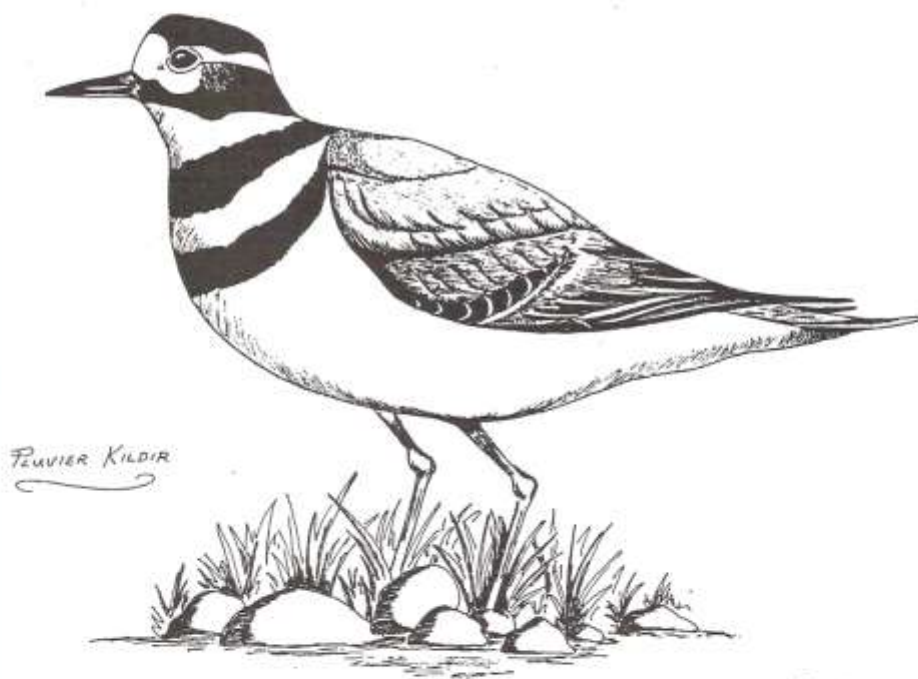


N.B. Naturalist

McArthur/Bishop
P. O. Box 1916, Sussex, N. B.
E0E 1P0

Le Naturaliste du N.-B.

January / janvier 1989



PLOVER KILDIR

*Jean-François
Gauthier*

N.B. Naturalist

ISSN 0047-9551

This magazine is published quarterly by the New Brunswick Federation of Naturalists, c/o New Brunswick Museum, 277 Douglas Avenue, Saint John, N.B. E2K 1E5. Second Class Mail Registration No. 7078. Return postage guaranteed. Send notice of change of address to preceding address. Subscription rates: in Canada \$10; other countries \$15; single issues \$2 a copy, plus postage.

N.B. Naturalist carries articles and reports pertaining to the natural history of New Brunswick. Articles are invited in either French or English, and will be printed in the language in which they are received. The opinions expressed are those of the authors. Contributions should be sent to the respective editors. Advertising rates available on request.

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

Cette publication trimestrielle est éditée par la Fédération des naturalistes du Nouveau-Brunswick, a/s Le Musée du Nouveau-Brunswick, 277, avenue Douglas, Saint John, N.-B. E2K 1E5. Courrier de la deuxième classe — Enregistrement no 7078. Port de retour garanti. Abonnements: au Canada 10\$; aux autres pays 15\$. On peut se procurer cette revue à 2\$ l'exemplaire plus les frais postaux.

On peut lire dans *Le Naturaliste du N.-B.* des rapports touchant l'histoire naturelle du Nouveau-Brunswick. Les articles seront acceptés dans français ou anglais pour être reproduites dans la langue d'origine seulement. Les opinions exprimées sont celles de leurs auteurs. Prière d'envoyer vos articles aux directeurs. Tarifs publicitaires disponibles sur demande.

Editorial Committee / Comité de rédaction

David Christie, co-editor/directeur, RR 2, Mary's Point Road, Albert, N.B. E0A 1A0; tel. (506) 882-2100

Mary Majka, co-editor/directeur, RR 2, Mary's Point Road, Albert, N.B. E0A 1A0; tel. (506) 882-2100

Hilaire Chiasson, directeur des articles français, C.P. 421, Lamèque, N.-B. E0B 1V0; tél. (506) 344-2286

Stephen Clayden, book reviews / rédacteur de critiques littéraires, 277 Douglas Avenue, Saint John, N.B. E2K 1E5; tel. (506) 658-1842

Hal Hinds, advisor/conseiller, Biology Dept., U.N.B., Bag Serv. 45111, Fredericton, N.B. E3B 6E1; tel. (506) 453-4885

Peter Pearce, advisor/conseiller, 5 Shamrock Terrace, Fredericton, N.B. E3B 2S4; tel. (506) 452-3086

16 (4) January / janvier 1989

From the President105

The '88 AGM: What a Bonanza!,
by Paul Bogaard106

My Wildlife Art Course,
by Halton Dalzell107

Oiseaux de nuit: Hou, hou, houl,
par Rose-Aline Chiasson108

Eastern Bluebird: More Common
than we Believe? by Donald Kimball109

Rare N.B. Plants—A New Orchid for N.B.,
by Hal Hinds110

Marine Mammals from New Brunswick's
Ice Age, by Randall Miller112

The Annual Animal Roundup,
by Mary Majka114

Silhouettes, by Peter Pearce115

An Unusual Mourning Dove Breeding Record,
by Rudy Stocck116

From the Pages of the Journals—Propagating
Punctuation..., by Christopher Majka116

Nature News—Spring—Autumn 1988,
by David Christie119

Federation News—Annual General Meeting126

The Nature Trust of New Brunswick126

On the Cover Sur la couverture

Pluvier kildir, par Jean-Raymond Gallien
Kildeer, by Jean-Raymond Gallien

Support of The New Brunswick Museum is gratefully
acknowledged. On remercie Le Musée du Nouveau-
Brunswick pour son assistance.

The '88 AGM: What a Bonanza!

Paul Bogaard

Each year our Federation plans an "AGM," and you may think that simply stands for another annual general meeting. But to my wife and me they have come to mean **Another Great Moment!** They are, after all, an opportunity to get together with folks who share our enthusiasm for the natural beauty and bounty of our province, and who have all decided to spend a couple of days exploring some select spot most of us have never seen before. That's what makes these meetings such a bonanza: we are introduced to an area by those who know and love them best.

Last spring when we first heard that the 1988 AGM was going to be held up on the Acadian Peninsula, we realized this provided the ideal opportunity to be introduced to a spot we had heard lots of, but which for us remained "terra incognita." We made arrangements with some friends who share our interests and blocked out those days on our calendar.

When the time came we spent a leisurely day driving and eating our way from the most southeasterly corner, which is our home, to Lamèque in the most northeasterly corner. The evening was spent greeting old friends and making new ones, discovering what enthusiasm energizes this relatively new Club de naturalistes de la Péninsule acadienne and finding ourselves warmed by their hospitality.

On Saturday we were up early and feeling our way through the morning mists to the ferry which took us across to Miscou. From there we gathered with our fellow explorers and were guided out into first one area and then another of a terrain—as vast as any we had experienced—which can only be spelled out in capital letters—BOG! With the mist just rising the atmosphere intensified our feeling of intruding upon a very "foreign" place. As it cleared, familiar sightings like Rough-legged Hawks appeared unexpectedly large for their distance. Perhaps it was another effect of the unusual topography, but my favorite memory is of the Whimbrels. They weren't so far off, but in a landscape that seemed so empty, still and flat they repeatedly slipped in and out of our view like a skein of scoter on a quiet but rolling sea.

We landed eventually on the northeast coast at a lighthouse, where emerging onto a familiar coastal landscape we fanned out in various directions ambling along at our own speeds. I particularly recall the Merlin, perched on a tussock above the shallow beach, which allowed us to approach close enough for a good look without the need for binoculars. And when she did fly it was only a short way up the beach, a routine repeated a number of times over.

After lunch at a local diner (seafood, of course) we chose one of two field trips which took us into another vast and open landscape, this one formed by the slow but inexorable advance of sand dunes. Hal Hinds filled our afternoon with a wealth of botanical detail, but the one general lesson I found the most fascinating was how the plants in this desiccated habitat had developed strategies strikingly similar to those out in the perpetually wet bogs, because both areas provide only marginal nutrition.

The evening brought with it a guest speaker, and of course the business meeting for which this was nominally the "annual general" gathering. I am sorry for those individuals who worked so diligently to prepare that portion of the evening to report that they were completely overshadowed by the FEAST laid on by our host club! It was a feast for the eyes long before it touched the palate: a huge halibut, baked bass on a sea of azure gelatin, shrimp salad where you had to hunt for the salad...

When we awoke the next morning, amazed that our appetites had returned, for more exploring as well as food, we made our way through the museum at Shippegan, then the Acadian Village, and finished with a very relaxed drive back to the southeast. When we hear of plans for another "AGM," we may consider attending to the business of the annual meeting, but what will bring out our maps and block out a few days on our calendar is **Another Great Moment!** We urge you to do the same. We may even consider inviting you to a few of our most cherished haunts!

My Wildlife Art Course

Halton Dalzell

During the first two weeks in July, I was able to go to a wildlife art course at Sunbury Shores Art and Nature Centre, thanks to the N.B. Federation of Naturalists, who paid for my tuition from its scholarship fund. Sunbury Shores has lots of summer courses to show people how to draw, paint, and enjoy nature. Mine was taught by Gary Lowe of Toronto. Gary knows his art, having done all the illustrations for *Birds of Prey of North America*, and is an excellent teacher.

I arrived in St. Andrews on July 4 with ten other students. I thought everyone would be my age, but there were a few adults there as well. My first project was a painting of the head of a Red-Breasted Merganser. Since they had no tempera paints there, and Gary said we all should try something different, I decided to use acrylic paint. It took me five days to finish it and my art skills improved greatly with Gary's advice. I learned how to do backgrounds and mix colours, as well as techniques in painting feathers.

After finishing the merganser I went on to what was to be my biggest project ever. My merganser painting was only 6 in x 8 in, but the Common Eider was 16 in x 20 in. I figured it took me at least 32 hours of work to finish it. Gary was quite impressed with the painting and said I was "an up and coming" wildlife artist. The staff at Sunbury Shores obviously agreed, because they said if I wanted to go back next summer, they would arrange to pay all my expenses!

When I compare paintings I did before I took the course with the merganser and eider paintings, there is no comparison!

I am sure looking forward to going back next summer. I'm glad the Federation had enough confidence in me to send me. No doubt you will see some of my improved artworks in future issues of the *N.B. Naturalist*.¹



¹ Wanted: Young naturalists aged 12-19 to be considered for scholarships in nature or nature art courses during summer 1989. Send you application to the editors.

Oiseaux de nuit : Hou, hou, hou!

Rose-Aline Chiasson

Ayant appris qu'on pouvait appeler les hiboux la nuit et s'ils répondaient à deux semaines d'intervalles, cela comptait pour l'Atlas, j'ai décidé de tenter l'expérience sur l'île Lamèque.

J'ai commencé par relever à plusieurs reprises, le cri du Grand Duc sur une cassette avec un volume très élevé. Par une belle soirée calme de mars, j'ai décidé d'aller tenter ma chance, malgré mon mari qui se montrait très sceptique. Il a tout de même décidé de m'accompagner sur une route isolée, traversant un boisé clairsemé. Nous sommes arrêtés à plusieurs reprises, je faisais jouer mon enregistrement à un très haut volume et j'écoutais plusieurs minutes et recommençais à deux ou trois reprises. Au quatrième arrêt, j'ai cru entendre un *hou, hou* dans le lointain dès que mon enregistrement eut fini de jouer. J'ai continué à tendre l'oreille, pas d'erreur, c'était bien un Grand Duc qui arrivait. Je suis allée avertir Hilaire qui était resté dans la voiture et nous avons attendu. L'oiseau semblait voler un bout de chemin pour s'arrêter, crier et repartir. À notre grande surprise, il y avait deux Grands Ducs qui répondaient et venaient vers nous, de chaque côté de la route. Si nous avions été plusieurs paires de yeux à observer, nous aurions peut-être eu la chance de l'apercevoir car c'était clair de lune. Ils sont venus très près de nous. Nous sommes revenus à la maison, c'était le 13 mars 1987.

L'hiver suivant, nous avions hâte de recommencer, mais à la recherche de nouvelles espèces, d'autant plus que nous avions eu une Nyctale boréale et une Petite Nyctale qui furent ensuite relâchés dans la nature.

Le 7 mars, nous avons repris la même route, Hilaire et moi, fait à peu près les mêmes arrêts en appelant la Nyctale boréale. Au même arrêt où nous avons entendu le Grand Duc, j'entends un *pou, pou, pou* j'ai pensé à une chargeuse mécanique nettoyant une entrée de maison. Mais, à ma grande surprise, le son se rapprochait. Une Petite Nyctale! Toute excitée, je fais encore sortir mon mari pour qu'il l'entende lui aussi. Un ruisseau traverse la route à cet endroit et elle est venue jusqu'à la limite des arbres, l'autre bord du ruisseau.

Nos amis Gérard et Denise Benoit étaient anxieux de venir avec nous. Le 16 mars, vers 21h.30, on se met en route, sans succès. J'ai alors suggéré de faire une autre route qui conduit à une tourbière. À plusieurs reprises, j'ai fait jouer l'enregistrement de la Petite Nyctale, sans succès. Nous étions sur le chemin de retour et étions arrêtés une dernière fois à un même endroit qu'à l'aller, quand, Denise, qui a l'ouïe très fine nous dit: «J'entends quelque chose.» Le cri est devenu distinct, c'était une Petite Nyctale! Soudain, un autre cri beaucoup plus près de nous, la Nyctale boréale! Elle avait répondu sur l'appel de la Petite Nyctale. Et curieusement, cette dernière est devenue silencieuse.

Nous sommes restés là plusieurs minutes à écouter et à décrire nos sentiments, quand soudain, un cri étrange nous fige sur place. Juste là, de l'autre côté de la route, un oiseau lançait un cri que nous n'arrivions pas à identifier. Malgré qu'il a lancé son appel à plusieurs reprises, nous sommes restés perplexes. Revenus à la maison, nous avons fait jouer le disque de Peterson et la cassette de National Geographic et identifier le cri, c'était le Hibou moyen-duc. Trois hiboux dans une soirée, ce fut un coup de chance!

Nous voulions maintenant tenter notre chance sur l'île Miscou. Le 31 mars, une Petite Nyctale a répondu à notre appel, mais la brise s'étant levée, nous sommes revenus pour y retourner le lendemain. Il n'y avait aucun vent, une soirée idéale. Nous avons suivi le chemin de la pointe Noire et appelé à plusieurs reprises quand soudain, des jappements, suivis d'un hurlement aigu, une meute de coyotes qui répondaient! Cette fois, nous ne sommes pas restés là à attendre. Nous

avons ensuite fait la route vers le phare et à un même arrêt, deux Nyctale boréale ont répondu à une distance très éloignée l'une de l'autre. Au début, seul Gérard et Denise l'entendaient, mais les oiseaux se sont rapprochés et Hilaire et moi ont pu les entendre très distinctement. En revenant au traversier, à l'autre bout de l'île, nous avons fait un autre chemin et une autre Nyctale boréale a répondu pas loin de nous. Nous étions très heureux de notre chance.

Nos sorties ont toujours débutées vers 21h. pour se terminer vers 23h.30. Il est important d'avoir un enregistrement qui porte loin. Une personne à l'ouïe fine est très utile car cela prend plusieurs minutes avant que l'oiseau se rapproche, il faut être patient. Nous, nous avons la chance d'avoir Denise avec son oreille «bionique», elle pouvait les entendre bien avant nous.

Ce fut une expérience qui nous fit passer des moments excitants l'hiver dernier. Nous nous promettons de couvrir un autre territoire cette année. Tentez l'expérience, nous croyons que cela en vaut la peine. C'est une manière très simple d'ajouter de nouvelles espèces à votre liste d'oiseaux. Bonne chance!



The Eastern Bluebird— More Common than We Believe?

Don Kimball

For New Brunswick naturalists, sighting an Eastern Bluebird (*Sialia sialis*) is an enjoyable, if uncommon, treat. How many of us can claim that the spirited warble of the richly-hued male is a familiar song?

Squires, in the 1976 edition of *The Birds of New Brunswick*, noted that the Eastern Bluebird nearly disappeared from eastern North America in the late 1950s. It has increased slightly since then, remaining rare but well distributed in the province. On a national level the species is recognized as rare by the Committee on the Status of Endangered Wildlife in Canada.

Each spring, bluebirds return to our province, establish territories and search for suitable nesting cavities. Most sightings seem to be of single pairs which have been fortunate enough to find a nest box not already claimed by House Sparrows or Tree Swallows. Asked what type of habitat you might hope to find Bluebirds in, expert and novice alike will mention forest edges, old orchards, and old farm fields. I suggest that we are overlooking another type of habitat just as important to this species' breeding success in N.B.—forest clear-cuts.

The following records are from 1986–1988, during the summers of which I worked under contract for the Canadian Wildlife Service. Contributing observations were provided by Mark Phinney and Scott Makepeace.

In June 1986 a pair was discovered near Big Hole Lake, Northumberland County. The birds were observed for several days, the male singing occasionally while its mate methodically checked tree cavities for potential nest sites. The sudden appearance of a second female was followed by a mad pursuit. The original female chased her out of sight, causing the male, stimulated by the action, to burst into an aerial display accompanied by fervent singing. In July, another pair accompanied by fully grown young were found not far from First Lake in Madawaska County.



At the time, not much thought was given to those two observations although it seemed unusual to find bluebirds so far from what was previously believed to be typical nesting habitat. In the summer of 1987, however, three more bluebird pairs were located in forest cuttings north of Pennfield, Charlotte County. Nests containing eggs were discovered for two of the pairs. No effort was made to actually search these areas for Bluebirds, the birds simply being discovered by observers working in the general area.

In 1988 another five records were obtained in similar habitat¹ as follows: (a) two pairs about a kilometre apart near Little Bald Mountain, Northumberland County, with young in the nest of one in a white birch snag; (b) a pair observed investigating cavities just west of Renous Lake, Northumberland County; (c) a male on territory near the Patapedia River in Restigouche County; (d) the quiet almost inaudible call notes of Bluebirds north of Black Brook, Victoria County, led to the discovery of a pair feeding stub-tailed young.

All the habitats were very similar, with snags providing perches and nest sites and the relatively open ground facilitating feeding. Often the cutovers were in once mainly coniferous forest in wilderness country far from settled areas. Potentially competing House Sparrows and Starlings were absent but there was a sparse population of Tree Swallows.

This information should be good news to the forest industry which seems to suffer bad press because of the practice of clear cutting. More investigation is needed to further clarify the relationship between forest cutting and the nesting of Bluebirds, and to identify ways in which cuts might be managed to favour them. Such an attractive rare species deserves all the help it can get.

A closer look in this habitat by naturalists throughout our province might reveal that the Eastern Bluebird is more common than previously believed.

Atlassers—check those forest cutovers!

Rare New Brunswick Plants

A New Orchid for New Brunswick²

I have often found late fall in New Brunswick to be a time of great botanical surprises. It seems that once the summer is over, the summer people return home and the field botanists return to their government or academic offices. If a species opens its blooms after the beginning of September it often goes undetected.

I have discovered several interesting new plants for the Province by continuing my explorations well into the fall.

So it was with this possibility in mind and David Christie's report of late blooming orchids that I ventured to Grand Manan over the 1988 Thanksgiving holiday weekend. I had never been on the

¹ Editor's Note: Also in 1988, bluebirds were found in two cutovers in Charlotte County by Brian Dalzell and two in Kent County by myself.—DSC.

² See also "Those Graceful Ladies'-tresses" by Hal Hinds [*N.B. Nat.* 15 (3): 92-93; Dec. 1986].

island so late, and I dare say no other botanist had either. It was mostly a blustery wet weekend, but the orchids didn't seem to mind. In fact, they were mostly in first class condition.

David directed me to a population near the Anchorage Campground where they were easily located on a grassy, periodically mowed edge of an alder thicket. There were about 50 plants, some crushed by the mower. Later near the back-road landfill and in the Grand Harbour area I found several hundred plants in gravelly alder thickets and roadside ditches.

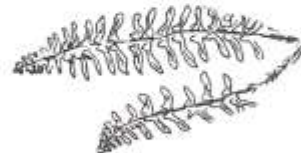
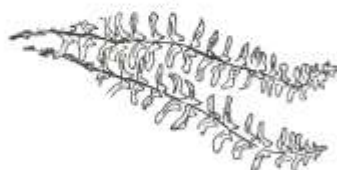
David and I both thought these orchids were the Nodding Ladies'-tresses (*Spiranthes cernua*), a late-blooming species common in southern Ontario, Quebec and southwestern Nova Scotia which had heretofore not been reliably reported from New Brunswick.

It was only later, back in the U.N.B. Connell Memorial Herbarium, that I carefully dissected the orchid flowers and discovered that all but one plant were the Yellow Ladies'-tresses (*S. ocreoleuca*), a species only recently accepted as a full species, but recognized as different many years ago by Rydberg. The other species, the Nodding Ladies'-tresses, seems to be rare on the island although since I thought I only had one species, I will have to check this further. The two late blooming orchids are very similar and so I have enclosed the following key to help separate our native ladies'-tresses. If you should find either the nodding or yellow I would be interested in the record.



Simple Key to the Ladies'-tresses Orchids of New Brunswick

- CHOOSE ONE A. Plants summer blooming.....Go to B
 A. Plants fall bloomingGo to C
- CHOOSE ONE B. Flowers tiny, in a loose spiral; lower leaves often absent at flowering; plants of dryish, open gravelly or grassy areas.....SLENDER LADIES'-TRESSES (*S. lacera*)
 B. Flowers larger, in a more congested spike; leaves usually present at flowering; plants of richer, generally moister sitesGo to D
- CHOOSE ONE C. Flowers creamy, yellowish-white or greenish-white; lower lip creamy or yellowish, strongly curving down from the base (view from the side).....
YELLOW LADIES'-TRESSES (*S. ocreoleuca*)
 C. Flowers mostly white, central portion of lip ivory or very pale cream and only moderately curving down from the base, the angle less than 30°
NODDING LADIES'-TRESSES (*S. cernua*)
- CHOOSE ONE D. Flowers greenish-white; lower lip bright yellow or orange-yellow; rare plants mostly of stream banks which are flooded in spring
SHINING LADIES'-TRESSES (*S. lucida*)
 D. Flowers ivory or creamy white; lip deep cream or pale yellow; common plant of many habitats.....HOODED LADIES'-TRESSES (*S. romanzoffiana*)



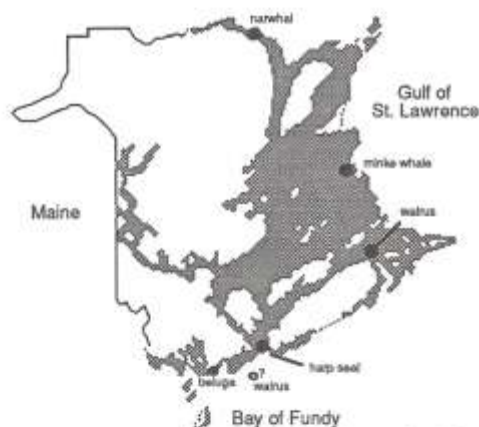
Marine Mammals from New Brunswick's Ice Age

Randall F. Miller

At the end of the Pleistocene, the last ice age, the continental ice sheet receded from the Maritimes exposing new environments that had been scraped clean. The great weight of glacial ice had depressed the earth's crust and as ice retreated sea-water flooded low-lying areas creating inland seas and shorelines different from those of today. All along the New Brunswick coastline and up river valleys, marine deposits can be seen tens of meters above the present sea level, left high and dry as the land rebounded and elevated old shorelines¹.

In areas near Saint John and along the southern coast reddish clay deposits contain fossil remains of marine clams, snails, starfish and sea urchins attesting to the marine origin of the sediments. Radiocarbon dates on shells from Saint John range from about 12,000 to 14,000 years before present, fixing the time when the Bay of Fundy became ice-free. Many of these invertebrate species still inhabit coastal waters although some, like the Arctic Rock Borer *Hiatella arctica*, a boring clam, are now found only in deeper, colder water.

As might be expected, whales and seals followed the sea into new habitats created by the retreating glacier. Fossils from clay deposits or interbedded sand and gravel provide evidence of a number of marine mammals from New Brunswick's past. Although some species are still common inhabitants of New Brunswick waters others are now only found in northern or arctic seas.



Late Pleistocene water levels in N.B. (redrawn from Ferguson, L. and Fyfe, L.R. 1985. Geological Highway Map of N.B. and P.E.I. Atlantic Geoscience Soc., Spec. Publ. No. 2).

Fossil Whales

Balaenoptera acutorostrata — Minke Whale
A vertebra tentatively identified as belonging to a Minke Whale was found in clay under marine sand near St-Louis-de-Kent, north of Moncton. A radiocarbon date yielded an age of 12,600 years before present¹. The Minke Whale occurs throughout the northern Atlantic and is fairly common in the coastal waters of New Brunswick.

Delphinapterus leucas — Beluga

A ramus from a lower jaw was found in clay near the mouth of the Pocologan River, Charlotte County in the late 1800s². Today Belugas are found in eastern arctic waters. A discrete population is found near the mouth of the St. Lawrence River and there are rare occurrences in the Bay of Fundy.

¹ Rampton, V.N., Gauthier, R.C., Thibault, J. and Seaman, A.A. 1984. Quaternary Geology of New Brunswick. Geological Survey of Canada, Memoir 416; 77 pp.

² Matthew, G.F. 1879. Report on the surficial geology of southern New Brunswick. Geological Survey of Canada, Report of Progress 1877-78, Pt. EE: 1-36.

Monodon monoceras — Narwhal

In the 1870s twenty-three bones of a Narwhal, mostly vertebrae, were found in clay in a railway cutting near Jacquet River, Restigouche County¹. In North America the Narwhal is only found in waters north of the Arctic Circle.

Fossil Seals

Phoca groenlandica — Harp Seal

Fossil evidence for Harp Seal in New Brunswick comes from a publication by Matthew (*op. cit.*) mentioning a specimen found in a brick pit near the Reversing Falls in Saint John. The specimen, which was comprised of the skull, hind limbs, vertebrae and ribs, was destroyed in the Saint John Fire in 1877. The present distribution of Harp Seals includes the Gulf of St. Lawrence. Its occurrence in the Bay of Fundy is probably accidental.

Fossil Walrus

Odobenus rosmarus rosmarus — Walrus

Several Walrus specimens are known. An almost complete fossil was recovered from a gravel pit near Moncton by Sandford Fleming in 1871². Tusks and skulls are also found by fishermen dragging the bottom for scallops. Several specimens at the New Brunswick Museum come from the Bay of Fundy near Chance Harbour and are possibly from Walrus that died on pack ice in the bay³. The Atlantic Walrus is now found in the North Atlantic and Arctic Ocean. In historic times it occurred in the Gulf of St. Lawrence in waters off New Brunswick and Nova Scotia and along the Labrador coast. A male Walrus was supposedly shot near the mouth of the Bay of Fundy in 1937.

In similar deposits in valleys along the St. Lawrence and Ottawa Rivers fossils of many of the same species provide records of their distribution in the Champlain Sea. The Champlain Sea formed about 12,000 years ago as the continental glacier retreated north of the St. Lawrence River Valley allowing marine waters to penetrate as far west as Ottawa and Brockville in Ontario. The National Museum of Natural Sciences in Ottawa has documented Beluga, Finback, Humpback, and Bowhead whales, possible Narwhal remains, Harbour Porpoise, and Ringed, Harp, Bearded and Hooded seals from Champlain Sea deposits⁴.

Fossils of marine mammals are rare in New Brunswick and in Champlain Sea deposits. Fossil finds are usually accidental as remains are uncovered during excavations underway for other reasons. Paleontologists who study these fossils are often dependent on the observations and generosity of gravel pit operators, engineers and geologists working on other projects. The fossils that have been recovered offer an intriguing glimpse into environmental conditions at the end of the ice age in New Brunswick. Some, like the Narwhal and the Walrus, support other paleoenvironmental data showing that arctic conditions existed in New Brunswick following retreat of the ice. The New Brunswick Museum has an ongoing project to document occurrences of "Ice Age" vertebrates in New Brunswick in an attempt to better understand past climatic conditions.



¹ Perkins, G.H. 1908. On a skeleton of a whale in the Provincial Museum of Halifax, Nova Scotia; with notes on the fossil cetacea of North America. *Proceedings and Transactions of the Nova Scotia Inst. of Science*, 12, Pt. 2: 139-163.

² Dr. C.R. Harington, NMNS, Ottawa. Pers. Comm. Specimen on display in the Biology Department, Queen's University, Kingston.

³ New Brunswick Museum Paleontology Collection, uncatalogued.

⁴ Harington, C.R. 1981. Whales and seals of the Champlain Sea. *Trail and Landscape* 15: 32-47.

The Annual Animal Roundup

Mary Majka

My relation of last year's adventures with animals ended with a Snowy Owl. It turned out to be one of those BIG years for Snowies and by the end of the winter we had seen or heard of about 50 of those magnificent birds. After a week and a half with us, our Snowy was strong enough to resume a normal wild life on the marshes.

On the other hand, our adventures with Kim, an American Bittern, were more complicated. We found him frozen and starving a short distance from home at the end of December, when temperatures had dipped below -20° . After almost a month of tender loving care Kim was ready to be released, but our weather was too bitter for a bittern. He needed a milder climate, but how? We knew that it's next to impossible to send a bird to the USA, so we looked elsewhere. The result: Air Canada transported Kim free of charge—and with special care—to Vancouver. There, Marc received the box marked "LIVE BIRD" and took it to Reifel Migratory Bird Sanctuary. To release the bird there I had to obtain permits from both the Canadian Wildlife Service and the British Columbia wildlife authorities. At Reifel Kim was fitted with a band and set free in a marsh so ideal that two months later he was still there doing fine. We wonder where he went when spring arrived—hopefully not to the Maritimes!



But speaking about the Maritimes, when winds were howling and temperatures well below zero, snug in his big nest in my closet slept Peppy, our little Red Squirrel, who ventured out only on good days to visit with the wild squirrels. One evening Peppy did not come home. At first we suspected the worst, but then we realized that "he" was a girl and in love. A brief and stormy love affair left Peppy wilder and much more independent—no longer coming to sleep in the closet. She was pregnant! Eventually in June, five handsome little squirrels emerged from beneath the corner boards of the house. A few days later, the whole family—including mama—disappeared, never to be seen again. Peppy will be remembered as one of the most lovable and interesting creatures we have kept.



Summer brought the usual array of fledglings: a Starling born without a wing; a Robin that needed to be weaned from people; Rolfe, a young Goshawk who didn't know how to hunt; Nick, a slightly injured Great Horned Owl; and Clip and Clap, two starving Great Blue Herons probably chased prematurely from the nest. To feed them, Dave had to manhandle Clip and Clap, stuffing herring or smelt into a forcibly-opened beak and either shaking or massaging it down a long gullet. As a result he always stank of fish and so did the garage where they lived. (Thank goodness the cold weather had helped control the fishy odour when Kim was living in our sun porch.)

The release of Clip and Clap provided some hilarity. The two herons stood beside us on the shore, a bit dazed by their newly acquired freedom and not really knowing what to do. "Go, go!" I shouted, waving my hands like wings. Finally they lifted off and glided a hundred yards along the beach. Wishing them good luck, we left after telling their story to a birdwatcher friend who had



just arrived to see the shorebirds roosting at high tide. A few hours later, he told us that an American couple who had been watching our performance from a distance thought we were very cruel people. "Thank God they left," they had commented to our friend. "Did you see how they harassed those poor herons?"

Besides the birds and animals which we keep only temporarily, we have some permanent residents. The one-legged veteran, Timmy, a Purple Gallinule, holds the record of almost two years with us and an honoured place in his aviary in the greenhouse. He has moulted twice and although not yet fully mature is exotically beautiful. He was joined this summer by a Cedar Waxwing named Sammy—also crippled for life. His wing broken by collision with a car, he was looked after by a veterinarian but it was soon evident that he would never fly again. Sammy easily adapted to life in a cage and seems to be a very contented little fellow. His mainstay is fruits. His next door neighbour is Guru, who literally fell from the sky when attacked by a hawk. Being somebody's pet turtle dove, he was not prepared for the harsh realities of outdoor life. With his crop and breast ripped open by the hawk's talons he presented a pathetic picture and we wondered whether he would survive. He did! Now he graces the greenhouse with his gentle presence and a soft call that reminds us of our African visits.

For a time Cloud, a fancy white pigeon, was Guru's neighbour. We got a call from our village hardware and grocery store, which advertizes "all kinds of everything." Cloud was not one of those "everything's" for sale—the owner was glad to get him out of his shipping room, where the pigeon seemed intent to spend the winter messing up his merchandise. Now installed in our barn, Cloud spends nice days swooping gracefully around our house. I speculate (in jest) that he was one of the thousands of white pigeons released for the opening of the Olympics in Seoul.

Just as I am writing this, another bird has entered our lives. This time poor Mike got involved and he was not at all amused. Hissee came in a box delivered to his office, where the big goose escaped, almost into the hallowed hallways of Moncton Hospital. The handsome Swan Goose of Asian extraction was certainly somebody's pet. Perhaps it grew up in somebody's barn, decided to try its wings and joined the wild geese, but unable to keep up, was found wandering on an Albert County road at night.

Installed with our neighbour's captive Canada Geese (raised from legally obtained goslings), Hissee behaved cordially. The Canadians, however, didn't want to have anything to do with the foreigner (glaring discrimination!) and staged a hunger strike. We had to look for another home, where Hissee finally has found her niche in the company of domestic geese and other farm animals. She enjoys a muddy pond and a stable where cows, goats, and a flock of hens find shelter at night.

Which reminds me of another stable and an event that took place almost 2000 years ago. Since then, according to Polish legend, all the animals are able to speak on Christmas Eve. We wish it would be true so we could find out about the adventures of Peppy, Timmy, Sammy, Guru, Cloud, Clip and Clap and all the rest of our feathered and furred friends.

Silhouettes

Save for the occasional bark of a night heron, quietness had descended on the marsh. The western sky, vividly red, witnessed the passing of another day. The great bay, at its lowest ebb, seemed remote. A myriad pools awaited the returning tide, glass smooth, placid in the still air. In one, two yellowlegs—one greater, the other lesser—stood motionless side by side, yet apart, their profiles silhouetted against the reflected hues of the sunset. The human observer sat nearby, contrasting the two shorebirds, savouring the moment. As if suddenly recalling a forgotten appointment, the larger bird sprang into the air and flew out across the intertidal reach, its strident tattler cries ringing down the shore. Its smaller cousin flitted noiselessly to a pool close at hand. Silence returned to the marsh as the darkness gathered.

Peter Pearce



An Unusual Mourning Dove Breeding Record



Rudy Stocek

The Mourning Dove (*Zenaidura macroura*) continues to increase in New Brunswick both as a wintering bird and summer resident. Christmas Bird Count records at Fredericton show that this bird was rarely ever seen during the winter until the late 1970s and early 1980s. Only one dove was recorded on the 1980 count, but there were 385 on the 1987 count—an increase from 0.01 to 1.44 birds per party-hour (1.93 in 1985). Breeding bird censuses in both New Brunswick and the eastern United States also indicate a significant increase in this species.

This increase in mourning doves may have prompted the curious breeding occurrence which follows.

Doves were seen and heard in the UNB Forest in Fredericton, N.B. in late March—early April 1988. On April 5 a dove was found brooding two young in a nest on a long, high pile of fuelwood. The nest was situated 3 m above the ground on the ends of two bolts of wood in the pile, below the top. Doves usually nest in trees, often conifers. The brooding bird could be approached to within 0.3 m. Its two young fledged between April 18 and 20. Assuming an incubation period of 14–15 days and a fledgling period of 13–15 days, the dove probably started nesting in mid-March, laying its first egg around March 21—an early record indeed.

If this early date and unusual nesting site weren't enough to be noteworthy, presumably the same bird decided to try again—a second nesting on the same fuelwood pile. The nest was located 6 m from the first, and only 1.3 m above the ground. As before, the nest was a small platform of loosely scattered twigs near the ends of the bolts of wood. The adult was first seen incubating two eggs on May 9. They hatched on about May 18 and by the first of June the two young had flown. The first egg was probably laid around May 3, about two weeks after the young from the first nest had fledged. This dove presumably had reared two broods before most others would even start nesting and in weather that was cold and wet with snow in March, April and early May.

Three weeks after the second nesting the doves were still calling in the same area but no new nest, with the elusive third brood, was found, at least not on that woodpile.

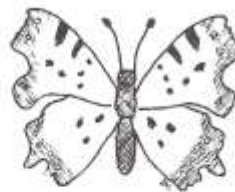
From the Pages of the Journals

Propagating Punctuation: Or Netting Commas Midst the Nettles

Christopher Majka

On a warm day in early spring when the last of the snows have melted and the first flowers are pushing their heads from beneath the cover of last year's leaves, even the most urgent of obligations cannot restrain me from a walk in the forest. It is so satisfying and refreshing to smell the aroma of spring in the flowing sap, the bursting buds and the trickling stream. Being an avid lepidopterist I keep my eyes peeled for the first signs of our scale-winged friends, the butterflies. I am frequently not disappointed when in a woodland glade I see the sharp, erratic flight and angular dark surfaces of what can only be a comma. No, not an errant point of punctuation taken wing but a member of the genus *Polytonia*, otherwise known as the anglewings.

Friends who know me are acquainted with the fact that such an observation inevitably induces equally erratic "stalking behavior" through which means I attempt to get close enough to the ever wary butterfly to distinguish just which of the six possible species found in this region it might be. This is a trickier task than one might think, for the Question Mark (*P. interrogationis*), Comma (*P. comma*), Satyr Angle Wing (*P. satyrus*), Green Comma (*P. faunus*), Gray Comma (*P. progné*) and Hoary Comma (*P. gracilis*) are remarkably similar in appearance.



They are unique in our region for, along with their close relatives in the Nymphalidae (the Brush-footed butterflies), the Mourning Cloak and the tortoise shells (genus *Nymphalis*) and the thistle butterflies (genus *Vanessa*), they are the only butterflies to hibernate as adults through the winter. Also, at least four of our species, the Question Mark, Comma, Satyr Angle Wing and Gray Comma have two broods every year (*bivoltine* in ecological parlance). Overwintering adults emerge early in the spring and lay eggs which mature rapidly to produce a "summer" generation of adults which are typically darker in colour. These in turn lay eggs which mature even more quickly to produce the lighter-coloured adults which emerge in the fall and, crawling beneath a piece of bark, hibernate to re-emerge as the "spring" adults. In warmer climes at least the first three species will try and squeeze a third, or perhaps even a fourth, generation into the summer cycle. The other two species in our area, the Green and Gray Commas, have only one brood a year (and are thus called *univoltine*).

There are even more wrinkles to this unusual pattern. Not all the offspring of a "spring" female in a bivoltine species develop into "summer" adults. Some will skip the double-brooded cycle entirely and emerge as "spring/fall" adults ready to go into hibernation. It turns out that this is entirely an environmental variable and the ratio of spring/summer morphs is regulated by the amount of sunlight (photoperiod) and the temperature¹. Thus if it's too cold and there is too little sunshine a larger proportion of the butterflies will opt for a single brood—a seemingly sensible response to inclement weather conditions or more northerly latitudes.

Now all these reproductive peculiarities are of considerable interest to ecologists and a recent paper by Swedish biologist Sören Nylin in the Danish journal *Oikos* (53:381-6) reveals some interesting facts about these lovely butterflies. Entitled "Host plant specialization and seasonality in a polyphagous butterfly, *Polyommata c-album* (Nymphalidae)," it is the focus of this issue's article. *P. c-album*, in Britain also called the "Comma" is a common European butterfly. Since this species, like most other commas, has been reported to feed on a large number of host plants, Mr. Nylin was interested in seeing if different plants might be selected for the purposes of egg laying by the spring as opposed to the summer females. In particular since the eggs laid by the summer females have a much shorter time to mature would these females select plants on which the caterpillars would grow more quickly?

To test his hypothesis he examined butterflies from both England (where some 30-40% of the butterflies are of the summer morph) and Sweden (where the summer morph is rare and found only in certain years). He tested their preferences by placing females in cages within which there were two species of plants. One was always Stinging Nettle (*Urtica dioica*), one of the Comma's favourite plants, and the other was one of Mountain Currant (*Ribes alpinum*), Silver Birch (*Betula verrucosa*), White Birch (*Betula pubescens*), Hazelnut (*Corylus avellana*), Goat Willow (*Salix caprea*), Wych Elm (*Ulmus glabra*) or Hops (*Humulus lupulus*), all known to be food plants of the

¹ Bailey, K.E.J. 1984. Light and temperature experiments on the comma butterfly, *Polyommata c-album* (Nymphalidae). — Proceedings & Transactions of the British Entomology Natural History Society 17:63-65.

Comma. By counting the number of eggs on the nettle as compared to the other plant he was able to calculate an "index of preference." In addition he took the eggs and reared the caterpillars on all of these plant species, measuring how long it took for the larvae to pupate.

The results of his experiments showed that the caterpillars grew best on nettle, Hops and Wych Elm and most poorly on Silver Birch and Hazelnut. Interestingly, he was also able to show that, given the choice, the females much preferred to lay their eggs on the plants on which the caterpillars grow best and were least likely to lay them on the plants on which the caterpillars did poorly. But most interestingly of all, his results also showed that the summer morph females were even more strongly inclined to lay their eggs on these "good" plants than were their spring sisters. This is in keeping with the prediction that for the second summer generation it is important that the caterpillars mature quickly to avoid potential frosts and inclement weather. When one considers that on the "good" plants caterpillars matured in 21-23 days and 89-100% survived whereas on the "poor" ones it took 31-42 days and between 0-60% survived, the differences are appreciable.

Bear in mind that all this research is on the European Comma but since our four species of angle wings which are bivoltine are also known to feed on Hops, nettle, elm, currant, birch and willow it might be reasonable to suppose that a similar process is occurring here.

	HERBS					BUSHES & TREES			
	Nettle	Hemp	Mallow	Composite	Saxifrage	Heath	Hazel	Willow	Elm
Map Butterflies — <i>Araschna</i>									
<i>A. leavana</i>	*								
Small Tortoiseshells — <i>Aglais</i>									
<i>A. urticae</i> & <i>milberti</i>	*								
Peacocks — <i>Inachis</i>									
<i>I. io</i>	*	*							
Banded Reds — <i>Hypanartia</i>									
<i>H. lethe</i>	*								*
<i>H. kefersteini</i>	*								
Thistle Butterflies — <i>Vanessa</i>									
<i>V. virginiensis</i>			*	*					
<i>V. cardui</i>	*		*	*					
<i>V. annabella</i>	*		*						
<i>V. atalanta</i>	*	*							
<i>V. tameamea</i> & <i>indica</i>	*								
Angle Wings — <i>Polygonia</i>									
<i>P. interr.</i> & <i>comma</i>	*	*	*						
<i>P. satirus</i> & <i>eyea</i>	*								
<i>P. c-sureum</i>	*	*							
<i>P. c-album</i>	*	*							
<i>P. faunus</i> & <i>gracilis</i>					*		*	*	*
<i>P. zephyrus</i>					*	*	*	*	*
<i>P. l-album</i>					*	*	*	*	*
<i>P. oreas</i>					*	*	*	*	*
<i>P. progne</i>					*	*	*	*	*
<i>P. silvius</i>					*	*	*	*	*
Large Tortoiseshells — <i>Nymphalis</i>									
<i>N. vau-album</i> & <i>poly.</i>							*	*	*
<i>N. antiopa</i>							*	*	*
<i>N. xanthomelas</i>							*	*	*

Mr. Nylin also speculates that these food preferences might be indicative of the evolution and phylogeny of the Nymphalinae, the subfamily which includes the angle wings, tortoise shells, thistle butterflies, peacocks and banded reds as well as the closely related map butterflies. Many of the butterflies in this group feed principally on hemsps and nettles or other herbaceous plants. The tortoise shells (genus *Nymphalis*), however, are curious in that they feed exclusively on trees of elm, willow and hazel. The angle wings, which according to systematic studies are most closely

related to the tortoise shells¹, are intermediate in that some of their members feed on Hops and nettles while others feed on elms, willows and hazels. I have compiled the accompanying chart which illustrates these feeding preferences.

Mr. Nylin points out that, "In the absence of a reliable phylogeny for... the Nymphalidae this can however at present be only speculation." Nevertheless, this is an interesting instance where the food plants of butterflies not only have interesting ecological repercussions but also may be indicative of the pathways of evolution.

Nature News

Spring-Autumn 1988

David Christie



This has become a long report on three seasons. Because of space limitations, I can incorporate only a few of the arrivals and departures of birds. Please be assured that all such records are placed in the bird files at the New Brunswick Museum, where they form part of a valuable database on this province's avifauna. If anyone is interested in a copy of the migration dates for many of our common species please send me a stamped, self-addressed business envelope.

Mammals

Awakened at night, Aug. 1, by screaming outside their house at Dawson Sett., near Hillsborough, Ralph and Sue Collins looked out to see a **Cougar** emerge from the darkness and, sniffing here and there, walk slowly across their lawn. Inspection the next morning revealed no tangible signs of the passing of that large animal, so one more sighting is added to the long list of Cougar observations reported in the Maritimes.

A rare marine mammal for New Brunswick was a **Beluga** seen off Grand Manan, between The Whistle and Whale Cove, July 13-20 (Lori Murchison). One was also apparently seen in Lubec Narrows, off Campobello, during June 1987 (*vide* BDD).

For the first time in the 20 years since the Petitcodiac River causeway was built, its gates were opened for an extended period, draining Lake Petitcodiac and allowing salmon and other fish free access to the upper river. Also reaching the area was a **Harbour Porpoise**, found stranded in shallow waters of the lake May 21 by Ian and Cory MacKenzie, whose father Dave and helpers carefully transported the animal and released it in deeper waters below the causeway. In years past porpoises regularly followed fish runs as far as Moncton and sometimes even Salisbury.

Birds

In his investigations on the current status of **Common Loons** in this province, Rudy Stoeck was told of a pair of loons with 4 young—an unprecedented number—during June and July on the Mactaquac River. Their description varied from very small and downy early in the season to half the size of adults later. Were it not for the fact that they were seen independently by four different persons, whom Rudy questioned in detail, one would suspect confusion with mergansers or some other species. Common Loons normally lay two eggs, although nests with three have been reported. Because of the strong territorial behaviour of loons during breeding season, the

¹ Niculescu, E.V. 1985, Problemes de systematiques dans la famille des Nymphalidae (Lepidoptera). — Deutsche ent. Z. 32: 335-347.



possibility of adopting another pair's brood seems unlikely. Bear this unusual event in mind if you visit the Mactaquac area—the birds might try a repeat performance in 1989.

Among the pelagic birds around Grand Manan in late summer and fall, 35 **Manx Shearwaters** were seen off Machias Seal Island Aug. 13 (Maine Audubon Society, *Guillemot* 17:35). I think that's the largest group reported here since the mid-1970s.

Great Blue Herons are common enough that we tend to take them for granted, although they're just as beautiful as the egrets and other southern herons, which add more excitement to the birdwatching year through their occasional visits to New Brunswick. Great and Snowy Egrets were scarcer than usual in 1988. I missed the **Great** that was seen by visitors to Marys Pt. Aug. 21; another at Mazerolle Sett. Road, near Fredericton, also stayed only one day, Sept. 11 (Joyce MacDonald, *vide* Peter Pearce). A **Snowy Egret** was at Saints Rest Marsh, Saint John West Apr. 24 (Cecil & Doris Johnston) and one at Maces Bay on the unusually late date of Nov. 5 (Mark Phinney). An adult **Little Blue Heron** was seen between Maugerville and Sheffield May 3-5 (v.o.) and another at Jones Lake in Moncton July 15-16 (v.o.). A **Tricolored Heron** appeared at Saints Rest June 21 and remained about 10 days (Aldei Robichaud). A **Glossy Ibis** was feeding in flooded fields at Lower Jemseg from Apr. 22 till at least May 1 (v.o.).

A considerable flight of **Cattle Egrets** appeared in late fall. One at Whitney, west of Newcastle, Oct. 29 (John Bodestaff, Harry Walker *et al.*) was followed by individuals at Nackawic Nov. 4-13 (Bob Squires *et al.*), Sackville Nov. 5-19 (v.o.; Stu Tingley saw 2 there Nov. 9), Dorchester Nov. 9 (SIT); Rexton about Nov. 8-17, and Fredericton Nov. 16 (Don Gibson). There were also two in the Woodstock area (*vide* Leona Avery).

A family group of 5 **Green-backed Herons** at Jones Lake during July (v.o.) provided the first breeding confirmation for the Moncton area. A single was seen at Whitemarsh Creek, near Florenceville, June 15 (Jeanette Greene *et al.*)

Possibly the biggest flock of **Snow Geese** ever reported in New Brunswick, 75 to 80, were discovered at the mouth of Turtle Creek, near Riverview, Apr. 27 (Doug Whitman *et al.*) and left early on the morning of May 8 (Ron Leger). Smaller numbers (1-3) were reported at Salisbury Apr. 8 (Tingley), Waterside the weekend of Apr. 9-10 (Doris & Fred Hatt), Inkerman Apr. 17 (CNPA), Tracadie Apr. 24 (CNPA), and Marys Pt. Apr. 17-30 (Moncton Naturalists' Club). We are getting an overflow from the increasing population that stops in the St. Lawrence. In fall, an immature was at Tide Head Nov. 15 (Alan Madden) and a blue morph immature in Courtenay Bay, Saint John Nov. 27-Dec. 3 (Jim Wilson).

A male **Cinnamon Teal**, accompanied by a female (presumed also to be a Cinnamon—although females are very similar to Blue-winged Teal), discovered at Mouth of Keswick Apr. 21 by Scott Makepeace, was a highlight of the spring. Lots of people looked but few were lucky enough to see this western species of duck. They were found again Apr. 26 (Bev Schneider, Jean Cunningham) and I believe also on an intervening date.

Alert observers spotted a couple of the **Eurasian** subspecies of **Green-winged Teal**. One was at Halls Creek, Moncton, about Apr. 11 (Tingley), another at Mouth of Keswick, Apr. 22 to May 1 (Peter Pearce *et al.*) The latter served as a consolation prize for most of the people who searched unsuccessfully for the Cinnamon Teal. At Memramcook Lake Apr. 23, Stu Tingley reported an intermediate bird, marked with both the white horizontal bar of the Eurasian male and the vertical white bar—but a faint one—of the North American. Single male **Eurasian Wigeon** were reported at Lower Jemseg Apr. 8-23 (v.o.), Le Goulet May 22 (Julien Ferron) and Tabusintac June 15, July 3 and Oct. 30 (CNPA).

A **Gadwall** at Daniels Marsh, near Hopewell Cape, was reported on the Moncton Naturalists' Club rare bird alert in early April. Pairs were at Waterside Marsh June 5 (DSC & Mary Majka) and Wishart Pt. July 3 (Chiassons, Benoits). There were several reports in the Saint John area, where this species is breeding.



It was a particularly good year for **Common Eider** in the Bay of Fundy. Peter Hicklin reports that the abundance of herring in spring and early summer provided lots of food for gulls and as a result there was excellent survival of eider ducklings. In recent years, Peter has found that virtually no young eiders survived at The Wolves because of predation by gulls.

A female **Harlequin Duck** at Indian Falls, on the Nepisiguit River, May 28 (Ian Walker) causes one to wonder whether this rather rare small duck might some day be found breeding in New Brunswick, as it does as close as the Gaspé. There are suitable turbulent waters in the Indian Falls area, where Harlequins have twice previously been reported in summer, and also on the South Branch of the Nepisiguit. A few **Ruddy Ducks** were reported during fall: one at Tracadie Lagoon Sept. 5 (Ernest Ferguson), one at Baie Verte Nov. 5 (Alma & Don White), and 6 at Sackville's sewage lagoon in early November. The last is a regular location for this species.

A **Black Vulture** flew over the Trans-Canada Highway near the turn-off to Nackawic June 22 (C. Johnston) and one reported feeding on a dead Porcupine at Cape Jourimain, near Bayfield, July 3 (*vide* Tingley) was verified the next day by Al Smith and Bill Prescott. An older record not previously mentioned in these pages was of one at Petit-Lamèque July 26, 1987 (photos verified by the Chiassons). As the numbers of breeding **Turkey Vultures** increase in Maine there is more spillover into this province. Singles were seen at Hopewell Hill, near Riverside-Albert, Mar. 23 (*vide* Angus MacLean), Youngs Cove Apr. 23 (Tingley), Marys Pt. Apr. 23 (DSC), North Head June 13 (Frank Longstaff) and Caines Pt., near Tabusintac June 15 (DSC & Mary Majka).

Bald Eagle reports were numerous. Rudy Stoeck, who summarized this species' status in our last issue (pp. 81-82), mentions an interesting observation in October of an immature eagle soaring around with a large branch in its talons. Another immature accompanied it and the two birds appeared to be playing.

The past two summers Brian Dalzell has done great work documenting breeding birds in Charlotte County and nearby parts of York County for the bird atlas project. One of his 1988 discoveries was a pair of **Cooper's Hawks** chasing a Bald Eagle along the upper St. Croix River near the Gravel Island picnic site July 10 (while accompanied by his brother Halton). Returning July 25, Brian found the agitated adults and two recently fledged young. W.A. Squires (1976) lists only two breeding records of this species in *The Birds of New Brunswick*. Brian was unable to confirm breeding but he did find **Red-shouldered Hawks** in six atlas squares.

Single **Rough-legged Hawks** lingered at Bathurst June 10 (Pearce) and Riverside-Albert June 21 to 30 (Rob Walker *et al.*). An adult **Golden Eagle** summered at Grand Manan for the third or fourth year (v.o.)—"a non-breeder in its retirement years?" speculates Brian Dalzell.

To me the **Merlin** seems to be increasing as a breeding species in New Brunswick, perhaps rebounding from a decline caused by DDT and similar persistent pesticides. Agitated calling at East Quoddy Head on Campobello Island in early July and a group of 4 presumed juveniles (only one still had down adhering) there Aug. 12 (Charles Duncan *et al.*) adds to at least three confirmations in the last couple of years. Among several other summer records were one at Whitemarsh Creek June 15 (Valley Naturalists) and one at Cap-Lumière in early July (Bob & Mary Cotsworth). A few returning Merlins may have arrived as early as mid-March, when an injured bird found at Alma was nursed back to health by Steve Woodley and another was terrorizing the jays around Pierrette Robichaud's bird feeders at Aldouane, near St-Louis-de-Kent, Mar. 17.

Fundy National Park's male **Peregrine Falcon** returned on schedule in late March but attracted only a year-old female, so again there was no nesting. Most Peregrines reported were along the coast but there were also sightings near Jemseg Apr. 30 (Saint John Naturalists' Club) and Sept. 5 (Pat Kehoe).

At least 25 of the **Wild Turkeys** released at Grand Manan in 1987 survived the winter and males were heard gobbling in mid-March; two broods of young were reported during the summer (*fide* BDD). Elsewhere, a turkey was seen May 10 at Bulls Creek, near Woodstock (Blair Avery), where there had apparently been one the previous summer. That bird possibly was an escaped captive like one in Nictau a few years ago.

Common Moorhens bred at the Ducks Unlimited project at Hillsborough, where fledglings were seen July 22 (RJW). Single **American Coots** were seen at Inkerman Ferry June 9 (R-A. Chiasson) and Tide Head June 12 (Madden).

An adult **Sandhill Crane** in a field at Shediac Cape in late June (*fide* Mary Majka) may have been the same as the absurdly tame one at Chatham July 24-26 (Bill & Lenora Hilchey, H. Walker *et al.*). Because it allowed people to approach almost within touching distance, it was captured by Dept. of Natural Resources staff and released in a safer area. Its lack of fear suggests it may have escaped from a zoo. Reports of a crane at Shediac and near Salisbury in August could not be confirmed, but there was an adult in a field between Bronson and Chipman Oct. 8 (Mrs James McInnis *et al.*, *fide* Dusan Soudek).

Unexpected was the first breeding record for this province of **Solitary Sandpiper**. An agitated adult was observed July 27 and 31 in a bog at Cold Brook, a tributary of the Cains River in Northumberland County. On the latter date three already flying juveniles were found and a second agitated bird was heard calling in the distance (DSC, EMM). Although the nearest breeding area I know of is about 500 km to the north in Quebec, this part of central New Brunswick is at the same latitude as the southern edge of confirmed Solitary Sandpiper breeding range in Ontario. On July 2, 1987, Richard Poulin saw a pair of Solitaires near Juniper, so observers should be on the watch for this species in very wet, boggy habitats. **Upland Sandpipers**, in addition to being found again during summer at Maugerville (Pearce) and Ste-Marie-de-Kent (Donald Cormier), were seen in the Camp Utopia blueberry barrens near Pennfield Ridge (BDD).

Semipalmated Sandpipers at Marys Pt. peaked at 250,000 on Aug. 8 and 150,000+ on Aug. 7, higher numbers than recorded there the previous three years. Rare species among them were a **Baird's Sandpiper** Aug. 14 and 2 on Aug. 22, and a minimum of 2 adult and 2 juvenile **Western Sandpipers** Aug. 13-Sept. 25 (DSC & Majkas). A Western was also reported at St. Andrews in fall (David Clark).

Strong easterly winds during mid-April blew hundreds of migrating **Greater Golden-Plovers** from Europe to Newfoundland. Two—the first reported in New Brunswick—frequented a field at Black River, St. John Co., for a few days later in the month (*fide* Johnston & Wilson). Another Old World visitor, an adult **Little Stint** at Castalia Marsh Aug. 3, was carefully described by Roger Taylor, Roy John, and Alan Hunt of the Ottawa Field-Naturalists' Club. The only previous provincial record was a similar bird at the same location June 30–July 4, 1980.

A group of 15 **Purple Sandpipers**, evidently on northward migration, were well seen at Mactaquac Mar. 2 (Jim Edsall). They are seldom reported inland in New Brunswick. A breeding plumaged **Curlew Sandpiper** fed along the shore at Castalia Apr. 28–May 5 (v.o.). A possible **Long-billed Dowitcher** was in the marsh there Aug. 17 (Bob & Sandy Righter). Three to 5 **Wilson's Phalaropes** were above the Tantramar River dam at Sackville in August (Tingley).



The more unusual gulls reported were a **Franklin's** at Tracadie Lagoon Sept. 6 (Hilaire Chiasson); a first summer **Little Gull** off the southern end of Deer Island July 10 (Duncan) and two there in August (Tingley); an adult **Common Black-headed Gull** off Blacks Harbour Apr. 26 (Tingley & DSC), 2 of them at Woodward's Cove, G.M., May 22 (BDD), a first summer bird near Deer Island July 10 (Duncan) and one at Shippagan Nov. 27 (H. Chiasson). CNPA members dared to pick out a dark-eyed **Thayer's Gull** among Icelanders at Shippagan Nov. 21—a difficult identification because of the considerable variation that occurs in Iceland Gulls. The only **Lesser Black-backed Gull** reported during the year was an adult at Marys Pt. Oct. 8 (DSC *et al.*).

A beautiful **White-winged Tern** in breeding plumage at Cap Pelé July 9 (DSC, Roger & Andrew Calkins) was the fourth provincial record of this European species.

Yellow-billed Cuckoos were reported to have been more numerous than usual in southern Maine during the summer and there was one report in Carleton County then (*vide* Ford Alward). Relatively few appeared in fall, singles at Lamèque Sept. 11 (Chiassons), White Head Sept. 12 (Wilson), Long Pond, G.M. Sept. 25 (Mike & Chris Antle), and Miscou Oct 29 (CNPA).

A **Common Barn-Owl**, an accidental visitor, was seen flying over Babbitt Meadows, near Upper Gagetown, at dusk June 2 (Pat Kehoe). An **Eastern Screech-Owl** was calling near Big Indian Lake, west of Welsford, June 25 (Ron Weir). In addition this very rare species was found in the Minto area in spring (Lionel Girouard) and near Lakeville Corner in September (Antles).

There were interesting reports of **Northern Hawk-Owls**, especially the discovery Aug. 14 of a group of five in a cutover, near the northwestern corner of Fundy Nat'l Park (George Sinclair & François Grainger). Because of their similarity of behaviour and plumage we assumed they were all young birds, although only one still had down adhering its crown and one had whiter tail banding than the others. Three were seen together and one or more 1-2 km away as late as Aug. 24 (Chris Majka). Singles were seen at Cap-Lumière in mid or late August (Robert Whitney) and Tracadie in September (CNPA). A winter visitor was at Miscou Island Nov. 6-Dec. 1 (v.o.). One of last winter's many **Snowy Owls** remained until May 27 near McGowans Corner (George Haley). The first of the 1988-89 flight was reported at Lamèque Oct 29 (CNPA).

A **Red-headed Woodpecker** in Saint John May 14 (Jacqueline Meltzer) may have been the one that had been seen nearby from late fall through mid-winter. **Three-toed Woodpeckers** reported included a female feeding a young near Route 116 west of Harcourt July 17-18 (Mary Majka *et al.*) and one in the Tabusintac area Nov. 13 (CNPA).

Willow Flycatchers—Alder Flycatcher look-alikes—continued to increase in the province; during June five or six were found singing near Sheffield, and singles at Douglas (Pearce *et al.*), Moncton (Tingley) and Millstream (Weir). A male **Vermillion Flycatcher**, a southwestern species not expected here at all, was identified at Rang St-Georges, near Paquetville (Audard & Liette Godin, Roland & Bernice Robichaud). I have no supporting details for another reportedly seen by Frank Robinson in mid-summer at Morna, a Saint John suburb. A **Western Kingbird** at Midway, near Riverside-Albert, July 2 (R. Walker *et al.*) was very unusual in mid-summer.

A male **House Wren** was singing at Milltown from May 10 well into the summer but no mate was seen (BDD), another at St. Andrews June 9 (Roger Burrows). One to two **Blue-gray Gnatcatchers** were observed at North Head May 21-27 (Clark *et al.*).

The **Eastern Bluebird** is recovering its numbers here, especially in western areas; it seems to be spilling over from New England, where it has been doing very well recently. For another reason, please refer to the article by Don Kimball in this issue. During breeding season bluebirds were reported in 12 atlas squares in Charlotte Region (BDD), at three locations in Carleton County (Alward), as well as at Blue Bell, near New Denmark (Yvon Beaulieu), near Coles Island (Albert

Cormier), and Ste-Cécile, Ile Lamèque (CNPA). Earliest and latest were one at Pennfield Mar. 23 (BDD) and a female at Penobsquis Oct. 15-16 (Mary Powers).

Brian Dalzell found more probable breeding locations for **Gray-cheeked Thrushes** at the mouth of the Bay of Fundy: near Digdeguash on the mainland and in two atlas squares on Campobello and four on Grand Manan. Gray-cheeks are not very apparent during migration but one was seen at Miscou Oct. 10 (H. Chiasson) and another stunned at a window in Sussex Oct. 24 (Harriet Folkins). Atlasers turned up several **Brown Thrasher** records, including confirmations in Carleton County (*vide* Alward), at St. Stephen (BDD) and near Wapske (Beaulieu). There were also reports near Quarryville (H. Walker), Brockway and Grand Harbour (BDD).

One of the rarest songbirds reported was a **White-eyed Vireo**, which Glenda Turner heard singing several times in the UNB Woodlot at Fredericton June 15. It was gone the next day. Glenda notes that she grew up with this southern species in North Carolina. A **Red-eyed Vireo** at Westfield on the unprecedented date of Apr. 25 sought shelter under a hedge in the wintry weather prevailing then (Kit Graham).



Page Brown reports the first provincial record of **Brewster's Warbler**, one at Mercury Island, near Upper Blackville Aug. 21. The Brewster's is a hybrid between the Blue-winged and Golden-winged Warblers, both of which have been found in New Brunswick, though extremely rarely. Also extremely rare in this province is the **Yellow-throated Warbler**, one of which visited Robin and Mary Wall's feeder at Castalia Apr. 21-May 5 (v.o.). A **Yellow Warbler** at Moncton Nov. 26 (Whites) is by far the latest of its species ever reported here. Brian Dalzell, who obtained New Brunswick's first breeding record of **Pine Warblers** in 1987, followed up by finding an estimated 400+ pairs in the western half of Charlotte County and the Brockway area. He says they are as easy to find as "good-sized stands of almost pure white pine." His earliest migrant was one singing at St. Stephen Apr. 19. Finally, a couple of **Prairie Warblers** were seen on Grand Manan Sept. 11 (Wilson).

There were three reports of **Summer Tanager**, a very rare vagrant here: a young male at Mr & Mrs Norman Harrington's feeder at Milledgeville, Saint John, May 26-27 (CLJ *et al.*), a male at Kent Island from late May until at least June 1 (Nat Wheelright) and a female or immature at North Head Sept. 19 (DSC *et al.*). A fairly late **Scarlet Tanager** was seen at Pointe Noire [= Wilson Pt.], Miscou, Oct 16 (Marcel David, *et al.*).

Northern Cardinal breeding was confirmed at North Head and near St. Stephen (BDD); this species was also seen at Grand Bay (Linda Caron), St. Andrews, Castalia, and Beaver Harbour (BDD). **Indigo Buntings** were reported mostly in spring but there were records in four atlas squares in Charlotte (BDD), and lone males at Oakland July 9 (Ansel Campbell) and St-Simon July 23-24 (David). **Rufous-sided Towhees** have never been found breeding in this province but two males were singing at Bocabec River during June and July (BDD) and another near Upper Blackville July 10-12 (Marge Brown & Jean Morehouse). One towhee visited a feeder at Shippagan Oct. 24 or 25 (Lucile DeGrâce).

A **Blue Grosbeak** was very unusual in mid-summer, at Alma July 3 (Stella MacLean); more ordinarily rare was one at Marys Pt. Sept. 25 (DSC & Majkas). A record number of **Dickcissels** was a flock of 10, both males and females or immatures, feeding on grasses at Saints Rest Oct. 21 (Dusan Soudek); a half dozen others were reported in Albert and Saint John Counties during October and November. Two **Clay-coloured Sparrows** visited David Smith's feeder at Saint John Oct. 5 and 16. Spring **Field Sparrows** were at White Head Island May 21 (2—Wilson *et al.*) and Brockway May 28 (BDD); another was singing near St. Stephen for most of June. Rob

Walker had an immature **Lark Sparrow** in his yard at Harvey, Albert Co., Sep. 6 and two were seen there on the 8th (Antles).

An adult male **Yellow-headed Blackbird** was seen with Red-wings in a cat-tail marsh near Rothesay June 17 (Mrs Davis McCrae, *fide* Wilson). Two or three female **Orchard Orioles** were at Grand Manan May 20-27 (v.o.).

House Finches reappeared at St. Stephen in mid-March (BDD), and during April were reported at Fundy Nat'l Park (R. Walker), Sussex (Folkins), Fredericton (Morris & Beverley Lemire), Newcastle (Tom Greathouse & H. Walker), and Marys Pt. (DSC & Mary Majka). Breeding was confirmed at St. Stephen and on Grand Manan (BDD) and territorial males seen at St. Andrews and near Moores Mills (Roy Proctor). They reappeared in mid-November at the Whites' feeder in Moncton after having been absent since spring.

To me **Red Crossbills** were a surprising bird feeder visitor when I heard about them coming to Darryl Innes' feeder at Moncton in late March; beginning Apr. 21 three showed up at Peggy Barnett's, also in Moncton. These crossbills found the small oil sunflower seeds attractive. About 25 at Molly Smith's in Saint John were more conventional in their diet; they were feeding on the seeds of mugho pine. A major invasion of **White-winged Crossbills** developed in early summer. They appeared about the third week of June and were very numerous by the beginning of July, mainly in eastern and northern parts of the province.



A major flight of northbound **Common Redpolls** occurred at Partridge Island Mar. 14, 2500 of them (Ralph Eldridge)! Ten to 12 (of a flock of 50) at Keswick Ridge Mar 25 had a frosty appearance and unstreaked rumps and were identified as **Hoary Redpolls** (Leona Keenan).

Amphibians

Amphibians emerged quite early. **Wood Frogs** were calling Apr. 3 and **Spring Peepers** the next day near Crystal Beach (Allen Gorham). Peepers were heard near Fredericton Apr. 14 (Heidi Grein).

An early **Garter Snake** was active at Riverview Apr. 16 (C. Antle). Yvon Beaulieu discovered 14 of them in one of CN's outdoor instrument cases in July. All but one were about 20 in. long. Because of the equipment inside he had to evict them, but they kept coming back until he finally put in a few mothballs as a repellent.

Plants

Kevin O'Donnell found one of the populations of **Northern Downy Violets** (*Viola fimbriatula*) near Castalia May 22, and all the birdwatchers on Grand Manan that weekend took time out to familiarize themselves with the deeply coloured flowers and characteristic leaf shape of one of New Brunswick's rarest wildflowers. [Hal Hinds, please note that we are not completely preoccupied with birds. Hal discussed rare violets in *N.B. Nat.* 15 (2): 63-64, July 1986.]

A very small selection of early blooming dates reported includes **Coltsfoot** in Saint John Mar. 17 (Harvey McLeod), **Speckled Alder** at Quispamsis Apr. 1 (Molly Smith), **Bloodroot** May 2 and **Bluets** May 10 (C. Johnston), and **Wild Strawberry** near Fredericton May 6 (Grein).

Abbreviations

BDD — Brian Dalzell
CNPA — Club de Naturalistes de la Péninsule Acadienne
DSC — David Christie
et al. — and others

fide — according to
G.M. — Grand Manan
v.o. — various observers

Federation News



Annual General Meeting

One member's impressions from our very successful annual meeting August 26-28 are found near the beginning of this issue. Paul Bogaard's enthusiastic response to the Acadian Peninsula and the program organized by the host club was typical.

Our indoor headquarters, the Centre municipal in Lamèque, contained fascinating displays demonstrating the variety of interests and talents of members of the Club de Naturalistes de la Péninsule Acadienne. Friday evening featured a slide show of superb bird photos by Jean-Claude Doiron of Caraquet. Nearby clubs should consider inviting Jean-Claude to put on a program. On Saturday evening Roland Chiasson told about the Piping Plover and his programs designed to raise youngsters' awareness of and concern for that endangered species and its habitat. Roland's work with northeastern New Brunswick schools was supported by the World Wildlife Fund.

At the federation's annual business meeting, Peter Pearce delivered an annual report, the substance of which has been covered in his messages in this magazine. Treasurer Harriet Folkins reported general fund receipts of \$4,080.65 and expenditures of \$6,368.08 during July 1, 1987-July 31, 1988, and a balance at the end of July of \$2,496.91. Scholarship fund balance was \$1,126.56. Elected as officers were: Peter Pearce, president; Paul Bogaard, vice-president; Ruth Rogers, secretary; and Harriet Folkins, treasurer. Jim Wilson was re-appointed as auditor.

Federation members voted to institute a membership fee for all federated clubs and affiliated organizations, the mechanism to be determined by the board. Proposed by-law changes allowing the board of directors to appoint up to two directors-at-large, who may be any member of the federation, were passed. Discussion of the deterioration and destruction of coastal habitats by people and vehicles was followed by adoption in principle of a resolution asking the federal and provincial governments to cooperate in developing coordinated comprehensive legislation and programs to govern the protection and management of the coastal zone. — DSC

The Nature Trust of N.B.

For this province's naturalists the launching of The Nature Trust of New Brunswick is particularly welcome. We can foresee a prominent place for this organization dedicated to providing protection for our vulnerable, endangered and precious places.

To start immediately with a tangible success is not often possible for a new organization but the Nature Trust has done just that. With the cooperation of Fraser Inc. it received a parcel of land which contains a variety of habitats that are home to 26 species of orchids as well as a mature stand of hemlock. Also a recent New Horizons project has compiled an impressive list of critical natural areas to be considered for protection by the Nature Trust.

The inaugural meeting of the Nature Trust in Fredericton May 31 was followed by an impressive dinner chaired by Federation president Peter Pearce. Lt.-Gov. Gilbert Finn, Honorary Patron of the Trust, offered his wishes for successful Trust programs. Representatives of Fraser's signed a lease agreement officially handing over care and management of the Shea Lake site near Plaster Rock to the Trust. After-dinner speaker was Diane Griffin, executive director of the Island Nature Trust, a P.E.I. group which has been active in natural area preservation for some time. The Federation wishes the newly hatched Nature Trust all the best in the future. — MM

NEW BRUNSWICK FEDERATION OF NATURALISTS
277 Douglas Avenue, Saint John, N. B., Canada E2K 1E5 Tel.: (506) 658-1842

LA FÉDÉRATION DES NATURALISTES DU N.-B.
277, avenue Douglas, Saint-Jean, N.-B., Canada E2K 1E5 Tél.: (506) 658-1842



The federation is a non-profit organization formed in 1972 to facilitate communication among naturalists and nature-oriented clubs, 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 faciliter la communication entre les naturalistes et entre les divers clubs axés sur l'étude de la nature, pour encourager une meilleure compréhension de la nature et de l'environnement naturel, et pour éveiller le souci pour le patrimoine naturel du Nouveau-Brunswick.

BOARD OF DIRECTORS / CONSEIL D'ADMINISTRATION

Past president / Ancien président: Hal Hinds, Biology, UNB, Bag Serv. 45111, Fredericton, E3B 6E1
President / Président: Peter Pearce, 5 Shamrock Terrace, Fredericton, N.B. E3B 2S4; tel. 459-3691
Vice-president / Vice-président: Paul Bogaard, RR # 1, Sackville, N.B. E0A 3C0
Secretary / Secrétaire: Ruth Rogers, Apt. A-9, 8 Wilmot Court, Fredericton, N.B. E3B 2M8
Treasurer / Trésorier: Harriet Folkins, P.O. Box 12, Sussex, N.B. E0E 1P0; tel. 433-1801
Directors-at-large / Membres généraux: Angus MacLean, P.O. Box 95, Alma, N.B. E0A 1B0; Mary Majka, RR 2, Albert, N.B. E0A 1A0
Representative directors / Membres représentatifs: Paul Bogaard (Chignecto), David Christie (Moncton), Harriet Folkins (Kennebecasis), Lionel Girouard (Grand Lake), J.-P. Godin (la Péninsule acadienne), Allan Gregoire (Nepisquit), Donald McAlpine (Saint John), Elizabeth McIntosh (Valley), Dusan Soudek (Fredericton), Georgette Thibodeau (Madawaska), Harry Walker (Miramichi)
CNF Director / Conseiller de FCN: David F. Smith, 149 Douglas Avenue, Saint John, N.B. E2K 1E5

MEMBERSHIP / SUBSCRIPTION RATES

Annual dues:
Individual or family \$10.00
Student (to age 18) \$5.00
Sustaining \$20.00

Membership privileges include subscription to *N. B. Naturalist*.

Please make cheques payable to: N. B. Federation of Naturalists
Mail to: Harriet Folkins, treasurer, P.O. Box 12, Sussex, N.B. E0E 1P0 Canada

COTISATIONS DE MEMBRES / TARIF D'ABONNEMENT

Cotisations annuelles:
Individu ou famille 10.00\$
Étudiant jusqu'à l'âge de 18 ans 5.00\$
Membre soutenant 20.00\$

Chaque membre recevra la revue *Le Naturaliste du N.-B.*

Veuillez faire votre chèque à l'ordre de La Fédération des naturalistes du N.-B. et postez-le à: Harriet Folkins, trésorier, C.P. 12, Sussex, N.-B. E0E 1P0 Canada

FEDERATED CLUBS / CLUBS FÉDÉRÉS

Chignecto Naturalists' Club, Box 1590, Sackville, N.B. E0A 3C0; 536-2333 or 536-0454; meets Sackville Public Library, 7:30 pm, 1st Thur., Sept.-June.
Club de Naturalistes de la Péninsule Acadienne, C.P. 421, Lamèque, N.-B. E0B 1V0; 344-2286 ou 395-5023; réunions alternant entre Caraquet, Shippagan et Tracadie, 1er mercredi, sept. à juin; *Le Gobe-mouche* mensuel.
Club des ornithologues du Madawaska, a/s Danielle Nadeau, RR 4, Edmundston (N.-B.) E3V 3V7; 739-7085; réunions à 19 h, 2ième lundi, sept. à mai, Centre communautaire de Boucher; bulletin *C.O.M.*
Fredericton Nature Club, Box 772, Stn A, Fredericton, N.B. E3B 5B4; 459-8685 or 454-2117; meets N.B. Craft School, 7:30 pm, 1st Wed., Sept.-May; monthly *Newsletter*.
Grand Lake Naturalists' Club, c/o Lionel Girouard, RR 1, Minto, N.B. E0E 1J0.
Kennebecasis Naturalists' Society, P.O. Box 12, Sussex, N.B. E0E 1P0; 433-1801 or 433-6473; meets St. Paul's United Church Hall, 8 pm, 4th Mon., Sept.-May.
Miramichi Naturalists' Club, 276 Heath Court, Newcastle, N.B. E3V 2Y5.
Moncton Naturalists' Club, 771 Mountain Road, Moncton, N.B. E1C 2R3; 857-4271 or 384-5212; meets Moncton Museum, 7 pm, 2nd Wed., Sept.-May; monthly newsletter.
Nepisquit Naturalists' Club, P.O. Box 385, Bathurst, N. B. E2A 3Z3.
Saint John Naturalists' Club, 277 Douglas Avenue, Saint John, N.B. E2K 1E5; meets N.B. Museum, 2nd Wed., Sept.-May, elsewhere in June; monthly *Bulletin*.
Valley Naturalists, P.O. Box 95, Florenceville, N.B. E0J 1K0; 375-6887 or 392-6485; meets Wicklow Agricultural Centre, 7:30 pm, 2nd Mon., Oct.-June; semi-annual newsletter.

AFFILIATED ORGANIZATIONS / ORGANISATIONS AFFILIÉES

Schoodic Chapter, Maine Audubon Society, c/o Sid Bahrt, Pembroke, ME 04666; meets Sunrise Apts., Calais, 7 pm, 3rd Tues., except Dec; bimonthly *Schoodic*.
Sunbury Shores Arts and Nature Centre, Inc., P.O. Box 100, St. Andrews, N. B. E0G 2X0; 529-3386; workshops, exhibits, semi-annual *Sunbury Notes*.

