

**N.B. Naturalist**

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

Vol. 12, No. 1 1983



*Edmund Campbell*



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N.B. Naturalist carries articles and reports pertaining to the natural history of New Brunswick. Contributions are welcomed, and should be sent to:

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Articles are invited in both official languages, and will be printed in the language they are received. The opinions expressed are those of the authors. Original material appearing in N.B. Naturalist may be reproduced without permission; credit lines would be appreciated.

Deadlines for submission of articles, notes and illustrations are January 1, April 1, July 1 and October 1. Line drawings and cover illustrations should be in black ink and the size they are to appear in print.

Deadlines for sightings and observations for 'Nature News' are December 1, March 1, June 1 and September 1.

LE NATURALISTE DU N.-B.

Le Naturaliste du N.-B. est une publication trimestrielle préparée par la Fédération des naturalistes du Nouveau-Brunswick, en collaboration avec le Musée du Nouveau-Brunswick.  
Les membres de la Fédération reçoivent sans frais un abonnement à la revue en payant leur cotisation (voir l'intérieur de la couverture, dos). On peut se procurer cette revue à \$1.00 l'exemplaire.

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Dates limites de présentation de vos articles, réflexions, avis et photos: 1<sup>er</sup> janvier, 1<sup>er</sup> avril, 1<sup>er</sup> juillet et 1<sup>er</sup> octobre. Les dessins au trait et les photos de couverture doivent être préparés à l'encre noire et dans le format de publication.

Dates limites pour toute observation destinée à la rubrique «Nouvelles de la nature»: 1<sup>er</sup> décembre, 1<sup>er</sup> mars, 1<sup>er</sup> juin et 1<sup>er</sup> septembre.

Cover illustration

Black-capped Chickadees, by Rosamond Campbell.  
Pencil drawing of New Brunswick's Provincial Bird.  
Courtesy Florence Christie.

Illustration sur la couverture

La Mésange à tête noire par Rosamond Campbell.  
Un dessin au crayon de l'oiseau provincial du Nouveau-Brunswick, une aimable reproduction de Florence Christie.

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#### FROM THE EDITOR

This issue of N.B. Naturalist marks a milestone in the history of the publication, as the New Brunswick Museum joins with the New Brunswick Federation of Naturalists to produce the magazine.

N.B. Naturalist originated in 1970 as a Museum publication when David Christie, then Curator of Natural Science, saw the need for 'a newsletter for all those interested in the natural history of the province.' In 1973, the Museum surrendered publication of the newsletter to the newly formed New Brunswick Federation of Naturalists; in 1983, at the request of the Federation, the provincial institution has again become formally involved in the production of N.B. Naturalist.

As Editor, I have assumed responsibility for the regular, quarterly production of the magazine. Your comments, suggestions, and - need I say! - contributions, are always welcome and should be addressed to me at the Museum. David Christie stays with the publication as Records Editor, continuing to compile Christmas Bird Counts and nature reports from around the province. His 'Nature News' will be a regular feature of each issue. Sightings will reach David at the Museum (where they are ultimately added to our data files). Donald McAlpine, on the curatorial staff of the Natural Science Department, has agreed to serve as Book Review Editor. Alan McNairn, Director of the Museum, Federation President Mary Majka, and Peter Pearce, Canadian Wildlife Service, Fredericton, complete the editorial committee. Hal Hinds, Curator of the Connell Memorial Herbarium, UNB Fredericton, will be a regular contributor to N.B. Naturalist with a series on New Brunswick's rare plants.

N.B. Naturalist will appear four times a year, reaching NBFN members in March, June, September and December. This year, as we ease into the regular production schedule, look for a second issue in June, a third 'special edition' in August to commemorate our hosting of the Canadian Nature Federation conference, and a fourth in December.

N.B. Naturalist has a dual role to fill. As NBFN newsletter it will communicate Federation business and the activities of affiliated clubs. As natural history magazine it will reflect the concerns, interests and investigations of New Brunswick naturalists. How well it does both depends to a large extent on the strength of the NBFN and the support the publication receives from naturalists and natural history organizations throughout the province.

This introductory issue is being sent to many of you who are not NBFN members; some because of your participation in the

Christmas Bird Counts, others because of your expressed interest in the natural heritage of New Brunswick. I hope you like what you see, and I urge you to support the Federation - and the N.B. Naturalist - by completing and mailing the membership form on the final page of this issue.

Gayl Hipperson

#### MOT DE LA DIRECTRICE

Ce présent numéro de la revue Le Naturaliste du N.-B. marque un tournant dans l'histoire de cette publication, alors que le Musée du Nouveau-Brunswick se joint à la Fédération des Naturalistes du Nouveau-Brunswick pour en faire la production.

Le Naturaliste du N.-B. vit le jour en 1970 comme publication du Musée quand David Christie, alors conservateur des Sciences naturelles, s'aperçut du besoin d'une lettre circulaire pour les personnes intéressées à l'histoire naturelle de la province. En 1973, le Musée en confia la publication à la nouvelle Fédération des naturalistes du Nouveau-Brunswick. En 1983, à la demande de la Fédération, l'institution provinciale acceptait à nouveau de s'impliquer dans la production du Naturaliste du N.-B.

Comme directrice de la revue, j'ai assumé la responsabilité de sa production régulière à tous les trois mois. Vos commentaires, vos suggestions et, a-t-on besoin de le dire, vos articles seront toujours bien accueillis. Ils devraient m'être expédiés directement au Musée. David Christie devient le directeur des inventaires et continuera à compiler les Recensements d'oiseaux de Noël et des rapports sur la nature en provenance de tous les coins de la province. Sa rubrique "Nouvelles de la nature" constituera un reportage régulier. Toute observation sur les espèces naturelles doit lui être acheminée au Musée (où elle sera ultérieurement portée à nos dossiers). Don McAlpine, un des conservateurs du Département des Sciences, a bien voulu de son côté accepter de jouer le rôle de directeur de la critique scientifique. Alan McNairn, directeur du Musée, Mary Majka, présidente de la Fédération et Peter Pearce, du Service canadien de la faune à Fredericton, complètent le comité de rédaction. Hal Hinds, conservateur de l'Herbier Connell Memorial à l'UNB de Fredericton, sera un collaborateur régulier du Naturaliste du N.-B. avec sa série sur les plantes rares du Nouveau-Brunswick.

Le Naturaliste du N.-B. sera donc une revue trimestrielle et atteindra les membres de la FNNB en mars, juin, septembre et décembre. Cette année, comme nous entamons un calendrier régu-

lier de production, vous recevrez un second numéro en juin, un troisième - une édition spéciale pour commémorer le congrès de la Fédération canadienne de la nature - en août, et un quatrième en décembre.

Le Naturaliste du N.-B. a deux rôles principaux. Comme circulaire de la FNNB, il vous transmettra les nouvelles concernant la Fédération et vous tiendra au courant des activités des clubs affiliés. Comme revue d'histoire naturelle, il se fera le reflet des inquiétudes, des intérêts et des travaux de recherche des naturalistes du Nouveau-Brunswick. Son succès à ces deux paliers dépendra dans une large mesure de la vigueur de la FNNB et de l'appui que la publication recevra des naturalistes ainsi que des organismes d'histoire naturelle à travers la province.

Ce premier numéro a été envoyé à plusieurs d'entre vous qui ne sont pas membres de la FNNB; pour certains, à cause de votre participation dans le Recensement d'oiseaux de Noël; pour d'autres, à cause d'un intérêt manifeste pour le patrimoine naturel du Nouveau-Brunswick. J'espère que vous en serez satisfaits et je vous invite à appuyer la Fédération - et Le Naturaliste du N.-B. - en remplissant et en nous renvoyant le formulaire des membres qui se trouve à la dernière page.

Gayl Hipperson

DEADLINE FOR NEXT N.B. NATURALIST ... 15 MAY

DATE LIMITE POUR LE PROCHAIN NUMERO ... LE 15 MAI





FROM THE PRESIDENT

Dear Fellow Members:

In the history of our Federation I am certain 1983 will be remembered as an extremely lucky year. I am delighted about a number of very fortunate events, and could hardly wait to share them with you.

You have already noticed that the magazine has a new face and the picture on the front cover will have told you that we now have an official Provincial Bird. It took quite a long time to hear the Premier's proclamation (an order-in-council had been passed months ago) but to those who have worked on this project and those who have waited, it is rewarding to know that it was all worthwhile.

It has also proved worthwhile for the Federation to approach the Director and Executive Committee of the New Brunswick Museum with a proposal for co-operation in the production of the N.B. Naturalist. To our delight the Museum viewed our ideas on working together as beneficial for everybody concerned and so we will from now on have tremendously helpful allies. Gayl Hipperson, curator at the Museum and editor of the Saint John Naturalists' Club Bulletin, has agreed to take over the editorship of our Federation magazine and we are fortunate to be able to draw on her tremendous experience and skill. This lucky turn of events literally turns the page on our recent problems with the N.B. Naturalist.

There are other good things to report. A newly established club, the Valley Naturalists, has officially joined our Federation and is developing very interesting programs and field trips. The Moncton Naturalists' Club, after a few years in the doldrums, has sprung to life under the leadership of an enthusiastic president, Fred Lloyd. Of some concern is still the Fredericton Field Naturalists' Club, which badly needs someone to help put it together again and restore it to its former vigor. I am happy to report all the other clubs are in the best of health.

Our winter was a very busy one with preparations for the upcoming national conference of the Canadian Nature Federation. As many of you know, our Federation has invited the C.N.F. to hold its annual meeting in Sackville on August 11-13. There will be a very interesting program, preceded and followed by field trips. Many members have volunteered their time and knowledge and are working hard to make this big venture something we can be proud of. I thank those who have joined us and call on others to be on the list of volunteers which will be compiled by individual clubs.

I realize that many of you are not members of the Canadian Nature Federation; however, that does not prevent you from enjoying the conference and taking advantage of the field trips. Everybody is welcome. One should keep in mind that this is a very special opportunity, since national conferences are held each year in a different province. Why not plan your vacation with those dates in mind?

Alas, I have to end on a very sad note. Dr. George Stirrett, honorary member of N.B.F.N., passed away this winter after a lengthy illness. We lost a great friend and teacher, one of those figures in the history of our Province who can never be replaced. He will be remembered as a pioneer of causes that need persistence, love and dedication. We extend to his widow, Grace, our deepest sympathy. A donation received in the name of Dr. Stirrett has been set aside for the establishment of a memorial fund honoring Dr. Stirrett's significant contribution to the natural history of New Brunswick.\*

After a very unusual winter, spring is letting us know that there is a new beginning in everything - let's feel that this year will bring with it lots of new and exciting events.

Mary Majka

*\*(Editor's note: An article honoring Dr. George Stirrett appeared in Vol. 11, No. 1 of the N.B. Naturalist.)*

Request for Information

on

Prince Edward Island

Natural History Specimens

An Inventory of Natural Science Specimens is being developed as an Island Studies Project by the Department of Extension at the University of Prince Edward Island. This project is an initial step in the possible development of a provincial natural sciences museum collection.

We are interested in viewing preserved or mounted birds, mammals, insects, fish, plants, shells, fossils and rocks from Prince Edward Island. If you have a collection or know of someone who does, please contact:

Kathy Martin or Geoff Hogan,  
Biology Department,  
University of Prince Edward Island,  
C1A 4P3

Telephone: (902) 892-4121



## MOT DE LA PRÉSIDENTE

Chers collègues,

Dans l'histoire de la Fédération, je suis certaine qu'on se souviendra de 1983 comme d'une année exceptionnelle. Je me réjouis d'un certain nombre de très heureux événements et je peux à peine contenir ma joie à l'idée de les partager avec vous.

Vous avez certainement remarqué que la revue a une nouvelle couverture et que l'illustration qui y apparaît vous présente notre oiseau provincial officiel. On a dû attendre un bon moment la proclamation du Premier Ministre (un décret du conseil a été pris plusieurs mois passés), mais pour ceux qui ont travaillé à ce projet et pour ceux qui ont dû forcément attendre, ça fait chaud au cœur de réaliser que nos efforts en ont valu la peine.

La Fédération est également sortie gagnante dans sa démarche auprès du Directeur et du Conseil exécutif du Musée du Nouveau-Brunswick concernant un projet de coopération dans la publication de la revue Le Naturaliste du N.-B. A notre grand plaisir, le Musée a reconnu que notre idée de travailler ensemble pouvait être bénéfique aux deux partis concernés. Nous aurons donc à l'avenir de très précieux alliés. Gayl Hipperson, conservatrice au Musée et directrice du Bulletin du Club des naturalistes de Saint-Jean, a bien voulu accepter la direction de la revue de notre Fédération. Nous sommes chanceux de pouvoir profiter de son énorme expérience et de son expertise. Ces heureux événements ont littéralement tourné la page sur nos récents problèmes touchant Le Naturaliste du N.-B.

Nous avons d'autres bonnes nouvelles à vous communiquer. Un nouveau club, le Valley Naturalists, s'est joint officiellement à la Fédération et est en train de préparer des programmes et des excursions très intéressants. Après quelques années d'inactivité, le Club des naturalistes de Moncton est de son côté revenu à la vie sous la direction enthousiaste de son président, M. Fred Lloyd. Une ombre au tableau, le Fredericton Field Naturalists' Club nous donne quelques soucis. Il a un pressant besoin d'une personne dévouée qui puissent le remettre à nouveau sur pied et lui redonner sa vigueur d'antan. Mis à part ce léger contretemps, je suis heureuse de vous faire part que tous les autres clubs sont en parfaite santé.

Cet hiver a été très occupé à préparer le prochain congrès national de la Fédération canadienne de la nature. Comme plusieurs d'entre vous le savent, notre Fédération a invité la F.C.N. à tenir son assemblée annuelle à Sackville les 11, 12 et 13 août prochain. Un programme très intéressant a été préparé, précédé et suivi d'excursions dans la nature. Plusieurs membres ont offert leur temps et leur savoir et travaillent très fort pour faire de cette entreprise quelque chose dont on se souviendra. Je remercie ceux et celles qui se sont joint(e)s à nous et invite les autres à placer leurs noms sur la liste des bénévoles dressée par les différents clubs.

Je sais bien que nombreux sont ceux qui parmi vous ne sont pas membres de la Fédération canadienne de la nature. Ce fait ne vous empêche pas toutefois de participer au congrès et de prendre avantage des excursions organisées. Vous êtes donc tous les bienvenus à Sackville. Rappelez-vous que c'est pour nous une occasion unique, vu que les congrès nationaux se tiennent chaque année dans une province différente. Alors! Organisez vos vacances en tenant compte de ces dates!

Hélas! Je dois terminer sur une note plutôt triste. M. George Stirrett, docteur en biologie et membre honoraire de la F.N.N.B., est décédé cet hiver après une longue maladie. Nous avons perdu en lui un grand ami et un excellent maître, un de ces personnages unique en son genre de l'histoire de notre province. On se souviendra de lui comme d'un pionnier des causes spéciales exigeant persévérance, amour et dévouement. Nous offrons nos plus profondes condoléances à Grace, son épouse. Un don reçu en mémoire de M. Stirrett a été utilisé pour établir un fonds en souvenir de son exceptionnelle contribution à l'histoire naturelle du Nouveau-Brunswick.

Après un hiver hors pair, le printemps nous fait savoir qu'il y a du nouveau dans l'air. Osons croire que cette année nous apportera toute une gamme de nouveau et heureux événements.

Mary Majka

\* (Note de la directrice: Un article en l'honneur de George Stirrett a paru dans le Vol. 11, No 1 de la revue Le Naturaliste du N.-B.)



#### Call for Bird Feeder and House Designs

A new book, tentatively titled The Audubon Society Handbook for Attracting Birds, will include innovative homemade designs for bird feeders, houses, and baths. The author, Stephen W. Kress, is looking for improvements to standard models of feeders and houses and original designs for any homemade bird attracting creations. Novel approaches to repelling squirrels, cats, and nuisance birds are also welcome. In addition to the handbook, some of the submitted material may be selected for articles in the Cornell Laboratory of Ornithology's new magazine, The Living Bird Quarterly. The designers of selected plans will be acknowledged in the book and articles.

Mail detailed plans with measurements (and photographs, if available) to:

Dr. Stephen W. Kress,  
Cornell Laboratory of Ornithology,  
159 Sapsucker Woods Road,  
Ithaca, New York 14850

## THE HARRIERS OF THE TANTRAMAR

Robert Simmons

The Tantramar marsh of New Brunswick is a vast, partially agricultural, freshwater marsh that was extensively dyked and reclaimed from the sea sometime in the middle 1600's. Its 60 km<sup>2</sup> comprise a mosaic of annually hayed timothy fields, grazing pastures, abandoned fields and wild-life impoundments overlying 80-100 ft. of some of the most fertile mud on the continent. It is also home to one of North America's largest populations of Marsh Hawks.



Adult male Northern Harrier (Marsh Hawk)  
Drawing by Robert Simmons

I have had the enviable pleasure of studying the bird, now known as the Northern Harrier, since 1980. It immediately proved to be a captivating subject, not only because of its wild haunts and its secretive ways, but because it has several unique characteristics which set it apart from all other hawks and falcons. The list is quite impressive.

First, it is the only bird other than the owls that can locate its prey using its extraordinary powers of hearing alone. It can detect voles and mice in thick grass from several metres and catch them sight unseen. Second, it is one of a few species that exhibits reversed sexual dimorphism in both size and colour. The males are up to 1/2 lb. (225g) lighter than the females (the females, as a result, tend to dominate the males in the breeding season); also, adult males are grey above and white below while females are brown backed with tawny undersides flecked with brown. (First year males, however, are brown-plumaged like the females, and in the field can only be recognized by their smaller size and quicker flight.) Third, and of greatest interest to me, the Northern Harrier is one of only three species of raptors that is regularly polygynous - one male breeds with two or more mates in one season. Polygyny is practised by only 2% of the world's birds; the other two polygynous raptors are European harriers that, like the Northern Harrier, breed in marshes.

The Tantramar was first mentioned to me by officials of the Canadian Wildlife Service in Sackville as being a likely study site, and the area has indeed proved to be excellent; not only did polygyny occur in all three years of my study, but the



numbers of breeding birds fluctuated with the abundance of Meadow Voles, their principal prey, providing an interesting contrast in the birds' breeding strategies.

The summer of 1980 started with a bang - I found 30 nests, 12 in polygynous situations, and I collected data on egg dates, clutch sizes, hatching and fledging dates, and most importantly, male feeding rates and fledging success. I had little rest the following year with 22 nests to study and an additional project investigating (via a blind) prey types brought to a nest by the adult harriers.

In addition, a fellow biologist, Phoebe Barnard, set up a study to investigate the energy requirements of a pair of breeding harriers. Her study results were vital to my own investigations, since she showed that weather conditions play an integral role in determining flight activity: calm and very hot weather or periods of rain both greatly reduced the number of prey items brought to the nestlings, and thus played a role in eventual fledging success.

Snap-trapping on the marsh indicated that small mammals, such as Meadow Voles and Arctic Shrews, fluctuated considerably in numbers. The "high" of 1980 fell to a much lower level in 1981, with a corresponding decrease in nesting harriers. These results were not surprising since harriers feed almost exclusively on small mammals for most of the year. Since 1982 was likely to be even lower than 1981 in terms of vole numbers, I was keen to follow the reaction of the harriers to the predicted decrease.

My prediction was only half right: the voles were very low for half of the season, and then appeared to undergo a sudden increase sometime in mid-summer. A late, dry spring, combined with the lack of voles had dramatic effects on the harrier's breeding in 1982.

The usual first egg dates (6-7th May) came and went; the birds were present, but none nested. May slowly passed by; the harriers remained, and still no nests were found. Furthermore, almost no food-passes (spectacular aerial food transfers that take place between the male and female) were seen, as is usual for pre-breeding harriers. I was becoming concerned - the final egg dates were fast approaching, the ground remained dry, males courted and defended territorial boundaries, and some of the first food-passes were beginning - but still no nests were to be found. It was not until June was a few days away that the birds eventually settled - three weeks late, and much reduced in numbers.

As ever, things happened fast; the females began laying all at once and continued past the previous year's egg dates (8-9th June) up to June 20th. Two late-nesting males amazingly managed to attract one extra female each with whom they bred

("amazingly", because polygyny is usually triggered by abundant voles, and up to that point I'd seen little evidence of any voles at all). Perhaps the biggest surprise though, was still in store. The usual clutch size of 4 to 5 eggs (4.6 to be precise) plummeted to just over 3.5 per nest, a decrease of 30% from the 1980 clutch size. Four females laid three-egg clutches, and two females managed only two eggs - a rarely reported full clutch for harriers. Only once previously had I seen a two-egg clutch, and that belonged to a female who had quickly renested following the failure of her first nest.

One question remained to be answered - was late nesting due to the dry spring weather? (Harriers prefer wet sites; their ground nests are less susceptible to predation in wet areas). Or was it that the voles were indeed as scarce as they seemed by observation to be early in the season, and increased in numbers later?

In retrospect, it appears that the voles were responsible, but they in turn were probably affected by the lack of early-season rain. Voles, like harriers, prefer damp areas in which to reproduce. The frequency of food-passes is linked to the number of voles, and it was very low in May and part of June. This behavior increased considerably in July, when large numbers of voles and shrews were brought to two successful nests I had under close observation.

The low vole numbers in May also accounted nicely for the greatly reduced clutch sizes, since females require a certain amount of extra energy in order to form their eggs - an amount they obviously did not get in May. Those chicks that hatched generally survived to fledge, however, unlike previous years when many chicks died through starvation.

The breeding success in a year when most matings were monogamous, however, further added to the mystery of polygyny. Polygyny can only "work" if those females who share mates are as successful in raising young as females who mate monogamously; if polygynous females do not raise as many young, then their trait would not be passed on and would eventually disappear



Adult female Northern Harrier (Marsh Hawk)  
Drawing by Robert Simmons

from the population. Not so, it would seem, with the Tantramar harriers! In all three years, those females who chose to mate with an already-mated male (i.e. polygynously) fared so badly that they would, on average, have to breed for 20 years in order to equal the lifetime productivity of a monogamous female breeding for a more normal 7 years!

First-settling females in polygynous relationships (alpha females) do not, however, suffer at all from sharing their mates. They receive more food from the male than do other harem females, and lay more eggs and raise more young than any other female in any other situation. Later-settling polygynous females, on the other hand, are forced to hunt for themselves once the alpha females' eggs hatch, and consequently many of their progeny starve or fall victim to predators.

Why, then, do females join harems at all? Are some females forced into mating with already-mated males in order to breed at all? This seems unlikely, because many of the polygynous situations arose at the start of the season, when unmated males were still available, and indeed later bred, on the marsh. Clearly, the problem is a fairly complex one, and further investigations revealed no clear-cut solutions -- except one. There is the intriguing possibility that male Northern Harriers may be "cheating" females into breeding with them, with a "promise" of abundant food in the early season, and later deserting them in favour of their alpha females.

If, after all, it takes one month for the unfortunate polygynous female to "realize" that she has been taken for a ride (one month being the incubation period), then she cannot re-mate because no males are left unmated at that stage. One up for "male chauvanism?" Well, perhaps, but the details of such an unlikely situation have yet to be worked out.

Whatever the case, the harriers should remain breeding on the Tantramar for a few years yet, and who knows -- 1983 may be their special year if voles remain abundant. (But then, who am I to predict!?)

Biology Department, Acadia University,  
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## FIRST BURROWING OWL FOR NEW BRUNSWICK

A.D. Smith

On June 21, 1978 I was travelling along the dyke at the Aulac Marsh (6 km east of Sackville, N.B.), when I flushed a small buffy-brown owl from the grass along the top of a ditch bank just below the dyke. The bird flew along the ditch and perched on a fence post approximately 40 meters from me. I noted the owl's long-legged appearance, barred breast, and rounded head features, but no prolonged observation was possible as I was engaged in a project to measure tidal flooding of salt marsh pools and had three other sites to visit while the tide was high.

I was curious about the unusual features of the owl, however, and I returned to the same area on June 26 with Peter Barkhouse and Colin MacKinnon. The owl was flushed from exactly the same location as the week before and perched on a fence post approximately 30 meters from us. It was observed through binoculars and a 20X spotting scope for more than two minutes. My earlier tentative identification of Burrowing Owl was confirmed. The bird was flushed twice and carefully observed flying and sitting on the top of the nearby dyke. The total period of observation was in excess of 30 minutes. When we left the area the bird was perched on the rubble of an old collapsed barn approximately 100 meters from where it had been flushed originally. I photographed the owl, but later discovered that the rewind button had stuck on the camera, leaving me with no photographic evidence of the sighting.

Later that day three other persons visited the area in hopes of locating the bird, but it could not be found. On the morning of June 27 I returned to the site but could not locate the bird. When I checked the exact location where the bird had been flushed on June 21 and June 26, I discovered that the owl had been using a large abandoned muskrat burrow near the top of the ditch bank. Three pellets were found at the entrance of the burrow and several barred breast feathers collected from just inside the burrow. An analysis of the pellets revealed 90% beetle remains and 10% mammalian and miscellaneous remains. The beetle families tentatively identified were Carabidae (ground beetles), Cucujidae (bark beetles), and Chrysomelidae (leaf beetles).

Identification of the bird was confirmed by Dr. Henri Ouellet, National Museum of Natural Sciences, who examined the feathers and pronounced them to be 'Burrowing Owl ... without any doubt.'

Canadian Wildlife Service  
Sackville, N.B. EOA 3CO

# Rare New Brunswick Plants

## THE HART'S-TONGUE FERN IN NEW BRUNSWICK -

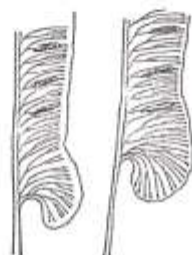
### IS IT A HOAX?

Hal Hinds

Does the Hart's-tongue Fern occur in New Brunswick?  
Did it ever?

The mystery surrounding specimens of this plant collected over a century ago from Woodstock, N.B., is a botanical tangle not yet completely unravelled.

The typical Harts'-tongue Fern (*Phyllitis scolopendrium* (L.) Newm.) is a Eurasian fern, although it is widely cultivated and very locally naturalized on this continent. The species is represented in North America by a distinct variety. Noted botanist Professor M.L. Fernald was so convinced that the American plant was different from the common Eurasian Harts'-tongue that he distinguished it as variety *americana*, and in *Rhodora* 37 (438): 220-221, he carefully describes the differences between the Eurasian and American varieties. *Phyllitis scolopendrium* (L.) Newm. variety *americana* Fernald is smaller than its Eurasian counterpart and has the tips of the veins ending somewhat farther in from the margin of the frond (see illustration).



a

b

*Phyllitis scolopendrium*  
American (a) and European (b)  
varieties.

In Canada, *Phyllitis scolopendrium* (L.) Newm. var. *americana* Fern. grows without doubt on the cool, shaded limestone cliffs of the Niagara escarpment in southern Ontario and similar places on the Bruce Peninsula, but is it a native New Brunswick plant?

The origin of the Woodstock specimens is a story in itself. In 1882, Peter Jack from Halifax was visiting in Woodstock and was shown a fern growing in the greenhouse of Mrs. Charles Connell. It was the Harts'-tongue Fern, and it had been found by Mrs. Connell's gardener about six miles from Woodstock, in the fall of 1880, while the gardener had been gathering leaf mold from under the snow.

The gardener, James Sutton, took Mr. Jack to the location but no further specimens could be found.

Now the plot thickens, for subsequently (we don't know how long after Mr. Jack's return to Halifax), James Sutton 'by diligent search' succeeded in finding two small plants, which he sent to Mr. Jack. One of the original accounts of this discovery printed in the Transactions of the Nova Scotia Institute of Science, (6:71-72) points out that these two small plants 'came with the native moss and mould still attached to their roots and effectually confirm one of the most interesting fern discoveries made for some years. Since then two more plants of larger size have been received by Mr. Jack.'

It is from these specimens that the record for the Harts'-tongue Fern in New Brunswick stood for nearly a century.

Gray's Manual of Botany (Fernald 1955) mentions the Harts'-tongue Fern from Woodstock, N.B., with the note 'perhaps extinct', but Bernard Boivin, in his Énumération des Plantes du Canada (Provancheria No. 6 1966-1967), does not list the New Brunswick occurrence at all. It was Boivin who reannotated one of the original New Brunswick specimens, now in the herbarium of the National Museum of Canada in Ottawa, indicating that he considered the plants of Eurasian origin and not of the native variety americana.

H.J. Scoggan, in Flora of Canada (1978), gives us a clue as to why the Harts'-tongue Fern is no longer considered a native New Brunswick plant:

'The plant has been widely cultivated and reports from Canada other than from southern Ontario (as from Vancouver Island and New Brunswick) are probably based upon such material.'

What, then, of the plants James Sutton sent to Mr. Jack? If Boivin and Scoggan are right, and the material is of non-native, Eurasian origin, then one explanation is that somehow a few specimens of the Eurasian variety of the Harts'-tongue Fern became established somewhere on the outskirts of Woodstock and these are what James Sutton found and sent to Peter Jack. A second possibility is that Mr. Sutton may have only thought he obtained his first specimen from the wild, when in actual fact, the plant in Mrs. Connell's greenhouse grew from spores or a small plant brought in from some other source. James Sutton was undoubtedly under considerable pressure to relocate the site of his fern discovery. Anxious to please Mr. Jack, but unable to find authentic wild specimens, the gardener may have either divided the crown of the original specimen or obtained specimens from elsewhere and sent these to Mr. Jack in Halifax.

If, on the other hand, Boivin is mistaken and the New Brunswick specimens belong to the native variety americana after all, then our fern may be still lurking in some deep fern grotto along the Meduxnekeag River waiting to be rediscovered -



unless, of course, the last specimens were collected by James Sutton himself, and the fern is now extirpated from the province. (It is possible, too, that there was some sort of mix-up and the specimens upon which Boivin based his identification may not have been the original specimens.)

The next chapter in this fascinating mystery will soon help answer some of our questions. Authentic material is now being prepared for some microphotography work that should establish, once and for all, the variety of Harts'-tongue Fern that was sent from Woodstock to Halifax. In addition, some sleuthing in the Provincial Archives or the records of the Woodstock Historical Society may reveal some references to the actual location of this mystery fern collected by James Sutton.

Tune in for the final chapter of ... DID THE HARTS'-TONGUE FERN LICK THE SHORES OF THE MEDUXNEKEAG?



(Editor's note: Two specimens of the Hart's-tongue Fern are part of the important botanical collections of the New Brunswick Museum. These specimens, and the one annotated by Boivin in the National Museum, Ottawa, are the only evidence we have that this rare fern might be part of our New Brunswick flora. The N.B. Museum specimens are now under investigation.)

A TUNDRA SWAN BY ANY OTHER NAME.....

Peter A. Pearce

It was last year when I saw a Green-backed Heron, a Northern Harrier and a Lesser Golden-Plover, all at the same place. Lucky me, you say? Maybe. But it happened in New Brunswick, and they're the new, official names of three species not all that uncommon in the province. You may be able to guess their identities. The changes are the result of the labours over many years of the Committee on Classification and Nomenclature of the American Ornithologists' Union (AOU). The 6th edition of the checklist of North American birds is scheduled to appear in 1983, a quarter of a century after the 5th edition was published. It will cover species recorded from Canada and the United States, including Hawaii, as well as Bermuda, the West Indies and Middle America from Mexico to Panama. A preview of the Canadian and United States listing, using the sequence, taxonomy and English names of the 6th edition, was provided last year (Auk 99(3): supplement) in the 34th supplement to the earlier checklist. It makes interesting reading.

Revisions were made for purely nomenclatural reasons, as required or directed by the International Committee on Zoological Nomenclature, and for taxonomic ones. In general, the AOU Committee approached its task with a "global viewpoint" regarding English names, striving to preserve those in the 1957 checklist. Revisions were made in some cases, for example, to comply with international usage, to avoid misleading taxonomic implications and to replace the qualifier "Common" with a more appropriate term. The Committee also followed "presently accepted avian classification unless there was a strong consensus for change." But some changes there were. It might be of interest to highlight a few.

Quite a number of changes for taxonomic reasons were actually announced in 1973 in the 32nd supplement to the checklist (Auk 90(2): 411-419). Readers may recall that as a consequence of the philosophy of "lumping" then in the ascendency, we had to pare several "species" from our life lists. A brief look at how the shorebirds fared in the past decade would be instructive. The turnstones were removed from the family Charadriidae (plovers) and placed in the Scolopacidae (sandpipers, et al.). The genus Totanus (yellowlegs) was merged in Tringa, and the genera Erolia, Ereunetes and Crocethia were all combined in Calidris ("sandpipers"). Now we learn of changes for strictly nomenclatural reasons. Black-bellied Plover (Grey Plover in Britain) remains unchanged, but American Golden Plover becomes Lesser Golden-Plover (as in Britain), as separable from the Greater Golden-Plover of Eurasia which has, incidentally,

occurred in Newfoundland. Confused? Read on. The Northern Phalarope is now to be called Red-necked Phalarope, in conformity with British usage, but Red Phalarope (Grey Phalarope in Britain) is not altered. (For the etymologically inclined, the specific name of the latter is fulicaria, not the widely used but apparently erroneous fulicarius.) It appears, then, that the Committee favoured names describing the alternate, adult breeding, plumage over the basic, adult winter, one.

The modifier "Northern" is now applied to no fewer than 18 species of birds that have occurred in New Brunswick, presumably to distinguish them from relatives found in more austral zones. In addition to ones we have known about for some time, we now have Northern Fulmar, Gannet, Pintail, Goshawk, Lapwing, Hawk-Owl, Saw-whet Owl, Rough-winged Swallow, Wheatear, Mockingbird and Cardinal. Pity the poor swallow, now stuck with a hexasyllabic handle almost as much of a mouthful as the Semipalmated Sandpiper - or the American White Pelican, which should be a delight to those who like to play with verse, or worse. The Committee also seems to have been pretty free with hyphens, the names of six of the 12 owls that have been noted in New Brunswick, for example, having been affected. The night-herons now find themselves doubly hyphenated.

Some of the Picidae have come a long way. The Three-toed Woodpecker has finally lost the former modifiers "American" and "Northern", the Black-backed (once Arctic Three-toed Woodpecker) its three (six?) toes, and both have shed the diaeresis from the generic name Picoides. You will remember the switch to the appellation "Common" Flicker when it was determined that the yellow-shafted, the red-shafted and the gilded forms should be considered conspecific. Well, it's now "Northern" Flicker. The order in which the woodpeckers are presented has also changed considerably.



The Northern Flicker, alias the Common Flicker, alias the Yellow-shafted, Red-shafted, and Gilded Flicker.

The revised ordering of species, reflecting the consensus of systematists on the relationships among taxa, may, at first encounter, be a little bewildering to the amateur naturalist. The kinglets now locate themselves in the family Muscicapidae, which they share with the gnatcatchers and thrushes, and species as apparently disparate as Middendorff's Grasshopper-Warbler and the Greater Necklaced Laughing-Thrush - but we needn't be too concerned about them. But it gets curiouser and curiouser! The wood warblers, tanagers, sparrows and blackbirds, in that sequence, are now all grouped in the one large family Emberizidae. Seemingly strange nestfellows! Only ten New Brunswick species remain in the




Fringillidae: they include the Pine and the Evening Grosbeak but not our other grosbeaks.

The new names and placement of some species suggest that marginal notations in our field guides could be useful. Some of the changes were, indeed, adopted in the 1980 edition of the eastern Peterson. In time we should become comfortable with them. But imagine quickly trying, under the pressure, for instance, of a breeding bird survey, to locate a name at an unaccustomed position on a tally sheet. Or consider becoming familiar with a new provincial checklist - to be available soon, it is hoped - that places Red-throated Loon first and House Sparrow last, Snow Bunting being twentieth from the bottom. Oh, well! It's not really the nomenclatural nightmare I have suggested, and it's all in the cause of science. Anyway, what's in a name? I for one won't be too disappointed if the Common Moorhen remains so singularly uncommon here, or if I fail to see a Sedge Wren in New Brunswick this year. And a Tundra Swan by any other name would be as beautiful.

[Editor's note: To help you update your field guides, a list compiled by David Christie of the revised English names of New Brunswick birds is on the following page.]

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# CHANGES IN ENGLISH NAMES OF NEW BRUNSWICK BIRDS, 1957-82

Hyphens have been inserted in Black-crowned and Yellow-crowned Night-Herons and Eastern Wood-Pewee. The 'd' has been dropped from wigeon and the 's' after the apostrophe of Harris' Sparrow. Modifiers have been added to the names of many species. 'Northern' now precedes Fulmar, Gannet, Pintail, Shoveler, Goshawk, Lapwing, Saw-whet Owl, Rough-winged Swallow, Wheatear, Mockingbird and Cardinal. 'American' introduces the White Pelican, Black Duck, Robin and Tree Sparrow. We also have the Greater White-fronted Goose, Red Knot, Common Black-headed Gull, Gray Catbird, European Starling, and Common Yellowthroat. Common Barn-Owl and Northern Hawk-Owl have been both hyphenated and newly modified.

Further changes (new species concepts asterisked) follow:

## 5th edition, 1957

Leach's Petrel  
Wilson's Petrel  
Common (formerly American) Egret  
Louisiana Heron  
Green Heron  
Wood Ibis  
American Flamingo  
Fulvous Tree Duck  
Whistling Swan  
Blue Goose  
Common (formerly European) Teal  
European Widgeon  
Common (formerly American) Scoter  
Marsh Hawk  
Sparrow Hawk  
Pigeon Hawk  
Common (formerly Florida) Gallinule  
American Golden Plover  
Upland Plover  
Skua  
Northern Phalarope  
White-winged Black Tern  
Common Puffin  
Screech Owl  
Black-backed (formerly Arctic)  
Three-toed Woodpecker  
Northern (formerly American)  
Three-toed Woodpecker  
Yellow-shafted Flicker  
Traill's Flycatcher (wee-be-o song)  
Traill's Flycatcher (fitz-bew song)  
Common Crow  
Short-billed Marsh Wren  
Long-billed Marsh Wren  
Parula Warbler  
Myrtle Warbler  
Baltimore Oriole  
Ipswich Sparrow  
Slate-colored Junco

## 34th supplement, 1982

Leach's Storm-Petrel  
Wilson's Storm-Petrel  
Great Egret  
Tricolored Heron  
\*Green-backed Heron  
Wood Stork  
\*Greater Flamingo  
Fulvous Whistling-Duck  
\*Tundra Swan  
\*Snow Goose (dark form)  
\*Green-winged Teal  
Eurasian Wigeon  
Black Scoter  
Northern Harrier  
American Kestrel  
Merlin  
Common Moorhen  
Lesser Golden-Plover  
Upland Sandpiper  
\*Great Skua  
Red-necked Phalarope  
White-winged Tern  
Atlantic Puffin  
\*Eastern Screech-Owl  
  
Black-backed Woodpecker  
  
Three-toed Woodpecker  
\*Northern (formerly Common) Flicker  
\*Alder Flycatcher  
\*Willow Flycatcher  
American Crow  
Sedge Wren  
Marsh Wren  
Northern Parula  
\*Yellow-rumped Warbler  
\*Northern Oriole  
\*Savannah Sparrow  
\*Dark-eyed Junco

If you own a 1980 edition of Peterson's Field Guide you will have five other names not recognized by the A.O.U. The names should be Great (not Greater) Black-backed Gull, Common (not Thin-billed) Murre, Eastern Wood-Pewee (not just E. Pewee, Common (not Northern) Raven, and Dark-eyed (not Northern) Junco.

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# Christmas Bird Counts

1982-3

David S. Christie

Environmental conditions affect the Christmas Bird Count (CBC) in various ways. Food supply, habitat condition and the weather govern what birds and how many of them will occur in an area at any time, as well as how conspicuous they will be. And, of course, the weather also affects the number of observers and their activity.

Late fall and early winter, including the CBC period, were mild and relatively snow free. On the counts the average temperature was  $-3^{\circ}\text{C}$  and the average snow cover 2 cm. Compare those to the corresponding figures,  $-13^{\circ}\text{C}$  and 30 cm, two years ago and it is easy to see why observer effort varies a lot. This year, for the first time since 1976, 28 counts were conducted, including a brand new one, Southeast Upsalquitch, in the wilderness of northern New Brunswick. The 487 participants, 798 party-hours and 201 feeder reports all were greater than ever before.

Considering the record effort and mild weather it is a bit surprising that the variety of species, 107 on the counts plus two additional species during the count period, was not closer to the record 116 plus 9 on the 1973 CBCs. However, the total number of birds, 79,686, exceeded the 1981 record by almost 7,000 because of the large numbers of gulls and alcids at the mouth of the Bay of Fundy, attracted there by an abundance of plankton, including arrow-worms and euphausiid krill, and huge schools of squid and small pollock (Townsend). New records were set for Dovekie (3800), Razorbill (463) and Thick-billed Murre. The 1200 murre far surpass the previous record of 64 but pale beside the 20,000 seen across the bay at Brier Island, N.S., in 1973.

Mild weather was probably responsible for the late occurrence of 15 Gannets on 5 counts, a total of 4 Great Blue Herons (usually 1 or 2), 2 Sanderlings (the first CBC record), a flock of 12 terns (odds favor them being Common Terns) at Grand Manan, a Common Snipe at Sussex, 2 Winter Wrens at Plaster Rock, the widespread occurrence of ducks and gulls inland, good numbers of Brant and Yellow-rumped Warblers, and more Golden-crowned Kinglets in the Tobique valley than one would normally expect.

The mildness and lack of snow gave us good numbers of American Crows (high counts in 7 areas) and a Northern Harrier (Marsh Hawk) rather far north at Florenceville. I would be inclined to attribute the 3 Northern Flickers to those same



conditions were it not for the fact that there were also 3 of them in the severe winter of 1980 and 2 last year, marking a period of greater winter frequency than hitherto (only 4 in preceding 20 years). The Northern (Baltimore) Oriole shows the opposite pattern. This year's is the first oriole on a count since 1961-9 when they were recorded in 6 of 9 years.

The Mourning Dove is a species one expects to be favored by open conditions and indeed there were good numbers, including a record 108 at St. Andrews; overall, however, it was not as common as during the previous three years, perhaps because of losses due to the heavy snows during the winter of 1981-2. On the other hand, the open winter may have made doves and other ground-feeding species seem less numerous than they actually were. Junco, Tree Sparrow, White-throated Sparrow and American Robin were found in low to very low numbers on the counts but were seen more frequently as significant amounts of snow began to accumulate later in the winter. At count time, food was so widely available that those birds were not conspicuous.

Certain northern birds may not yet have been forced south in large numbers. Snow Buntings, for instance, were the scarcest they have been since 1970 and Purple Sandpipers were also scarce. Barrow's Goldeneye and Lapland Longspur were missed altogether. However, despite the mildness, good numbers of Iceland Gulls were seen.

The seeds of evergreen trees are an important food for several species, but the cone crop was good in only a few areas: principally along the coast of Fundy Park, but also at Grand Manan and Mount Carleton and locally at Cape Tormentine. The abundance of Boreal Chickadee, Red-breasted Nuthatch and White-winged Crossbill reflects that distribution, as does the Black-capped Chickadee, although less conspicuously because it utilizes a much greater variety of food.

All the winter finches, typically erratic in their movements, are strongly controlled by the abundance of seeds, not only here but elsewhere. Evening Grosbeaks were abundant and widespread (provincial record of 587 at Fredericton; high counts in 7 other areas) and there were moderate numbers of American Goldfinches. The rest of the finches were rare or found in few areas. Purple Finches were almost confined to the upper Saint John River valley. Pine Grosbeaks and Common Redpolls, generally scarce this winter, must have been finding lots of food near their main breeding areas, as must the Bohemian Waxwing. There were lots of fruits for the waxwings to eat but it was the first year since 1974 that there were no Bohemian Waxwings on the counts. Instead, we had a few Cedar Waxwings, not often found here in winter.

The fluctuations of small rodents, food for many birds of prey, are reflected in the CBC results. There must be an ample number of lemmings in the eastern Arctic for there was no major invasion of Snowy Owls. There were also few Northern Shrikes this winter. Rough-legged Hawks, concentrated in Sackville (where mice must be numerous) were otherwise rather scarce. They were conspicuously absent at Riverside-Albert where the vole population has crashed following a peak that supported a lot of hawks and owls last winter. Red-tailed Hawks were also most numerous at Sackville.

Additional species worthy of comment were the first ever Tufted Titmouse (visiting Fredericton feeders), good counts of Oldsquaw, Ring-necked Pheasant, Ruffed Grouse, Spruce Grouse, Great Black-backed Gull, and Black-backed Woodpecker, and below average numbers of Rock Dove, Downy Woodpecker (at least in southern N.B.), Blue Jay (2nd year in a row) and House Sparrow.

Many readers may be surprised by the use of some new names (e.g. Northern Harrier, American Crow) and an 'unusual' order of species in the table of results. These changes follow the latest supplement to the American Ornithologists' Union Checklist. The new sequence reflects improved understanding of the relationships of birds and the names are just the tip of the iceberg of a movement to eliminate confusion and standardize English bird names throughout the world.



NEW BRUNSWICK CHRISTMAS BIRD COUNTS - 18 Dec. 1982 to 2 Jan. 1983

Grand Manan Channel (GMC) 7th year

Mostly clear. Seas moderate.

Brian Dalzell (compiler)

Grand Manan Island (GM) 12th year

Mostly cloudy in the morning with a few sunny breaks, partly cloudy in the afternoon. Snow cover almost non-existent in the open and less than 2.5 cm in sheltered woods. Most streams open and previously frozen lakes and ponds partly opened by unseasonable mild weather.

Vernon Bagley, Brian Dalzell (compiler), Virginia Greene, Lincoln Harvey, Hayward Ingalls, Margaret and Merle Lambert, Elaine and Roger Maker, Geraldine Nelson, Mildred Russell, Carl, Ellis and Nancy Small.

Eastport-Campobello (E-C) 16th year

Partly cloudy. Ground bare; some fresh water open.

Sid Bahrt, Rhoda Bowman, Diane Cohen, Fran Collier, Thurlow Collier, Ellen Johnson, Richard Klyver, Zack Klyver, Sierna Lookwood, Hubert Ross, Nellie Ross, Dan Tishman, William Townsend (compiler).

St. Andrews (StA) 22nd year

Partly overcast, clear about half the time. Ground bare, ground thawed; very little ice on water.

Steve Adamowicz, Mrs. Hollis Bartlett, M.J. Dadswell, Mrs. Donald J. Johnson, Kenneth Langmaid, Daryl Linton (compiler), Mrs. N. Talbot Mais, Mrs. Donald McLeese, Walter Williamson, V. Zitko.

Pennfield (PENN) 20th year

Sunny. Ground bare.

Ralph Eldridge, M.C. Morehouse, Mrs. M.C. Morehouse (compiler)  
E.A. Nason.

Lepreau (LEP) 20th year

Heavy fog until mid-day then clearing with sunny intervals. No snow; all water open.

Don McAlpine (compiler), Mark Phinney.

Saint John (SJ) 26th year

Clear. Ground bare; rivers partly open, lakes frozen.

Mike Bamford, Charles Belyea, Marjorie Chatwin, David Christie, (compiler), Marjorie Duffy, Verna Ehrhardt, Joan Goucher, Gayl Hipperson, John Holloway, Cecil Johnston, Jean Lambert, Don



McAlpine, Lynne McAlpine, Doreen McIntosh, Tom Page, Joan Pearce, Mark Phinney, Allen Sellars, Marion Sherwood, Lorraine Shonaman, David Smith, Evan Smith, Molly Smith, Reg Smith, Sandy Smith, Audrey Sparks, Helen Stockford, Lawson Stockford, Jim Wilson, Stan Winslow.

Fundy National Park (FNP) 18th year

A.M.- mostly cloudy; p.m. overcast with intermittent snow or rain. Snow cover, 1-15 cm; fresh water mostly frozen, salt water open.

Brian Blakney, Annemarie Burzynski, Michael Burzynski, David Christie, Vincent Crowston, Ken East, Doris Hatt, Gerald Janes, Angus MacLean, Denise MacLean, Stella MacLean, Anne Marceau, Allan Nicol, Lee Saunders, George Sinclair, Sedgewick Sinclair, Robert Walker (compiler) Stephen Woodley.

Riverside-Albert (R-A) 14th year

Partly cloudy. 1 cm snow cover; lakes frozen, streams open, no sea ice.

Myrtle Beaman, Mildred Carpan, David Christie (co-compiler) Sue Fullerton, Mary Majka (co-compiler), Mieczyslaw Majka, Mrs. Don Milburn, Kay Mills, Petrus Stone, Doug White.

Sackville (SACK) 23rd year

Overcast, continuous snow to 0900 changing to flurries, changing to intermittent light rain by noon, visibility poor throughout the day. Ground covered with 10-12 cm of fresh, wet snow; freshwater frozen except for running streams, salt water open.

Peter Barkhouse, Paul Bogaard, Brian Dalzell, Tony Erskine, Jocelyne Gauvin, Gay Hansen, Hinrich Harries, Peter Hicklin, Randy Wicks, Etta Hudgins, Don Kimball, Bill Prescott, Al Smith (compiler), Stuart Tingley, Ian Walker.

Moncton (MTON) 22nd year

Mostly overcast, with a few sunny breaks in the afternoon. Ground covered with 0-5 cm of fresh snow. Lakes and ponds were mostly frozen, fast-flowing brooks and streams mostly open, and tidal waters open but starting to fill with ice and slush.

Hamilton Baird, Brenda Burzinski, David Christie, Al Cormier, Don and Yves Cormier, Brian Dalzell (compiler), Norma Dobson, Mary Fownes, Clayton Grant, Fraser Hale, Louis LaPierre, Fred Lloyd, John Loch, Dr. M. Majka, Gordon Mosher, Winston Prince, F.B. Proude, Francis Richard, Dennison Tate, Nelson Poirier, W.J. Quartermain, Barbara Swinamer, Rob Walker.

Cape Tormentine (CT) 22nd year

Cloudy, continuous snow flurries until 10:15 a.m. and intermittent flurries thereafter. Ground very lightly covered with less than 1 cm of fresh snow; freshwater frozen except for running

streams, salt water open with slush ice in some coves.

Paul Bogaard, Brian Dalzell, Tony Erskine, Peter Hicklin, Don Kimball, John Loch, Al Smith (compiler), Ralph Stopps, Stuart Tingley, Ian Walker, Rob Walker.

Kouchibouguac National Park (KNP) 13th year

A.M.- mostly clear, p.m.- partly cloudy. Snow cover 10 - 35 cm; freshwater partly open, saltwater mostly open.

Gilles Babin, Harry Beach, Harry Collins, Albert Crossman, Noel Fontaine, Carmel Levesque, Pierrette Robichaud, Michel Savoie (compiler), Harold Sock, Leon Sock, Barry Spencer, Arnold Vautour.

Newcastle-Chatham (MIR) 11th year

Thin scattered cloud. Much of the ground bare; almost all water frozen.

Margaret Adams, Sybil Anderson, U.J. Bosma, Mrs. Robert Bransfield, Monica Charnley, Paul Clark, Tim Clark, Graham Crocker, Phyllis Crowe, Faye Ferguson, Thomas Flynn, Vernon Goodfellow, Don Hoddinott, Ann Israeli, Sylvia Israeli, John Keating, Connie Kukulski, Hazen Loblan, Denis Mazerolle, Lem McDonald, Nora McKenzie, Theresa Ross, Mrs. Gordon Steeves, Maxime Tozer, Ferry Tweedie, Elayne Walker, Harry Walker (compiler), Stewart Walker, Winnie Walker, Rick Wedge, Margaret Wheaton.

Sussex (SUSS) 10th year

Cloudy with sunny intervals. Ground bare; high water open.

Thomas Anderson (compiler), Florence Arnold, Lawrence Arnold, Pearl DeLong, Florence Dodge, Harriet Folkins, Elizabeth Hutcheson, Gerald MacKenzie, Helen Mac Kenzie, Alice McLeod, Evelyn Robinson, Mrs. Hubert Robinson, Mrs. Stewart Upham.

Hammond River-Hampton (HTON) 10th year

Overcast. Snow cover 1 - 5 cm; fresh water open in rivers.

Robert Barton, Richard Blacquiére, David Christie, Margaret Churchill, Stephen Clayden, Shari Coles, John Darling, Rollie Darling, Jean Isaacs, Russell Jamieson, Peggy Kelbaugh, Mr. and Mrs. Douglas MacAndrews, Mary Majka, Mr. and Mrs. Tom McAlpine, Ruth Mcleese, John Murphy, Tom Page, Geoffrey Sayre, Molly Smith, Mr. and Mrs. Wasson Stockford, Petrus Stone, Millie Widdershoven, Charles Wilson, Jim Wilson (compiler).

Cambridge-Narrows (C-N) 13th year

Clear. Fields bare, traces of snow in wooded areas; lakes frozen, brooks open.

Doris Appleby, Marion Belyea, Lawrence and Dilys Carpenter, Bruce and Pauline Chase, Anna Clarke, James Connell, Thora

Connell, Joan Fanjoy, Enid Inch (compiler), Doug Jackson, Eileen Kincaide, Elva McConnachie, Audrey Perry, Nellie Perry, Haren and Lillian Pugsley, Joyce Robinson, Martha Sypher, Niven and Joyce Thorne, Phyllis Thorne, Carl Urquhart.

Jemseg (JEM) 20th year

Clear. Ground bare; most water frozen, occasional open areas.

Dan Busby, Cathy Busby, Nev Garrity (compiler), Richard Garrity, Janice Illsley, Dave Noble, Marven Palmer, Robert Palmer, Peter Pearce, Rudy Stoczek, Rudy Stoczek Jr., Don Townsend, Owen Washburn.

Fredericton (FTON) 27th year

Overcast in morning, sunny intervals in afternoon. No snow cover; about 2/3 of water surface frozen.

John Bennet, Willard Benson, Dan Breen, Brenda Brown, Rae Brown, Barbara Burke, Cathy Busby, Dan Busby, Gerry Clayden, John Clayden, Stephen Clayden, Jim Coles, Rod Currie, Lucy Dyer, Charles Edgecombe, Eric Emery, Don Fowler, Russ Fowler, Neville Garrity, Don Gibson, Lionel Girouard, Heidi Grein, Harold Hatheway, Harold Hinds, Joyce Hubbard, Janice Illsley, Bill Knight, Nancy Lutes, Robert Lutes, Stephen McAllister, Albert Morais, Jean Noble, Jim Noble, Lisa O'Hara, Stephen Oliver, Robert Palmer, Peter Pearce (compiler), Vincent Poirier, Bear Rhineland, Tony Rhineland, Beverley Schneider, Marc Schneider, Rudy Stoczek, Jane Tarn, Stephen Vanicek, Bill Varty, Dorothy Varty, Ron Wilson, Owen Washburn, Susan Washburn.

Stanley (STAN) 8th year

Cloudless. Ground almost bare, lightly frozen; river 1/4 open.

Harold Hatheway (compiler)

Woodstock (WSTK) 19th year

Sunny. Bare ground; frozen rivers and streams, little open water.

Mrs. B. Avery, Mrs. Nelson Flewelling, Mrs. David Fry, Marjorie Gray, Eric and Jane Hadley, Mrs. Keith Helmuth, Ken Homer, Murray Hubbard, Mrs. W.M. Jones, Mrs. Charles MacDonald, Mrs. Donald Nixon, Mrs. G.A. Olmstead, Eric Randall, Mrs. Ralph Sexsmith, Bob Speer (compiler), Donna Speer.

Hartland (HART) 12th year

Overcast with freezing rain changing to rain. Little snow; ground partially frozen; water mostly open except for ice jams.

Florence Britton, Greg Belyea, Lori-ann Horne, Greg Horne, Mark Canan, Mike Rigby (compiler).

Florenceville (FLO) 2nd year

Clear in a.m., clouded over in afternoon. All freshwater open, except ponds. Saint John River running high and completely open. No snow cover.



Ford Alward (compiler), Henry and Eleanor Arnand, Archie Bishop, J. Gordon Blackie, Lesley Blackie, Albert Bell, Jack and Jennie Burnham, Ansel Campbell, David Campbell, Jean Carmichael, Coleman Clark, John Corey, Mrs. Mark Cox, Mrs. Harold Crabbe, Els Ebbett, Minnie Ebbett, Florence Gaunce, Frances Giberson, David Greene, Jeanette Greens, Walter Greene, Eldon Hillman, Gordon Hunter, Percy Karrigan, Frank Kearney, Mrs. David Lloyd, Alex Matheson, Bob McIsaac, Murray Nicholson, John Patterson, Hazel Salmon, Peggy Smith, William Stewart, Larry Sweet, Joanne Upton, Fred Welch, Mrs. Helen White, Kenneth Wortman.

Perth-Andover (P-A) 14th year

Cloudy - no precipitation. Ground bare; rapids open, much more open water than usual.

F.W. Tribe, Beth Watters, Murray Watters (compiler)

Plaster Rock (PR) 11th year

Freezing rain in afternoon. Ground bare with practically no snow.

Sally Davidson, Mr. and Mrs. Donald Hollins, Mr. and Mrs. Hayward Jay, Diane Rabatich, Laverne Rabatich (compiler) Laura Reynolds, Emmie Reed, Kate Wright.

Nictau-Riley Brook (NIC) 10th year

Clear. Snow cover - zero; Tobique River not frozen over.

Joan and Alec Fraser, Erwin Landauer, Bill Miller, Wilma Miller, (compiler) Rudi and Elizabeth Richter, Margaret Sutherland.

Mr. Carleton Provincial Park (Mt. C) 5th year

Cloudy with light snow. 6 cm snow cover, running water open.

Ed Higgins, Erwin Landauer (compiler), Jeff Landauer, Rudi Richter.

Southeast Upsalquitch (SEU) 1st year

Very little snow cover (2 - 5 cm); rivers largely ice covered.

Christopher Gauthier, Ronald Gauthier, Gilles Godin (compiler) James Meagher.



[illegible]

1982-3 Christmas Counts																	Total
G M C	G E-Sk	P E N N	P E S	F W P	S A K	M J C T P	M R S	H T O N	C N	J E M	S T A N	W S K	H A R T	F P P A R	N M C U	Total	
Sharp-shinned Hawk	*		1	1	1	3		2		1						11	
Northern Goshawk	1		1	2	1	1			1							7	
Red-tailed Hawk	4	1	*	*	1	5	1	*		*		3	1	1		21	
Bonaparte's Hawk	2		1		32	1	2	*		1	4	1				45	
American Kestrel									11					1		2	
Merlin														1		1	
Peregrine Falcon										11						1	
Gyrfalcon										*		7	1	4	1	156	
Ring-necked Pheasant	1																
Spruce Grouse																	
Puffed Grouse	6	4	4	16	2	4	6	19	3	10	5	3		5	13	147	
Sanderling	2															2	
Purple Sandpiper	52	17	12													129	
Common Snipe																1	
Bonaparte's Gull	18	1														19	
Ring-billed Gull	2			5	1	6	25									39	
Herring Gull	32	325	344	240	441	28	43	133	135	165	104	132	63	54		17043	
Island Gull	4	2	7	57	10	11	1	40								523	
Glaucous Gull																	
Great Black-backed Gull	25	9	1	4	*	2	15	1	3							42	
Black-legged Kittiwake	28	123	36	27	159	172	31	7	21	116	90	77	141	23		4929	
tern sp.																10531	
Dovekie	72															12	
Common Murre	3															4563	
Black-billed Murre	34	225	4													3	
Pomarine	3	22	63													1238	
Black Guillemot	5	24	22													488	
																57	



1982-3 Christmas Counts	G	E-M	S-A	P	E-S	F-N	S-R	S-A	M	C-T	K-P	M-I	S-S	H-T	C-N	J-E	F-T	S-W	H-A	F-L	P-P	N-M	S	Total
#	C	A	N	P	J	P	A	K	R	P	P	R	O	O	O	M	N	T	R	O	R	C	U	
Rock Dove	17	10	108	*	10		13	284	353	30	60	110	33	165	4	5	840	220	47	325	55	27	2943	
Mourning Dove													*	6		10	38	4	3	1	5		213	
Great Horned Owl													2			1							4	
Snowy Owl	1							1															2	
Northern Hawk-Owl										1													1	
Barred Owl																							5	
Short-eared Owl																							2	
N. Saw-whet Owl																							1	
Downy Woodpecker	3	7	2	*	1	18	6	2	1	4	1	5	7	4	12	7	21	6	1	15	3	5	147	
Hairy Woodpecker		1	7	1	8	6	2	1	1			7	3	8	17	7	24	1	8	14	3	4	131	
Black-backed (3-t.) Wap.																				*			22	
Three-toed Woodpecker																							1	
Northern (Com.) Flicker																							3	
Pileated Woodpecker																							16	
Horned Lark																							39	
Gray Jay																							125	
Blue Jay	19	17	38	3	65	15	32	69	84	21	1	74	27	32	28	48	176	4	17	126	17	36	1149	
American (Com.) Crow	195	213	24	173	28	133	13	12	135	303	79	39	32	17	64	4	31	276	1	27	4	38	11948	
Common Raven	60	18	13	6	21	11	18	56	11	16	70	27	93	34	62	64	47	175	78	43	39	79	1632	
Black-capped Chickadee	67	133	35	13	12	199	227	48	9	157	47	28	102	27	156	161	315	5	101	152	23	47	2400	
Poreal Chickadee	28	2			3	2	55	15	12	5	21	19	9	2	3	1	6		*	*			247	
Mufted Titmouse																							1	
Red-breasted Nuthatch	8	4					36		3			6				5	1			*			74	
White-br. Nuthatch																1	10	1			1		21	
Brown Creeper							2	2				3	5	1	2	4							23	
Winter Wren																							2	
Golden-crowned Kinglet	17	2			5	2	11	10	15	30	31	1	1	6	10	11	23						215	
American Robin					6	6	*	2	*	*	*	2					1						15	

1982-3 Christmas Counts																														Total	
	G	M	G	E	S	P	L	F	R	A	C	M	K	M	S	H	C	N	J	F	S	T	W	N	F	R	P	N	M	S	
Northern Mockingbird	*																														5
Brown Thrasher																															*
Cedar Waxwing																															39
Northern Shrike																															11
European Starling																															8095
Yel-rump, (Nuttall) Warbl.																															72
Northern Cardinal																															6
Am. Tree Sparrow																															497
Fox Sparrow																															1
Song Sparrow																															27
White-throated Sparrow																															24
White-crowned Sparrow																															1
Dark-eyed (Sl-col.) Junco																															143
Snow Bunting																															946
Red-winged Blackbird																															28
Eastern Meadowlark																															1
Common Grackle																															87
Brown-headed Cowbird																															239
N. (Baltimore) Oriole																															1
Pine Grosbeak																															142
Purple Finch																															73
White-winged Crossbill																															49
Common Redpoll																															208
Pine Siskin																															47
American Goldfinch																															517
Song Sparrow																															3523
House Sparrow																															4410

1982-3 Christmas Counts															Total
M	G	E	S	P	L	P	F	R	S	M	K	M	S	H	
C	M	C	A	N	P	J	P	A	A	T	C	R	S	T	Total
unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	unidentified	
18	64	57	34	25	22	49	43	40	43	40	42	25	31	19	7986
10	13	3	3	4	2	13	18	4	15	16	11	12	15	6	107
5	1	1	1	4	3	2	4	3	2	4	2	2	1	3	2
10	13	3	3	4	2	13	18	4	15	16	11	12	15	6	278
4	7	7	7	17	16	1	1	6	5	8	5	3	5	1	209
15	31	12	8	8	36	21	41	45	36	34	36	32	13	8	778
16	2	5	2	4	5	21	41	45	36	34	36	32	13	8	922+
2.5	24	7	6	3.5	15	13.5	1	24	28	20	17	24	4	25	371.2+
32	338	240	75	25	187	465	127	20	46	456	377	446	400	78	6558
40	3	12	5	3	20	74	14	90	60	62	96	30	16	10	242
228	237	63	20	184	445	148	196	371	396	315	350	370	62	383	5624
30	2	29	26	27	29	27	20	1	20	19	18	22	27	28	(18-2)
1434	105	130	800	730	750	730	745	800	745	725	732	800	800	800	700-
160	110	110	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1730
2	9	11	8	11	8	11	8	11	8	11	8	11	8	11	-15
5	6	0	5	2	3	1	2	1	2	2	4	3	1	12	12
144	10	8	8	14	15	15	6	3	10	15	25	15	15	15	0-
40	20	16	32	?	?	?	?	?	?	?	?	?	?	?	40

# Abbreviations & Footnotes

- \* seen during count period
- # high count a provincial record
- ## first time on N.B. counts
- 6 (number underlined) count high
- 11 (number boxed) count first
- The two preceding notations used only for areas counted 4 or more years.

- a 1 Accipiter sp.
- b by boat
- c 1 cormorant sp.
- d 1 Mallard x Black Duck hybrid

- e 2 diving duck sp., 2 Callidris sandpiper sp., 45 finch sp.
- f 1 merganser sp.
- g 19 gulls sp., 2 songbird sp.
- h 1 hawk sp., 1 crossbill sp.
- i 10 waxwing sp.
- j 1 hawk sp., 6 unidentified birds
- k 40 duck sp., 30 gull sp., 1 woodpecker sp., 5 sparrow sp., 3 unidentified birds
- m includes warbler sp.
- n 6 unidentified birds
- o 1 hawk sp.



# Nature News

David Christie

As usual, birds dominate the news; it is especially hard to get away from them in winter, when the Christmas Bird Count dominates everything. January 16 brought the first substantial snowstorm to western and northern New Brunswick but the southeast did not get much snow until February 12. From mid January it was colder than at Christmas but still slightly warmer than normal.

## Mammals

In such an open winter it was not very surprising to find a freshly killed Skunk at Hartland Jan. 6 or to see a fat Raccoon hustling across the road in the highlands of Fundy Park Feb. 28 (DC & Mary Majka).

Red Foxes are declining in some places as Coyotes spread and become numerous in much of the province. At Nictau, Bill and Wilma Miller have been privileged to have a beautiful fox regularly crossing the field by their house this winter. On Jan. 7 they watched it carrying a Snowshoe Hare, most of which it ate standing in the open within a couple of bounds of the woods.

A white weasel (Short-tailed or Long-tailed?) startled the residents of a Saint John home Jan. 13, when it dashed boldly across their living room floor (fide Charles Belyea). Weasels in houses are good news for anyone troubled by mice.

## Birds

In addition to the 4 on the CBCs, 3 Great Blue Herons were reported: at Alma Dec. 7 (Rob Walker), Martinon, St. John County, Dec. 16 (K.P. Ellick) and Jemseg Jan. 4-5 (Grace Chapman).

Few Canada Geese were seen on the CBCs, perhaps because many were still in Prince Edward Island and northeastern N.B. Late flocks moving south were 35 at Quispamsis Dec. 27 (Len Riendeau) and 120 at Shediac Jan. 9 (Leo Martin).

Other waterfowl news includes 2 rafts of Black Scoters, totalling about 300 birds, at Lorneville Jan. 2 (David Smith). That's many more than were on the counts. A very lively male Wood Duck at Forrester Cove in Quispamsis Jan. 8 (Jim Wilson) is an unusual species in winter. It was also unusual to have a Bufflehead far inland at Bristol Dec. 30 (Erwin Landauer)

The Bald Eagle situation seems to be slowly improving. A good number were seen on the CBCs and the records were quite widespread. In the later part of the winter, eagles continued to be seen frequently in the Saint John area and elsewhere. An adult Broad-winged Hawk, a species normally expected far to the south at this season, was reported at Sackville Dec. 15 (Evan Smith). The American Kestrel at Cambridge-Narrows survived the winter, being reported as late as Feb. 28 (Enid Inch et al.) A quite white Gyr Falcon just missed the St. Andrew's CBC period by being seen Dec. 16 or 17 (Walter Williamson). Another possible Gyr was a large falcon near Jemseg Jan. 9 (R. Walker & Angus MacLean).

I wonder if many Dovekies were blown ashore by the winds associated with the storm of Jan. 16. The only report is of one picked up at Juvenile Settlement, Sunbury Co., Jan. 17 and brought to Peter Pearce. I was in Nova Scotia during the storm and while driving along a Lunenburg County highway Jan. 16 had a Dovekie going in the opposite direction pass low over my car.

In addition to the 2 Snowy Owls on the CBC, one was reported a number of times in Saint John Jan. 10-31 (Cecil Johnston & Bob Horton). More exciting and also frustrating because the bird could not be relocated, is the report of a "small gray owl with ears", identified as an Eastern Screech-Owl, at Riverview Feb. 23 (G.M. Antle). The bird perched briefly on the railing of a sundeck and then moved to a branch next to the trunk of a tree.

Belted Kingfishers were missed during the CBC but 2 were reported later: the first flying through a suburban yard, was chased by the local Mockingbird at Saint John West Jan. 16 (Denise Johnston); the other, more typically, sat on a power line by a brook near Albert Feb. 13 (R. Walker).

Two immature Red-headed Woodpeckers put in December appearances but were gone before the CBC. One spent a week at 2 Pennfield feeders about the second week of December (Lena Morehouse), the other was seen at Quispamsis in mid December (Paul Perry).

Highlight of the winter is a Tufted Titmouse, the first well substantiated record for New Brunswick. (Two previous reports have been brief, undocumented encounters.) During the fall there was a major dispersal from the southern New England range of this species which resulted in at least 100 being reported in Maine during October and November (Maine

Birdlife 4: 58-9). Those included birds as far northeast as Bangor, Orono and Steuben. Vanguard of the flight, it seems, is the Fredericton bird discovered by George, Lorraine and Mary Evans at their feeder Nov. 5 or 6. That bird settled in and was still visiting the Evans, Reg Balch and others as of Feb. 27. It was seen by many observers and photographed.

Another visitor from the south was first noted about Feb. 15, eating insect eggs or pupae under the eaves of Mr. and Mrs. Hazen Pugsley's woodshed at McDonald Corner near Cambridge-Narrows. After it began to visit their suet feeder, the Pugsleys were able to identify it as a Carolina Wren and spread the word to others. The sixth provincial record, it remained until at least Mar. 4.

A Brown Thrasher appeared at Tom and Nancy Page's Saint John feeder and, although missed on the day of the CBC, managed to successfully survive the winter. It had the interesting habit of digging tunnels in the snowbanks (when they were available) and it was in those tunnels the Pages placed dog food for the bird.

American Robins in groups of from 1 to 4 began to be reported frequently in the Moncton, Saint John and coastal Albert County areas from mid January through February (various observers) but the biggest group was at Millerton on the Miramichi where a flock of from 20 to 25 was stripping fruits from a hawthorn tree Feb. 13 (various observers, fide Harry Walker). The Miramichi also produced the season's only Hermit Thrush, which is very rare in winter. It was in the Newcastle area, hopping on Susan Harper's porch Jan. 20. The bird looked weak so she managed to capture it under a laundry basket and take it indoors. At last word it was becoming tame, dining on a varied diet and becoming quite partial to hamburger. Harry Walker quotes Roger Tory Peterson's story about a Hermit Thrush that once spent all winter in a florist's shop in New York, disappearing in spring only to come back two winters later for another stay amongst the potted plants.

The northernmost Yellow-rumped (Myrtle) Warbler report comes from North Tetagouche, Gloucester County, where forest ranger Harry Power had an immature visit his bird feeder Dec. 24 (fide Gilles Godin).



Purple Finches moved a bit in January and February. Although there were none on the Fredericton CBC they were seen frequently there by late January. A flock of 12 was feeding on burdock seeds at Harvey, Albert County Feb. 13 (R. Walker) and "quite a few" were in North End Saint John Feb. 28 (Mrs. Coughlan).

An unusual sparrow for winter was a Savannah Sparrow, an injured one, at Gordon Peacock's feeder in Quispamsis in early January (fide Wilson). Snow Buntings were reported increasingly as snow accumulated, for example 200 at Sheffield Feb. 9 (Ian Cameron), 300 at Waterborough Feb. 27 (DC & Majkas), and "flocks" on Laverne Rabatich's lawn at Plaster Rock in February. The largest flock, however, was an early one - 1200 at Mary's Point, Dec. 18 (Mike Majka), before the snow came.

Finally, some avian signs of spring. At Alma, Rob Walker found both Brown-headed Cowbirds and Common Grackles involved in courtship display Feb. 13, an early date for that activity. At Mary's Point, a flock of 6 to 12 White-winged Crossbills began singing in the last week of January, suggesting they might try late winter nesting this year (DC). American Crows noisily returned to their nesting territory at Mary's Point Feb. 22 (DC). Returning Horned Larks were spotted on Feb. 28, 6 near Sussex (Harriet Folkins) and 4 at Daniel's Marsh, Albert County (Mike Majka).

#### Flora

There must have been lots of wildflowers to be found in December but no one made a point of reporting them. I did notice two fresh Dandelion flowers at Mary's Point Dec. 8 and Mary Majka extended that a few weeks by discovering one bloom, albeit not quite as fresh, by a spring brook at Erbs Cove on Belleisle Bay Jan. 2. Finally, Nancy Page was reported picking bouquets of pansies in her Saint John garden as late as Dec. 5.



NATIONAL FILM BOARD PROGRAM NOTES FOR NATURALISTS

Sandy Burnett, N.F.B. Rep.

What to put on the program for the next Naturalists' Club meeting? The guest speaker you had counted on has come down with the flu, everyone has seen everyone else's slides, and you are at your wit's end. To paraphrase Gilbert and Sullivan, "a programmer's lot is not an 'appy one!".

In fact, help is as near as your telephone. In the past couple of years, the National Film Board has added several new film titles to its free libraries, joining such old standbys as "World In a Marsh" in providing topical, informative material on nature and environmental concerns. If you haven't used your film library card recently, you may be in for a pleasant surprise at the excellent films available free of charge for your club's use.

To whet your appetite, here are brief notes on seven recent releases.

Acid Rain - Requiem or Recovery (16 mm, colour; 26 min., 50 sec.). Unseen, insidious, acid rain poses a particular menace to our Maritime lands and waterways. This film, sponsored by Environment Canada, presents the causes, effects and attempted cures of this most topical threat to the balanced environment. The information is soundly researched and scientific, but the language and images make it easily understood by non-specialist audiences.

Atlantic Salmon (16 mm, colour; 27 min., 25 sec.) This film presents some of the finest underwater photography ever done on a subject so close to the hearts of many New Brunswickers. The life cycle of the Atlantic Salmon, the pressures of exploitation and environmental degradation, and the efforts being made to restore this species of fish are presented in this fascinating film.

Images of the Wild (16 mm, colour; 21 min., 45 sec.) A film on the art of Robert Bateman, Canadian naturalist and internationally acclaimed painter of wildlife. The camera follows him in his home studio and on location in northern Ontario, East Africa, and at the opening of an exhibition of his paintings.

The Great Blue Heron (16 mm, colour; 44 min., 7 sec.) This film documents the yearly cycle of our largest wader. Outstanding cinematography from a tree-mounted blind enables the viewer to observe courtship rituals seldom visible to the field naturalist on the ground.

Gulfstream (16 mm, colour; 27 min., 52 sec.) A voyage of discovery shot aboard the multi-hulled sailing vessel "Freya" as she follows the Gulfstream from the equatorial doldrums to the ice-pack off Newfoundland. What we discover is one of the world's great ecosystems, a river in the ocean, inhabited by creatures ranging from great whales to microscopic plankton and the unusual denizens of the seaweed jungle of the Sargasso Sea. A valuable introduction to ecology on a planetary scale.

The planetary scale is explored further in "The Biosphere" (16 mm, colour; 56 min., 31 sec.). While the Mackenzie and Amazon river systems are 10,000 km apart, there are links between them which demonstrate how all natural systems collaborate to preserve the biosphere, Earth's thin layer of living matter.

Special mention should be made of "Roger Tory Peterson: Portrait of a Birdwatcher", (16 mm, colour; 57 min., 40 sec.). This CBC-produced chronicle of the life of North America's best known artist/naturalist shows his love of birds and the development of his system of bird identification in the field. A film not to be missed by any naturalists' club.

In addition, a wide range of selections from CBC's "The Nature of Things" series are available in 16 mm format from N.F.B. libraries.

For further information on the availability of these and other films for your club program, contact:

Sandy Burnett  
National Film Board  
1222 Main Street  
Moncton, N.B.  
388-6101

or

Charles MacLellan  
National Film Board  
1 Market Square  
Saint John, N.B.  
(506) 648-4996

You'll be glad you did.

(Editor's note: The Federal Cultural Policy Review Committee - the Applebaum-Hébert Report - has, in effect, recommended that the N.F.B. cease the production and distribution of films to become, instead, a research and training centre.

The NBFN has sent a letter to the Hon. Francis Fox, Minister of Communications, opposing the recommendation and expressing strong support for the role of the N.F.B. as producer and distributor of distinctively Canadian films.)



# Book Reviews

Amphibians of Canada. By Barbara Froom. McClelland and Stewart. 1982. 120 pp. Illus. Softcover only. \$12.95.

Reviewed by Donald McAlpine, New Brunswick Museum, Saint John.

Popular literature on Canadian amphibians is sparse and for this reason alone Barbara Froom's book should be a welcome addition to the library of many naturalists. Ms. Froom has previously written The Snakes of Canada and The Turtles of Canada. Unfortunately, unlike these books, Amphibians of Canada includes neither a synopsis nor photographs of each Canadian amphibian and is, therefore, not "especially suited for field use" or "easy identification" as stated on the cover of the book. However, in 53 pages 23 of the 42 species of Canadian amphibian are discussed with one or more members from each of the nine families present in Canada included. This has resulted in a good cross-section of eastern, central and western, common and rare species. A checklist of Canadian amphibians is included. Nine of the 16 species of amphibian known to occur in New Brunswick are mentioned in the species accounts. Fair to good photographs of each of these species are contained in eight colour plates at the front of the book. The remaining photographs are in black and white. Most are as good as the mediocre quality of the paper would allow, but the picture of the five-legged frog on page 41 is poor and the photograph of the Red-backed Salamander on page 64 appears out of focus.

The first four chapters of the book include the Origin of Amphibians, Myths and Legends, Physical Characteristics and Adaptions, and Classification. Chapters Five through Seven contain species accounts and the final two chapters are Amphibians as Pets, and Conservation. Range maps are not included, but the written descriptions seem adequate for a book of this nature. The writing style is simple, relatively jargon-free and often anecdotal, which should appeal to many readers. Species accounts contain a brief description of distribution in Canada, a description of coloration and size, and notes on natural history. Much of the information on the timing of spring emergence seems to be drawn from Canada, but since relatively little data on Canadian amphibian populations is available, some of what is related undoubtedly refers to populations in the United States.

The last two pages of the book contain a list of references that includes some standard works on North American amphibians as well as a few technical papers and a useless reference to a personal communication concerning the Pacific Giant Salamander.

Lacking is a complete listing of regional popular accounts and studies that refer specifically to the Canadian herptofauna.

The most encouraging aspect of this book is the very strong conservation message throughout the text. Froom is a founding member and continuing editor of the Canadian Amphibian and Reptile Conservation Society and has done much to stimulate popular interest and concern for Canada's often maligned amphibians and reptiles.

This book, although overpriced at \$12.95 softcover should prove useful as a popular introduction to the amphibians of Canada.

## Museum News

GORHAM GONE

(but not forgotten!)

After seventeen years at the New Brunswick Museum, Stan Gorham has retired from his dual role as Curator of Vertebrate Zoology and Acting Head of the Natural Science Department.

Previous to his joining the NBM in 1965, Stan spent twelve years on the staff of the National Museum of Natural Sciences in Ottawa. During his museum career, he built not only a national but an international reputation as a recognized authority on amphibians. (Saint John Naturalists' Club members report that he wasn't bad at the local level, either, slogging it out through damp ditches leading the Club's annual frog hunt each spring.)

Stan's field studies took him throughout Canada and the Arctic, to the Fiji Islands, Falkland Islands, Brazil and the Soviet Union. His collecting efforts in New Brunswick form the backbone of the Museum's fish, amphibian, reptile and mammal research collections. Over fifty published scientific and popular works are testimony to his knowledge and expertise.

In 1975, the University of New Brunswick conferred an honorary Doctor of Sciences degree on Stan - and associates and friends of 'Doc Gorham' heartily applauded the award.

Anyone who knows Stan Gorham will not be surprised to hear that he has not taken to his rocking chair to reflect on past accomplishments, but is continuing his museum work as Honorary Research Associate at the Central New Brunswick Woodsmen's Museum in Boiestown.



NBFN TREASURER'S REPORT, 1981-82

Current Account

Cash on hand, opening balance		\$ 331.91
Receipts (memberships)	292.50	
Interest (Apr. 30, 1982)	2.55	
		<u>\$ 295.05</u>
Disbursements (postage)	2.04	
(postage)	134.60	
		<u>136.64</u>
Balance on hand, Oct. 22, 1982		\$ 490.32

Scholarship Fund

Cash on hand, opening balance		\$ 634.77
Receipts (donation)	10.00	
(interest)	41.83	
		<u>51.83</u>
Balance on hand, Oct. 22, 1982		\$ 686.60

TOTAL CASH BALANCE (October 22, 1982)                      \$ 1,176.92

We are grateful to have received recent donations to the scholarship fund in memory of: Gladys Bickford, Sussex  
George Stirrett, Grand Falls  
Arthur Folkins, Sussex

David F. Smith,  
Treasurer



# Events Calendar

June 4 - 11, Canadian Environment Week - a week set aside to heighten public awareness of environmental problems and the efforts being made to solve them.

June 4-5, Early Summer on the Tobique

Saturday: Hike to points of interest in Mount Carleton Provincial Park. Traditional beanhole beans, cake and slides in the evening.

Sunday: Canoeing on the Tobique.

Meet at Bill and Wilma Millers' Nictau, on Route 385 8 km north of Riley Brook; 9:30 a.m. or 5:30 p.m. Saturday, 9 a.m. Sunday

Camping space available; Millers' phone: 356-2409

July 1 - 2, Border Region Wildlife Areas - a sneak preview of the CNF conference site.

Friday: Cape Jourimain National Wildlife Area; meet 1 p.m. at Bayfield corner, Route 955, 3 km west of Cape Tormentine ferry terminal.

Evening search for Yellow Rail and other marsh birds; meet 8:30 p.m. at the Canadian Wildlife Service office, Main Street, Sackville.

Saturday: Amherst Point Bird Sanctuary and Tintamarre National Wildlife Area, starting from CWS office, Sackville; meet at 8 a.m.

Bed and breakfast, \$17.00, Mount Allison University; phone: 1-800-561-3981

July 30 - 31, Albert County Weekend - thousands of shorebirds at Mary's Point

Saturday: For shorebirds meet 1:30 p.m. at Bank of Nova Scotia, Albert, N.B. or go directly to Mary's Point, off Mary's Point Road, Harvey, by 3 p.m.

Evening campfire at the beach.

Sunday: For recently released Peregrine Falcons and hike in Fundy Park, meet 8:30 a.m. at Park Administration Building. Shorebirds again at Mary's Point from 4 p.m.

Camping space available; Majkas' phone: 882-2100

August 7 - 18, Canadian Nature Federation Conference and Field Trips

Interesting speakers and many field trips; see enclosed brochure. If you have already received a brochure with your Nature Canada, please pass one on to a friend.

September/October - NBFN Annual Meeting

Tentatively planned for the New Brunswick Museum in Saint John. Details later.

SUNBURY SHORES ARTS AND NATURE CENTRE

SUMMER PROGRAM, 1985

Sunbury Shores announces a preview of their summer program; for complete details, contact Sunbury Shores Arts and Nature Centre, P.O. Box 100, St. Andrews, N.B. E0G 2X0. Telephone: (506) 529-3386.

Fine Art

The Essentials of Painting Through the Medium of Oils; Bobak and Grant. July 4 - 15. Fee: \$150

Wildlife Art; Gary Low. July 11 - 29. Fee: \$185

Watercolours; Chinkok Tan. August 6 - 19. Fee: \$150

Craft

Designing on Fabric; Charlotte Glencross. August 1 - 5. Fee: \$70

Weaving; Charlotte Glencross. August 15 - 26. Fee: \$150

Introduction to the Potter's Wheel; Tom Smith. August 1-12. Fee: \$150

Intermediate Stained Glass; Ned Bowes. Aug. 29 - Sept. 2. Fee: \$150

Introductory Gobelin Tapestry Weaving; Sondra MacLeod. August 1-12  
Fee: \$150

Archaeology

Weekly courses during July and August. Fee: \$30 per week

Natural Science

Marine Ecology - three identical one-week courses, July 4 - 8,  
July 18 - 22, August 1 - 5. Fee: \$100

Marine Mammals - two identical one-week courses, August 15 - 19,  
August 29 - September 2. Fee: \$125



## NEW BRUNSWICK FEDERATION OF NATURALISTS

277 Douglas Avenue, Saint John, N.B., Canada E2K 1E5  
Telephone: (506) 693-1196

The NBFN is a non-profit organization formed in 1972 to:

- \* facilitate communication among naturalists and nature-oriented clubs
- \* encourage an understanding of nature and the environment
- \* safeguard the natural heritage of New Brunswick

## LA FÉDÉRATION DES NATURALISTES DU NOUVEAU-BRUNSWICK

277, avenue Douglas, Saint-Jean, N.-B., Canada E2K 1E5  
Téléphone: (506) 693-1196

La FNNB est une organisation sans but lucratif formée en 1972 pour:

- \* faciliter la communication entre les naturalistes et entre les divers clubs axés sur l'étude de la nature
- \* encourager une meilleure compréhension de la nature et de l'environnement naturel
- \* sauvegarder le patrimoine naturel du Nouveau-Brunswick

### BOARD OF DIRECTORS/CONSEIL D'ADMINISTRATION

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### FEDERATED CLUBS/CLUBS FÉDÉRÉS

Chignecto Naturalists' Club	P.O. Box 1590, Sackville, E0A 3C0
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Kennebecasis Naturalists' Society	P.O. Box 1931, Sussex, E0E 1P0
Miramichi Naturalists' Club	276 Heath Court, Newcastle, E1V 3M2
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Please make cheques payable to:  
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Mail to: David F. Smith, Treasurer,  
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#### Abonnement à la revue Le Naturaliste du N.-B.

Au Canada	\$5.00
Autres pays	\$6.00

Veillez faire votre chèque à l'ordre de  
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