been present in November). Faced with a local shortage of seeds, the redpolls flocked to feeders, and a few **Hoary Redpolls** were counted among them.

This year, there were also notable influxes from the north of **Bohemian Waxwings** (in southern N.B.) and **Northern Shrikes** (4 years after their previous peak) and from the southwest of **Northern Cardinals**, **White-breasted Nuthatches** and a significant number of **Red-bellied Woodpeckers** (at least 10, if you include the count period birds).

House Finches remain centred in Saint John and Moncton, but also appeared northwards at Buctouche and



Edmundston, and were found during count period on the Restigouche.

Because of the scarcity of seeds, observers often noted that there were few songbirds away from feeders. The **Black-capped Chickadee** population stayed about the same as last year, but **Boreal Chickadee** numbers were low. **Red-breasted Nuthatches** were prominent, especially at feeders. **Brown Creepers** shot up in the south, but were low in the north. About average numbers of **Golden-crowned Kinglets**, **Gray Jays** and **Blue Jays** were found throughout.

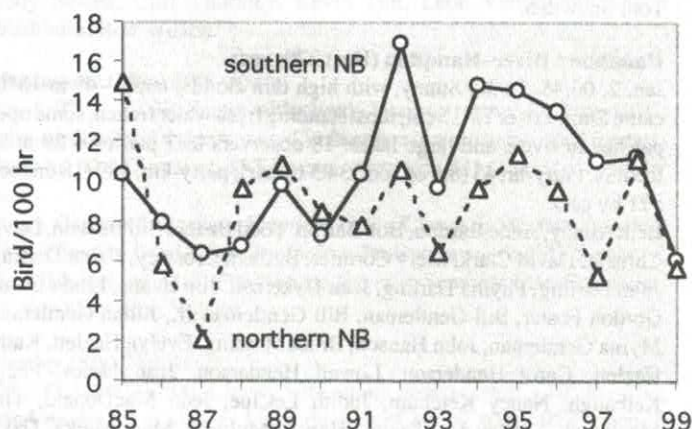
Most species of sparrows were relatively scarce, but **Snow Buntings** were above average in the north.

Common Ravens seem to be declining in northern New Brunswick, but their numbers are holding fairly steady in the south where there was a decline during the 1980s. **American Crow** numbers dropped this winter but remain above those typical a decade ago.

Although **Downy** and **Hairy woodpeckers** increased in the north, **Pileated Woodpecker** was below average there, while found in good numbers in the south. Note how **Black-backed** and **Three-toed woodpeckers** were concentrated in the northern highlands.

The fact that fewer **Ring-necked Pheasants** were counted than usual may be more a result of them being less conspicuous with little or no snow on the ground than of reduced numbers. **Ruffed Grouse** numbers seem at or near a low in their cycle. **Mourning Doves** and **Rock Doves** dropped somewhat from the previous year but are still high

Ruffed Grouse



compared to long-term levels.

Among raptors, **Red-tailed** and **Rough-legged hawk** counts were above average and a few were found farther north than normally. **Sharp-shinned Hawks** were numerous in the southern part of the province, closer to average in the north. More **Barred Owls** were reported than usual and **Great Horned Owls** were also numerous, but only in the south. It was a low year for **Snowy Owls**, but three **Gyr falcons** and a **Northern Hawk Owl** (Edmundston) were found.

The greater amount of open water this season must have been responsible for some of the variation from normal in numbers of several water birds.

Common Loon counts were low but the numbers of **Horned** and **Red-necked grebes** and **Great Cormorants** were above average. More than a dozen **Double-crested Cormorants** lingered in this mild season.

Several species of ducks were more numerous than usual. Note especially the number of places that reported record counts of **Am. Black Ducks**. **Common** and **Barrow's goldeneyes**, **Common Eider**, and **Common** and **Red-breasted mergansers** were all more numerous than normal. The **Greater Scaup** count was high but they were almost all at Shediac. A considerable number of **Canada Geese** remained into, or migrated through during, late December.

As last winter, the mildness of the pre-count season probably accounts for a high number of **Bonaparte's** and **Ring-billed gulls**. **Great Black-Backed Gulls** were also more common than normal.

Grand Manan again produced a high count of **Razorbills**. Aside from the usual **Black Guillemots**, other alcids were scarce.

Abbreviations and footnotes to the tables

Species bold faced: first on N.B. CBCs

Number bold faced: local CBC record high

Number in italics: no details or details not fully convincing

* recorded during count period

highest number a provincial record

a 2 gull sp., 1 crossbill sp.

b 1 hawk sp.

c 14 sparrows sp.

d incl. 1.5 hours, 10 km by boat

e incl. 0.25 hours, 2.9 km by boat

f y compris 6.5 h, 51 km à vélo

g 1 hawk sp., 6 finch sp.

h 1 songbird sp.

i 20 crossbill sp.

j 1 meadowlark sp.

k incl. a Cattle Egret

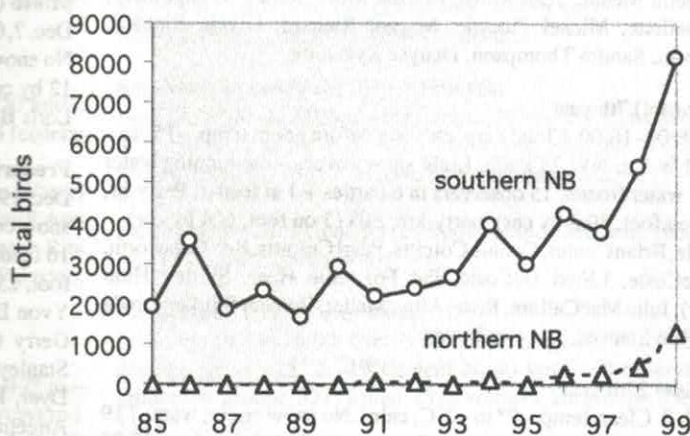
++ much above average numbers

+ above average numbers

- below average numbers

-- much below average numbers

Am. Black Duck



Results of the Miramichi, Dalhousie, Restigouche, and inland counts are presented in the first two pages of tables.

Miramichi (Mir) 28th year

Dec. 27, 08:15–16:00. Cloudy; temp. -10° to -5°C ; wind NW, 5–10 km/h. 6 cm snow cover; river 80% frozen but still some large stretches of open water. 10 observers in 4 parties + 38 at 38 feeders; Party-hr, 16 (10 on foot, 6 by car); party-km, 153 (15 on foot, 138 by car).

Margaret Adams, Mrs. William Arnoldus, Joyce Atkins, Dave Baldwin, Jeep Bosma, Eileen Bransfield, Eleanor Breau, Monica Charnley, Winston Churchill, Florence Currie, Gregg Currie, Rodney Currie, Barbara Digdon, Tom Greathouse, Mary Alma Harrigan, Linda Hartlen, Walter Holland, Joan Houston, Gene Kukulski, Richard Landry, Robert Lisk, Irene Loggie, Margaret MacKinnon, Theresa McKnight, Donna McDonald, Georgia McLean, Dave McLeod, Cathy Mercier, Madeleine Morrisette, Betty Muzzeroll, Walter O'Toole, Dave Pickard, Frank Power, Ed Rawlinson, Mary Rawlinson, Mickey Reynolds, Lionel Richard, Eldon Rogers, Art Ronan, Theresa Ross, Jim Saunders, Delta Steeves, Hayward Sturgeon, Doug Underhill, Harry Walker (compiler), Jens Walker, Stewart Walker, Margaret Wheaton, Bun Worrell.

Dalhousie (Dal) 15th year

Jan. 2, ?–?. Hazy sun am, overcast pm; temp. -6°C ; wind NE, 0–10 km/h. 100% snow-cover; freshwater 100% frozen, floating ice plates in estuary and bay. 16 observers in 6 parties + 6 at 6 feeders; Party-hr, 25.5 (10 on foot, 15.5 by car); party-km, 157 (21 on foot, 136 by car).

Artie Ahier, Ruth Bulmer, Raymond Chiasson, Jason Clifford, Jim Clifford, Ray Clifford, Irene Doyle, Margaret Gallant Doyle, Bob Gillis, Greg Guidry, Ann Lavoie, Mike Lushington (compiler), Pat McGorlick, Michel Plourde, Andy Watson, Denyse Zyveniuk.

Restigouche (Rst) 10th year

Dec. 18, 08:00–16:00. Partly cloudy; temp. -15° to -10°C ; wind W, ? km/h. 7–8 cm snow cover; fresh water open. 20 observers in 11 parties + 19 at 18 feeders; Party-hr, 88 (? on foot, ? by car); party-km, 530 (92 on foot, 438 by car).

Gilberte Bélanger, Wallace Best, Jean-Paul Breton, Ruth Bulmer, Jean Casey, Raymond Chiasson, Emily Clavette, Pierre D'Amour, Exie Delaney, Odile Doiron, Irene & Margaret Gallant Doyle (compilers), Lisette Drapeau, Carole Dubé, Douglas Firlotte, Jean Gallant, Greg Guidry, Sandra & Tom Gulliver, Jim Katan, Flora Kelly, Edgar Landry, Ann Lavoie, Alan MacNeish, Alan Madden & family, Don & Isabelle Mann, Noella Meade, Jean Miles, Marina Mills, Renée Montgomery, Roger Ouellette, Michel Plourde, Margot Richard, Ulysse Richard, Gladys Swan, Sandra Thompson, Denyse Zyveniuk.

Salisbury (Sal) 7th year

Dec. 29, 08:00–16:00. Cloudy am, clearing before noon; temp. -15° to -5°C ; wind W 5 to NW 25 km/h. Light snow cover; some running water open, still water frozen. 15 observers in 6 parties + 1 at feeder; Party-hr, 40.5 (1.2 on foot, 39.3 by car); party-km, 605 (3 on foot, 604 by car). Chris Antle, Brian Coates, Connie Colpitts, Pearl Colpitts, Bob Cotsworth, Jackie DeCoste, Lloyd DeCoste, Pat Fox, Sue Hoar, Shirley Hunt (compiler), Julia MacCallum, Rose-Alma Mallet, Heather Silliker, Linda Steeves, Ron Steeves.

Sussex (Ssx) 27th year

Dec. 19, ?–?. Clear; temp. -7° to -2°C ; calm. No snow cover; water ? 19 observers in ? parties + 2 at 2 feeders; Party-hr, 56.25 (23.5 on foot, 32.75 by car); party-km, 541 (27 on foot, 514 by car).

Tom Anderson, Mike Antle, Gart Bishop, Marvin Bradstreet, Jim Brown

(compiler), Darren Byers, Anne Candy, John Candy, Don DeLong, Anthea Doyle, David Hughes, Judy Hughes, Carol MacFarlane, Lauring MacNutt, Paul Martin, Barry McPhee, Jim McQueen, Wendy Rodgers, Tom Snowden.

Hammond River–Hampton (Htn) 27th year

Jan. 2, 06:45–16:30. Sunny, with high thin clouds; temp. -4° to $+3^{\circ}\text{C}$; calm. Snow cover 10–15 cm; most standing fresh water frozen, some open patches in rivers and large lakes. 18 observers in 7 parties + 29 at 27 feeders; Party-hr, 43 (8.5 on foot, 34.5 by car); party-km, 589 (18 on foot, 571 by car).

Beth Allaby, Anne Bardou, Bob Barton, Todd Beach, Bill Brittain, David Christie, David Clark, Merv Cormier, Barbara Crossley, Helen Darling, John Darling, Phyllis Darling, Jean Dykeman, Jim Evans, Linda Ewart, Gordon Foster, Bill Gentleman, Bill Gentleman Jr., Jillian Gentleman, Myrna Gentleman, John Hanson, Bruce Harding, Evelyn Hazlett, Kathy Hazlett, Carol Henderson, Lowell Henderson, Jean Isaacs, Peggy Kelbaugh, Nancy Ketchum, Judith LeClue, Jean MacDonald, Tina MacIntosh, Shirley MacTavish, Harvey McLeod, Mary Majka, David McCurdy, Bill McKay, Bill Nowlan, Juliette Nowlan, Geoff Sayre, Janet Whitehead, Peter Wilshaw, Brian Wilson, Gretchen Wilson, Jean Wilson, Jean Wilson (sr.), Jim Wilson (compiler), Phil Withers, Jan Wright.

Cambridge–Narrows (C-N) 30th year

Dec. 31, 08:30–16:30. Clear; temp. -17° to -13°C ; wind W, 15 km/h. Light snow cover; lakes frozen, brooks partly open. 11 observers in 5 parties + 20 at 16 feeders; Party-hr, 21.5 (5 on foot, 16.5 by car); party-km, 271 (12 on foot, 259 by car).

Marion Belyea, Betty & Winston Carpenter, Jean Carpenter, Marie Carpenter, Merle Carpenter, Pauline Chase, Thora & James Connell, Wayne Friars, Dorothy Graham, Sandra Hamilton, Margaret & Alan Hicks, Enid Inch (compiler), Rhoda Inch, David & Debora Kantor, Phil & Marlene Landry, Dot McConnachie, Elva McConnachie, Faye & Owen McCormack, Mildred Moss, Nellie Perry, Joyce Robinson, Jacqueline Straight, Joyce & Niven Thorne, Walter Thorne.

Jemseg (Jem) 37th year

Jan. 2, 07:45–16:45. Overcast, with light flurries in late morning; temp. -4° to $+2^{\circ}\text{C}$; wind variable, 5 km/h. Light snow cover; some open water in larger water bodies. 13 observers in 6 parties; Party-hr, 40.5 (17.5 on foot, 23 by car); party-km, 358.6 (31 on foot, 327.6 by car).

Marie Carpenter, Rod Currie, Don Gibson, Jim Goltz, Enid Inch, Yvette Kerry, Don MacDougall, Milda Markauskas, David Myles, Peter Pearce, Joyce Robinson, Shirley Sloat, Owen Washburn (compiler), Ron Wilson.

Minto (Min) 11th year

Dec. ?, 08:30–16:00. Clear with cloudy periods; temp. -10° to 0°C ; calm. No snow cover; water?. 6 observers in 2 parties; Party-hr, 16 (4 on foot, 12 by car); party-km, 67 (9 on foot, 58 by car).

Loris Boucher, Ann Boucher.

Fredericton (Ftn) 44th year

Dec. 19, 07:00–17:00. Sunny; temp. -14° to -3°C ; wind W, 10 km/h. No snow cover; River open, ponds frozen. 11 observers in 5 parties + 20 at 16 feeders; Party-hr, 21.5 (5 on foot, 16.5 by car); party-km, 271 (12 on foot, 259 by car).

Yvon Beaulieu, Moira Campbell, Eric Carr, Fred Carson, Mike Casey, Gerry Clayden, Leta Clayden, Christine Cornell, Merlene Crawford, Stanley Crawford, Rod Currie, Elizabeth Diamond, Tony Diamond, Lucy Dyer, Katie FitzRandolph, Don Gibson (compiler), Margaret Gibson, Angélique Gloss, James Goltz, Charles Graves, Heidi Grein, Lorie Holland, Yvette Kerry, Gisèle LeBlanc, Morris Lemire, Susan Little, Tony Little, David Lounsbury, Sara Lounsbury, Cathy MacLaggan, Milda Markauskas, Brian McEwing, Diane Mercier-Allain, David Myles,

Murray Neilson, Paul Nicholson, Jean Noble, Jim Noble, Margie Olive, Peter Pearce, Wendy Rogers, Dwayne Sabine, Mary Sabine, Bev Schneider, Marc Schneider, Bill Seabrook, Jane Seabrook, Shirley Sloat, Rudy Stoczek, Cliff Thornley, Kevin Tutt, Leon Vietinghoff, Owen Washburn, Ron Wilson.

Mactaquac (Mac) 20th year

Jan. 1, 07:30–17:30. Sunny with cloudy intervals; temp. -25° to -10°C ; calm. Ground and water frozen. 15 observers in 6 parties + 3 at 3 feeders; Party-hr, 42.5 (7 on foot, 35.5 by car); party-km, 431 (19 on foot, 412 by car).

Moir Campbell, Barbara Clayden, Gerry Clayden, Stephen Clayden, Susan Clayden, Don Gibson, Jim Goltz, Charles Graves, David Lounsbury, David Myles (compiler), Peter Pearce, Beverley Schneider, Marc Schneider, Shirley Sloat, Ron Wilson.

Stanley (Sty) 25th year

Dec. 27, 08:00–17:00. Cloudy with sunny breaks; temp. -10° to -5°C ; wind moderate to strong. Light dusting of snow, water 95% open. 8 observers in 3 parties + 5 at 5 feeders; Party-hr, 17.25 (6.25 on foot, 9 by car); party-km, 265 (9 on foot, 256 by car).

Dena Corey, Thelma Fairly, Jim Goltz, Jeremy Gullison, Roger Ince, Ruth Munn, David Myles, Uda & Oro Ross, Margie Pacey, Julie Singleton (compiler), Shirley Sloat, Robert Whitney.

Woodstock (Wsk) 36th year

Dec. 27, 09:00–17:00. Clear; temp. -8°C ; wind 8 km/h. Ground snow-covered; no open water. 12 observers in 6 parties + 28 at 26 feeders; Party-hr, 30.25 (9.25 on foot, 21 by car); party-km, 419 (28 on foot, 391 by car). Sheldon Anderson, Blair Avery, Leona Avery (compiler), Rev. T.S. Bellis, Earle Blackie, Danny Bowser, Earle Briggs, Sheila Bryant, Duff Campbell, Moira Campbell, Beatrice Cattle, Lillian Clark, Michael & Lois Derrah, Gerald Donovan, Mrs. Blair Findlater, Mrs. Melvin Fogarty, Mrs. David Fry, R.C. Gibson, Verna Grant, Charles Graves, Adam Hadley, Eric & Jane Hadley, Ronald Hawkins, Wallace Jones, Jack Lavender, Allie McBride, Walter Neal, Mrs. Roger Olmstead, Alma Speer, Karen Speer, Martin Speer, Robert John & Donna Speer, Donald St. John, Alex Whiteway, Gordon Wort, Clifford Wright, Pauline Yerxa.

Florenceville (Flo) 20th year

Dec. 26, ? to ?. Partly cloudy; temp. -10°C ; wind SE, 5 km/h; light snow cover; water?. 5 observers in 3 parties + 14 at 13 feeders; Party-hr, 9.5 (? on foot, ? by car); party-km, 149 (3 on foot, 146 by car).

Catherine Bell, Ann Brennan, Helen Briggs, Ansel Campbell, David Campbell, Marie Campbell, Opal Derrah, Harry Ebbett, David Hatt, Aubrey Lamont, Helen Lovely (compiler), Lorna Maddox, Lloyd McNair, Ray Mulherin, Janice Oakes, Dean Prior, Marg Seymour.

Glassville-Juniper (G-J) 16th year

Dec. 27, 08:00–16:00. Overcast; temp. -9 to -5°C ; wind W, 20 km/h. Snow cover 5 cm; brooks 50% open. 4 obs. in 2 parties, 15 at 15 feeders; party-hr, 7 (3 on foot, 4 by car); party-km, 125 (5 on foot, 120 by car).

Mary Anderson, Edith Buxton, Charles Crabbe, Nan Curto, Wanda Delong, Robert Dole, Bobbie Gascoigne, Marge Martinson, Carol Ann McBrine, Darlene McIntosh, Elsie McIntosh, Jessie McIntosh, Rita McIntosh, Sally McIntosh (compiler), Marion Pearson, Peter Puleston, Mary Spence, Marion Spence.

Perth-Andover (P-A) 31st year

Dec. 28, 08:00–16:30. Sunny, some cloud later in day; temp. -17° to -6°C ; calm. Snow cover 5 cm; river frozen except rapids. 2 observers in 1 party + 10 at 10 feeders; party-hr, 8.5 (2 on foot, 6.5 by car); party-km, 120 (4 on foot, 116 by car).

Borden DeMerchant, Ellsworth DeMerchant, Barbara Fenwick, Glen

Furge, Judy Hanson, Roy Leach, Henry Manzer, Judy McNally, Mary Jane Savoy, Fred Tribe, Margaret Wallace, Murray Watters (compiler).

Plaster Rock (PR) 28th year

Dec. 29, 08:00–16:00. Light overcast, some snow; temp. -16 to -23°C ; wind NE, 5 km/h. 10 cm snow cover; water frozen. 3 observers in 3 parties + 2 at 2 feeders; party-hr, 15.5 (10.5 on foot, 5 by car); party-km, 117 (20 on foot, 97 by car).

Howard Aiton, Roger Jenkins, Chris Kush, Erwin Landauer (compiler), Marion Landauer.

Nictau-Riley Brook (Nic) 27th year

Dec. 30, 09:00–16:00. Cloudy with snow (5–8 cm); temp. -15° to -10°C ; wind NW, 3–5 km/h. 20–25 cm snow cover; water? 4 observers in 2 parties + 7 at 6 feeders; party-hr, 25 (20 on foot, 5 by car); party-km, 132 (20 on foot, 112 by car).

Juanita Black, Melissa Fullerton, Roger Jenkins (compiler), Wes Jenkins, Erwin Landauer, Diana McAskill, Rose McCullum, Leola McDougall, Bill Miller Jr., Joan Nevers, Joe Yacovino.

Edmundston (Etn) 13ième année

Le 18 déc., 08:00–14:00. Soleil; temp. -10° à -5°C ; vent O, 10 au matin, 40–50 km/h en après-midi. Terre gelée, léger recouvrement de neige; eau dégelé. 13 observateurs en 9 groupes + 2 à 2 postes d'alimentation; h. groupe, 54 (13 à pied, 41 en voiture); km groupe, 660 (22 à pied, 638 en voiture).

Jean-Pierre Beaulieu, Marilène Beaulieu, Daniel Bouchard, Pierrette Bouchard, Simon Bouchard, Claudette Chiasson, Gilberte Cyr, Donna Dumont, Sylvain Fiset, Marie-Anne Gauvin, Pierrette Mercier (compilateur), Sylvie-Line Michaud, Pauline Morneau, Irène Nadeau, Jocelyne Perron, Nicole Rossignol, Gilles Roussel, Patrick Smyth, Gisèle Thibodeau, Adeline Verret, Gérard Verret.

Kedgwick (Ked) 10ième année

Le 30 déc., 09:30–16:30. Neige légère (5 cm); temp. -14° à -11°C ; vent NO, 5 km/h. 25 cm de neige; lacs gelés, rivières 50% gelées. 6 observateurs en 3 groupes + 6 à 4 postes d'alimentation; h. groupe, 11 (3 à pied, 7 en voiture); km groupe, 173 (3 à pied, 170 en voiture).

Mariette April, Fernande Bélanger, René Cimon, Arthur Desjardins, Cécile Desjardins, Ginette Émond, Marcel Émond, Pat Émond (compilateur), Jacques Léonard, Diane Paré, Wilfred Roy, Roland Simon.

Mount Carleton Provincial Park (MtC) 22nd year

Dec. 21, 09:00–16:00. Drizzle in am, cloudy; temp. $+1^{\circ}$ to -2°C ; wind NE, 3–5 km/h. Snow cover 14–16 cm, most freshly fallen overnight; fair amount of open water. 2 observers in 2 parties; party-hr, 14.5 (9 on foot, 5.5 by car); party-km, 125 (22 on foot, 103 by car).

Roger Jenkins (compiler), Erwin Landauer.

Southeast Upsalquitch (SEU) 18th year

Dec. 27, 09:00–15:00. Snowing; temp. -10° to -20°C ; wind NW, 30 km/h. 20 cm snow cover; river frozen with open channels. 6 observers in 3 parties; party-hr, 15 (12 on foot, 3 by car); party-km, 58 (14 on foot, 44 by car).

Pierre Duguay, Ron Gauthier (compiler), Eldon McLean, Hanson Miller, Rod O'Connell, Stuart Wells.

Paquetville (Paq) 12ième année

Le 2 jan., 08:00–16:00. Ciel ?; 20 cm de neige sur le terrain; ruisseau dégelé. temp. -25° à -17°C ; vent N, 40 km/h. 10 observateurs en 4 groupes; h. groupe, 32 (7 à pied, 25 en voiture); km groupe, 356 (24 à pied, 332 en voiture).

Frank Branch, Hilaire Chiasson, Rose-Aline Chiasson, Michel Chiasson, Jude Larocque, Réjean Laforge, Roland Robichaud (compilateur), Donald

St-Pierre, Gertrude St-Pierre, Jolande St-Pierre.

Results of the following coastal counts are in the last 3 pages of the tables.

Grand Manan (GM) 29th year

Dec. 26, 08:00–17:00. Cloudy am, light flurries pm; temp. -13° to $+4^{\circ}\text{C}$; wind SW, 40–80 km/h. No snow cover; still water partly open, running water open. 8 observers in 5 parties + 3 at 3 feeders.

Colin Bagley, Jim Brown, Brian Dalzell (compiler), Halton Dalzell, Bowlen Gaskill, Nellie Huckins, Jim Leslie, Rodger Maker, Elaine Maker, Peter & Carmen Roberts.

Eastport–Campobello (E-C) 33rd year

Dec. 26, 06:45–15:15 EST. Cloudy, mixed precipitation throughout the day; temp. -8° to $+8^{\circ}\text{C}$; wind S, 38–64 km/h. No snow cover; still water frozen, running and salt water partly frozen. 7 observers in 4 parties.

Ralph Eldridge, Fred Hartman, Ellen Johnson, Maurice Mills Jr. (compiler), Fred Stocking, Marion Stocking, Bill Townsend.

St. Andrews (StA) 39th year

Dec. 18, 08:00–15:30. Clear; temp. -5°C ; wind NW, 30 km/h. No snow cover; large fresh water bodies open, ponds frozen, a little shore ice, salt water open. 8 observers in 4 parties + 15 at 10 feeders.

John Allen, Mindy Brown, Sandra Cooper, Carlotta Cummings, Tracey Dean (compiler), Lad Dunfield, Brenda Fullerton, Ken Langmaid, Eloise Lemire, Ken MacIntosh, Margo Mais, Kenneth Neilsen, Suzanne Overgaard, Ray and Dick Peterson, Lee & Lonny Ryall, Peggy & Dick Saunders, Tom Smith, Gwyneth Wilbur, Marion & Dick Wilder.

Blacks Harbour (BH) 37th year

Dec. 19, 07:30–16:30. Clear; temp. -8° to -2°C ; wind NW, 15 km/h. No snow cover; running water open, still water partly frozen. 7 observers in 2 parties + 3 at feeders.

Sandra Cooper, Tracey Dean, Janet Hunt, Joe Hunt, Greg McGuire, Ron McGuire, Ken MacIntosh (compiler), Kenneth Neilsen, Bill Nelson, Suzanne Ocergaard.

Saint John (SJ) 43rd year

Dec. 27, 08:00–17:00. Cloudy am with snow flurries turning to light snow, clearing to variable clouds pm; temp. -5° to -10°C ; wind W, 5 to WNW, 22 km/h. No previous snow cover; thin ice in sheltered coves, otherwise river open. 27 observers in 14 parties + 17 at 17 feeders.

Anne Bardou, Ethel & Roly Bosence, Helen Brown, Ian Cameron, Robert Carson, David Christie, David Clark, Greta & Ken Clark, Stephen & Susan Clayden, Merv Cormier, Hank & Kirsten Deichmann, Jim & Betty Evans, Jeanne Finn-Allen, Allen & Janet Gorham, Holly Haines, Kelly Honeyman, Cecil Johnston, Don McAlpine, Fenning McAlpine, Doreen McIntosh, Barbara & Meredith Miles, Paul Mortimer, Ngaire & Richard Nelson, Paula Noel, Rick Peacock, Joan Pearce, Aldie Robichaud, Marion Sherwood, David Smith (compiler), Don Smith, Evan Smith, Jim Wilson, Frank & Mitzi Withers.

St. Martins (StM) 19th year

Dec. 19, 07:00–17:00. Clear; temp. -11° to -4°C ; wind NW, 20–30 km/h. No snow cover; mostly open water. 11 observers in 5 parties + 3 at 3 feeders.

L. Collins, Merv Cormier, Hank Deichmann, Shirley Hunter, Dianne Kelly, Frank Kelly, Ed LeBlanc, Jane LeBlanc, S. Loughery, Trudy Melvin, Chris Sears, Nancy Sears, Ted Sears (compiler), Dennis Seeley.

Fundy National Park (FNP) 35th year

Dec. 16, ? am–? pm. High overcast, occasional sunny breaks in afternoon, then isolated light showers at coast, light snow showers in uplands; temp.

-4° to $+5^{\circ}\text{C}$; wind SW, 5 km/h. No snow cover at coast, patches on uplands; no ice at coast, at higher elevation ponds frozen, lakes partially frozen. 22 observers in 10 parties + 5 at 5 feeders.

Matthew Betts, Betty Betts, Jim Blewett, Shirley Butland, Alain Caissie, David Christie, Alain Clavette, Lloyd DeCoste, Jackie DeCoste, Karen DeWolfe, Jennifer Gunter, Doris Hatt, Sue Hoar, Anna Holdaway, Shirley Hunt, Mary Majka, Beulah Michelin, Doreen Rossiter, Marla Rossiter, Vicki Sahanatien (compiler), Jamie Simpson, George Sinclair, Sedgwick Sinclair, Brian Townsend, Karen Townsend, Gail Walker, Rob Walker.

Riverside-Albert (R-A) 31st year

Jan. 1, 07:30–17:30. Mostly sunny am, cloudy pm with light snow beginning 1530; temp. -15° to 0°C ; wind SW to S, 0–20 km/h. 10 cm snow cover, freshwater 99% frozen; sea open with some ice on beaches. 15 observers in 9 parties + 2 at 2 feeders.

Chris & Mike Antle, Norm & Gisèle Belliveau, David Christie (compiler), Barbara Curlew, Rick Elliott, Jim Edsall, Nancy Keirstead, Mary Majka, Mike Majka, Rose-Alma Mallet, Stuart Martin, Beulah Michelin, Juliette Pellerin, Gail Walker, Rob Walker.

Hillsborough – Memramcook (Hil) 8th year

Dec. 19, 08:30–17:30. Clear; temp. -11° to -1°C ; wind NW to WNW, 0–10 km/h. No snow cover; lakes and ponds frozen, brooks partly open; tidal waters ice-free. 12 observers in 7 parties + 6 at 4 feeders.

Dwayne Biggar, Maryse Bourgeois, Alain Clavette, Barbara Curlew, Rick Elliott, Dale Gaskin, Rachel Gautreau, Susan Hoar, Shirley Hunt, Roger LeBlanc, Freda Murphy, Margie Murphy, Dorothy Reynolds, Keith Reynolds, Tania Smith, Rob Walker (compiler).

Moncton (Mtn) 38th year

Dec. 18, 07:30–16:50. Clear; temp. -7° to -3°C ; wind NW, 30–40 km/h. No snow cover; ice on small ponds, otherwise open water. 46 observers in 17 parties + 14 at 14 feeders.

Chris Antle, Mike Antle, Brian Beaman, Gilles Belliveau, Gisèle Belliveau, Normand Belliveau, Gilles Bouque, Meghan Brodie, Marc Chiasson, David Christie, Connie Colpitts, Carmel Constable, Don Cormier, Bob Cotsworth, Jackie & Lloyd Decoste, Fred Dubé, Joyce Dubé, Oscar Duguay, Jim Edsall (compiler), Margaret Fanjoy, Bill Gallant, Elsie Gallant, Gayle Gallant, Derek & Madeleine Gemmell, Susan Hoar, Shirley Hunt, Jean Inglis, Myrna Lamoureux, Oscar LeBlanc, Roger LeBlanc, Janet MacMillan, Rose-Alma Mallet, Heather Mitton, Ron Pellerin, Nelson Poirier, Kathy Popma, Mike Rae, Edgar Savoie, Wendy Sullivan, Rob Walker, Alma White, Don White, Vivian White.

Sackville (Sck) 40th year

Dec. 18, 07:30–17:00. Cloudy with occasional clear periods; temp. -6° to -2°C ; wind NW, 5–30 km/h. No snow cover; Moving water open, still water 50–70% frozen. 26 observers in 8–12 parties.

Mary Bogaard, Paul Bogaard, Andrew Boyne (compiler), Sarah Boyne, Sandy Burnett, Don Colpitts, Marc D'Entremont, Petra D'Entremont, Richard Elliot, Tony Erskine, Janet Erskine, George Finney, Nev Garrity, Dedreic Grecian, Gay Hansen, Peter Hicklin, Hinrich Harries, Ron Hounsell, Paula Lushington, Tim Lushington, Andrew Macfarlane, Colin MacKinnon, Megan MacCulloch, Bill Murphy, Debi Musgrave, Al Smith.

Cape Tormentine (CT) 38th year

Dec. 16, 07:32–16:30. Mostly cloudy; temp. -1° to $+5^{\circ}\text{C}$; wind SW, 5–10 km/h in am, SW 10–20 in pm. No snow cover; fresh water partially frozen, salt water fully open. 22 observers in 5–10 parties.

Sean Blaney, Paul Bogaard, Andrew Boyne, Sandy Burnett, Dan Busby, Kate Elliott, Richard Elliott, Tony Erskine, Ross Galbraith, Nev Garrity, Dedreic Grecian, Hinrich Harries, Peter Hicklin, Ron Hounsell, Donna

Johnson, Andrew Macfarlane, Colin MacKinnon, Julie Paquet, Kathy Popma, Laura Reinsborough, Al Smith (compiler), Ralph Stopps.

Shédiac (Shd) 12ième année

Le 19 déc., 08:00-16:00. Claire; temp. -8° à -4°C ; calme. 0 cm de neige; eau douce partiellement gelée, mer dégagée. 28 observateurs en 8 groupes.

Donald Cormier, Leona Cormier, Edgar et Angela Savoie, Lionel et Lise Gionet, Francis Richard, Onide Maurice, Angela Bourgeois, Fred Leger, Angela Leger, Raymonde Chartier, Denise Theriault, Noella et Abel Doucette, Yvon et Bernice Comeau, Gilles Bourque, Richard Leger, Juliette Pellerin, Rose-Alma Mallet, Caroline Arseneault, Raymond Doiron, Lise Rodrigue, Isabelle Jean, Gilles Belliveau, Normand Belliveau (compilateur), Gisele Belliveau (Les Amies de la Nature du Sud-Est).

Bouctouche (Buc) 4ième année

Le 26 déc., 08:00-16:00. Clair; temp. -10° à 0°C ; vent SO, 20 km/h. Conditions de la terre et de l'eau ? 11 observateurs en 7 groupes + 1 poste d'alimentation.

Louis-Émile Cormier, Marie-Louise Cormier, Lisa Gauvin, Maria Gauvin, Anna LeBlanc, Bernadette LeBlanc, Irène LeBlanc, Jean-Paul LeBlanc, Michael A. LeBlanc, Mike LeBlanc (compilateur), Roger LeBlanc, Stella LeBlanc.

Kouchibouguac National Park (KNP) 29th year

Jan. 3, 07:00-18:30. Overcast with rain/drizzle and ground fog for 2 hr in am, scattered cloud and sun in pm; temp. -5° to $+1^{\circ}\text{C}$; wind E to SE, 5-10 km/h. ? cm snow cover; rivers and lakes frozen, some open springs along river banks; coastline and estuaries open. 14 observers in 8 parties + 6 at 6 feeders.

Alvin Cormier, Mrs. Alvin Cormier, Donna Crossland, Lily Daigle, Nicol Daigle-Savoie, Alfred Hébert, Jeannine LeBlanc, Rose-Alma Mallet, Nelson Poirier, Fernand Robichaud, Gilles Robichaud, Lucille Robichaud, Pierre Robichaud, Pierrette Robichaud, Victor Savoie, Barry Spencer (compiler), Marguerite Spencer, Eldin Stewart, Sémedia Stewart.

Tracadie-Sheila (Tra) 13ième année

Le 26 déc., 08:00-16:00. Ensoleillé en avant-midi, nuageux avec neige légère en après-midi; temp. -10° à $+2^{\circ}\text{C}$; vent NO, 15 km/h. 4-5 cm de neige au sol; eau gelée dans les baies. 12 observateurs en 5 groupes + 3 à 3 postes d'alimentation.

Frank Branch, Hilaire Chiasson, Michel Chiasson, Rose-Aline Chiasson, Marcel David, Robert Doiron, Émile Ferron, Jude Larocque, Jean-Guy Robichaud, Roland Robichaud, Donald St-Pierre, Gertrude St-Pierre (compilatrice).

Ile Lamèque (Lam) 27ième année

Le 27 déc., 08:00-16:00. Ciel partiellement dégagé; temp. -8° à -4°C ; vent NO, 9-50 km/h. Neige sur terre 10 cm; eau de mer gelée à 15%. 13 observateurs en 8 groupes.

Gérard Benoit, Denise Benoit, Égide Chiasson, Hilaire Chiasson (compilateur), Michel Chiasson, Rose-Aline Chiasson, Marcel David, Lucille DeGrace, Émile Ferron, Réjean Ferron, Jacques Guignard, Jocelyne Guignard, Stéphane Guignard, Rosita Lanteigne, Jude Larocque, Gertrude St-Pierre.

Ile Miscou (Mis) 13ième année

Le 18 déc., 08:30-16:00. Partiellement nuageux, quelques flocons; temp. -10° à -5°C ; vent NO, 40 km/h. Neige au sol 4 cm; eau libre. 12 observateurs en 5 groupes.

Donalda Benoit, Frank Branch, Hilaire Chiasson, Michel Chiasson (compilateur), Rose-Aline Chiasson, Émile Ferron, Jacques Guignard, Stéphane Guignard, Lucille Landry, Rosita Lanteigne, Jude Larocque,

Roland Robichaud.

Caraquet (Car) 15ième année

Le 19 déc., 08:00-16:00. Généralement ensoleillé; temp. -8° to -4°C ; vent NO, 30-50 km/h. 0 cm de neige au sol; zones côtières dégagées, marais à moitié gelés. 13 observateurs en 5 groupes + 1 à poste d'alimentation.

Frank Branch, Hilaire Chiasson, Michel Chiasson, Rose-Aline Chiasson, Marcel David (compilateur), Guy Hébert, Réjean Laforge, Benoit Lanteigne, Rosita Lanteigne, Jude Larocque, Corinne Mallais, Roland Robichaud, Donald St-Pierre, Gertrude St-Pierre.

Bathurst (Bst) 17th year

Dec. 26, 08:00-16:00. Clear; temp. -10° to -15°C ; wind NW, 20 km/h. snow cover ?; estuary few open channels, sea open. 4 observers in 3 parties + 3 at 2 feeders;

Mary Gauthier, Ron Gauthier (compiler), Eldon McLean, Nora McLean, Stuart Wells.

Petit-Rocher (P-R) 5ième année

Le 18 déc., 7:00-16:15. Nuageux à dégagé; temp. -5° à -10°C ; vent NO, 10 km/h; très peu de neige au sol; eaux presque dégagées. 2 observateurs en 2 groupes + 1 à poste d'alimentation.

Luc DeRoche (compilateur), Marc Landry.



1999-2000 CBC	Mir	Dal	Rst	Sal	Ssx	Hin	C-N	Jem	Min	Fun	Mac	Sty	Wsk	Flo	G-J	P-A	PR	Nic	Em	Ked	MC	SEU	Paq
Blk-bk Woodprtr	2		1	*	3	6	6	13	1	1	1	*	1	1	2	*		3	1	1	4	3	1
Pileated Wdpkr	15		2	7	11	6	23	4		16	13	7	8	7	2			16	3	2	1	8	17
Gray Jay	126	48	142	139	173	164	138	106	3	126	137	50	88	104	130	70	6	27	72	42	2	2	94
Blue Jay	21	21	22	133	306	341	70	48	11	387	86	16	114	78	17	8	8	18	95	4	6	4	16
American Crow	32	39	75	77	525	34	46	41	95	192	45	39	44	51	9	11	8	18	28	7	7	7	16
Common Raven	279	183	407	382	311	477	325	298	29	760	377	170	329	160	224	117	59	103	200	78	65	22	264
Blk-cap Chickadee	27	11	21	14	15	19	*	1	5	72	3	7	1	*	37	15	1	26	4	4	13	1	26
Boreal Chickadee	4	1	7	1	2	10	9	9		15	12	2	21	3			1	4	1	2			
Red-br Nuthatch										6	2								2				
Wh-br Nuthatch										1													
Brown Creeper																							
Carolina Wren																							
Golden-cr Kinglet	3		2	4	20	6		13		38	26	17				6							2
Ruby-cr Kinglet					1																		
Hermit Thrush																							
American Robin	6		*	5	1	4		*	1	9	3		2	*					*	*			32
N. Mockingbird	63		6	108	547	151		297		224	90												2
Bohem. Waxwing	*	1	3	4	3			1		3	4	1	1						1	1			
Cedar Waxwing																							
Northern Shrike	246	254	436	983	1750	590	236	381	27	1213	348	71	71	231	36	27			98	56			37
Loggerhd Shrike																			4				
European Starling	1		*	*	1	7		3		7	4		2	*	*	5	4				*		
Yel-rump Warbler																							
Pine Warbler																							
N. Cardinal	31		1	31	44	56	36	94	3	50	40	33	49	14	10	9			2	2			1
Rose-br. Grosbeak	1		*	1	2	2				*			2										
Am Tree Sparrow																							
Chipping Sparrow																							
Savannah Sparrow																							
Song Sparrow	9	*	3	21	151	73	11	8	*	1	2	10	3	1	24	2	1	1	1	1000	24	*	441
Wh-thr Sparrow	*		*	332	361	*	373	660		10	73	12	25	1	575	16							
Dark-eyed Junco																							
Snow Bunting																							
Rusky Blackbird																							
Common Grackle	*		2		1					1								1					
Bm-head Cowbird	*																						
Pine Grosbeak	41	18	45	63	84	3	25	37	*	117	47	10	111	29	32	22		9	28	45	11	7	5
Purple Finch	2		55	5	5	10			6	9		2	3	18	12	1			7				
House Finch	2		*		15					5									5	*			
Red Crossbill	*					6																	
Wh-w Crossbill	1			15	2				*	1057	1196	271	634	300	160	110	20	8	7				195
Common Redpoll	341	147	358	721	165	271	390	806											221	37			
Hoary Redpoll			1																				
Pine Siskin	1	8	36		1	3	30	7		27	5	2	143	81	12	25		63	1	5	23		52
Am. Goldfinch	184	24	110	507	233	72	113	159	6	201	129	15	164	113	66	102	27	6	65	23			
Evening Grosbeak	*	1	24	126	27			124		14	145	66	127	20	126				33	28			
House Sparrow																							
Unidentified																							
TOTAL BIRDS	2011	2047	2778	5312	6165	3289	2241	3694	207	7988	3583	952	2381	1609	1622	801	134	259	2390	478	128	56	1372
TOTAL SPECIES	33	31	46	40	48	46	27	41	16	58	45	25	33	26	21	23	12	16	39	23	13	14	22
Add Spp in Period	6	3	5	7	3	8	6	3	2	6	1	4	2	6	1	7	2	1	2	5	0	3	5

1999-2000 CBC	GM	E-C	STA	BH	SJ	StM	FNP	R-A	Hil	Mtn	Sck	CT	Shd	Buc	KNP	Tra	Lam	Mis	Car	Bst	P-R	NB Total
Red-throat Loon	8	11	14	4	1	1	3	1	2		7		*			1			1			16 + 40 - *
Pied-billed Grebe																						
Horned Grebe	15	7	67	4		27																120 + 268 + 25 +
Red-neck Grebe #	235	9	12	4		6						2	*					*				248 ± 19 + 3 ±
Northern Gannet #	23																					
Great Cormorant	175	43	*	29							5		2			*						
D-crest Cormorant	9			2																		
Great Bl Heron			1		1																	
Snow Goose	2																					
Brant	89																					3
Canada Goose	29	242			63			*	38	101		90	539	5		360				2	*	89 + 2610 ++
Green-wing Teal #					29			*		*										*		32 +
Am Black Duck	1055	974	577	46	869	95		1205	150	117	405	1250	994	305		90	84		2	34	83	9549 ++
Mallard	25	25	14	2	66	19		9	1	411	77	11	59	4		8	39		8	43	*	983 ±
Northern Pintail			1		1			2					*									4
N. Shoveler																						1
Gadwall					2	2																4
American Wigeon					3	1							*									4
Tufted Duck					1																	1
Greater Scaup #	30	2	15		12								295									356 +
Lesser Scaup																						
Common Eider	890	90	2750	495		9	2	*	264	7		14	68	2		31	115	48	5	*		48 + 4787 + 1
King Eider			*																			
Harlequin Duck	18																					18 +
Oldsquaw	210	69	89	52								154	84	38	25	51	55	232	20	*		1079 -
Black Scoter	4	4	*	12		8						4	*			1	15	4				52 ±
Surf Scoter	6	4	1	12								1	26			1	1	3				54 ±
White-wing Scoter	8	26	10	19	1	4						13	5			1	4					91 -
Common Goldeneye	65	53	38	3	561	22	3	6				427	444	90	7	79	141	11	17	80	25	2938 ++
Barrow's Goldeneye			*		2																	415 ++
Bufflehead	73	156	180	34	101	12	2	1					83			43						564 ±
Hooded Merganser		13	3	*	1								3		1					2		34 +
Com Merganser #	40	*		20	3	3	4	197	20	47	205	2	647	127	1	38	7		7			1875 ++
Red-br Merganser	88	62	4	11	85	6				3	70	81	185	11	6	10	17	25	6	41	2	717 +
Ruddy Duck #										6												6
Turkey Vulture										*												1
Osprey																						1
Bald Eagle	4	39	8	8	3	3	1	4		4	4	7	2	3	1				*			125 ±
Northern Harrier										*	4	1				1			1			11 +
Sharp-shin Hawk			1		1	1	*	2	1	1	3	3	*		2				1			31 +
Cooper's Hawk																			*	*		1
Northern Goshawk			*						*	2			*	1								8 ±
Broad-wing Hawk	1	1	2	1						1		2	3	4	1							1
Red-tailed Hawk																						31 +
Rough-leg Hawk	1	1			2					1	19	1	1	1	1	1		1	2		1	47 +
American Kestrel																			*			1
Merlin					*			*		1												3
Peregrine Falcon																						*
Gyr Falcon													1									3
Ring-neck Pheasant	5							7	16	23	81	6	8	*			*					235 -

1999-2000 CBC	GM	E-C	StA	BH	SJ	SiM	FNp	R-A	Hil	Mm	Sck	CT	Shd	Buc	KNP	Tra	Lam	Mis	Car	Bst	P-R	NB Total
Spruce Grouse																						3 -
Ruffed Grouse		2	4	2	4	2	10	1	3	5	1	5	2	1	1	1	2		1	1		99 -
Wild Turkey			*																			*
Killdeer																						1
Purple Sandpiper	325	26		19	4	1		30														417 +
L-b DOWITCHER																						*
Common Snipe																						1
Black-headed Gull																						1
Bonaparte's Gull	250	670	5	114										*								1039 ++
Ring-billed Gull		82	21	18	90	6	8	57	3	17	19	53	177	21		69	1					761 ++
Herring Gull	2450	3579	763	483	1054	134	33	221	200	5234	221	353	902	219	151	84	26		76	33	14	17605 ±
Iceland Gull	5	12		69	156	7	4	82	21	45	18	28	1	8		17	72	187	171	5	7	971 ±
Lesser Blk-bk Gull										1												1
Glaucous Gull	650	796	115	1		3	4	13	119	7	72	2	1	2	1	3	20		17	1	128	68 ±
Great Blk-bk Gull #										3048	98	98	346	163	127	111	273	313	238	1576		9046 +
Blk-leg Kittiwake	1750	764		79	225	14												5				2519 -
Razorbill	7500	7																				7507 +
Black Guillemot	135	14	20	54		2						3	548	230	98	1	27	30	27			295 ±
Rock Dove	18	89	71	34	375	43	7	3	6	1001	355	142	125	72	29	142	116	27	56	44	59	7975 ±
Mourning Dove	205	3		47	192	36		96	108	440	308	126		*		110	136	27	78	5	1	4479 +
Great Horned Owl		1			1			*		1	1											13 +
Snowy Owl																						3 -
Northern Hawk Owl																						1
Barred Owl							4	2	*			2							1			19 +
Short-eared Owl									*										*			*
Belted Kingfisher								1	*							1	1					3
Red-bellied Wupkr	*		*		1				*													5 +
Downy Woodpecker		3	13	3	6	5	23	5	17	19	10	11	12	3	5	8	5	1	7	2	1	469 ±
Harry Woodpecker		1	8		9	5	20	4	13	22	9	12	11	1	3	12	4	3	10	6	*	514 +
3-toed Woodpkr																	*					2 -
Blk-bk Woodpkr														1				*				11 ±
Northern Flicker															*							9 +
Pileated Woodpkr	2	2	1		2		4	*	1	2	1	4	1	2	*					*		80 +
Horned Lark						1					7					3	3		6			20 ±
Gray Jay		2	2	3	2		4	12	2	5	3	1		3	3	5	1	1	18			250 -
Blue Jay	11	13	31	17	20	19	37	63	59	128	153	120	133	60	20	59	57	9	37	12	5	3072 -
American Crow	185	331	147	66	270	100	98	71	80	327	439	292	539	153	19	93	57	21	52	16	34	5175 +
Common Raven	33	28	40	29	12	12	16	39	29	140	126	41	52	32	8	36	92	15	34	2	*	2258 -
Blk-cap Chickadee	65	90	218	34	306	88	186	250	202	589	561	288	484	169	48	193	167	31	237	56	29	9910 ±
Boreal Chickadee	5	*	*	1	*	9	20	8	3	1	14	11		1		3	42	2	11	1		210 -
Tufted Titmouse																						*
Red-br Nuthatch	15	5	23	5	8	29	44	27	34	53	35	14	20	2	1	7	12	3	7	1	2	807 +
White-br Nuthatch	4	1	7		2	*	3	2	1	6	2	1	2	*						*	*	131 ++
Brown Creeper	*	2	2		1		6	2	2	7	*	1	1	*								48 +
Carolina Wren																						1
Winter Wren	2																					2
Gold-crown Kinglet	14	6	23	2	4	26	65	12	5	8	51	54	11	7		2	7	1	5	2		442 ±
Ruby-cr Kinglet			1								*											2
Townsend Solitaire								1														1
Hermit Thrush																						1
American Robin	*	5	*	1	5	3	1	9	2	5	2		4	*	1							68 -

1999-2000 CBC	GM	E-C	StA	BH	SJ	StM	FNP	R-A	Hil	Mtn	Sek	CT	Shd	Buc	KNP	Tra	Lam	Mis	Car	Bst	P-R	NB Total
N. Mockingbird	*	1	1	1	2	*				4	1		1	1	1	1						14 +
Brown Thrasher																						1
American Pipit																						*
Bohemian Waxwing	*		50	12	*	61	44	191	147	612		116	181	*			1	48	31	33		3220 +
Cedar Waxwing										*	1		12									70 ±
Northern Shrike	2			1	3	3	1	6	1		4	9	5	1	4	3	6	1	3			75 +
Loggerhead Shrike																						1
European Starling	540	465	217	223	2148	173	30	342	297	1412	1515	784	1074	486	119	238	218	5	228	10	56	17671 +
Yel-rump Warbler												9	10	8		1		2				34 +
Pine Warbler				2							1		1				1					5
Yellow-breast Chat				1																		2
Northern Cardinal #	22		4	*	13		1	1		1	1					1	3		1			81 ++
Rose-br. Grosbeak																						1
Dickcissel																						1
Eastern Towhee																						1
Am Tree Sparrow	5	4	18	2	17		1	48	28	33	27	32	9	12	12	7	1	1		*		770 -
Chipping Sparrow		1	2		*		1			1												7
Savannah Sparrow										*							1					3
Fox Sparrow						2																2
Song Sparrow	3	3	3	2	2	2	2	2		1	2	3	*	1		1						33
Wh-throat Sparrow	*	1		2	1	2	2		1		1	2	8									23
Dark-eyed Junco	4	6	*	60	9	15	15	31	22	37	123	28	34	4	*	2	5	1	6	9	*	716 -
Lapland Longspur																1						1
Snow Bunting	27	3	3	3		24	1	6	107	15	352	380	175	227	32	338	694	90	256	208		6841 ±
Red-wing Blackbird	2									3								1				6 -
Yellow-hd Blackbird										1	10	3					2			*		1
Rusty Blackbird	*			3						6	3		*		1	1	1					20 +
Common Grackle		3	1			1	3	1				6										26 -
Brown-hd Cowbird							1			4												11 -
Baltimore Oriole																						1
Pine Grosbeak	22					2	20	22	13	121	26	24	25	42	*	3	12	4	9			1140 +
Purple Finch	3		9							16			5		36	1						206 -
House Finch			33							114			2	12								268 +
Red Crossbill #	6						40			1			9									56 +
Wh-wing Crossbill						8	11		2	5	2			2		*	2					64 -
Common Redpoll	45	2	172	11	173	7	52	138	305	1078	645	632	500	775	90	616	301	12	190	125	10	13287 ++
Hoary Redpoll										*			1			1						4 +
Pine Siskin		9			27		5		3	4	1			30	6	1	20					271 -
American Goldfinch	*	14	46		27	16	4	15	88	33	19	40	10	24	37	3	*			1		1319 -
Evening Grosbeak		18	15		6	3	*	8	42	78	135	48	65	61	74	22	22	14	7			3110 -
House Sparrow		42	6		46		1 h	67	6	95	115	31	53	49		3	92		37			1503 -
Unidentified					7 g							20 i					1 j					46
TOTAL BIRDS	17308	9043	5885	2073	7199	1082	923	3594	2200	15509	6265	5912	9000	3484	970	2832	3026	1200	1920	2952	707	154781
TOTAL SPECIES	51	69	55	46	63	54	47	55	43	60	54	61	64	49	33	52	52	37	40	28	22	137
Add. spp. in period	9 k	0	12	2	5	2	2	7	3	7	2	0	10	6	3	2	2	2	3	11	6	8
Hours on foot	3	2.5	4	3	35	15	48.1	21.75	9.5	50	46.75	43.5	12	8	20.5	7.75	13.5	22	13.3	10	0.33	631.05
Hours by car	13.5	28	10	10	29	25	14	21.5	29	66	28.5	36.5	48	24	19	30.3	45.5	12.5	18.8	4	14.7	922.75
TOTAL HOURS	18 d	31 e	14	13	64	40	62.1	43.25	38.5	116	75.25	80	60	32	39.5	38	59	34.5	38.5 f	14	15	1694.55
Km on foot	8	8	10	5	43.5	18	77.5	33.5	18.5	71	64	66	22	?	39	20.5	30	57	33.5	10	1.5	1068.5
Km by car	251	474	290	99	477	215	148	339.2	370	963	514	394	536	?	385	436	478	148	318	12	301	13998.9
TOTAL KM	269 d	484 e	300	104	521	233	226	372.7	388	1034	578	460	558	380	424	457	508	205	403 f	22	303	15511.3

NEST UTILIZATION BY BALD EAGLES IN NEW BRUNSWICK

Rudy Stocek, Maritime Forest Ranger School

Twenty-five years of studying Bald Eagles in New Brunswick has given me some measure of how little we initially knew about this majestic raptor that builds the very large tree nests that attract our attention as much as the eagle itself. So, how long do the eagles, with their reputed high nest fidelity, use these nests for breeding? Let's see what my provincial research shows.

The Bald Eagle population that summers in the province consists of breeding pairs, non-breeding adult birds (they don't all nest each year), sub-adults or immatures (that take 4 to 5 years to acquire adult plumage and rarely breed) and the juveniles or young-of-the-year. The nesting birds generally select a breeding area and maintain one or more nest sites in that area for many years. Each year the adult eagles either (a) occupy an established nest site, (b) move to

a new nest site, or (c) take the time off from nesting.

During the 25 year period, 1974 - 1998, 108 breeding areas and 200 nest sites were recorded in the province. Table 1 summarizes the distribution of these sites, by county. Charlotte and York counties account for 66% of both the breeding areas and the nesting sites utilized. No breeding areas were located in Gloucester and Restigouche counties; a very few sites had been recorded there in the early 1900's.

Even though nesting eagles show a high fidelity to the individual breeding areas, they do not nest every season. Breeding was not attempted (i.e., the nests were not utilized) in 15% of the overall 863 nest years (no. of nests x no. of years). Eighty-five percent of the nests (nest years) however were occupied during the 25 year period (Table 1).

County	Breeding Areas	Breeding Sites	Nest Years	% Of Nest Years Occupied
Charlotte-marine	19	33	172	85
Charlotte - mainland	24	37	178	88
Saint John	2	4	21	90
Kings	5	11	49	86
Queens	3	10	38	84
Sunbury	4	6	39	80
York	28	63	267	81
Albert	3	9	24	88
Westmorland	4	5	17	94
Kent	3	3	6	100
Northumberland	7	10	31	90
Carleton	3	6	15	80
Victoria	2	2	4	100
Madawaska	1	1	2	50
Total	108	200	863	85

Table 1 Distribution of breeding Bald Eagles in New Brunswick, 1974 - 1998. Nest year equals number of nests x number of years.

Bald Eagles occasionally have multiple nest sites in their breeding areas. An average 1.85 nests per breeding area was found over the 25 years. The extra nest sites may be utilized when the nest or tree currently used becomes unsuitable. However, the older nest site may continue to be used even if there is no nest in place. The eagles simply rebuild the structure.

The average length of time that 85 known-age nest sites

were used for breeding, varying between 1 and 21 years, was 4.1 years (using nest years). The 43 breeding areas, with these nests, were used between 1 and 24 years and averaged 11.9 years (using nest years). The frequency distribution of nesting years of the 200 sites over the 25 years is shown in Table 2. Over half of the occupied nests were less than 4 years of age, not unusual for an increasing eagle population.

Nest Usage (Years)	No. of Nests	Nest Usage (Years)	No. of Nests
1	39	11	2
2	42	12	3
3	32	13	4
4	19	14	1
5	15	15	2
6	14	16	0
7	7	17	1
8	9	18	0
9	3	19	1
10	5	20	0
	21	1	

Table 2

Nest site abandonment, whether temporary or permanent is not unusual. Occasionally the nests will collapse or fall out of the tree. The eagles may then move to another nest site the following season. Fifty-nine of the 200 recorded nests (29.5%) fell from the trees, including 22 where both the nest and the tree went down. A number of the nests had blown down, as shown below.

The destruction of a nest can occur throughout the year as shown below for 38 nests:

Spring	-	6 nests	Fall	-	2 nests
Summer	-	18 nests	Winter	-	12 nests

Those that fall from the tree during the summer sometimes carry along unfledged young or even an adult. The eaglets if old enough, may survive on the ground with the parents attendance.

When a nest site is deserted, the eagles may nest the next season or they may wait until later years. Fifty-two percent of the pairs associated with 108 nests that were occupied one year and deserted the next, nested the next season (at a new site); the rest of the birds nested sometime later. These deserted nests continue to deteriorate over the months and years and eventually fall out of the nest tree. Records of 55 deserted sites showed that 32.7% of the nests did not last a full year after the last season of occupancy. One nest however, remained in tact for 10 years, as shown in Table 3. (Please see page 109 following AGM agenda).

Nest and nest tree down due to:

sleet storm	- 1 site
lightning strike	- 1 site
wind action	- 5 sites
water action on tree	- 4 sites
age or wear	- 3 sites
tree cut down	- 3 sites
unknown causes	- 3 sites

Nest only down due to:

wind action	- 21 nests
collapse of supporting tree limbs	- 3 nests
unknown causes	- 13 nests

**NEW BRUNSWICK FEDERATION
OF NATURALISTS**



28th Annual General Meeting

Campbellton, June 2-4, 2000

**Hosted by
The Restigouche Naturalists' Club**

Friday June 2nd:

Registration 5:00 to 10:00 p.m. Sugarloaf Provincial Park.
Social Wine and Cheese, local exhibits, displays of carvings,
pictures, paintings, local nature crafts. A scoter seminar will
be given by Mike Lushington.

Saturday June 3th:

Meet at Sugarloaf Prov. Park

6:00 – 9:00 Free tea, coffee, and muffins

6:30 – 7:30 a.m. Early Birding Tour

8:00 – 11:30 a.m. Choice of outings:

(1) Atholville/Tide Head Marsh

(2) Prichards' Lake

(3) Landfill Sites in Dalhousie

(4) Dalhousie Mountain

1:00 – 4:00 p.m. Choice of outings:

(5) Aboriginal Heritage Gardens

(6) Sugarloaf Mountain climb

(7) Sugarloaf Park walk

Saturday Evening

Sugarloaf Provincial Park

5:30 – 6:30 p.m. Social hour (with cash bar)

6:30 – 8:00 p.m. Banquet with speaker

Banquet: Buffet; Salmon and Fiddleheads included

Speaker: Mike Lushington launching of "Birds and Birding
in Restigouche". Also surprises!+

8:30 – 10:00 p.m. AGM

Sunday June 4th

All day tours meet at Sugarloaf Provincial Park

6:00 – 9:00 a.m. Free tea, coffee, muffins

6:30 – 7:30 a.m. Early Birding Tour

9:00 a.m. – until about 3:00 p.m. Choice of outings:

(8) Canoe down the Restigouche

(9) Restigouche County "Important Birding Areas"

(10) Census of Bird Life on Heron Island

**FEDERATION DES NATURALISTES DU
NOUVEAU-BRUNSWICK**



28e assemblée générale annuelle

Campbellton, du 2 au 4 juin 2000

**A l'invitation du
Club des Naturalistes du Restigouche**

Vendredi le 2 juin

Inscription 17h00 à 22h00. Parc Provincial Sugarloaf.
Rencontre sociale. Expositions d'artisanat local.

Samedi le 3 juin

Rencontre au Parc Provincial Sugarloaf

6h00 – 9h00 Café, thé, et muffins Gratuit

6h30 – 7h30 Randonnée Lève-tôt

8h00 – 11h30 Choix de randonnées:

(1) Marais Atholville/Tide Head

(2) Lac Prichard

(3) Ancien site dépotier industriel

(4) "Dalhousie Mountain"

13h00 – 16h00 Choix de randonnées:

(5) Jardin Patrimoine Ooctone

(6) Montée du Mont Sugarloaf

(7) Randonnée au Parc Sugarloaf

Samedi Soir

Parc Provincial Sugarloaf

17h30 – 18h30 Rencontre avec bar payant

18h30 – 20h00 Banquet avec orateur

Banquet: Buffet; Saumon et têtes de violon inclus

Orateur: Mike Lushington; lancement de

"Restigouche et ses oiseaux". Aussi des surprises!

20h30 – 22h00 AGA

Dimanche le 4 juin

Randonnées pour toute la journée

On se rencontre au Parc Provincial Sugarloaf

6h00 – 9h00 Jus, muffins, thé, café

6h30 – 7h30 Randonnée Lève-tôt

9h00 – jusque vers 15h00. Au Choix:

(8) Canoter la Restigouche

(9) Les "ZICO" du Restigouche

(10) Recensement d'oiseaux sur l'Île aux Hérons

AGA 2000

RANDONNEES AGA 2000



2000

Samedi le 3 juin

6h30 – 7h30 **Randonnée Lève-tôt**
Parc Sugarloaf
(Margaret Doyle)

8h00 – 11h30

1. Randonnée aux marais de TideHead/Atholville Rencontre Parc Provincial Sugarloaf

Du belvédère Margaret Doyle, incluant une section du Sentiers du N-B. Un site où il y a une possibilité de voir une grande variété de canards, de parulines et autres passereaux. Les botanistes auront la chance de voir une grande quantités de plantes aquatiques et d'identifier la végétation du marais. (n'oubliez pas vos bottes). La marche de quelques kilomètres sera sur terrain plat mais le marais est mouillé.
(Guidé par Margaret G-Doyle et Irene Doyle)

2. Randonnée au Lac Prichard Rencontre Parc Provincial Sugarloaf

Une marche d'à peu près 6 km. autour de ce trésor de lac et ses environs vous donnerons la chance de voir plusieurs oiseaux, d'admirer notre végétation. Aussi un vieux cimetière borde le lac où la famille Prichard vivait autrefois. Une marche un peu ardue mais les participants seront bien récompensés par leur trouvailles. (Guidé par Michel Plourde)

3. Randonnée d'un ancien site industriel Rencontre Parc Provincial Sugarloaf

Dix ans passés ils étaient des dépotoirs industriels. Cinq ans passés, ils furent nettoyés et laissés à reprendre leur état naturelles. Aujourd'hui ils sont de petites communautés vibrantes de végétation marécageuse, d'herbes sauvages, un habitat parfait pour attirer les bruants, les bécasseaux, les pluviers et beaucoup d'autre espèces d'oiseaux sans mentionner les libellules. Non loin de là on trouve des colonies de goélands et de mouettes, de Sternes et de Guillemots à miroir. Pas un endroit trop pittoresque mais rempli de trésors à être découverts par des naturalistes. Cette randonnée se fera en auto avec quelques arrêts pour examiner nos trouvailles. (Guidé par Mike Lushington)

4. Une marche au sommet de "Dalhousie Mountain" Rencontre au Parc Provincial Sugarloaf

Une montée de peut-être quatre kilomètres en tout mais une qui vous donnera une vue inoubliable de la région. Une vue de la Baie des Chaleurs, de l'Île au Héron, de l'Estuaire du Restigouche, en une belle journée on voit jusqu'à Jacquet River. Ce sentier fait aussi parti du Sentier du NB et en vous rendant au sommet, vous trouverez tout au long de votre chemin des plantes et des oiseaux. La montée est un peu rude mais le sentier est sec et propre. Il ya aussi une possibilité de visiter un Barrage de Castor.
(Guidé par Pat McGorlick et Karl Heinsteint)

Samedi le 3 juin Randonnées en après midi

13h00 – 16h00

5. Une tournée du Jardin Patrimoine Autochtone Charlo

Rencontre Parc Provincial Sugarloaf
Les Amérindiens d'Eel River, ont fait un arrangement avec l'Institut Smitsonienne, très bien connus du monde entier, pour s'aventurer dans le monde des plantes indigènes. Même si le jardin n'est pas encore officiellement ouvert, beaucoup de travail a déjà été fait pour ressusciter nos connaissances de ces plantes et leur implication dans une ancienne façon de vivre. (Guidé par Gilles Soucy)

6. La montée de la montagne Sugarloaf Rencontre au Parc Provincial Sugarloaf

Une autre excursion avec une excellente vue panoramique de la ville de Campbellton, des localités environnantes et de la rivière Restigouche. Comme il est cru que cette montagne est ce qui reste d'un ancien volcan, on y trouve toute sorte de plantes et roches intéressantes. Nous suivrons le sentier Terry Fox qui fait le tour de la montagne pour débiter cette randonnée pour finir au sommet de la montagne. Une montée assez ardue mais qui n'en vaut bien le coup. Le tour au complet sera d'à peu près 4 km. (Guidé par Ruth Bulmer)



7. Une marche dans le Parc Sugarloaf

Rencontre au Parc Provincial Sugarloaf

Une marche sur le sentier de raquette au sein du Parc Sugarloaf. Un peu moins ardue que la montée de la montagne pour ceux qui ont besoin d'une randonnée alternative mais qui aimeraient quand même admirer les beautés naturelles du parc.

(Guidé à être annoncé plus tard)

RANDONNEES du DIMANCHE le 4 juin

8. Une balade en canoë sur la Restigouche

Rencontre au Parc Provincial Sugarloaf

Ramez votre canoë (nous ferons la location) de Matapédia à Tide Head. Une excursion d'un jour, descendant la rivière Restigouche entre les Iles, suivant des guides professionnels. Limite de 12 canoës et il y aura un coût de 15.00\$ par participant, et deux participants par canoë.

Paniers-repas disponibles.

(Guidé par Ann Lavoie, Allan Madden et/ou Bill Duncan)

9. Une randonnée routière des ZICO du Restigouche

Rencontre au Parc Provincial Sugarloaf

Tournée des Zones Importantes à la Conservation des Oiseaux du Restigouche, incluant l'estuaire de la Restigouche, l'estuaire de Charlo, et la Rivière Benjamin. Une tournée interprétée mais aussi avec la possibilité de voir les Harlequins Plongeurs et le site où niche les Eiders au duvet. Il n'y a pas de coût ou de limite pour ce tour.

Paniers-repas disponibles.

(Guidé par Mike Lushington)

10. Recensement d'oiseaux sur l'Île au Héron

Rencontre au Parc Provincial Sugarloaf

On s'embarque sur un bateau à New Mills pour se rendre à l'Île au Héron où l'on participera à un compte d'oiseaux. L'île autrefois habitée par des humains, aujourd'hui est un sanctuaire d'oiseaux qui appartient aux Amérindiens d'Eel River. Durant les dernières deux années l'île fut développée en site écologique. Limite ici seulement par la capacité du bateau. Des prix seront distribués pour celui/celle qui trouve le plus d'espèces. On s'habille en conséquence pour les vents frais de la mer et il se peut que l'on doive mouiller les pieds.

Paniers-repas disponibles.

(Guidé par Irene Doyle avec l'aide d'Allan MacNeish)

*****IMPORTANT SVP NOTER*****

*****A LIRE*****

**** SVP Notez** Toutes les randonnées débuteront au Parc Provincial Sugarloaf dans le terrain de stationnement de l'ouest et à l'heure spécifiée. Vous devrez vous servir de votre propre voiture, on vous encourage à la partager. Paniers-repas disponibles dimanche pour ceux qui les demandent seulement.

**** SVP Notez** En complétant votre formule d'inscription pour l'AGA, simplement cocher la boîte pour la randonnée qui vous intéresse.

**** Nous tenons à noter** que ceux qui participent à l'Assemblée Générale Annuelle mais qui n'ont pas trouvé de randonnées qui les conviennent il y a plusieurs autres sites attrayant à visiter tel que:

- 1) Le Musée de Fossiles de Miguasha
- 2) Le Musée de la Bataille de la Restigouche
- 3) Le Fort Listugui
- 4) Le Musée de Dalhousie

Plus de renseignements seront disponibles sur ces sites et autres au centre d'information pour la fin de semaine au parc.

****SVP Notez** Les randonnées du dimanche seront des tournées de presque toute la journée. (de 9h00 jusqu'à peu près 15h00) Pour certaines randonnées le nombre de participants est limité et les premiers inscrits seront les premiers servis.

****SVP Notez** N'oubliez pas d'apporter vos galoches, manteau de pluie, bonnes bottes, huile à mouches, livres d'oiseaux, jumelles et tout autre articles qui vous rendra la vie plus facile durant cette fin de semaine.

****SVP Notez** Nous n'avons pas spécifié de randonnées pour les plantes, oiseaux, végétation: presque toutes les sorties seront mixtes où vous pourrez voir un peu de tout. Comme nous croyons qu'un(e) Naturaliste ne devrait pas se limiter à une partie de la nature seulement.

Ile au Héron
(Photo Allan Macneish)





SATURDAY June 3rd

6:00 – 7:30 Early Morning

Birding

Sugarloaf Park

8:00 – 11:30

1 A Tour of the Atholville Marsh

From the Margaret Doyle lookout, including a section of the New Brunswick Trail. This is an excellent waterfowl site, and one which also promises fine warbler and other passerine sightings. For botanists there is ample marsh vegetation for inspection. The tour will involve walking several kilometers along the NB Trail and the ground is flat throughout, so there is no undue challenge. (Tour led by Margaret G-Doyle and Irene Doyle)

2 A Tour of Prichard's Lake,

Sugarloaf Provincial Park. This will be an all-encompassing nature walk around a forest lake. There is a prepared forest trail but the walk will be, in total, about six kilometers, so participants should be prepared for some exertion. They will be amply rewarded for their efforts though as they have an opportunity to acquaint themselves with this small gem of a lake and its environs. (Michel Plourde will lead this tour)

3. A Tour of Landfill Sites in Dalhousie.

Ten years ago they were industrial dumps. Five years ago, they were cleaned up and allowed to revert to a natural state. Today they are vibrant communities of wild grasses, marsh and swamp vegetation, natural attractions for migrating open country birds and summer home for sparrows and several species of dragonflies. Nearby are several colonies of gulls (including Ring-bill) and Common Terns, as well as one of Black Guillemots. Not a pretty area perhaps, but one filled with treasures just waiting to be discovered by naturalists. This tour will be largely by car, with several short strolls to examine particulars. (Tour led by Mike Lushington)

4. A Walking Tour of Dalhousie Mountain.

A hike perhaps four kilometers in all but one which provides spectacular views of the Bay of Chaleur from one lookout and of the whole Restigouche Estuary from another. Along the way, you will pass through transition vegetation, from mixed hardwood to boreal forest – with ample opportunity to examine bird and vegetation life along the way. This trail is also part of the NB Trails system so, although a bit strenuous the footpath is clean and dry. There is also a possibility of visiting a beaver dam.

(Walk led by Pat McGorlick and Karl Heinsteint)

Saturday afternoon outings

1:00 – 4:00 PM

5. A Tour of the Aboriginal Heritage Gardens - Charlo.

The Eel River Bar First Nation has established an arrangement with the world-renowned Smithsonian Institute to establish this venture into the world of native plants. Although not officially open, much has been done to resurrect our knowledge of these plants and their implications into an ancient way of life. (Tour leader Gilles Soucy)

6. A climb of Sugarloaf Mountain.

Another beautifully scenic climb. This one follows the Terry Fox Trail around Sugarloaf until it joins with the trail that leads to the top of the mountain and a spectacular lookoff over the City of Campbellton, the Tide Head islands and the lower reaches of the Restigouche. Again, there will be ample opportunity to examine the plants and wildlife connecting walk, about four kilometers in all. It is rather strenuous, although on good quality trails throughout.

(Climb leader Ruth Bulmer)



7. A Walking tour in Sugarloaf Park

An easier alternative walk through the snowshoe trail, for those for whom the mountain would be too strenuous but who wish to enjoy the natural beauties of the park. (Tour guide to be announced later)

SUNDAY June 4th TOURS

8. A Canoe Trip Down the Restigouche.

Paddle your own canoe down the Restigouche. A one-day excursion down a section of the Lower Restigouche, under the leadership of professional guides. Participation will be limited to approximately twelve canoes and there will be a charge of \$15.00 for each of the two paddlers in each canoe.

(Ann Lavoie, Allan Madden and/or Bill Duncan will guide this tour)

9. A Road Tour of Restigouche Co. IBA's

Including the Restigouche Estuary, the Charlo Estuary and the lower Benjamin River. This will be an interpretative tour but we will also have an opportunity to look for Harlequin Ducks and visit the Common Eider nesting grounds in Benjamin. There is no charge and there are no limits on number. (Mike Lushington will lead this tour)

10. A Census of Bird Life on Heron Island.

Participants will take a boat from New Mills to Heron Island to conduct a bird count on the Island. Heron Island is an IBA and is owned by the Eel River Bar First Nation, who have been developing it as an ecological site. Participation is limited by the boat's carrying capacity.

(Irene Doyle with the help of Allan MacNeish will conduct this tour)

Heron Island
(Photo Allan MacNeish)



*****IMPORTANT NOTES*****

*****TO READ*****

***Please note** that all outings on both Saturday and Sunday will originate in the Parking Lot at Sugarloaf Provincial Park at the scheduled times. Participants will provide their own transportation, so car pooling is encouraged. Box lunches will be provided for those who request them for Sunday only.

****In filling out the registration form for the AGM, simply tick off the number of the outings in which you are interested.**

****As well,** participants at the Annual General Meeting are reminded of several attractions in the area which they can visit on their own. These include:

- (1) Restigouche Gallery (with its new Athol House Room)
- (2) The Fossil Museum at Miguasha
- (3) The Battle of the Restigouche Museum
- (4) The Fort Listuguj
- (5) Dalhousie Museum

Further information on these attractions and on how to get to them will be available at the information desk.

**** Please note** that the Sunday tours will be all day outings (From 9 am until about 3 PM), that the number of participants may be limited to those who register for them first. Specifics are noted in each case.

**** Please note Remember to bring appropriate footwear, raincoats, insect repellent, field guides, binoculars, and anything else you may deem necessary.**

****Please note For the botanists out there:** Although we have not placed specific tags on each outing as to what would be seen, plants, birds, vegetation, are all included. We happen to believe that Naturalists should not limit themselves to one aspect of nature. So as you take in the vegetation and the view, the birds will flitter and sing and can be admired.

COST TO YOU!

Registration fee: \$ 20.00 before May 12th.

Banquet: \$ 18.00

Box Lunches Sunday: \$5.00

Canoe Tour Outing: \$ 15.00/person

ACCOMODATIONS

HEBERGEMENT

Sanfar Cottages (Country Kettle Dining Room)

753-4287

All of the cottages have kettles, and toasters and coffee and tea is supplied.
Some of the bigger cottages have small fridges. There are some cots available also.
Tout les chalets on des bouilloires et grille-pain et le thé et café sont fournis.
Les plus gros chalets on des frigidaires. Il y a aussi des lits de camp disponibles.

Journey's End and Howard Johnson's are both booked for that weekend (Minor Hockey convention)
Les deux sont complets pour toute la fin de semaine (Convention de hockey mineur)

BED AND BREAKFASTS.....CAMPBELLTON

Aylesford Inn 759-7672

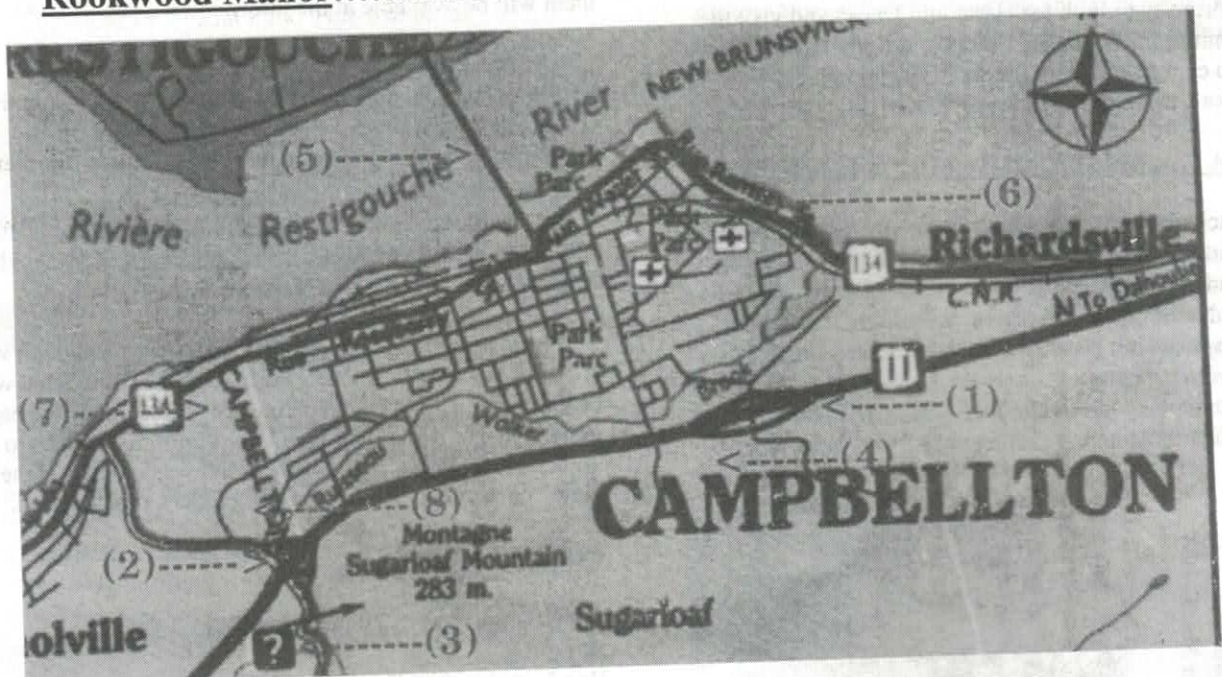
MacKenzie House Bed and Breakfast 753-3133

Yvonne's Kitchen Bed and Breakfast 753-3360

DALHOUSIE

Manoir Adelaide..... 684-5681

Rookwood Manor..... 684-3437



- 1) First Campbellton Exit when coming from Moncton
- 2) First Campbellton Exit when coming from Edmundston
- 3) Sugarloaf Provincial Park
- 4) Regional Hospital
- 5) Interprovincial Van Horne Bridge to P.Q.
- 6) Aylesford Inn (B&B)
- 7) Shopping Mall / Canadian Tire

- 1) Première sortie pour Campbellton en provenance de Moncton.
- 2) Première sortie pour Campbellton en provenance d'Edmundston.
- 3) Parc Provincial Sugarloaf
- 4) Hopital Régionale
- 5) Pont Interprovincial Van Horne
- 6) Aylesford Inn (B&B)
- 7) Mall Sugarloaf

AGM 2000 REGISTRATION FORM
FORMULAIRE D'INSCRIPTION AGA 2000

Name/Nom _____
 Address/Adresse _____

Additional Name/Nom Supplémentaire _____

Please note, that the charge for children between the ages
 of 10 and 18 will be half price
 SVP, notez que le coût pour les jeunes entre 10 et 18 ans
 sera réduit de moitié.

Phone/Téléphone _____
 E-mail/Courriel _____
 Web site/Page Web _____
 Name of your Club _____

COST/COUT

Banquet/Banquet \$18.00 X ____ = \$ ____
 Buffet: Choice of Salmon and Fiddleheads or Chicken Kiev
 Buffet: Choix de saumon et têtes de violons ou Poulet Kiev

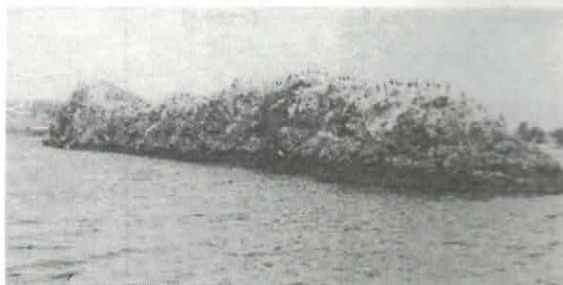
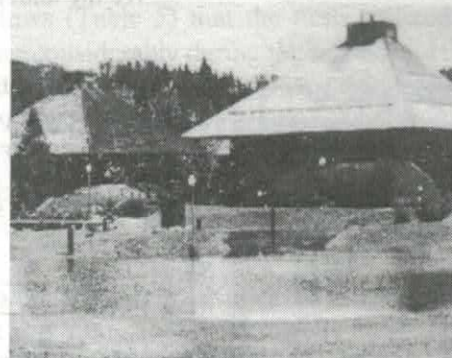
Registration Fee
 Before May 12th \$20.00 X ____ = \$ ____
 After May 12th \$40.00 X ____ = \$ ____

Frais d'inscription
 Avant le 12 mai, 20.00\$ X ____ = \$ ____
 Après le 12 mai, 40.00\$ X ____ = \$ ____

Box Lunches (Sunday only) \$5.00 X ____ = \$ ____
 Paniers-Repas (Dimanche) 5.00\$ X ____ = \$ ____

Canoe Tour \$15.00 X ____ = \$ ____
 Randonnée canoë 15.00\$ X ____ = \$ ____

Total enclosed: \$ ____
 Total inclus: \$ ____



**WHICH TOUR?/QUELLE RANDONNEE?
SEE DESCRIPTION OF TOURS
VOIR DESCRIPTION DES RANDONNEES**

Saturday June 3rd / samedi le 3 juin

- (1) Atholville/Tide Head Marsh ☐ Marais Atholville/Tide Head
- (2) Prichards' Lake ☐ Lac Prichard
- (3) Landfill Sites in Dalhousie ☐ Ancien site dépotier industriel
- (4) Dalhousie Mountain ☐ "Dalhousie Mountain"
- (5) Aboriginal Heritage Gardens ☐ Jardin Patrimoine Autochtone
- (6) Sugarloaf Mountain climb ☐ Montée de la montagne Sugarloaf
- (7) Sugarloaf Park Trails Walk ☐ Marche Sentiers Parc Sugarloaf

Sunday June 4th / dimanche le 4 juin

- (8) Canoe down the Restigouche ☐ Descendre la Restigouche en canoë
- (9) Restigouche County IBA's ☐ Les ZICO du Restigouche
- (10) Heron Island Bird Count ☐ Dénombrement d'oiseaux sur L'Ile au Héron

PLEASE NOTE:

That the Restigouche Naturalists' Club and the NBFN are not responsible or liable for injuries or other damages to persons participating in any of the activities of the weekend of June 2nd to June 4th.

We the undersigned, accept to participate at **OUR OWN RISK.**

SVP NOTER:

Le Club des Naturalistes du Restigouche et la FNNB ne seront pas tenus responsables de tout accident, blessure, ou dommage subis relativement à la participation aux activités de la fin de semaine du 2 au 4 juin.

Nous soussignés acceptons de participer à **NOS PROPRES RISQUES.**

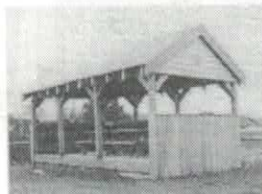
Signature(s) _____
Date: _____ 2000

Cheques or Money Orders/Cheque ou Mandat Poste

Payable to/ Payable à
Restigouche Naturalists' Club
c/o Margaret Doyle
6 Van Horne Cr.
Campbellton, N.B.
E3N 3K3

****NOTE****

Any questions
call
Ruth 753-6026
Mike 684-5688
Irene 789-7759



Post-Occupied Nest Age (Years)	No. of Nests	Post-Occupied Nest Age (Years)	No. of Nests
< 1	18	6	1
1	15	7	0
2	11	8	0
3	4	9	0
4	3	10	1
5	2		

Table 3

Some eagle pairs will re-nest in the same tree that housed the old nest. Others however, will move further away in the breeding area, as shown in Table 4 for 46 new nests.

Distance From Old To New Nest (m)	No. of Nests
In Same Tree	9
<100	12
100 - 499	9
500 - 999	9
1000 - 1499	3
1500 - 2000	1
(4000 - 5000)	(3)

Table 4

Generally 1-2 kilometres (1000 - 2000 m) is a figure used to separate different nesting pairs of eagles. Here the distance of 4 - 5 kilometres (4000 - 5000 m) from the deserted to the new nest site suggests that these 3 pairs may not have been the deserting eagles. However, looking at the nesting chronology in these areas (where there were few breeding birds) indicates that the pairs were likely those that deserted the last years nest in the three breeding areas.

The utilization curve of 85 known-age data nests during the 25 years shows (Table 5) that the nests utilized for breeding decrease considerably during the second and third nesting seasons. There are only about half of the nests used by the third year. After that there is a gradual decrease in rate to nest age 14 years where six percent of the nests are still being used by the eagles for nesting.

There are only a few still-occupied nests from age 14 to 21 years.

Success in producing eaglets is not always assured with a change of nest site. Only 56% of 121 newly located pairs were successful in this respect. However, 63% of 35 successful old nesters produced young in the new nest the next year; but so did 53% of 21 unsuccessful old nesters.

Nest Usage (years)	% of 85 Nests	Nest Usage (years)	% of 85 Nests	Nest Usage (years)	% of 85 Nests
1	100	6	25	11	11
2	78	7	30	12	9
3	54	8	18	13	7
4	42	9	14	14	6
5	39	10	13		

Table 5

Here, then, is the essence of nest utilization by Bald Eagles in New Brunswick.

- Charlotte and York counties account for many of the 108 breeding areas and 200 nest sites recorded in the 25 years, 1974-1998.
- 15% of the 863 nest years were not used for breeding (unoccupied).
- 1.85 nests per breeding area were noted.
- 4.1 years was the average length of utilization for 85 known-age nests.
- 11.9 years was the average length of utilization for 43 known-age breeding areas.
- Nest mortality reflects a number of causes - but blowdown from wind is important.

- Nest destruction can happen in any season, especially the summer.
- Only half of the eagle pairs from deserted nests breed the next season.
- About one-third of the unattended deserted nests fall out of the tree within 1 year.
- 46% of the eagles build a new nest <100 m from the old site.
- There seems to be a large decrease in nest usage during the second and third years in 85 known-ages nests over the 25 year period.
- Success in producing eaglets does not really rely on changing the nest site.

MARY'S POINT SHOREBIRD RESERVE

Mary Majka, Moncton Naturalists

Editor's Note: The following is from a presentation Mary made to the NBFN board on 5 th of February 2000.

Objectives: The objectives of our work at Mary's Point are two-fold: first and foremost is to protect the migrating shorebirds and their habitat. Second, to interpret the phenomenon of migration and coastal ecology to the public.



Photos by D. Christie

History: In the 1960s we realized that the Mary's Point shore was important to migrating shorebirds and tried to get protection for the site. Eventually, Canadian Wildlife Service (CWS) acquired the Mary's Point peninsula and some adjacent land as a National Wildlife Area (1978). The area acquired progressively higher status, as a Ramsar Site (1982) and a Western Hemisphere Shorebird Reserve (1987). Under the shorebird reserve program Mary's Point was also linked with other parts of the upper Bay of Fundy and with Suriname, a country to which many of the sandpipers migrate to for winter.

Prior to CWS acquisition, we had been fortunate to be able to purchase a cottage (1974) and began unofficially to protect the birds and the area from disturbance. Eventually we bought more land along the shore, including that surrounding the access route, providing more control of activi-

ties on the reserve. We restored an old house and moved permanently to Mary's Point (1977).

After CWS acquired Mary's Point we were able to establish more formal ways of protection and interpreting the site and birds, first by providing trails

access, later interpretive staff, and eventually an interpretive building and associated facilities.

Administration: The administration is in our hands (D. Christie and Mary Majka). Through the New Brunswick Federation of Naturalists, we apply for funds, hire and train students and other workers, write interpretive material. For several years we have employed a part-time bookkeeper to maintain payroll and financial records.

Over the years, and in association with the CWS, we have developed policies which regulate activities in the reserve.

From the start our association with CWS has been cooperative and mutually beneficial. While CWS was able to acquire the area, it did not have the resources to provide on-site protection or interpretation. During Mary's term as president of the Federation, it was easy to form a cooperative venture

which the Federation operates the reserve programs under a permit from CWS. This has continued for close to 20 years.

Finances: CWS was occasionally able to provide financial help, but most of the money came from other sources, such as federal and provincial job creation grants, student employment programs, and the Environmental Trust Fund. We raise a small amount of money through the sales of books and T-shirts, and sometimes have to add money of our own.

Staff: Since the mid 1980s, we have employed students every summer to help us control activities on the beach, to monitor the flocks, and provide visitor interpretation. Recently, we have employed four students (interpreter-wardens) plus two other employees who do maintenance and operate the centre for a few weeks before and after the 8 to 10 week student terms. The students are mostly local youth, but through Young Canada Works we have also had some students from other parts of Canada in the last four years. We try to have students who are bilingual. Written interpretation and signs are in both official languages. The staff wears uniforms which carry the insignia of the Federation and Western Hemisphere Shorebird Reserve Network. Also, our interpretive material includes the Federation's name. Wages for staff come from employment programs, sometimes supplemented by a top-up from CWS.

Community: The community around this area at first ignored our activities, later had some misgivings, but eventually accepted the reserve programs, and is now very proud of this special place. An important incentive was the fact that we provided employment and that bed and breakfasts and other businesses have sprung up and benefited from the people drawn by Mary's Point's fame.

We do not experience any problems of vandalism.

Mary's Point has been recognized not only as an important area for birds but is well known as a destination for naturalists, birdwatchers, photographers, writers, and other visitors. This creates some problems.

Problems: Through word of mouth and travel literature the place has become well known. Its popularity has created some problems and might in the future require visitor limitation. Visitation concentrates in a period of 5 weeks, and the site has definite limits to the numbers of people that can be accommodated at one time. We are hoping that developments at Johnsons Mills on the opposite side of the bay will alleviate a bit of the pressure. We have in the past tried to minimize the number of people by various means such as minimal road signage and limited proper parking.

Plans for the future: Various ideas that we have had, could make the protection and interpretation better. However, more money and staff would be required. For example, the parking problem could be solved if some more land became available. A better area for sales could generate more income. More interpretive activities could be developed such as guided hikes, lectures, workshops, more school visitation, etc. But we would not like to see those developments infringing on the natural values of this area, and also we very much would not like to see this reserve developed to an intensive scale, such as at Hopewell Rocks. We are grateful that the area is not owned by the province, since in recent years they have gone overboard on "selling the province" to "clients", i.e. visitors.

Mary's Point has the reputation of being a very peaceful and unspoiled area. People often comment on that aspect and we would like to keep it that way.

On a personal Note: We have been responsible for the development of this area and sometimes have had second thoughts about whether this was the right way to go. However, what's done is done and we have put a lot of time, love and care into this project. The time is slowly approaching where this undertaking, which we have carried out without remuneration for so long, will have to evolve into another way of operating. This is the reason why we are approaching the Federation and would like to ask for help. Our idea is to establish an endowment fund to ensure that a paid manager can be hired each summer to direct the operation of the centre and its programs.

We envision that such a person would have to have sufficient background and be paid an adequate salary. We would still be able to assist and be responsible for some guidance, since we are on location and have years of experience, but we would not be involved in the day to day operation.

We hope that the board will see fit to take this on as one of its projects.



Mary Majka & David Christie
Photo by René Belliveau

MINUTES NBFN DIRECTORS' MEETING, FEBRUARY 5, 2000

Submitted by Bonnie Hamilton-Bogart, Secretary

PRESENT:

Pierrette Mercier (President - St-Joseph de Madawaska)
 Rose-Alma Mallet (Past-President - Shediac)
 Jim Brown (Treasurer - Sussex)
 Bonnie Hamilton Bogart (Secretary - Village of Gagetown)
 Gart Bishop (Kennebecasis - Sussex)
 Jean Wilson (Saint John)
 Vivian Beale (Moncton)
 Kevin O'Donnell (Member-at-large)

Kevin Tutt (Fredericton)
 Inuk Simard (Member-at-large)
 Gilles Bourque (Dieppe)
 Elizabeth McIntosh (Ford Alward, Glassville)
 Roland Chiasson (Acadian Peninsula)
 Mary Majka - Mary's Point
 David Christie - Mary's Point

1. Agenda

Moved by Bonnie Bogart and seconded by Gart Bishop that the agenda be approved as circulated. Carried.

2. Minutes of the November Meeting

Moved by Bonnie Bogart and seconded by Gart Bishop that, with the addition of Gilles Bourque to the list of those present, the minutes be approved as corrected. Carried.

3. Business Arising from the Minutes

•Kevin O'Donnell reported that progress on NB Trail may be affected as the Program Review undertaken by the Conservative Government may result in reduced funding for trail development. New Brunswick Trails Council Inc. may be delegated more responsibility in terms of trail maintenance and operations. NBTCI enlists the aid of municipalities, businesses, local service groups and other volunteer bodies to participate in trail activities as Local Trail Sponsors. Generally speaking, trails will not be developed in areas where no Local Trail Sponsor exists.

The New Brunswick Federation of Snowmobile Clubs and the New Brunswick ATV Federation signed an Agreement in which each Federation acknowledges the other's jurisdiction over its own network of trails. It also governs joint trail use by both parties (e.g., for critical linkages). Therefore, the NBFSC/NBATVF Joint Trails Committee must agree to joint use before seeking landowner approval to do so. The aim of the Agreement was to improve the relationship between both Federations and reduce any conflicts between competing trail user groups.

A significant portion of Sentier NB Trail shall be incorporated into the Trans-Canada Trail. This would be run south from Quebec along the Saint John River

(more or less), swing east at Saint John to connect with the Fundy Trail, through Fundy National Park and then on to Sackville into NS and up to St. Jourmain towards PEI. Approved sections of Sentier NB Trail have been leased to the NBFSC during the winter months. At present time, ATVs are prohibited on Sentier NB Trail. •Speakers and Topics: Bonnie will collate the suggestions submitted by members and send out by e-mail to clubs.

4. Correspondence

- Repap: Pierrette received a brief reply to her letter of support for the protection of the Stillwater area.
- Kevin McNamee, of Canadian Federation of Naturalists: Kevin submitted a copy of his submission on funding the creation of two new national parks.
- New Brunswick Nature Trust: Request for renewal of membership. Agreed by consensus. Jim Brown to send a cheque for \$20.00.
- New Brunswick Environmental Network: Request for renewal of membership. Agreed by consensus. Jim Brown to send cheque for \$25.00.
- Valhalla Wilderness Society: Request for membership. Declined by consensus.
- Saint John Marine Pilots: Appreciation for our support and reporting that they had won their case.
- Norfolk Field Naturalists: Request for membership. Declined by consensus.
- Coastal Stewardship International Conference: Advance notice: September 17 - 22, 2000 in Saint John.
- National Millennium Conference: Advance Notice: June 3 - 6, 2000 at the University of Guelph. "Caring for Our Land: Stewardship and Conservation in Canada".

5. Treasurer's Report - Jim Brown

- Balance at February 4, 2000 is \$3,630.26 in the chequing account, and \$6,534.08 in the savings account.
- Jim served notice that he will be sending invoices to those clubs that are not in good standing.
- Discussion followed re: what benefits are conferred on clubs who are members of NBFN. Some federated clubs disagree with the practice of contributing half of the money raised from the Annual General Meeting to the provincial NBFN account.

MOTION: Moved by Rose-Alma Mallet and seconded by Kevin O'Donnell that a protocol be developed with guidelines regarding the financing of the Annual General Meeting, including clear practices for the distribution of any money raised. The protocol would become part of the AGM binder that is passed on from one hosting club to the next. Carried.

ACTION: Pierrette will consult David Christie to determine why the practice has been to divide up money raised 50/50 between the hosting club and the provincial body.

ACTION: Establishment of a sub-committee to draft protocol for AGM. The members of this sub-committee would be Gart, Rose-Alma, Roland and Pierrette.

6. Membership Secretary's Report - Jean Wilson

There were 68 memberships that had been renewed for the year 2000 (and some beyond that year), and 189 members who had been active in 1999, for a total "active" membership of 257. If any of the 189 does not renew by mid-year, they will be taken off the mailing list.

MOTION: Moved by Gart Bishop and seconded by Roland Chiasson that Jean Wilson be authorized to send out separate renewal notices, in both official languages, to unpaid membership for 2000 and 1999. Carried.

7. Newsletter

The fall issue was distributed. Gart Bishop is working on the winter issue.

8. Projects

Roland Chiasson gave a verbal report on the Important Bird Areas initiatives, and submitted a written report for the Piper Project for their 1999 season. Report available by contacting Pierrette Mercier.

9. Charitable Status - Kevin Tutt and Jim Brown

ACTION: As a result of the priority-setting session (as reported below), it was decided that the NBFN will aim to have Charitable Status by June 2000. Therefore, the application will be submitted to Revenue Canada by April 1.

10. Insurance - Kevin O'Donnell

ACTION: As a result of the priority-setting session (as reported below), it was decided:

- That the NBFN will aim to have a Liability Insurance plan in place by June 2000.
- The NBFN will poll its members to gain a full understanding of the insurance needs of the federated clubs; that these insurance needs will be compiled into a report and used to approach insurance companies before the next meeting. It is planned that the NBFN will review the proposals submitted by the insurance companies and make a decision by April 2000.

11. Report from Federated Clubs - deferred

12. Proposal by Mary Majka

Mary Majka and David Christie discussed the future of Mary's Point with the Directors. After 20 years of developing the Mary's Point project, and administering it on a volunteer basis during that time, David and Mary are interested in gradually withdrawing from the day-to-day administration of the project. They estimated that this transition may take a couple of years.

Their programs to protect migratory shorebirds, together with the nature trails and interpretation services provided during the summer months, have become an integral part of the Albert County community and its economy. Through their affiliation with NBFN, Mary and David have applied for, and received funding for summer students for many years. All interpretation services provided by the students are in both official languages, and the sponsorship of the NBFN has been displayed by the NBFN logo on the students' uniforms.

Mary and David proposed to the Directors that they consider ways to assist with the administration of the Mary's Point projects. One suggestion was to establish an Endowment Fund which would provide ongoing funding to operate the project. They estimated that it may take \$100,000 to \$200,000 to fund the hiring of a manager on an ongoing basis. To establish an Endowment Fund would require that the NBFN has charitable status. David and Mary envisioned the Endowment Fund being administered via a Board of Directors who would oversee / advise / and set policy. This board would do the hiring of the manager. Mary and David's role would be to fund-raise for the Endowment Fund.

The attributes considered by Mary and David to be necessary for this manager were: skills in administration / organization, proposal writing, public relations and promotion, and an interest in nature.

The NBFN Directors present expressed great interest in this idea, and discussed the possibility of combining the

Mary's Point manager with a hired manager for the NBFN. All of this would be contingent on achieving charitable status and obtaining adequate liability insurance coverage. Pierrette expressed our thanks for the presentation and indicated that she would stay in touch with Mary on this issue.

13. Prioritizing Session - Bonnie Hamilton Bogart

At the Nov. 13th meeting, it was decided to poll all the federated clubs to get an indication of where they felt the NBFN should be focusing their attention and energy; in other words, what should be the priorities of our provincial body?

Priorities were submitted by 4 of the federated clubs - les amies de la nature, Kennebecasis, Chignecto and Madasaska. In addition, the Gagetown Celebration of Birds group also submitted suggestions.

All the priorities of the participating clubs were sorted, by a group exercise, into groupings of similar priorities. The categories were then named by the members: Administrative Issues, Education, Protection of the Environment, Projects, and Inter-communication among clubs.

These five categories were then prioritized by all members present. Each member had 3 votes - they were asked to indicate their preferred priorities by assigning numbers to the categories: 1st priority (3 points), 2nd priority (2 points) and 3rd priority (1 point). The results of the voting were as follows:

- Administration - 34 points
- Protection of the Environment - 17 points
- Education - 8 points
- Inter-communication among clubs - 5 points
- Projects - 2 points

Issues addressed under each category were as follows:

Administrative issues: Liability Insurance, Charitable Status, and Paid Director for NBFN

Protection of the Environment: Protecting / preserving marshes, the NB Protected Areas Strategy, lobby for endangered species, nature stewardship, protected natural areas, continued strong voice for natural areas, watch dog for the environment, protection around the periphery of national parks.

Education: public appreciation of nature, curbing excessive use of pesticides, public education on land use (e.g., clear-cuts)

Inter-communication among clubs: program for more communication among clubs, coordination of meetings between clubs

Projects: Observation towers with Ducks Unlimited Canada, Breeding boxes.

14. Other Business

14.1. Club Schedules of Events: It was suggested that all clubs keep David Christie posted by e-mail of their Schedules of Events, so that David can post it on the website.

14.2. Guide to Coastal Eco-Systems: Roland Chiasson made a request to the Federation to withdraw its agreement with the Department of Fisheries and Oceans which has the effect of maintaining a high price to the public (\$175.00) for the Guide to Coastal Eco-Systems. By withdrawing the agreement, NBFN will in effect free the project to be able to provide the educational material to schools at a much lower price.

MOTION: It was moved by Gart Bishop and seconded by Rose-Alma Mallet that the executive of the NBFN take the necessary steps to withdraw its agreement with Fisheries and Oceans regarding the Guide to Coastal Eco-Systems, and that the next version of the material display the logo of the NBFN. Carried.

14.3. Species at Risk Act: Vivian Beale spoke regarding her initial reaction to the proposed Species at Risk Act (SARA) proposal, which is due to be tabled in the House of Commons in March. At first glance it looked promising, but bears closer scrutiny. She advised members that she will e-mail all Directors with her summary and suggested course of action. Bonnie will send her the list of e-mail addresses for the directors.

14.3. Provincial Species List (Jim Goltz) - deferred to next meeting.

15. Next meeting

March 18, with a storm date of two weeks later.

11:00 a.m., Loring Bailey Hall, Lounge on ground floor

13. Adjournment



Illustration by E. Aris

Third Annual Environmental Education Exchange Fair

Saturday, April 8, 2000, 10 a.m. - 3 p.m.
Jacqueline Bouchard Building, University of Moncton

Workshops

- 10:30 - 11:30
"Educating for sustainable communities: A hands-on workshop" Diane Pruneau Professor, University of Moncton
- 12:30 - 1:30
"The Wetheads" Chris Porter Tantramar Wetlands Centre
- 2:00 - 3:00
"Sick Schools" Patty Donovan Coalition for Pesticide Reduction

Display Booths - 10:00 a.m. - 3:00 p.m.

Looking for new education materials? Eager to show off new projects, techniques or green ideas? This is your big chance to find what you have been looking for.

Materials on display may include pamphlets, brochures, books, leaflets, videos, posters, slides and lesson plans. Light refreshments will be available.

This fair is designed for ...

- environmental educators
- a variety of speakers
- teachers
- community action groups
- camp counselors
- youth leaders
- environmental groups
- nature interpreters and naturalists
- any member of the general public interested in environmental education
- anyone who may have collected materials or may be looking for them

- la traduction simultanée sera disponible / simultaneous translation will be provided
- Date limite: le 20 mars 2000 / Registration Deadline March 20, 2000*

Communique avec / Contact:

Réseau environnemental du Nouveau-Brunswick /
New Brunswick Environmental Network
167, chemin Creek, Waterford, N.-B. E4E 4L7
Tél: 506-433-6101 Téléc.: (506) 433-6111
nben@nbnet.nb.ca <http://www.web.net/nben>

3e Foire annuelle d'échanges en éducation environnementale

Le samedi 8 avril 2000, 10 h - 15 h
Édifice Jacqueline-Bouchard, Université de Moncton

Ateliers

- 10 h 30 - 11 h 30
"Éduquer à la construction de communautés durables: un atelier pratique" Diane Pruneau-Professeur, Université de Moncton
- 12 h 30 - 13 h 30
"Les cerveaux humides" Chris Porter Tantramar Wetland Centre
- 14 h - 15 h
"Écoles malades" Patty Donovan - Coalition for Pesticide Reduction

Kiosques de présentation - 10 h - 15 h

Êtes-vous à la recherche de nouveaux matériaux didactiques à ce sujet? Aimeriez-vous montrer vos nouveaux projets ou nouvelles techniques ou idées écologiques? Voici l'occasion idéale de faire tout ça.

Le matériel sur place comprendra des dépliants, des brochures, des livres, des feuillets, des vidéos, des affiches, des diapositives et des synopsis. Des consommations seront servies.

Cette foire est conçue pour ...

- éducateurs/éducatrices en environnement - une variété de conférenciers/conférencières
- enseignants/enseignantes
- groupes d'action communautaire
- conseillers/conseillères de camp
- jeunes leaders
- groupes d'écologistes
- interprètes de la nature et naturalistes
- toute personne du grand public qui s'intéresse à l'éducation en environnement
- toute personne qui aurait recueilli ou qui recherche du matériel didactique en environnement

BOTANY QUIZ: CAN YOU IDENTIFY THIS PLANT?

Gart Bishop, Kennebecasis Naturalist's Society

What is it? See if you can guess the identity of the following native fern. The answer will appear in the next issue of the *N.B. Naturalist/Le Naturaliste du N.-B.*

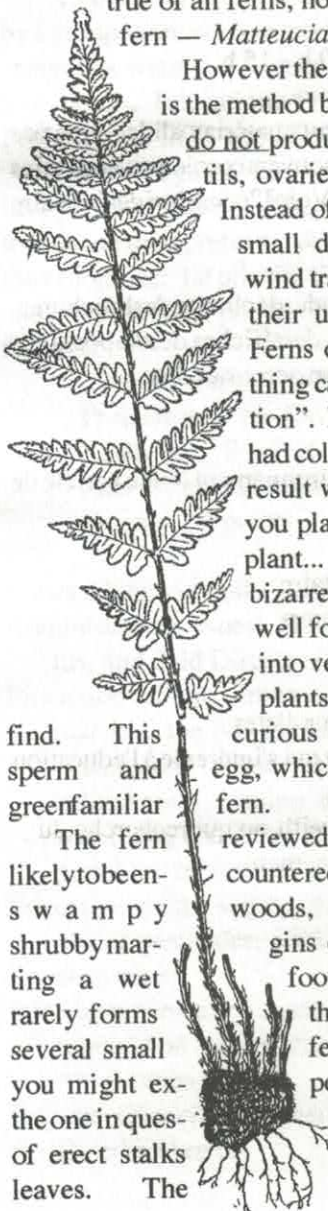
Of all the plants of New Brunswick, I particularly like the ferns ... and I am not alone in this preference. Next to orchids, there are probably more books and field guides dedicated to ferns than any other group of plants. Yet what is it exactly that distinguishes ferns from other types of plants? Their highly dissected leaves, while distinctive are not always reliable as some non-fern plants such as Yarrow (*Achillea millefolium*) have fern-like leaves.

One identifying feature of ferns is the way each leaf or frond begins, all rolled up in the bud with the tip at the very centre, giving the characteristic 'fiddlehead' shape. This is true of all ferns, not just the ones we eat (Ostrich fern — *Matteucia struthiopteris*).

However the main link between all the ferns is the method by which they reproduce. Ferns do not produce flowers with stamens, pistils, ovaries, pollen, petals and the like.

Instead of seeds, ferns produce spores, small dust-sized particles which are wind transported to new habitats. But their uniqueness doesn't stop there. Ferns do this strange, but intriguing thing called an "Alteration of Generation". It is as if you planted a seed you had collected from a sunflower and the result was a radish plant. And when you planted the seed from this radish plant... you got a sunflower plant! A bizarre method, but it seems to work well for the ferns. The spores develop into very small (less than 1 cm) funny plants that are usually very difficult to find. This curious creation in turn produces a sperm and egg, which when united, grows into the green familiar fern.

The fern reviewed in this issue's Botany Quiz, is countered if you are mucking about in woods, in amongst alders or in the gins of marshy habitats where getting foot is not a great challenge. It thick colonies. While there are ferns (less than half a meter high) you might expect to find in such a habitat, but the one in question consists of a small cluster with firm dark green leathery leaves. The



blade are roughly triangular. Each leaf off of the main stalk twists to a horizontal position, giving the frond the distinctive appearance reminiscent of an open venetian blind. [not particularly well illustrated in the accompanying sketch]

This beautiful fern produces two types of fronds. The smaller and more spreading sterile leaves (less than 30 cm high) form an outer ring around the taller, more erect inner cluster of fertile leaves (up to 50 cm high). If you look on the back side of the fertile leaves you will see numerous 'fruit dots', where the tiny spores are produced. While the sterile leaves form an evergreen winter rosette, the fertile fronds turn brown and die back late in the season.

This attractive fern is found throughout New Brunswick, being somewhat less abundant in the northern counties. In North America it is found from Newfoundland west to Alberta, south to the Carolinas. It is also found throughout Europe. In England, it is commonly associated with areas having been mined for peat and has been found to play a significant pioneering role in the development of various other wetlands.

Though it has a natural preference for a wet habitat, this fern can easily be transplanted to one's garden in damp locations with sub-acidic soil, where quite likely it will require very little care, as it continues to multiply by extension of its rootstock.

The wildflower described in the Botany Quiz from the last issue [Vol 26 (3)] was Water-plantain also known as Alisma plantain-d'eau (*Alisma plantago-aquatica*).

The illustration is by Ruth George. The following books were consulted in compiling the above description.

- Cody, W.J. & D.M Britton. 1989. *Ferns and fern allies of Canada*. Research Branch Agriculture Canada Publication 1829/E, Ottawa ON.
- Cobb, B. 1963. *A field Guide to the Ferns*. The Peterson Field Guide Series, Houghton Mifflin Company, Boston.
- Hinds, H. R. 1986. *The Flora of New Brunswick*. Primrose Press, Fredericton NB.
- Small, J.K. 1975. *Ferns of the Vicinity of New York*. Dove edition, General Publishing company Ltd. Toronto ON.
- Wherry, E.T. 1995. *The Fern Guide Northeastern and Midland United States and Adjacent Canada*. Dove edition, General Publishing Company Ltd. Toronto ON.

UN COIN DE MA REGION

Rose-Alma Mallet

Au cours des années, les crochets sur les listes d'oiseaux sont devenus mon passe temps favori: liste du Nouveau-Brunswick, du club Les Amis.e.s de la Nature du Sud-Est, de ma cours, d'hiver et autres. Donc en juillet 1999, je décide de faire l'inventaire des oiseaux qui visitent le Cap-Brûlé, un coin de ma région.

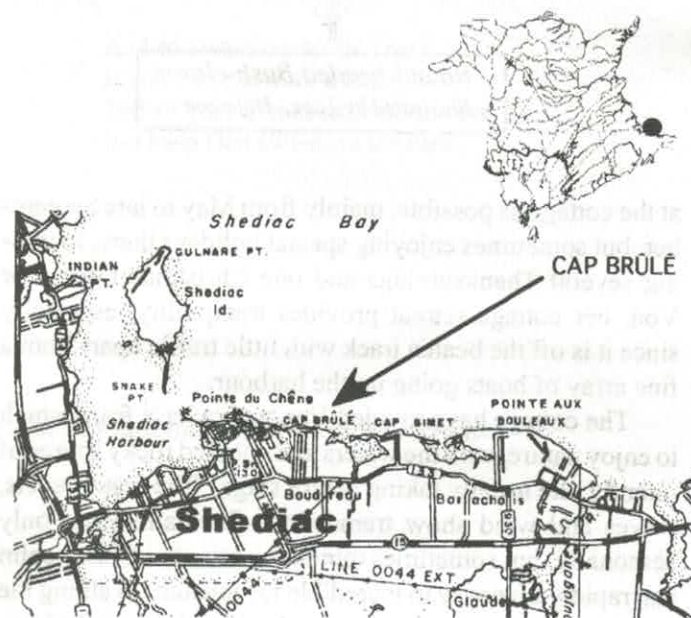
A Cap-Brûlé, le parcours choisi fut d'un kilomètre, de l'entrée de la route Cap-Brûlé à la plage. J'ai fait de l'observation ornithologique de chaque côté de la route. Cet itinéraire d'un kilomètre offre un milieu naturel varié. On y trouve deux grands champs dont un est tondu régulièrement et l'autre est laissé à dame nature. En plus, il y a une lagune d'épuration des eaux usées, un marais, un boisé de conifères où le propriétaire a fait une coupe sélective et un petit boisé de feuillus composé surtout d'érables. Et bien sûr, il faut mentionner que le nombre de chalets de cette région augmente à chaque année. C'est peut-être le temps de faire un inventaire des oiseaux, des plantes et des insectes qui s'y trouvent avant que ce coin de ma région devienne une plage publique aussi achalandée que la plage Parlee qui n'est qu'à deux kilomètres de là.

Du 19 juillet au 31 décembre, j'ai visité 3 fois par semaine le parcours de la route Cap-Brûlé. Me servant de jumelles et d'un télescope, j'ai dénombré 116 espèces. Voici la liste de ces espèces: plongeon huard, grèbe esclavon, grèbe jougris, fou de Bassan, comoran à aigrette, grand Héron, grande aigrette, bihoreau gris, oie des neiges, bernache du Canada, canard branchu, sarcelle à ailes vertes, canard noir, canard colvert, canard pilet, sarcelle à ailes bleues, canard souchet, canard chipeau, canard d'Amérique, fuligule à tête rouge, fuligule à collier, fuligule milouinan, petit fuligule, eider à duvet, harelde Kakawi, macreuse noire, macreuse à front blanc, macreuse brune, garrot à oeil d'or, petit garrot, harle couronné, harle huppé, erismature rousse, balbuzard pêcheur, pygare à tête blanche, busard Saint-Martin, épervier brun, buse à queue rousse, faucon émerillon, faisande Colchide, pluvier argenté, pluvier bronzé, pluvier kildir, grand chevalier, petit chevalier, chevalier semi-palmé, chevalier grivelé, courlis corlieu, barge hudsonienne, tournepierre à collier, bécasseau maubèche, bécasseau sandreling, bécasseau semipalmé, bécasseau minuscule, bécasseau à croupion blanc, bécasseau à poitrine cendrée, bécasseau variable, bécassin roux, bécassine des marais, mouette pygmée, mouette rieuse, mouette de Bonaparte, goéland à bec cerclé, goéland argenté, goéland

arctique, goéland brun, goéland bourgmestre, goéland marin, sterne caspienne, sterne pierregarin, guifette noire, pigeon biset, tourterelle triste, pic mineur, pic chevelu, pic flamboyant, hirondelle bicolore, hirondelle de rivage, hirondelle à front blanc, hirondelle rustique, geai bleu, corneille d'Amérique, grand corbeau, mésange à tête noire, sitta à poitrine rousse, sitta à poitrine blanche, merle d'Amérique, moqueur chat, moqueur polyglotte, jaseur boréal, jaseur d'Amérique, pie-grièche grise, étourneau sansonnet, paruline jaune, paruline à croupion jaune, paruline à couronne rousse, paruline masquée, cardinal à poitrine rose, bruant hudsonien, bruant familier, bruant des prés, bruant de Nelson, bruant chanteur, bruant des marais, bruant à gorge blanche, junco ardoisé, bruant des neiges, goglu des prés, carouge à épaulette, quiscalpe bronzé, durbec des sapins, roselin pourpre, roselin familier, bec-croisé des sapins, sizerin flammé, chardonneret jaune et gros-bec errant.

En moyenne on peut observer vingt-cinq espèces d'oiseaux par jour. La journée des observations record fut le 29 juillet, quarante-sept espèces dénombrées dans un parcours d'un kilomètre. Quel plaisir de pratiquer l'observation ornithologique à chaque jour!

C'est la lagune d'épuration des eaux usées qui offre la plus grande variété d'oiseaux. Que pourrait nous réserver comme compte d'oiseaux l'observation toute une journée entière à une lagune d'épuration des eaux ?



ROUND-HEADED BUSH-CLOVER A NEW SPECIES FOR NEW BRUNSWICK

James P. Goltz

According to Dr. Paul Catling, a mentor and one of Canada's finest all-around naturalists, "When you find a good place for botanizing, always go back!". By adhering to this principle, Von Connolly discovered a new plant species for New Brunswick this past summer. Before I give you the details, let me paint a little background picture.

Von has owned property on Grand Lake, between Scotchtown and Douglas Harbour, for about 40 years. In the late 1960s, she built a cottage there, one of the first on that stretch of shoreline. Since then, she has spent as much time



Round-headed Bush-clover
Illustrated by Tabea Hofmann

at the cottage as possible, mainly from May to late September, but sometimes enjoying special holidays there, including several Thanksgivings and one Christmas Day. For Von, her cottage retreat provides tranquillity, especially since it is off the beaten track with little traffic apart from a fine array of boats going up the harbour.

The cottage has provided Von with a base from which to enjoy nature, with the waters and cobbled rocky shores of Grand Lake usually taking centre stage. The water levels, waves and wind show tremendous fluctuation, not only seasonally, but sometimes minute by minute. Glassy calm can rapidly give way to incredible turbulence. Walking the beach has become both a ritual and spiritual retreat for Von. Some of the highlights of 40 years of beach walking have

included finding pumice and petrified wood among the varied and interesting stones, seeing a **Bald Eagle** on the beach, enjoying visits from **Canada Geese** introduced from Ontario, observing a spectacular adult **Red-headed Woodpecker** and, of course, her botanical find that inspired this article.

Von has always enjoyed the trees and other plants that grow near her cottage and on the beach. One day in early September of 1999, while making a foray along the shore of Grand Lake and admiring the pink and white morning glory-like blooms of **Hedge Bindweed**, Von found a single plant of a species that she had never before encountered in four decades of beach walking. It stood nearly thigh high and had 14 stems of creamy white clover-like blooms that were mostly clustered toward the tops of the stems. Von gave a sprig of this plant to Liz Mills, who took it to the Connell Memorial Herbarium at the University of New Brunswick for identification. Von was surprised to find out that her discovery was **Round-headed Bush-clover** (*Lespedeza capitata*), a first for the province.

While all of this exciting activity was going on in New Brunswick, both Hal Hinds and I were independently out of the province on vacation. Upon our return, we were keen to see the plant and the site at which it had been discovered. When Von took Hal there on a glorious sunny afternoon in late September, Hal found a second plant (with five stems) not far from the first. My own visit was delayed until October 4, when Von kindly braved wet snow, heavy rain and cold wind, to guide me to these plants.

The Round-headed Bush-clover grew on an open rocky beach between the lake and a large pond. On most days the site would be very dry (but not on the day of my visit!). In the vicinity of these plants, there was a mixture of native and introduced species, including much **Bouncing Bet** (*Saponaria officinalis*) and **Tall Wormwood** (*Artemisia campestris*), as well as some **Poison Ivy** (*Toxicodendron rhydbergii*), **Sand Cherry** (*Prunus pumila*) and **Carpenter's** (*Mollugo verticillata*). At this location, only species resilient to change and rugged conditions can survive the constant remodelling work of wind, water and ice. My first-hand experience with the ever-changing nature of Grand Lake made me realize that the plants are much harder than I. With bone-chilling precipitation running down the back of my neck and coating my glasses, I had difficulty believing that the Grand Lake area has one of the warmest climates

anywhere in the province.

Fortunately, Round-headed Bush-clover was discovered in time for its inclusion in Hal's second edition of the *Flora of New Brunswick*, scheduled to come out this summer. Unlike most other 'clovers', this is a native species that ranges from New Brunswick and Maine to Minnesota and South Dakota, and southward to Texas and Florida. Elsewhere in its range, it grows in open dry soil, sandy fields, sand dunes and prairies, and sometimes grows with an almost weedy abundance where it occurs. Clearly, further exploration of the Grand Lake area for this species is in

order.

To Von, many thanks for sharing your discovery with me, Hal and the readers of the *N.B. Naturalist*. Your constant vigilance of the shores of Grand Lake may be peaceful for you, but your important scientific discovery had the opposite effect on the botanical community. May other naturalists be inspired by your enthusiasm for watching out for new floral faces in the New Brunswick landscape!

A BIRDER'S FOLLY

Cecil Johnston

In Fredericton there lives a man,
Whom birders all admire,
For of their finds and birding deeds,
He writes in words of fire.

But then, alas, there came the day,
When his true colours did appear,
As he set out to write about,
The ten best birds to show up here.

Four judges had been chosen,
And settled down to do their task,
They were the best in all the province,
None better could one ask.

They worked away and did their job,
And then they tallied up the score,
Ten birds were ranked in order,
Now who could ask for more.

But did this man in Fredericton,
Do them honour on his page,
Of course not; all you noticed
Was his comments on their age!

Now to be ranked with Audubon,
Or Cecil, sure is fun,
For Cecil is still with us,
But Audubon, he left us
In 1851.

And so I warn my birding pals,
If you find a kiwi or a lark,
Tell all your friends to come and see,
But keep Don Gibson in the dark.

Cecil's poem was inspired by Don Gibson's article, entitled *Ten Best Bird Sightings in New Brunswick* (*N.B. Naturalist* 26(2): 39-40).

New Brunswick Rare Plant Project Discovers NEW VASCULAR PLANTS FOR THE PROVINCE

By Sean Blaney, Botanist / Ecologist, Atlantic Canada Conservation Data Centre

The summer of 1999 was a busy one for botanical discoveries in New Brunswick, with at least four native species of vascular plants being discovered in the province for the first time. New discoveries are always interesting, but from my perspective, the summer of 1999 was especially exciting. Within a week of my arrival in the province to start my newly created position (a week which included finding a house and a car), I was off in the wilds of northwestern New Brunswick looking for rare plants as part of the New Brunswick Rare Plant Project. After returning home and identifying the unknown specimens collected during this work, I found that we had two species never before found in New Brunswick!

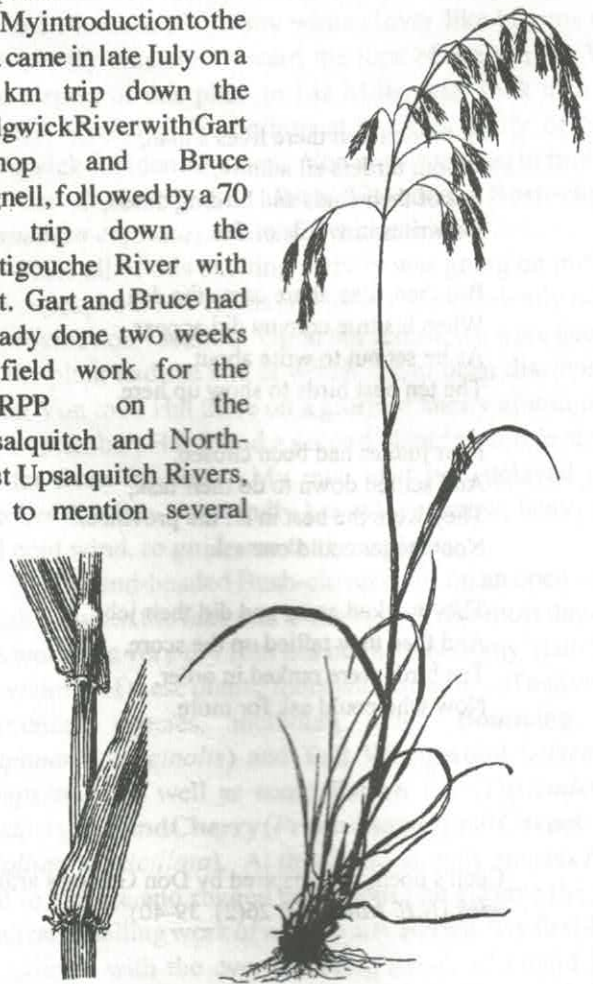
Before I begin a discussion of these two new species, a bit of introduction is probably warranted for those who are not familiar with the Atlantic Canada Conservation Data Centre (AC CDC). The AC CDC is a non-profit organization founded in 1997 by a mix of federal, provincial (from the four Atlantic provinces) and non-government organizations. We exist to compile and manage information on plants, animals and natural communities, with a focus on those elements of biodiversity that are at risk of extinction, extirpation and endangerment. The AC CDC fulfills this role for New Brunswick, Prince Edward Island, Nova Scotia, Newfoundland and Labrador, and is part of an international network of conservation data centres and natural heritage programs. Equivalent organizations, using a standard methodology developed by The Nature Conservancy, are found in every other province of Canada, all US states and many Central and South American countries. Our office is currently housed within the Canadian Wildlife Service office in Sackville, New Brunswick, but in May we will be moving to a space of our own on the campus of Mount Allison University. More information on the AC CDC is available on our website at www.accdc.com.

The summer of 1999 marked the first field work efforts of the AC CDC, with rare plant inventory projects begun in Newfoundland (a joint effort with the Newfoundland provincial government and Parks Canada) and New Brunswick. The New Brunswick Rare Plant Project (NBRPP) was supported primarily by the New Brunswick Department of Natural Resources, through the New Brunswick Environmental Trust Fund.

The NBRPP field work focused on the northwestern part of the province, specifically within the Restigouche,

Upsalquitch and Kedgwick river basins. This sparsely populated area is unlike the majority of the province in that the bedrock is mostly calcareous siltstones and limestones. The numerous river valley cliffs and rock outcrops in the area provide harsh environments which have allowed the persistence of a number of subarctic species from glacial times. The calcareous bedrock meanwhile permits the occurrence of numerous unusual plant species that do not tolerate acidic soils. Despite being recognized as one of the most botanically diverse and interesting areas in New Brunswick, the remoteness of the Restigouche watershed meant that it had been incompletely covered by botanists in the past.

My introduction to the area came in late July on a 52 km trip down the Kedgwick River with Gart Bishop and Bruce Bagnell, followed by a 70 km trip down the Restigouche River with Gart. Gart and Bruce had already done two weeks of field work for the NBRPP on the Upsalquitch and Northwest Upsalquitch Rivers, not to mention several



Tall Brome grass
Illustration by A.S. Hitchcock

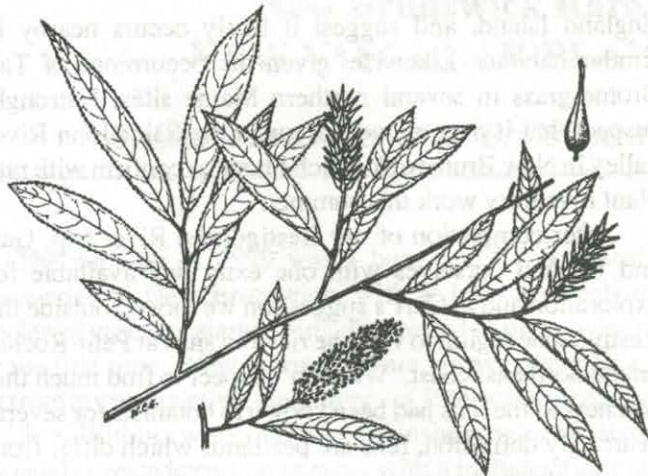
years of previous work in the region, so they provided the voice of experience. I had to rely on my Ontario botanical experience and was pleased to find that the flora here was not that different. The total diversity of plants recorded was quite impressive. Gart and I recorded almost 500 vascular plant species, 31 of which were provincially rare and Bruce recorded 108 bryophyte species, 24 of which were rare. A summary of the all the finds beyond our two new vascular species will have to wait for a future article.

The first of the new species was Tall Brome-grass (*Bromus latiglumis*), which was found at England Island in the Restigouche River, just metres from Quebec (all islands in the Restigouche are part of New Brunswick, so there was no question of whether the plant lay inside New Brunswick). Tall Brome-grass is an essentially southern species in Canada, previously known to occur from southern Alberta, where it is rare, to southern Quebec (Kartesz and Meacham 1999). In the US, it occurs throughout the eastern states, from the northeastern great plains, south to northern Georgia and Alabama (Kartesz and Meacham 1999). It had not previously been found in Atlantic Canada, although it had been on a list of species "to be looked for in New Brunswick" compiled by Hal Hinds at UNB, based on its occurrence near the New Brunswick border in both Maine and Quebec. In Maine it is known through most of the state, with the exception of the southeast corner. Tall Brome-grass tends to occur in rich, moist soils, especially along wooded river and stream banks (Dore and McNeill 1980), and its habitat on the Restigouche River fit this description well. I had decided to investigate the island because of the presence of a rich mix of Balsam Poplar, Black Ash, White Cedar and Yellow Birch. As I explored further, I became more excited by the occurrence of understory flora indicative of rich forest sites in New Brunswick - Zig-zag Goldenrod (*Solidago flexicaulis*), Blue Cohosh (*Caulophyllum thalictroides*) and Bloodroot (*Sanguinaria canadensis*). My excitement was being (literally) dampened at the time, however, by an intense downpour. As I stumbled, soaked, back to the canoe I noticed a brome-grass which looked slightly different from the very common Fringed Brome-grass (*Bromus ciliatus*). I noted the similarity to the Tall Brome-grass I had seen in Ontario, and the fact that this habitat was appropriate for that species, but I also knew that Tall Brome-grass was not in the Flora of New Brunswick (Hinds 1986). I collected a specimen of the plant, figuring that it probably was just an odd individual of the common Fringed Brome-grass. It was only after looking at the pressed specimen carefully that I found that it was actually the new species. Having not confirmed the plant's identity in the field, I was not looking carefully for other sites with Tall Brome-grass on the Restigouche. I can say for certain that the species occurs on

England Island, and suggest it likely occurs nearby in similar habitats. Likewise, given the occurrence of Tall Brome-grass in several northern Maine sites, I strongly suspect that it may as well occur in the Saint John River valley in New Brunswick which I hope to confirm with rare plant inventory work this summer.

After completion of our Restigouche River trip, Gart and I found ourselves with one extra day available for exploration and at Gart's suggestion we moved outside the Restigouche region to visit the rich fen sites at Petit-Rocher on the northeast coast. We didn't expect to find much that was new as the fens had been known to botanists for several years. By definition, fens are peatlands which differ from bogs in the presence of a groundwater flow bringing in nutrients. The Petit-Rocher fens are unusual in New Brunswick in that they have very basic groundwater, which allows many species intolerant of acidic peatlands to occur. We noted Hoary Willow (*Salix candida*), Labrador Bedstraw (*Galium labradoricum*), Low Spike-moss (*Selaginella selaginoides*) and Showy Lady's-slipper (*Cypripedium reginae*), among others. While moving through the open peatland and White Cedar - Tamarack forest (distressingly close to new housing subdivisions in one fen), I noticed a low willow which looked to me like Autumn Willow (*Salix serissima*), another species I was familiar with from explorations in Ontario. This willow was present at both fen sites, though not very common, and I collected a few branches. At the time I was fairly certain of my identification, though I confirmed it with a lab examination. However I did not realize that the species had not been previously recorded for New Brunswick. As it turned out, the species had already been collected from this very spot but was not distinguished from the very similar Shining Willow (*Salix lucida*) because the collections were without mature inflorescences. As the name suggests, the Autumn Willow is unusual among the willows in producing its seeds late in the summer.

The Autumn Willow is present across Canada, from British Columbia to Newfoundland, but is rare in many of the states and provinces along the southern, western and eastern edges of its range and had not been previously found in New Brunswick, Nova Scotia or Prince Edward Island (Kartesz and Meacham 1999). It usually occurs in basic soils and is often found in fens (Scoggan 1978). I have not as yet been able to determine where the closest known sites to the Petit-Rocher fens are, but presumably they are in Quebec, as the species is "rare in western Quebec" (Marie-Victorin 1964), and unknown from Maine (Kartesz and Meacham 1999). Autumn Willow is easily overlooked because of its similarity to Shining Willow, and may be more widely present in northern New Brunswick than is currently realized.



Autumn Willow
Illustration by W. C. Grim

The discovery of new native plants which presumably have always been present, indicates that there is still much to be learned about the distribution of plants in New Brunswick. In the right habitats and regions, it may only take a little bit of searching to find new locations for known rare plants and you might possibly find a completely new species.

I hope this article helps to alert NB Naturalist readers to the potential for exciting botanical discoveries, and in turn encourages more New Brunswick naturalists to get on out there and look for rare plants!

The AC CDC is always interested in reports of rare plants. Contact the author at AC CDC, P.O. Box 6416, Sackville, NB. E4L 1G6; or email at <sean.blaney@ec.gc.ca>.

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UN GROS MERCI / A BIG THANK YOU

RoseAlma Mallet, Past President / Ancien Président

Un gros merci à tous les membres du CLUB DE NATURALISTES DE LA PENINSULE ACADIENNE de l'accueil si chaleureux et des belles sorties dans la nature lors de l'AGA provinciale de juin 1999.

Bon succès au club RESTIGOUCHE NATURALISTS' CLUB les hôtes de l'AGA provinciale 2000.

A big thank you to all members of the naturalist's club LE CLUB DE NATURALISTES DE LA PENINSULE ACADIENNE for your warm hospitality and enjoyable excursions in your region at last year provincial AGM.

Best wishes RESTIGOUCHE NATURALISTS' CLUB the 2000 AGM hostess.

Rose-alma mallet

NATURE NEWS: December 1999 to mid February 2000

David Christie

The winter was a fairly mild one, notably so in the first half of December, but later there was a reasonable amount of snow cover.

Kathy Popma and Ruth Miller observed an interesting snow phenomenon while birding on the Tantramar Marsh Jan. 1. Kathy wrote, "We encountered what are locally called "snow devils" or "snow rolls"... structures of snow, about the size of basketballs, hollow on the inside. Under certain snow and weather conditions the wind picks up some snow and starts rolling it across a field. Soon the field is littered by what looks like clumps of snow where no clumps should be. From a distance it looks like a snowshoe hare convention underway. All the rolls are more or less the same size and can be picked up and maintain their shape. Many people have mentioned to me that they have seen this once or twice only."

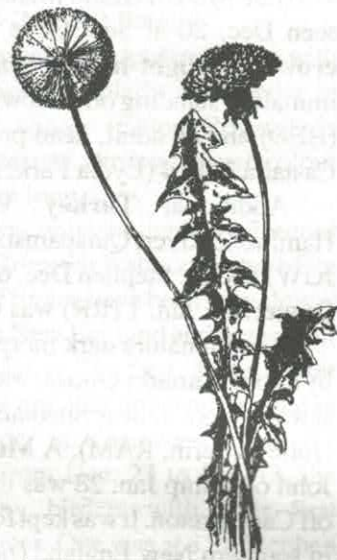
Invertebrates, Amphibians, Plants

When one thinks about insects in winter, **Snow Fleas** come immediately to mind. Thousands of these tiny springtails may appear on the snow in footprints and around tree boles, especially later in the winter, but they can appear earlier, as on Jan. 2 at Fundy National Park (Rob & Gail Walker) and Jan. 9 at Irishtown (Vivian Beale). But there are other snow insects as well. On Jan. 2, one footprint also sheltered two 5-mm long, dark gray insects with long antennae and spindly legs. Rob took them home and found they were **Snow Scorpionflies**, flightless insects with the head prolonged into a slender beak with the jaws at the tip. Jim Edsall informed him that only one species of the family Boreidae is found in New Brunswick, *Boreus nivoriundus*. One of Rob's books says that they are probably predacious on snowfleas and other springtails and may also feed on vegetation. A third winter-active insect to look for by fast-flowing streams is the winter stonefly, the adults of which emerge from the water to mate during the winter months.

A late **Wood Frog** was calling about every 15 seconds, right after the fog signal sounded, Dec. 5 at Ox Head, GM ("I've noticed before they often respond to loud noises" — BED). Given the mild late fall and the location on Grand Manan this observation is not terribly unexpected. A lot of cold-blooded creatures were probably active late, such as a "significant number of earthworms on a paved driveway" in the Moncton area in the first week of December (fide Bob Blake).

Many plants were also blooming in early December. Most probably persisted from the fall while some may have

been reacting to a false "spring," a change to very mild conditions following cold weather in the first half of November. These included significant numbers of **Common Dandelions** at Fredericton Junction Dec. 6 (Fredrica Givan), Edgetts Landing, near Hillsborough, Dec. 8 (DB) and at Fundy National Park Headquarters Dec. 16 (DSC, EMM). At Fundy, some **Green Alder**, **Multiflora Rose**, and **Red Elderberry** had new leaves emerging in the second week of December (RJW). In the Blacks Harbour area, **Yarrow**, **New York Aster** and **Common Winter Cress** were in bloom Dec. 12 (KMac) and at Saint John "Purple" Asters and a single **Oxeye Daisy** plant Dec. 13 (PMo).



Common Dandelion
F.S. Mathews

On December 11, Jim Goltz and Don Gibson were able to find 17 species in bloom in the Fredericton area, including **Heart-leaved Aster**, **Pineapple-weed**, **Woodland Angelica**, **Mouse-eared Chickweed**, **Field Penny-cress**, and **Prostrate Knotweed**. Additions to the 17 were **Common Groundsel** Dec. 10 and **Scentless Chamomile** Dec. 13 ("hundreds of blooming plants" — JPG).

Birds

As usual in winter, this section will concentrate on reports that augment those in the detailed Christmas Bird Count results. There were many seasonally unusual observations. The numbers of **Red-bellied Woodpeckers** and **Tufted Titmice** were a definite highlight.

Three seabirds not noted alive elsewhere this winter were found on the Crack Grounds, off Machias Seal Island: 5 **Northern Fulmars** Dec. 9, 2 **Dovekies** Dec. 10, and an **Atlantic Puffin** Dec. 13 (fide BED). Another Dovekie was found dead at Ste-Anne-de-Kent Dec. 27 (Rita Cormier), blown ashore by the southwesterly gale the previous day or by the Dec. 1 nor'easter. A **Thick-billed Murre** at Deer Island Point Dec. 10 (JGW, SIT) was also, surprisingly, the only report this winter.

The largest estimates of **Razorbills** off Grand Manan

were 32,000 passing S off Langmaid Cove, WHI, Dec. 5 (BED) and 10,000 off Southwest Head, Feb. 4 (BED). **Northern Gannets** remained as late as Jan. 11, when 25 were in Long Island Bay, GM, Jan. 11 (BED).

For such a mild year it was surprising that the CBCs did not find more lingering **Great Blue Herons**. In addition to those 5 reports, which included a surprising count-period bird in the Edmundston area, one was at Campbellton Dec. 4-5 (*fide* MGD). Grand Manan's late **Cattle Egret** was last seen Dec. 20 at Seal Cove (*fide* BED), but two **Black-crowned Night-herons** survived record late, with an immature standing on a snowbank at Bancroft Point Jan. 28 (BED) and an adult, dead probably several days, found at Castalia Feb. 4 (Lydia Parker, *fide* BED).

Additional **Turkey Vulture** reports came from Hammond River, Quispamsis, Dec. 3 (Joan McAllister, *fide* JGW) and St. Stephen Dec. 6 (5 — *fide* BED). One at Petit Paquetville Jan. 1 (RR) was the latest.

The immature dark morph **Snow Goose**, accompanied by a lone **Canada Goose**, was still present at the Cap Brûlé sewage lagoon, near Shédiac, at the beginning of February (Julie Pellerin, RAM). A **Mute Swan** that arrived in Saint John on a ship Jan. 28 was thought to have come on board off Cape Breton. It was kept for release at the next port of call in southern New England (*fide* KHD).

A male **Wood Duck** was very late inland at Summerville, near Bayswater, Dec. 13 (KHD) and three possibles were seen at an industrial lagoon in East Saint John about the beginning of January (KMac). One of the **Green-winged Teal** wintering at Saint John, a male of the **Eurasian** subspecies, reported several times around Courtenay Bay between Dec. 3 and Jan. 6 (JGW+). Flocks of "normal" Green-wings included 12 at Cap Brûlé Dec. 16 (SIT) and 14 at Castalia Marsh, Jan. 26 (BED). **Northern Pintail** were noted more often than usually during winter, including 3 at Atholville Marsh Dec. 12 (MGD, ID), 7 at Marys Point Dec. 25 (DSC), one at Courtney Bay throughout the winter (v.o.), a male at Castalia Marsh in January and February (BED), and a female that was visiting a Moncton yard to feed on corn from mid January into February (Charlotte & Paul Breau+).

Ring-necked Ducks were not found as late as the CBCs, 4 at Hampton Marsh Dec. 4 (JGW) being the only report. **Lesser Scaup**, however, were seen frequently during December. Saint John's male **Tufted Duck** was back for the fifth winter, being seen at Milford and Indiantown beginning Dec. 27 (DFS, Jim Evans+). An adult male **King Eider** was at Greens Point, Letete, Dec. 10 (JGW, SIT) and one to two were picked out Dec. 26 to Jan. 12 (v.o.) among the large numbers of Common Eiders at St. Andrews. A pair of **Harlequin Ducks** were at Bas Cap-Pelé Dec. 9-12 (Lionel & Lise Gionet+). The total of 18 on the Grand Manan CBC

was greatly exceeded by 40 at Pringle Point, WHI, Dec. 14 (*fide* BED) and by 55 at Gull Rock, off WHI, Feb. 22 (BED). A survey that day also yielded 40 at The Wolves and 15 at Pt. Lepreau (NBDNRE, CWS). A count of 24 **Hooded Mergansers** at Shemogue Dec. 5 (SIT) was higher than on any of the CBCs. **Common Mergansers** formed most of a flock of 300-500 ducks and gulls below the bridge at Campbellton Dec. 6 (ID). Their appearance on the sewage lagoon there Feb. 4+ was considered unusual in mid winter (MGD).

Pierre Duguay who travels regularly between Carleton, Quebec, the Acadian Peninsula and Boiestown reports having seen 17 **Northern Goshawks** from December through the first week of February. Alain Clavette saw both an immature and an adult Goshawk land in the same tree in which he was watching a **Sharp-shinned Hawk** at Taylor Village Road, Memramcook, Feb.

8; the sharpie didn't budge while the goshawks were present and for an hour after!

Most of the **Northern Harriers** on the CBC probably moved farther south soon after, but individual males

were seen at New Horton Ridge, near Riverside-Albert, Feb. 5 (DSC, EMM) and Castalia Feb. 7 (BED). Adding to the single **American Kestrel** report during the CBCs were individuals at North Head Jan. 22 (*fide* BED), Marsh Creek, Saint John, Jan. 29 (MNC), and Harvey, Albert Co., Feb. 13 (Pat Rossiter). A female **Peregrine Falcon** was seen at Castalia Bank, GM, Feb. 10 (BED). A male was reported at Saint John in December, but apparently not again till the pair were back near the Harbour Bridge nest site in the last week of February (DFS). All the **Gyrfalcon** reports came during the CBC period.

A late **American Coot** was on the Lancaster s.l., Saint John, Dec. 15 (KA, MP), and one Jan. 10 and 2 Feb. 24 at an industrial lagoon in East Saint John (KMac).

Additional **Purple Sandpipers** were at Johnsons Mills, near Dorchester Dec. 14 (34 — KP) and at Le Goulet Dec. 3 (3 — *fide* MD). **Sanderlings** were unreported at Grand Manan this winter but 2 were still at Cap Bimet, Shédiac, Dec. 1 (SIT). Besides the single **Killdeer** on the CBCs, 2 were at Bocabec Marsh, Dec. 5 (TD) and one at White Head Island Jan. 27-28 (BED+). A **Dunlin** was present at Little Lepreau, near Maces Bay, Dec. 18 through Jan. 29 (JGW+). **Common Snipe** were noted on the Cape Tormentine CBC,



Sharp-shinned Hawk
Sketch by E.J. Sawyer

at Prince of Wales Dec. 28 (PMo, MJC), and at Sugarloaf PP in the last half of February, indicating that snipe again wintered along a small brook there (MGD+). An **American Woodcock** was found at Point Lepreau Dec. 18 (MJC). There was also a report of 3 **Red Phalaropes** from the White Head Island ferry Dec. 14 (*fide* BED).

Record late shorebirds were a **Lesser Yellowlegs** at the Sackville Waterfowl Park till Dec. 6? (AMacf, Tony Erskine) and a **Long-billed Dowitcher** at Marsh Creek, Saint John, Dec. 9-21 (MJC+).

A juvenile **Parasitic Jaeger** was both very late and a rarity in Northumberland Strait, at Robichaud during strong northeasterly winds Dec. 1 (SIT). An adult **Little Gull** and an immature **Black-headed Gull** were among many Bonaparte's Gulls at Deer Island Point, Dec. 10 (JGW, SIT), and a **Black-headed** at the Cap Brûlé s.l. Jan. 5 (Mike Rae). The gull of the season was the immature **Ivory Gull** seen close at Indian Point, St. Andrews, during strong SW winds Feb. 9 (TD, her sister, Kenneth Neilsen).

Two **Northern Hawk Owls** were found, at Rang St-Georges, near Paquetville, Dec. 14 (RR) and on the Ennemond Road near Edmundston Dec. 18 (GV, Gene Nadeau). A newspaper report of a **Great Gray Owl** near Hampton Jan. 20 could not be confirmed, but the "screech owl" found in a Woodstock yard Jan. 10 (B. McMillan) was easily identified as a **Long-eared Owl** from the photo published in *The Bugle*.

Northern Saw-whet Owl was not reported by the CBCs but one was perched on a bird feeder at Taylor Village, Memramcook, Feb. 7 (AC) and three others were found dead at Grand Manan.

Investigating a clamour of **American Crows** at Moncton Feb. 14, Oscar LeBlanc located a decapitated crow hanging from a branch. Later, the cause of the commotion, a **Barred Owl**, perched in the tree all day. This species was reported quite frequently throughout the winter.

In addition to the CBC reports, **Short-eared Owls** were noted at Inkerman (Jean-Guy Robichaud), Lower Jemseg (Nancy MacDonald), Blacks Harbour (KMac), Taylor Village Road (AC), on the Tantramar Marsh (RM, KP), and most reliably along the Shore Road, Cocagne, where two were seen frequently Feb. 3+ and there could well have been 3 birds present (Louis Cormier+).

In addition to the 3 CBC birds, **Belted Kingfishers** were noted at Murray Corner Dec. 5 (SIT), Blacks Harbour and Deadman's Harbour Dec. 12 (KMac), and near Taymouth Jan. 11 (Jeremy Gullison).

There has never been a better winter for finding **Red-bellied Woodpeckers** in New

Brunswick. The reports of 7 CBCs account for 10 of them (5 seen on the count day). Additionally there were singles at Fredericton Junction Dec. 15 (Fredrica Givan), Riverview Jan. 22 (RL), Sussex all winter (Jim Patterson, *fide* DB), and Douglas, Fredericton, from the first week of February (BJS+). Several were still surviving in late February, when 3 present at North Head (*fide* BED) raised hopes that New Brunswick's first breeding record might occur this spring. An immature **Red-headed Woodpecker** made a one-day appearance at a Shediac Bridge feeder Dec. 8 (NP, Pat Poirier).

A partial albino **Black-capped Chickadee**, "white with pale cinnamon areas," appearing regularly at a feeder in Miramichi City for its 7th winter (Eldon Rogers), is establishing quite a longevity record. Birds with such colour aberrations often don't survive long.

Prior to this season there was only one confirmed record of **Tufted Titmouse** in New Brunswick although there had been a very few other reports. Titmice have been very slowly spreading northwards through New England and now occur regularly as close as central Maine. The first of this winter to become widely known was one that appeared at Blaine and Jane Chamberlain's feeder at Chamcook about the second week of December. From Dec. 23 to Jan. 13, the Chamberlains provided many birders with their first provincial sighting of this species. One was at a St. Stephen feeder Jan. 16-17 (*fide* Tom Moffatt). Leona Avery reported that a titmouse appeared at David and Anna Rogers' Woodstock feeder in the second week of February and that another was in Hartland. Both were seen Feb. 19 by Dave Myles, who heard of yet another coming to Leroy Johnson's in Nictau. Finally, it was learned that one had been coming to Graham Hooper's feeder in St. George since October (confirmed Feb. 23, KMac).

One of 2 **Carolina Wrens** at Fredericton continued to be seen into at least late January (*fide* DGG). Grand Manan had all the **Winter Wrens** with one as late as Jan. 19 on the Battle Beach Road, WHI (BED).

A surprising male **Eastern Bluebird** was seen at River Glade Jan. 9 (MJC). A **Townsend's Solitaire** wintered at Riverside-Albert where it was seen from Dec. 13 (DSC+).

Northern Mockingbirds were seen frequently across the southern half of the province. Of the 3 **Brown Thrashers** seen during the CBC period, one was surviving at a Tracadie-Sheila feeder at the end of January (Nicole Benoit) and another on White Head Island Feb. 10 (BED).

Two of several December **Pine Warblers** survived the winter by visiting feeders in Sackville (AMacf+) and Grande-Digue (*fide* RL).



Belted Kingfisher
Sketch by E.J. Sawyer

A warbler at Reversing Falls, Saint John, Dec. 13 (KA, MP) is the first winter report of **Prairie Warbler** in this province. The **Yellow-breasted Chats** on the Shediac and Saint John CBCs were apparently not seen into January; a third was at Shippagan till Dec. 7 (LDg).

The good showing of **Northern Cardinals** continued through the winter, including 3 at Shippagan (LDg+) and one at Tide Head (DZ). Mrs. M.E. Harrison near Elgin had 2 males and 2 females peacefully coexisting at her feeder all winter, but at Connie and Pearl Colpitts in Salisbury there was considerable strife between a pair and a second female. Denyse Zyveniuk's **Rose-breasted Grosbeak** was not seen after Dec. 22, when a shrike was suspected to be in pursuit of it.

Not listed in the St. Andrews CBC report was a count-period **Dickcissel** seen there Dec. 23 (PAP). An immature **Chipping Sparrow**, one of 7 reported on the CBCs, survived the winter at feeders in Alma (DR, RJW+). An adult **Field Sparrow** appeared at a Torryburn, Saint John, feeder Jan. 23 to at least the 29th (Ken, Greta & David Clark). The only **Fox Sparrow** besides the 2 on the St. Martins CBC was one at a Fredericton feeder Dec. 6 (Margery Acheson). A tailless **Song Sparrow** that appeared in Campbellton Dec. 24 regrew its tail and survived through February (MGD). All but one other report came from the southern part of the province.

An adult **White-crowned Sparrow** at Taylor Village Road, Memramcook, beginning Jan. 6 (AC) was unique this winter.

An adult male **Yellow-headed Blackbird** accompanied other blackbirds visiting a Moncton feeder till Dec. 22 (I. Vandenberg), reappeared for a few days from Jan. 17, then began appearing intermittently at another feeder about 1 km away (Al & Norma McKinnon+), where a female was also occasionally reported. Up to 15 **Rusty Blackbirds** were seen at Frosty Hollow, Sackville, throughout the winter (Nev Garrity+). Small numbers were noted in several other areas.

The lack of cones was responsible for **Red Crossbills** appearing at feeders in various areas, including 18 at Salisbury Dec. 9 (CC), several at Riverview in the last week of January (Ginette Davis) and 4 at Lac Baker during February (*vide* GV).

Substantial numbers of **Common Redpolls** attended feeders, especially during January and February. They were sometimes accompanied by a **Hoary Redpoll** or two. Positive identification of the Hoary requires careful study, but there were a couple of dozen reports from a dozen localities.

A long-black-and-white-tailed, pink-breasted, red-masked finch with a broad white wing bar that appeared Jan. 2 at Dave and Alice Baldwin's at Bonny River, near St. George, was at first a real puzzle but was ultimately identified

as a **Long-tailed Rosefinch** (JGW, CLJ), a species of southern Siberia that is commonly kept as a cage bird, especially in Europe. Evidently escaped from captivity, this one was still being seen in mid February.

Mammals

Gray Squirrels have been becoming quite numerous in the Moncton area. Five individuals in a Riverview yard one day in January (JT) was a significant sign of that. A two-legged one has adapted well to its disability at Kay Vander Feer's in Moncton and an unusual black colour morph squirrel has been reported in Riverview (*vide* NP). In inland parts of the Saint John area there were also reports of increases of Gray Squirrels this past fall and winter (IC, JP, KHD).

Bobcats seemed to be at a high point in their population cycle with numerous reports from Woodstock to Buctouche and south (*vide* KHD, JGW, NP+).

There are two amusing stories about seals. First, during the second week of February, an ice fisherman must have been quite surprised when 2 **Seals** come up in the hole inside his shack on the Bay Chaleur (*vide* MGD). In mid February "the takeout window at Tim Hortons in Sackville was visited by a **Harbour Seal**." It was captured by Maritime Atlantic Wildlife and released in Saint John "without successfully placing an order!" (*vide* Laurie Murison).

Jan. 1-3, Nelson Poirier and park staff were puzzled by "bright burnt orange" discoloration of the snow and an "almost pleasant," non-urine-like "odour of almond or that of a horse barn" around Moose tracks in Kouchibouguac National Park. Bev Schneider suggested that the "serum from recently-shed antlers would probably color the snow pinkish yellow and would smell sweet. If [the moose] was scratching at the head lesions with his hind hoof or rubbing against his flank or front leg, the exudate would be in hoof marks or splattered over the snow."

Abbreviations

AC Alain Clavette; AMacf Andrew Macfarlane; BED Brian Dalzell; BJS Bev Schneider; CBC Christmas Bird Count; CC Connie Colpitts; CLJ Cecil Johnston; CWS Canadian Wildlife Service; DB Dwayne Biggar; DR Doreen Rossiter; DSC David Christie; DFS David Smith; DGG Don Gibson; DZ Denyse Zyveniuk; EMM Mary Majka; GM Grand Manan; GV Gérard Verret; IC Ian Cameron; ID Irene Doyle; JGW Jim Wilson; JP Joan Pearce; JPG Jim Goltz; JT John Tanner; KA Karel Allard; KHD Henrik Deichmann; KMac Ken MacIntosh; KP Kathy Popma; LDg Lucille Degrâce; MD Marcel David; MGD Margaret Gallant Doyle; MJC Merv Cormier; MNC Moncton Naturalists' Club; MP Manfred Pendl; NBDNRE N.B. Dept. of Natural Resources and Energy; NP Nelson Poirier; PAP Peter Pearce; PMo Paul Mortimer; RAM Rose-Alma Mallet; RJW Rob Walker; RL Roger LeBlanc; RM Ruth Miller; RR Roland Robichaud; SIT Stu Tingley; TD Tracey Dean; v.o. various observers; WHI White Head Island.

FUNDY MODEL FOREST - PARTNERS IN SUSTAINABILITY

Maureen Whelan, Fundy Model Forest

Editor's Note: The NBFN has been a partner in the Fundy Model Forest for the past 8 years.

Forests mean different things to different people. Whether we rely on them for subsistence, our economic well being, recreation or as places of spiritual reflection, the fact remains that forests are an integral part of our lives. How do we ensure that everyone's needs are met without sacrificing the ecological integrity of the many natural resources found in the forest? A Model Forest is a place to start.

What is a model forest?

A model forest is a place to develop innovative solutions that will help to provide a healthy forest legacy for generations of Canadians.

The Canadian Model Forest Program was initiated in 1992 by the Canadian Forest Service in response to a growing concern among Canadians about forestry practices and the preservation of our natural environment. Now mid-way through its second five-year phase, the program boasts almost 400 partners.

"Canada's Model Forest Program has proven that given the proper forum, people from different points of view can form partnerships and work together to ensure that we achieve a balance between our economic demands on the forest and our ability to maintain its environmental sustainability," says Dr. Louis LaPierre, Chair of the Fundy Model Forest in New Brunswick. "The Model Forest Program has provided that forum."

In New Brunswick, 31 diverse organizations are partners in the Fundy Model Forest, which is located in the southern part of the province. Four main landowner groups are a critical part of the FMF Partnership. The Department of Natural Resources, J.D. Irving, Limited, the Southern New Brunswick Woodlot Cooperative and Fundy National Park join partners from universities, recreation groups, government departments, aboriginal interests and research organizations to work together to ensure the environmental sustainability and ecological integrity of the forest, while deriving sustainable social and economic benefits.

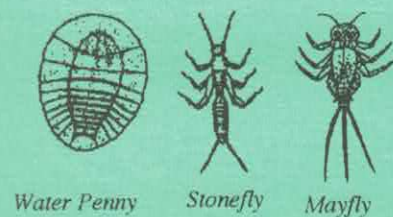
In this 420,000-hectare area, seven years of re-

search projects have resulted in substantial changes in how forests are managed. One project, which has not only increased our knowledge about forest ecosystems, but also demonstrates the cooperative spirit of model forests, is the Hayward Brook Watershed Study.

In this study, J.D. Irving, Limited made the 30km² area available for a project which examined how different forestry practices impacted cavity nesting birds, water quality, fish habitat, and different types of mosses and plants. Researchers from Environment Canada, the Canadian Wildlife Service, the University of New Brunswick and Université de Moncton carried out two years of measurements on their particular areas of expertise before the area was harvested. When harvesting took place in the area, several different methods were used so researchers would have a number of variables to compare and contrast. The results of this study will be made available to landowners throughout the model forest network so that they can incorporate many of the best management practices developed through the partners of the Fundy Model Forest.

Another project included 'Water Quality: A Bug's Life'. If you were driving to Miramichi on October 30, you may have questioned the sanity of the group splashing around in the Cocagne River off Highway # 126. This group of Fundy Model Forest partners were trying to determine the quality of the river water based on the types of macroinvertebrates (bugs) that lived there.

Macroinvertebrates are aquatic organisms that live in the sediment and gravel of streams and rivers. They can be divided into three main groups: 1) those that are



Water Penny

Stonefly

Mayfly

very sensitive to pollution, 2) those that show moderate tolerance and 3) those that are very resistant. Macroinvertebrates are an excellent measure of the

integrity of aquatic ecosystems. When used in conjunction with water chemistry testing, they enable us to evaluate the effects of human activities such as forestry on the diversity of life in our rivers and streams.

Dr. Alyre Chiasson of the Université de Moncton developed and delivered the Macroinvertebrate Workshop. He and David Sparkes, also of the Université showed the group three different ways to collect samples. The sampling methods ranged from very simple and inexpensive to more sophisticated and costly.

The first method and most commonly used involved a kick seine or a kick net. In this two-person operation, one person holds the net which is basically two poles joined by a net, which are placed directly on the substrate and then the other person kicks the rocks and generally disturbs the bottom of the river or brook, in order to move any bugs that are in the substrate. This kicking continues for two minutes and then the net is lifted at both ends. The net is then taken to shore and the samples are removed and placed in jars of solution to preserve them until they are taken to a lab. This method has been adopted by the Environmental Protection Agency in the United States.

After the group spent the morning collecting samples using the kick net, the Hess Sampler and the Surber Sampler, they returned to the lab. Using the "Monitor's Guide to Aquatic Macroinvertebrates" the samples were identified by either Order or Family and

related to water quality. For example, if the river had little variety of insects with great abundance of each kind, you would look for water overly enriched with organic matter. If there were only one or two kinds of insects in great abundance, you would look for severe organic pollution. If there were a variety of insects, but only a few of each kind, or no insects but the stream is clean, you would look for toxic pollution.

The identification of the macroinvertebrates from the Cocagne River showed the water quality to be excellent because of the diversity and abundance of insects in the water.

For more information on Fundy Model Forest, please visit our web site at www.fundymodelforest.net.



Participants using a kick net
Photo by Maureen Whelan

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