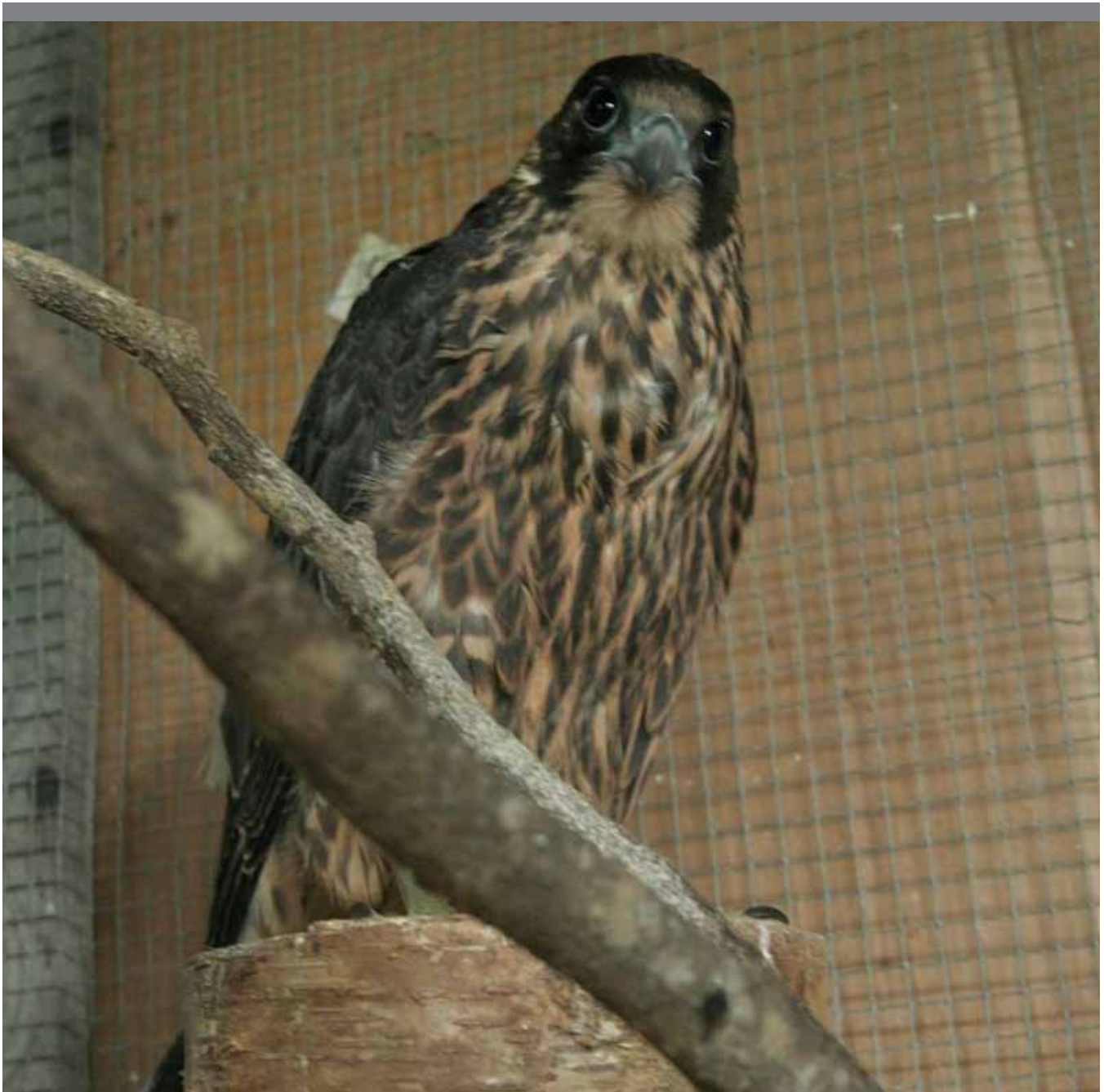


Vol. 39 No. 4 2012



Naturaliste du **NB** Naturalist



Leaf-dwelling lichens • Jardiner en conscience • Flight of a falcon



Nature NB

924 rue Prospect St.
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Nature NB is a non-profit, charitable organization whose mission is to celebrate, conserve and protect New Brunswick's natural heritage, through education, networking and collaboration. (The former name of Nature NB – New Brunswick Federation of Naturalists / Fédération des naturalistes du Nouveau-Brunswick is retained for legal purposes.)

Nature NB est un organisme de bienfaisance à but non-lucratif qui a comme mission la célébration, la conservation et la protection du patrimoine naturel du Nouveau-Brunswick par l'éducation, le réseautage et la collaboration. (L'ancien nom de Nature NB, soit « Fédération des naturalistes du Nouveau-Brunswick / New Brunswick Federation of Naturalists », demeurera le nom légal de l'organisme.)

Nature NB (NBNB/FNNB) is a provincial affiliate of Nature Canada (formerly Canadian Nature Federation) and the Canadian Nature Network (CNN).

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Chignecto Naturalists' Club, c/o CWS, Andrew Macfarlane, Box 6227, Sackville, E4L 1G6, 364-5047; meets Sackville Public Library, 7:30 pm, 3rd Mon., Sept.-June.

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Club de Naturalistes Vallée de Memramcook, a/s Valmond Bourque, 12 rue Desbarres, Memramcook, E4K 1E7, 758-1095, www.natureacadie.ca; réunions 2^{ième} mardi du mois, sept. à juin, à l'amphithéâtre de l'école Abbey-Landry, rue Centrale, Memramcook.

Club d'ornithologie du Madawaska Ltée, a/s Musée historique du Madawaska, 195 boul. Hébert, Edmundston, E3V 2S8, 737-5282 (Bert Lavoie); www.umce.ca/com1; réunions à 19h00, 2^{ième} mercredi, sept. à juin, Musée du Madawaska; Le Jaseur, trimestriel.

Club les Ami(e)s de la Nature du sud-est Inc., a/s Normand Belliveau, CP 26024 Moncton, E1E 4H9, 532-4583, ami.e.snature@gmail.com; http://picasa-web.google.com/Ami.e.snature; réunions alternant entre Dieppe et Shédiac, 1^{er} mercredi du mois; excursions 3^{ième} samedi ou dimanche; La Plume verte.

Fredericton Nature Club, Box 772, Station A, Fredericton, E3B 5B4, 366-3079; meets Stepping Stone Centre, 15 Saunders St., 7:00 pm, 1st Wed., Sept-May; newsletter.

Kennebecasis Naturalist Society, c/o Ms H. Folkins, 16 Meadow Lane, Sussex, NB E4E 0E6; meets St. Mark's Anglican Church, 2 Needle St. Sussex Corner; 7:30 pm, 4th Mon., Sept.-June; quarterly newsletter.

Miramichi Naturalist Club, President: Leonel Richard, 773-3774; lrichard@nbnet.nb.ca; www.miramichinaturalistsclub.ca; meets 6:30 pm, 2nd Mon. in the Friendly Neighbor Senior Citizen Centre, Sutton Rd.

Nature Moncton, PO Box 28036, Moncton, NB E1C 9M1, Info Line: 506-384-6397; www.naturemoncton.org; Meets Rotary Pavilion, Mapleton Park, 3rd Tuesday September – June; Monthly newsletter.

NB Botany Club / Club botanique du N.-B., c/o Richard Fournier, Faculty of Forestry, Université de Moncton, 165boul Hébert, Edmundston, E3V 2S8, 737-5050 ext 5258, organizes 5-8 outings/year, AGM in September. www.macbe.com/botanyclub/home/html.

Restigouche Naturalists' Club, c/o Mike Lushington, 214 Rosebery Street, Campbellton, E3N 2H5, 684-3258; meets Village-Campbellton Nursing Home, 7 pm, 1st Monday.

Saint John Naturalists' Club, P.O. Box 2071 Saint John, E2L 3T5; meets N.B. Museum at Market Square, 7:30 pm 2nd Mon., Sept.-May, elsewhere in June; monthly newsletter
www.saintjohnnaturalistsclub.org.

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Please submit articles for the next issue by **April 30, 2013.**
S.v.p. soumettre les articles pour le prochain numéro avant le **30 avril 2013.**
To / à Janet MacMillan, janetmac@nbnet.nb.ca

Sincere thanks to our many volunteers who contributed to this publication.
Merci beaucoup à tous les bénévoles dévoués qui ont contribué à cette publication.

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Naturaliste du **NB**

President's Message

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The Questing of Naturalists

After exploring New Brunswick for 40 years, I can still be surprised by new little gems. This October I undertook two short adventures on the lower Oromocto River. Here, it is a slow flowing river about 80 metres wide wandering through an extensive series of wetlands which run some 25 km southward toward Fredericton Junction. The canoeing was easy, accompanied by botanical delights and delightful scenery. A good friend and I put in a canoe where the Lincoln Road crosses the river, just east of the Fredericton Airport, and paddled upstream on a day when the leaves were just beginning to drop. They decorated the placid water surface like coloured snowflakes as they slowly drifted down to the Saint John River. We observed a huge population of Water-meal (*Wolffia columbiana*), which is New Brunswick's smallest plant (smaller than the head of a pin!), which neither of us had seen before. We observed a young buck's head periscoping above meter-high bulrushes only ten meters from us. We strolled along the red clay banks of the river collecting various

mosses and wildflowers, some of which have been found to be significant records.

We only managed to go about 3 km the first day. The second day, assisted by a 2.2 hp motor, we ventured 4 km upstream before turning into the huge wetland complex called Holden Meadows via Kinney Creek, and continued another 3 km through a maze of channels until we reached Irvine Brook. This wetland, similar to the better known and explored Grand Lake Meadows found to the north of the Saint John River, has slightly greater elevation changes allowing different vegetation to grow adjacent to the water. The area is relatively inaccessible, other than by boat, and the human footprint was limited to a few deer blinds. Litter was scarce, allowing one to feel immersed in wilderness, except for the roar of overhead jets and the distant rumble of the Trans-Canada Highway.

The lower Oromocto River offered me a unique experience, and I hope to return again. Already I am excited so see what new discoveries hide behind the next bend in the river.

Être naturaliste c'est une quête

Mot du Président

Gart Bishop
Sussex

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Être naturaliste c'est une quête. Un des grands plaisirs dans le fait d'être naturaliste c'est que chaque sortie est une aventure.

Que vous soyez à la recherche d'un oiseau nouveau, ou que vous découvriez, dans un champ, une plante que vous ne connaissiez auparavant que pour l'avoir aperçu dans un guide de terrain, chaque sortie vous amène dans des habitats différents, dont certains, comme une tourbière sont rarement visité et tout cela peut être fort excitant.

Et, parfois on n'a pas à aller bien loin pour trouver l'aventure.

L'automne dernier, une vieille cheminée, qui avait été utilisé pour nombre d'années par les Martinets ramoneur, a été détruite. La question que se posaient le Club de naturalistes de Kennebecasis ainsi que les gens d'Études d'oiseaux Canada était; Où vont aller en 2012 les quelques 300 martinets qui avaient été recensés, dans cette cheminée, en 2011? Ally Manthorne d'Étude d'oiseaux Canada, ayant organisé notre groupe de naturaliste pour surveiller la ville, ce fut au grand plaisir de tous, que Judy Stockdale-Dow nous fit savoir, au début mai, que les martinets étaient de retour, et quelle avait trouvé une cheminée avec 200 oiseaux dedans.

Plusieurs d'entre nous furent soulagés d'ainsi apprendre que les oiseaux s'étaient trouvé un nouveau logis. Au début juin

150 oiseaux utilisaient toujours le site. Malheureusement lorsqu' un recensement fut réalisé, vers la fin Juillet, il fut constaté que la cheminée avait été abandonnée, et ce malgré le fait qu'en apparence, le même nombre d'oiseaux pouvaient être aperçu le jour se nourrissant dans le ciel au dessus de la ville. Une nouvelle quête s'amorçait pour trouver le lieu de repos des martinets.

À l'heure où j'écris ce message, ce mystère n'a toujours pas été élucidé. Reste, que ce qui est tout particulièrement plaisant pour moi, c'est de voir comment les gens s'investissent dans cette recherche. Hier, moi et mon épouse nous promenions en ville, conduisant lentement avec les fenêtres baissées. Nous avions souvent la tête sortie dans l'espoir d'apercevoir ou d'entendre les martinets. Et quel ne fut pas notre plaisir, de rencontrer un autre véhicule avec des confrères naturalistes qui cherchaient eux aussi pour la même chose. Quoique notre quête ne fut pas couronnée de succès, ce fut très énergisant d'ainsi rencontrer d'autres personnes qui partageaient notre démarche.

Je sais bien que le même genre de scénario se répète dans plusieurs clubs. Et c'est ce qui fait que le regroupement qu'est Nature NB est si important. Je ne peux qu'espérer que tous les membres vont continuer à partager de cette grande aventure qui régénère continuellement l'énergie et la vitalité de notre organisme.

Flight of a Falcon

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We did not give him a name because we knew he was not going to be too long with us. We assumed that he was a male because of his small size. Still, he will be remembered by us for a long time.

First of all, he was one of those bird species not so long ago considered to be on the verge of extinction. Secondly, his ordeal and recovery has taught us new lessons about birds of prey. Also, never before in our rehabilitation work had we encountered so many roadblocks in releasing an animal into the wild.

The story begins quite romantically. A pair of Peregrine Falcons is building a nest in Hopewell Rocks Provincial Park! What a perfect place for thousands of visitors to admire the progress of a nest with its 3 nestlings peeking out and busy parents attending! But things obviously did not proceed as we humans would envision they should.

Birds' strategies differ vastly from what we perceive as normal parental behavior! Moreover, this is where we learned our lessons about the behaviour of birds of prey.

For a bird of prey, one offspring is already sufficient and two are tolerated, but a third, usually the youngest and therefore the weakest one, is just a "spare" and soon disappears from the nest, dominated by his aggressive siblings. Then, there is a constant fierce competition between the two that are being fed by their busy hunting parents, who apparently do not have the ability to count their children! If one youngster is strong enough to push the other sibling out of the nest and even if it continues to beg, the parents may only cater to the noisy one in the nest disregarding completely the unfortunate one that was tossed out! That is what happened to our not-yet fledged youngster. And unfortunately, we suspect, it happens more often than we know. There he was, on a precipitously slippery ledge, feebly trying to call for attention of his parents, who ignored him in favor of a more robust and bigger sibling (presumably a female) on the nest!

Fortunately, the staff of the park noticed the plight of the young bird and we received a phone call asking for advice. Familiar with this kind of situation, with other species of birds, we suggested to just observe the young Peregrine and hoped his parents would soon take care of him. To our dismay, this did not happen, and the staff of the Park, after many hours of waiting and observing, was not able to reach the nestling on the high steep ledge.

Eventually it was stranded there for two days and two nights. Not strong enough



Peregrine Falcon
Photo by D. Christie

Peregrine Falcon
Photo by D. Christie



to hold on, or perhaps desperate, it fell into the incoming tide and, luckily, was swept onto the sandy shore. Contacted, we asked the interpreters of the park to put the bird in a carton and we went to pick it up. The weak, starving Peregrine youngster was placed in a large cage and we started his rehabilitation.

First, of course, I had to obtain a temporary license from the provincial Fish and Wildlife Branch in order to care for a wild bird (which in my case was easy since I had a similar license before). Second, we had to secure a source of food that would be similar to the natural diet of a bird of prey. Fortunately, we have neighbours who commercially raise all sorts of fowl (from chickens to turkeys, pheasants to chukars). There is always mortality in such operations. Our Peregrine was a beneficiary of the farm in getting feathered freshly dead chicks, similar to the birds he would be getting if growing up in the wild! David, who fed the bird a couple of times a day, spent as little time as possible in the barn so as not to habituate it to connecting food with humans. The fluffy youngster was gradually losing his downy attire and becoming more like a juvenile individual. When it was time to let it try its wings, we relocated the bird to the Atlantic Wildlife institute in Cookville, where Pam Novak and Barry Rothfus reported the bird's slow but steady progress in one of their flight cages.

In the meantime, there were other developments taking place in connection with the falcon. While our bird was just beginning to climb from one branch to another his sibling, already fledged and, loudly begging, was pursuing her parents to the amusement of Parks visitors! In the meantime, I was having interesting discussions with all sorts of experienced and knowledgeable individuals in order to figure out what we would do when our Peregrine

would be ready to be released. This turned to be a much more formidable task than we imagined, which once again taught us a number of valuable lessons!

We first had thought that if we let the fledgling go at Hopewell Rocks, it would be naturally accepted as a "long lost" part of the resident family. We were immediately told that the parents would not accept their own offspring and likely would kill it as an intruder! (This has happened in other locations.)

Consequently, we realized that we had a problem on our hands. Here we had a ready-to-be-released Peregrine Falcon but no safe place where we could let him go without causing a conflict between him as unwelcome competition to the resident raptors. We understood, of course, that all newly fledged birds are facing this predicament but they probably are learning from their parents how to avoid conflicts, whereas our falcon would not have adult guidance.

I spread my inquiry right around the upper Bay of Fundy and found out that the shore was "occupied to capacity" with resident raptors in places that had a suitable food supply. Once one puts effort into raising a bird, one wants to see it have a reasonable chance to continue living, so we wanted to find the right

Congratulations to Mary Majka

We join naturalists from across the province in congratulating Mary with her receipt of the first Lieutenant Governor's Award of Excellence in Land Conservation. Presented by His Honour Graydon Nicholas in December, 2012, the award was established to mark the 25th anniversary of the Nature Trust of New Brunswick.

Photo by D. Christie





Peregrine Falcon
Photo by D. Christie

place to set it free. The solution came to me when I stopped thinking about the shore of the Bay as the only suitable place. It had to be where the falcon could find a good number of birds to hunt and yet be away from aggressive residents.

The answer came when we scouted out a composting/recycling plant close to the village of Penobscis, which processes “green” garbage destined to eventually be turned into a rich soil.

Associated flocks of starlings, pigeons and blackbirds are an easy target for a practicing young Peregrine!

One sunny morning in late August, David, Pam Novak from the AWI and I opened the carrying cage containing the impatient, beautiful Peregrine Falcon and watched him, after a few hesitant moments, spread his wings and fly to FREEDOM and, we hoped, a good chance of SURVIVAL!

Grand Lake’s Goat Island

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We had the distinct pleasure on June 12, 2012, of being guests of Tony and Janet Ratliffe on a voyage to Goat Island from Douglas Harbour aboard the “Thomas Gage”, their home-built, well-appointed, outboard-powered version of a Nova Scotia inshore lobster boat, circa 1950. We had both been to the island before: MP’s salient memory of a 2007 visit was the disconcerting amount of Poison Ivy (*Toxicodendron rydbergii*) she had encountered, while PP recalls finding several nests of Double-crested Cormorants (*Phalacrocorax auritus*) and, most curiously, a pile of Common Tern (*Sterna hirundo*) eggs so carefully stacked up on the shore on an early-1980’s visit. A floral and faunal update would seem to be in order.

It is not known why Goat Island is so called, Alan Rayburn making no mention of it in his 1975 publication “Geographical Names of New Brunswick”. One can only speculate that at one time goats were released there. They may not have survived long since the island is not

much more than a hectare in extent, being situated just a kilometre offshore near Flowers Cove at the northwestern end of Grand Lake. Irregularly square in shape, the exposed part of the island is made up of materials – sand, shingle, cobble and scattered boulders – largely thrown up by the lake at the end of a narrow underwater ridge extending from the northwestern shore. A sand beach and spit on the east side is popular with summer picnickers, a fairly sharp bottom drop-off facilitating an easy landing. The island, also a Grand Lake center for winter ice fishing, reaches an elevation of about five metres above mean lake level and accommodates a small pond.

We found the upper parts of the island to be quite densely vegetated, the dominant form comprising trees and shrubs growing in concentric circles. The central area supported a few mature Red Oak (*Quercus rubra*), Sugar Maple (*Acer sacharum*), ash (*Fraxinus* sp.), American Elm (*Ulmus Americana*), Witch-hazel (*Hamamelis virginiana*)

and Jack Pine (*Pinus banksiana*). They were surrounded by pioneering Gray Birch (*Betulifera populifolia*), Trembling Aspen (*Populus tremuloides*), Speckled Alder (*Alnus incana*) and willows (*Salix* spp.) intermixed with woody shrubs including Serviceberry (*Amelanchier* sp.) and Red Osier Dogwood (*Cornus sericea*). Outside that circle and noticeably growing on banks of shingle were masses of Sand-Cherry (*Prunus pumila*) in full flower. Riverbank Grape (*Vitis riparia*) draped luxuriantly over some of the shrubbery. There were also patches of Lowbush Blueberry (*Vaccinium angustifolium*) and Dogbane (*Apocynum* sp.). Poison Ivy was omnipresent, making access to the interior challenging, nearly impenetrable banks of alder and dogwood in places compounding the difficulty.

During our visit there was little evidence of herbaceous growth outside of young specimens of Sagewort Wormwood (*Artemisia campestris*), St. John's Wort (*Hypericum perforatum*) and Blue Flag (*Iris versicolor*). However, on a subsequent visit by MP two months later on August 4th more herbaceous plants were noticed including Common Toadflax (*Linaria vulgaris*), New York Aster (*Symphotrichum novi-belgii*) and both Swamp and Fringed Loosestrife (*Lysimachia terrestris* and *L. ciliata*, respectively). Two pondweeds (*Potamogeton* spp.) were noted in the pond, which by then had almost dried out, and several grasses and rushes including *Juncus pelocarpus* elsewhere. At the more-gently sloping southern end of the island it was interesting to see how the plants and number of species increased in size with distance from the waterline.

So much for the main features of the island's botany, a complete list of the plants identified being available from MP upon request.

Now for what turned out to be the island's somewhat sparse avifauna. As

we approached for a landing, a gulp of 15 Double-crested Cormorants lined up on the shore as if to welcome us. Four were adults in breeding attire; the others we took to be adults in non-breeding plumage. They soon flapped off to settle eventually far down the lake. We found no evidence of their nesting. Great Black-backed Gulls (*Larus marinus*) – much more typically coastal rather than inland nesters in New Brunswick – constituted the most conspicuous avifaunal element on and off the island. There were about two dozen adults with six accompanying chicks about three or four weeks old. Doubtless there were a few more chicks in cover on the upper beach, judging by the sporadic strafing we were subjected to by adults before we quickly moved away from the likely places. We found seven or eight empty nests of that species. Another contained a single egg, likely abandoned, its shell warmed by the late-morning sun. We had expected to see Ring-billed Gulls (*L. delawarensis*), given the recent marked increase in that species in New Brunswick and particularly the presence of a nesting colony at nearby Princess Park in the late 1980s. But we saw only one bird. We were likewise disappointed to find so few Common Terns. In fact, we saw only five,

Sand Cherry
Photo by M. Pugh



one “perched” on an approach buoy, the other four as they flew by in line astern. But we did come across four tern eggshell halves. We concluded that the apparent absence of young may have reflected predation by the gulls. (It is of interest to note that observations of terns defending eggs and young on the island as late as July 24th in 2007 were reported to the second Maritimes Breeding Birds Atlas project, and that MP saw about a dozen terns there on her second visit in 2012.)

The most unexpected encounter was with a breeding-plumaged male Ruddy Turnstone (*Arenaria interpres*), a passage migrant not often seen in inland parts of the province, although there have been a number of summer records from nearby Grand Point. The “inter-seasonality” of our mid-June observation made the record even more interesting. The only other shorebirds we saw were Spotted Sandpipers (*Actitis macularia*), of which we thought there were three pairs. A duck flushed from the pond

but disappeared so quickly that a specific identification could not be made. Finally, the only songbirds we identified during the short hour and a half we spent exploring the island were several Yellow Warblers (*Dendroica pentechia*) and Song Sparrows (*Melospiza melodia*).

Calm, sunny conditions prevailed during our outward passage but a stiff southwest breeze brought gray skies by early afternoon, a not-uncommon phenomenon on Grand Lake. So on our return we were subjected to considerable pitching and, after we had rounded Grand Point Bar, to rolling as we headed in, all contributing to our experience and enjoyment of the lake in two quite different moods.

A mere speck on the map, Goat Island offers much of general interest but perhaps little of outstanding significance or association from a naturalist’s perspective, yet it nevertheless possesses a certain measure of that allure common to islands everywhere, whether large or small.



Festival of de la Nature

We are happy to announce that the 2013 Nature NB Festival of Nature will be held in Miramichi. We, the Miramichi Naturalists’ Club, are looking forward to hosting this event for the first time since 1985. The dates of this event are June 14th to 16th and will follow the usual format with the Nature NB Annual General Meeting taking place Friday evening at 7pm and the Banquet on Saturday evening at 6pm. Our theme for the festival is “Nature in Art” and as the center piece, an art gallery will be prominent during the weekend. We are promising a traditional Miramichi hospitality to all who attend.

Make sure you mark the dates on your calendar and join us for a weekend of fun and learning.

Jardiner en conscience

Lise Godbout-Rioux
Caraquet

Après avoir lu le livre "Jardiner en conscience" de Michael J. Roads, j'aimerais partager avec vous quelques notions qui ont retenu mon attention.

L'auteur affirme que "les plantes ont des émotions et qu'il y a un lien fort entre l'émotion humaine et celle d'une plante. Ce lien est assez fort pour que les deux puissent se reconnaître et se lier." Il va plus loin en disant que "le règne végétal peut recevoir et émettre une communication." Ces affirmations m'ont rassurée. Je vais continuer de parler à mes plantes, de les toucher et de les caresser comme je le faisais, sans craindre d'être ridicule!

Pour l'auteur, jardiner est un grand privilège et un honneur. "Le jardin est un lieu où l'être humain s'unit à la Nature, où il se relie à la Vie, un lieu où notre vie prend un sens". Le jardin nous enseigne à mieux vivre en se dépouillant des soucis de la vie quotidienne. S'occuper des plantes, toucher le sol de ses mains, regarder les plantes pousser, avoir une relation avec elles, tout cela est bénéfique tant d'un point de vue émotionnel et mental que spirituel sans parler des bienfaits physiques. Il semblerait que les personnes qui aiment travailler au jardin jouissent d'une santé mentale bien meilleure que celles qui ne jardinent pas. Ce rapport qui nous lie à nos plantes serait donc très thérapeutique. Il y a une sorte d'échange d'énergie entre le jardinier et son jardin qui rend son jardin unique. Quand nous mangeons des légumes frais bios, nous consommons l'énergie et la force de la

Vie, quelque chose qui ne peut que se refléter dans l'état de santé du jardinier.

Que veut dire "jardiner en conscience"? Cela signifie "jardiner dans l'instant et jardiner avec le cœur plutôt qu'avec la tête." Le jardin ne s'inquiète pas de la température ni du temps qu'il fera. Il pousse au présent, c'est tout, alors que nous sommes trop occupés à penser. La terre ressent si nous avons un rapport affectif avec elle, lorsque nous la cultivons. Comment expliquer que des personnes semblent avoir le pouce plus vert que d'autres? C'est l'amour pour les plantes qui fait la différence. Jardiner consciemment se transforme en vivre consciemment, toujours en harmonie avec la Nature.

Le secret du "jardinage en conscience" réside dans le paillage. "Le paillis est un foyer de vie, un système naturel enrichissant dans lequel le recyclage de tous les déchets organiques comme la paille, foin, sciure de bois, feuilles, etc. assurent la continuité de la fertilité naturelle du sol." Le cycle de la vie et de la mort rejette continuellement de la matière organique dans le sol.

Notre état de conscience est altéré chaque fois qu'au lieu de nous laisser façonner par notre environnement, nous essayons de le façonner à notre guise. La Nature ne s'exprime pas par la concurrence, mais par la coopération. Elle ne connaît que "l'éternelle continuité de la Vie." La planète est consciente et si nous traitons la Terre et le sol avec respect, alors la planète nous respectera.

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For more information,
visit NatureNB.ca or
call 506-459-4209

Update from the Nature NB Office - Winter 2012

Proposal season is upon us and Nature NB staff is busy applying for funds to continue providing the programs and projects that promote natural history conservation and appreciation in the province. We invite you to learn more about what we do as well as the fun events planned this year, like our Annual Festival of Nature (in Miramichi!), by visiting our website, our Facebook page and by signing up for our monthly electronic newsletter.

2012 BIRDATHON

Nature NB is pleased to announce the winners of the first annual Birdathon.

- Most Birds (106): Team Fallout
- Most Money Raised (\$350): Team Fallout
- Best Bird (South Polar Skua, Marbled Godwit, Snowy Egret): Team Manszter
- Winning Young Naturalists' Club: MASHE (Moncton)

A total of \$887 was raised and we are very thankful for all your participation and efforts. The winners will all be receiving a year membership to Nature NB. We hope you will consider participating again next year!

NATURE NB SCHOOL PRESENTATIONS

Nature NB is once again offering a wide variety of interactive and curriculum complimenting nature based presentations and activities (province-wide and in both French and English). Our presentations, interspersed with fun activities, are designed to educate

students about our environment and help foster an appreciation for nature.

To find out more and schedule a presentation, visit our website.

PROJECT FEEDERWATCH 2012

If you feed birds in your yard each winter, why not turn your hobby into research that supports bird conservation? By joining Project FeederWatch and sharing information about which birds visit your feeders between November and April, you can help scientists at Bird Studies Canada and the Cornell Lab of Ornithology track changes in bird numbers and movements. Project FeederWatch begins on November 10 and runs until early April. Taking part is easy! Just count the numbers and kinds of birds at your feeders, and enter the information on the FeederWatch website. Participation Fee: \$35

For more information visit: www.birdscanada.org/pfw.html.

IMPORTANT BIRD AREAS

The Important Bird Areas (IBA) Program is a worldwide effort to maintain and improve the conservation of the world's birds by protecting important bird habitats and integrating bird conservation with sustaining people's livelihoods. Join Vanessa Roy-McDougall from Nature NB as she talks about IBAs here in New Brunswick and how naturalists can get involved. See local club schedules for presentation dates.

THANK YOU!

Nature NB would like to thank our generous funders and volunteers. We could not deliver our programs without your support over the last year. Thank you!

Marbled Godwit
Photo by P. Mansz



Des nouvelles du bureau de Nature NB - hiver 2012

Nature NB
Fredericton
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La période de préparation de demandes de fonds est en plein essor. Les membres du personnel de Nature NB sont très occupés par cette activité afin de nous permettre de continuer les programmes et projets visant la conservation et l'appréciation du patrimoine naturel de notre province. Nous vous invitons à en apprendre plus sur nous et nos activités intéressantes planifiées tout au long de l'année, telles notre Festival de la Nature (à Miramichi en 2013) en visitant notre site Web et notre page Facebook et en vous inscrivant à notre bulletin électronique mensuel.

DÉFI AVIAIRE 2012

- Nature NB est fier d'annoncer les gagnants du premier Défi aviaire
- La meilleure équipe (le plus grand nombre d'espèces observées) (106) : équipe Fallout
- Le plus gros montant amassé (350 \$) : équipe Fallout
- Le meilleur oiseau (Labbe de McCormack, Barge marbrée, Aigrette neigeuse) : équipe Manszter
- Gagnant parmi les Clubs de jeunes naturalistes : MASHE (Moncton)

Un total de 887 \$ a été amassé; nous sommes reconnaissants à tous les participants pour leurs participations et efforts. Les gagnants recevront chacun une année d'adhérence à Nature NB. Nous espérons vous revoir au défi l'année prochaine!

PRÉSENTATIONS SCOLAIRES DE NATURE NB

Nature NB offrira de nouveau une vaste gamme de présentation et d'activités interactives ayant la nature pour thème

central partout dans la province, en anglais et en français. Nos présentations, parsemées d'activités intéressantes, sont conçues pour éduquer les jeunes sur notre environnement tout en favorisant une appréciation de la nature.

Pour en apprendre plus sur l'horaire des présentations, visitez notre site Web.

PROJET FEEDERWATCH 2012

Si vous nourrissez les oiseaux chez vous pendant l'hiver, pourquoi ne pas transformer votre passe-temps en recherche qui appuie la conservation des oiseaux? En participant au Projet FEEDERWATCH et en partageant l'information sur les espèces d'oiseaux qui visitent votre mangeoire entre les mois de novembre et avril, vous aiderez les chercheurs d'Études d'Oiseaux Canada, ainsi que le Laboratoire d'ornithologie de Cornell, à suivre les déplacements et l'état des populations des oiseaux. Le Projet FEEDERWATCH débute le 10 novembre et se termine au début avril. C'est facile d'en faire part! Vous n'avez qu'à compter le nombre ainsi que les types d'oiseaux qui se présentent à vos mangeoires et à entrer cette information sur le site internet de FEEDERWATCH.

Le frais de participation est de 35 \$.

Pour plus d'information, visitez : <http://www.birdscanada.org/volunteer/pfw/index.jsp?targetpg=index&lang=FR>

Zones importantes pour la conservation des oiseaux (ZICO)

Pour plus d'information, veuillez visiter NatureNB.ca ou composer le 506-459-4209

Labbe de McCormack
Photo par P. Mansz



Le Programme Zones importantes pour la conservation des oiseaux (ZICO) est un effort mondial afin de maintenir et améliorer la conservation des oiseaux du monde en protégeant d'importants habitats d'oiseaux. Joignez Vanessa Roy-McDougall de Nature NB lorsqu'elle discutera les ZICO au Nouveau-Brunswick et comment les naturalistes peuvent s'impliquer.

Le Club de Naturalistes de Miramichi : le 12 novembre

La Société de Naturalistes de Kennebecasis : le 26 novembre

MERCI!

Nature NB aimerait remercier ses généreux donateurs de fonds et bénévoles. Sans vous, nous ne pourrions pas faire de nos programmes un tel succès. Merci pour votre appui des dernières années.

Snowy Egret
Photo by P. Mansz



Heart-leaved Aster (*Symphyotrichum cordifolium*) [Aster à feuilles]

Botany Corner

Gart Bishop
Sussex
gartali@nbnet.nb.ca

New Brunswick has a great many kinds of asters (around 23 species). They all add a touch of purple or blue to white from late July into November when most of our other flowers are long since passed.

Heart-leaved Aster (*Symphyotrichum cordifolium*) [Aster à feuilles], one of our more common asters, is found throughout the province in thickets, clearings, open woods, roadsides and in areas having been recently disturbed. Its range extends from Manitoba east to Nova Scotia, south to Montana and Florida.

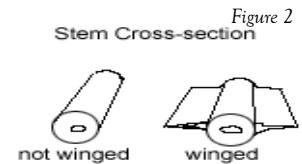
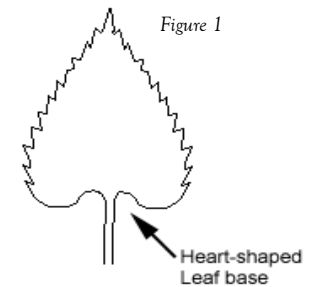
This native perennial is one of the easiest asters to identify, as we have only three asters having heart-shaped leaf bases (See Fig 1). The leaf stem (petiole) is unwinged, or with a wing of less than 2mm. The 'wing' refers to a thin flat surface extending out from either side of the stem in a longitudinal direction (See Fig 2). The second aster having a heart-

shaped leaf base is Northern Heart-leaved Aster (*Symphyotrichum ciliatum*). However, its leaves midway up the stem have a noticeable winged petiole. The third aster having a heart-shaped leaf is Large Leaved Wood Aster (*Eurybia macrophylla*). This aster differs from the previous two species by having large basal leaves (> 8 cm wide) and small glandular hairs (< 1 mm) on the individual flower stalks.

Heart-leaved Aster is usually less than one metre in height. The 1-2 cm wide flowers are composed of light blue ray flowers (like the white 'petals' on a daisy) and a centre of disk flowers, initially yellow, that becomes dark purple/red as the flowering progresses (See Fig 3).

Insects searching out a feast of pollen or nectar pollinate the flowers. The mature seed has a short tuft of hairs at the top that allow them to be easily distributed by the wind. The plant spreads through its seeds and through rhizomes (non-herbaceous underground stems).

Although not the showiest of our asters, it is occasionally cultivated, and can be ordered from various seed houses. Songbirds and grouse feed on the seeds while squirrels and mice nibble at seeds and leaves. Deer and moose will graze the whole plant. The flowers are attractive to bees and butterflies and can be dried and preserved.



References

H.R. 2000. Flora of New Brunswick, 2nd Edition. Department of Biology, University of New Brunswick, Fredericton, NB.

“Most Untypical Lichens”

How to Live on a Leaf

Warren Coleman
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What is a Lichen?

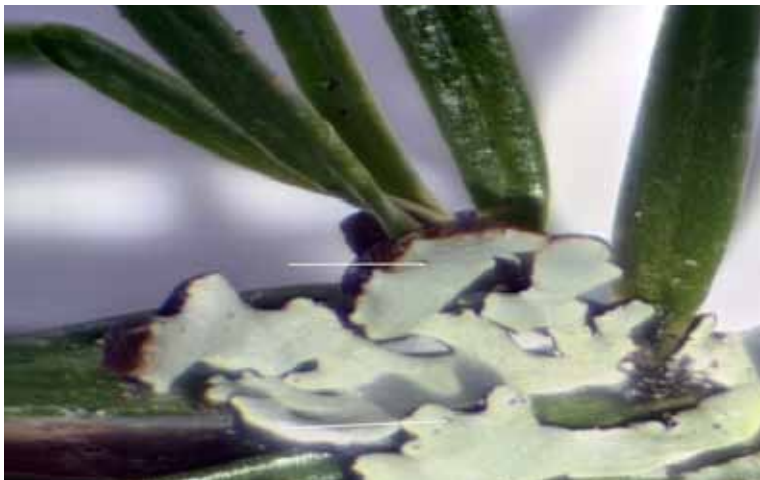
A lichen is composed of at least two organisms: a fungus and a photosynthetic partner that contains pigment responsible for its ability to use sunlight in the production of food by means of photosynthesis. Composed of mutually dependent organisms, this stable “mini-ecosystem” has evolved a distinct lichen appearance. By sharing the benefits of their close association as a lichen, a fungus and its photosynthetic partner can survive and thrive under adverse conditions that are detrimental to the individual members.

Lichens live in strange places. However, one of their most unusual homes may be the surface of living leaves. These leaf dwellers or foliicolous lichens (literally, “living on leaves”) are masters of adaptation. Are there lessons these “beautiful adaptations” can teach us about adapting to our planet?

LEAF DWELLING LICHENS OF THE TROPICS

Tropical rainforests contain numerous broad-leaved plants with over 700 lichen species living on their leaves. These unique lichens are often found on fern fronds and palm leaves in the shady understory of the forest floor. Forest floor plants frequently produce long lived, physically tough leaves (Dominy, Lucas and Wright 2003). For example, palm leaves live for more than 3 years (Abrahamson 2007). The high growth rate of tropical plants constantly provides new leaf surfaces for colonization. This allows many leaf dwelling lichens to reach sexual maturity and produce fruiting bodies within a 6 – 12 month period (Purvis 2000). Thus, lichens can endure in these environments from generation to generation.

Figure 1. A Tube lichen grows on a twig of Balsam fir. Each fir needle is 1 to 2 mm wide. Small black “dots” on the surface of the Tube lichen (white arrows) known as pycnidia release asexual spores produced by fungal cells of the lichen. Photo by: W. Coleman



LEAF DWELLERS OF THE NORTH

The first report of leaf dwelling lichens in northern forests occurred in 1943 when eight species were discovered on conifer foliage in forested ravines of Northern Idaho (Daubenmire 1943). The lichens either extended from twigs onto Douglas fir needles or grew directly on the leaves of Western Red cedar. When Daubenmire studied the lichens on cedar leaves, he was surprised to find they possessed fruiting structures. He hadn't expected such a rapid rate of development into mature reproducing lichens as found in tropical rainforests. Since Western Red cedar leaves can live for at least 6 to 10 years (Harlow, Duursma and Marshall 2005), the leaf dwellers had found a suitable home in northern forests.

The first report of leaf dwelling lichens in Canada appeared in 1973. Three scientists discovered 16 different lichens living on leaves of Western Red cedar in lowland forests of British Columbia (Vitt, Ostafichuk and Brodo 1973). These leaf dwellers included two types of Tube lichen (*Hypogymnia* species), organisms that also occur in New Brunswick. As Daubenmire had noticed in the early 1940s, crevices formed by overlapping cedar leaves provided a perfect location for tiny “reproductive balls” of a lichen known as soredia (singular: soredium) to become lodged on the leaf surfaces and develop into mature lichens

DO LEAF DWELLING LICHENS OCCUR IN NEW BRUNSWICK?

Conifer branches support lichens throughout New Brunswick. However, a check of lichens in Mactaquac Provincial Park found no evidence of leaf dwell-

ers on Eastern White cedar. Rather, I was surprised to find leaf dwellers on the needle-like leaves of Balsam fir. A check with a 10-x magnifying glass revealed Tube lichens (Figure 1).

The leaves of Balsam fir meet a number of conditions for a good lichen home:

- an average life expectancy of 5 to 7 years;
- flat and often horizontal; and,
- often found below reproducing lichens.

A closer check of Balsam fir twigs revealed Monk's hood lichens (*Hypogymnia physodes*). The lichen's broad lobes can serve as sites for soredia production. Flour-like soredia are released when the ends of these lobes split open. Soredia from the lobes can land on nearby trees where colonization takes place. According to a study by Armstrong that was published in 1990, relative humidity and temperature changes can affect soredia release. Figure 2 shows soredia that have dropped onto Balsam fir needles.

Tube lichens are an interesting - and successful - adaptation to their environment.

Figure 2. Tiny "reproductive balls" called soredia (white arrows) drop from a mature Tube lichen (black arrow) onto the flat surface of Balsam fir needles. Photo by W. Coleman



For example, they use disks composed of fungal hyphae or filaments to attach their inflated, hollow, leaf-like lobes to the branches and leaves of trees such as Balsam fir. If we look with a 10x magnifying glass at a fir needle that has small white lumps on its surface, we may be rewarded by finding the first stages of a lichen's life: fungal hyphae that radiate away from the small tissue clumps (Figure 3).

The tissues of Figure 3 develop into small, organized vegetative lichen bodies known as thalli that attach to the Balsam fir needle by black fungal hyphae (Figure 4).

Further development leads to mature-looking lichens. However, a check of Balsam fir needles in the Park didn't uncover any indisputable evidence of soredia production (Figure 5). Nevertheless, I'm confident further searches will reveal reproducing leaf dwellers that allow Tube lichens to thrive in the Park.

FUTURE LESSONS IN ADAPTATION?

Tube lichens are not restricted to leaf surfaces. They exhibit a global distribution that ranges from wood surfaces to rocks (Brodo, Sharnoff and Sharnoff 2001).

Figure 3. Unknown lichens begin their life on the surface of a Balsam fir needle. Fine "threads" of black fungal filaments (white arrows) radiate away from the growing tissues. These living "threads" will anchor the new lichens and may play other, unknown roles. Photo by W. Coleman



Monk's hood lichen has been found throughout New Brunswick. According to records at the New Brunswick Museum, it occurs on twigs of Balsam fir, Spruce and Eastern white cedar in York County.

"we see beautiful adaptations everywhere and in every part of the organic world." Charles Darwin

What is a Soredium?

A soredium is a vegetative propagule of lichen consisting of a few algal cells entwined and surrounded by fungal filaments.



Figure 4. A young Tube lichen develops on the surface of a Balsam fir needle. Black fungal hyphae (white arrows) anchor the young lichen to the leaf surface. Photo by W. Coleman.



Figure 5. A maturing Tube lichen develops on the surface of a Balsam fir needle. The ends of the lobes appear to possess developing soredia. Photo by W. Coleman.

The future will not be without its challenges for leaf dwellers such as Tube lichens. For example, the survival of their host trees may be threatened by “unprecedented” global warming (Saxe, Cannell, Johnsen, Ryan and Vourlitis 2001). Whether climate change will affect the lichen directly or affect the close relationship between its fungal and photosynthetic partners is unknown. Nevertheless, I remain optimistic. Lichens have a family history that extends at least 400 million years into the past. Since they have survived four mass extinction events that occurred on Earth, I believe these “beautiful adaptations” will be successful in the future.

If you have questions about lichens, Stephen Clayden at the New Brunswick Museum (<http://www.nbm-mnb.ca/>) would be pleased to help you. He can be reached by telephone at 506-643-2362, toll free at 1-888-268-9595 or by e-mail at Stephen.Clayden@nbm-mnb.ca.

References

- Abrahamson, W.G. 2007. Leaf traits and leaf life spans of two xeric-adapted palmettos. *American Journal of Botany* 94:1297-1308.
- Armstrong, R.A. 1990. Dispersal, establishment and survival of soredia and fragments of the lichen, *Hypogymnia physodes* (L.) Nyl. *New Phytologist* 114:239-245.
- Brodo, I.M., S.D. S.D. Sharnoff and S. Sharnoff. 2001. *Lichens of North America*. Yale University Press, New Haven. 795 pp.
- Daubenmire, R.F. 1943. Some observations on epiphyllous lichens in northern Idaho. *American Midland Naturalist* 30:447-451.
- Dominy, N.J., P.W. Lucas and S.J. Wright. 2003. Mechanics and chemistry of rain forest leaves: canopy and understory compared. *Journal of Experimental Botany* 54:2007-2014.
- Harlow, B.A., R.A. Duursma and Marshall. 2005. Leaf longevity of western red cedar (*Thuja plicata*) increases with depth in the canopy. *Tree Physiology* 25:557-562.
- Purvis, W. 2000. *Lichens*. National History Museum, London. 112 pp.
- Saxe, H., M.G.R. Cannell, O. Johnsen, M.G. Ryan and G. Vourlitis. 2001. Tree and forest functioning in response to global warming. *New Phytologist* 149:369-400.
- Vitt, D.H., M. Ostafichuk and I.M. Brodo. 1973. Foliicolous bryophytes and lichens of *Thuja plicata* in western British Columbia. *Canadian Journal of Botany* 51:571-580.

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Festival of de la Nature

C'est avec grand plaisir que le Miramichi Naturalists' Club vous invite au Festival de la nature 2013 de Nature NB qui aura lieu à Miramichi du 14 au 16 juin 2013. Le tout commencera le vendredi 14 juin avec l'inscription suivie de l'Assemblée générale annuelle de Nature NB à 19 h. Un banquet est à l'horaire le samedi à 18 h. Notre thème pour cette fête sera "Nature en art" avec comme centre d'attraction une galerie d'art qui sera ouverte pendant toute la fin de semaine. En tant qu'hôtes, nous les membres du club vous promettons un accueil chaleureux dans la région de Miramichi. Veillez inscrire ces dates dans votre agenda et venez vous joindre à nous pour une fin de semaine remplie de plaisir et de découvertes.

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