N.B. NATURALIST

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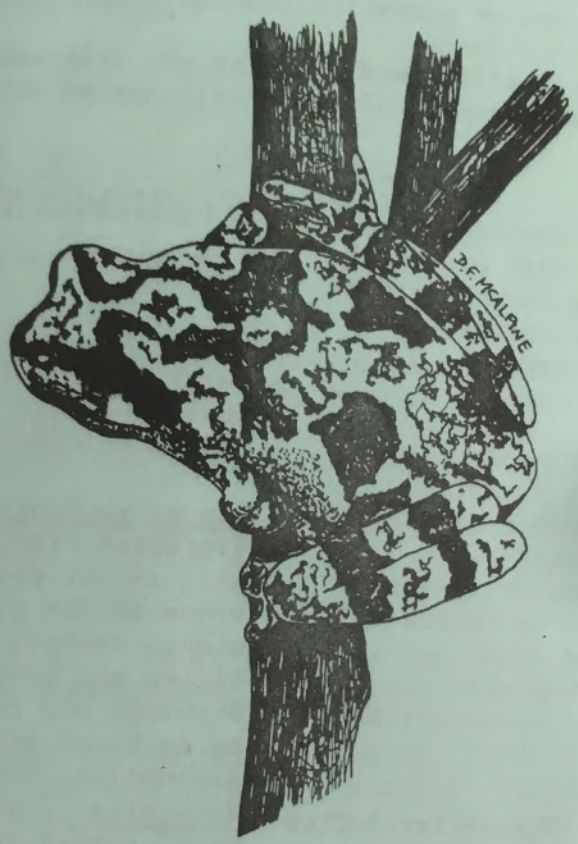

is this frog endangered

in new brunswick ?

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N. B. FEDERATION OF NATURALISTS / FEDERATION DES NATURALISTES DU N.-B.
277 Douglas Avenue, Saint John, N. B., Canada E2K 1E5 Tel. 693-1196

The federation was formed in 1972 in order to

- develop an understanding interest in nature among amateur naturalists
- serve as a means of communication and cooperation among nature-oriented groups and individuals
- promote ecologically sound policies and programs of resource management
- foster public awareness of the relationships between man and nature.

Federated Clubs
Fredericton Field Naturalists' Club
5 Shamrock Terrace, Fredericton

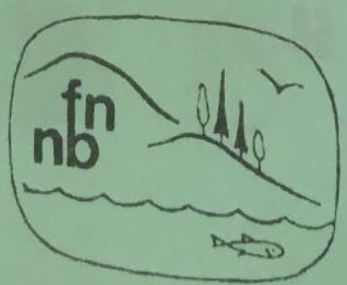
Moncton Naturalists' Club
166 North Street, Moncton

Saint John Naturalists' Club
277 Douglas Avenue, Saint John

Chignecto Naturalists' Club
P.O. Box 1590, Sackville

Miramichi Naturalists' Club
276 Heath Court, Newcastle

Kennebecasis Naturalists' Society
P.O. Box 1547, Sussex



NEW BRUNSWICK NATURALIST ISSN 0047-9551
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Advice to Contributors
Preferred articles are those from one-half to two pages in length, having relevance to the natural history of New Brunswick. Authors of potentially longer articles are invited to contact the editors. Drawings and cover illustrations should be in black ink and in the same size and proportions they would occupy in the N.B. Naturalist. Observations for "Nature News" should be submitted promptly after March 15, May 31, August 15 and November 15, or more frequently.

Aux Naturalistes Francophones
Nous avons besoin d'articles en français, aussi de volontaires qui voudraient écrire des résumés en français des articles en anglais.

Memberships - Subscriptions
Mail to Janice Dexter, 956 Dever Road, Saint John West, N.B. E2M 4J3. Annual fees: $3 (individual or family), $1 (students to age 18), $3 (libraries).

Correspondence
Re the N.B. Naturalist to editor, N.B. Naturalist, 277 Douglas Ave., Saint John, N.B. E2K 1E5. Articles and reports are always welcome.

Re federation policies and programs to Harry Walker, 276 Heath Court, Newcastle, N.B. E1V 2Y5

editorial.

The Role of the Naturalist

At a recent meeting of your directors considerable concern was expressed over the future of the New Brunswick Federation of Naturalists. Particularly the role the Federation should be playing in this province and on a national level.

Let's examine the role of the naturalist. What specifically is the role of this publication and of the federation in New Brunswick?

What is a naturalist? What are the necessary qualifications? Do naturalists always recognize themselves as such? We suspect not.

As naturalists each of us must develop the ability to fuse two attitudes that on the surface may appear contradictory. These two attitudes we believe, issue from the necessary objectivity of science and from a subjective response that finds irreplaceable value in the flutter of aspen leaves or the texture of storm blasted rock.

So as naturalists we must recognize that there is something important, not only in a personal sense, but in a social context about our outlook on the world, and on environmental issues in particular. Naturalists serve a "watch dog" function that opposes the "big is better" syndrome when it threatens to consume a life style that values salt marshes and wild rivers for example.

Through the 1970s we have become increasingly aware of our dependence on clean air and clear water and the necessity for tracts of undisturbed wilderness. Each of us as naturalists, simply by our position on these issues have found ourselves at the forefront of a shift in public attitude towards environmental problems. Citizens who in the past showed little interest now demand answers; why should the Saints Rest marsh not be zoned for industrial use?

What are the alternatives to currently used insecticides? Which wildflowers populate the peat bogs? Where do New Brunswick robins go in the winter? We must recognize that as naturalists we often have some of the answers, or at least know where to look for them. We have a real responsibility to communicate both answers and attitudes.

If we can use our membership list as an index, unfortunately our efforts at communication have not been particularly successful. Current membership stands at 105. Of these 60 (57%) have been members since the inception of the NBFN, in 1972. During 1979 twenty-one new members joined the NBFN. Meaning, a surprizingly high 20 percent of our current membership is new this year. Before we congratulate ourselves it should be pointed out that membership has dropped considerably since the Federations inception when paid subscriptions stood at 366. We should ask ourselves why. Whatever the reasons only 16% of the original membership is still a part of the NBFN and the fact remains we have been able to retain only a small portion of our original membership.

Communication is of utmost importance in an organization such as the NBFN which is dispersed over a sparsely settled area. Much of the responsibility for communication has fallen on this bulletin, as it should. Unfortunately publishing schedules in the past have been irregular. With this issue we hope to remedy the situation and return to a schedule of five issues yearly. As well we would suggest that the federation take a more public stance on environmental issues, that it offer or sponsor lectures and field programs during the year and that it encourage the growth of local naturalists organizations. In the future the success of the federation will be largely dependent on the strength of its local affiliates. The needed impetus will have to be drawn from our membership, but organizers will need feedback from members: YOU. Note that we make a plea for observations from each of you in the nature notes section of this issue.

In reviewing the position of the NBFN we do not wish to be entirely critical. A small number of individuals have put a great deal of time and energy into the federation from the word go. Nearly a dozen briefs have been submitted on concerns that included a submission on whaling to the Japanese ambassador to Canada, a brief on the Pittson Oil Refinery proposal for Eastport Maine and a brief concerning establishment of an international bird sanctuary on Machias Seal Island, to name but a few. As well numerous letters have been sent in support of a wide variety of concerns.

New Brunswick has a history of outstanding naturalists; Ganong, Hay, MacIntosh, Cox, these are naturalists who made significant contributions both to science and to life in this province. We see no reason why the New Brunswick Federation of Naturalists cannot continue in the same tradition.

D. F. McAlpine
B. King

Is the Gray Treefrog an Endangered Species in New Brunswick?

Donald F. McAlpine

The officer watched as I peeled my soggy driver's license from a damp bill. "Been collecting frogs" I explained matter-of-factly as I passed over the limp license. Silence. It was 3 AM. "You been drinking?" he asked. Hours earlier we had been up to our armpits in a York County marsh. Silent up to this point, Alan suddenly came to life. He leaned his gangly frame towards the driver's side and shook a large pickle jar of gray treefrogs under the policeman's face. "Proof positive, proof positive!" he chortled. A frog exploded into trill. Locked in the jar it sounded as if it were vocalizing in a shower cabinet. The officer handed back my license, told me to drive carefully and left without a word.

There are about 450 species of treefrogs (Family Hylidae) in the world today. Of these, two are found in New Brunswick. The spring peeper (Hyla crucifer) is common and widely distributed. Its ear-slitting "peeping" is probably familiar to most of you. The second species, the gray treefrog (Hyla versicolor) is extremely restricted in its distribution. Current of 1979 this frog is known from but a single locality in New Brunswick. During the breeding period male gray treefrogs call from a marsh along the St. John River opposite Fredericton. A marsh that occupies little more than 16 hectares (40 acres). When the egg laying period is over the gray treefrog supposedly retreats to the surrounding woodlands. Outfitted with adhesive toe disks (characteristic of the treefrogs) this frog is well suited to spend the summer months clambering about the vegetation feeding on insects and other small arthropods. We know little of the life history of this amphibian in New Brunswick and are only now beginning to sort out the distribution of the species here.

A. Leith Adams, army surgeon and naturalist, was the first to note the presence of the gray treefrog in New Brunswick. The year was 1873. The description in his book "Field and Forest Rambles" is vague and gives no clue to just where in the province he observed this attractively mottled green and gray frog or how common or uncommon it may have been at that time. New Brunswick herpetologist (one who studies amphibians and reptiles) Philip Cox pronounced the species as rare in 1898 and noted that but a single specimen had been collected in New Brunswick, by the leprosy inspector for Tracadie while on his travels in Gloucester County. Apparently Cox examined the specimen and he stated that it was deposited in the Chatham Museum. Sherman Bleakney, then herpetologist at the National Museum searched the Chatham Museum unsuccessfully for this specimen in 1955. In 1975 however Chris Majka, a student at Mount Allison University, located a specimen in the Chatham collection, its preservative long evaporated, that bore the label "H. versicolor." At the New Brunswick Museum Stan Gorham carefully re-hydrated the now dry and brittle frog for examination. He identified it as Hyla crucifer and Francis Cook, herpetologist at the National Museum confirmed his identification. The first New Brunswick specimen of the gray treefrog was really

a spring peeper!

It was not until 1935 that the first Hyla versicolor collections were actually made in New Brunswick, when C.E. Atwood collected two specimens about a kilometer (1/2 mile) from the mouth of the Nashwaak River, opposite Fredericton.

Meanwhile in the Northwest of the province. R.F. Morris reported three specimens had been collected in spruce budworm traps during the summers of 1947 and 1951. Unfortunately it appears these specimens were never examined by anyone familiar with the species and the specimens have now disappeared.

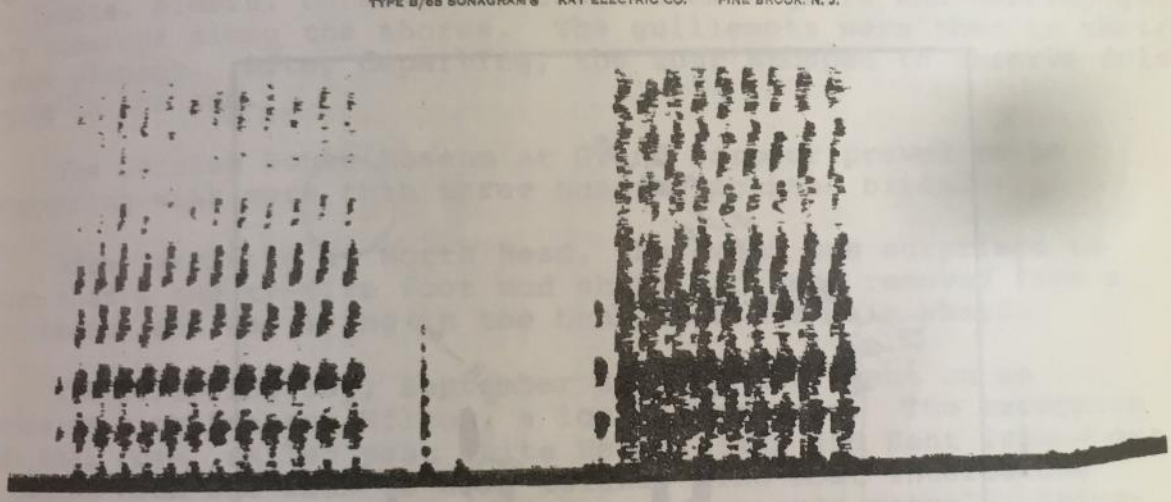
Although unable to locate Cox's specimen in the Chatham Museum, Bleakney did locate a small population along the St. John River opposite Fredericton in 1953, in the same general locality that Atwood's collection had been made. Bleakney reported that on the night of the 8 July he heard 12 - 18 males calling. In 1955 only three males were calling at this site when he visited it.

Since 1967, New Brunswick Museum field parties have visited the area regularly during the gray treefrog breeding season. Although frogs no longer call from Bleakney's collection site or at the point where Stan Gorham made collections in 1967 an apparently well established population was discovered by university student W.J. Connell in 1972. This site, Barkers Point, is along the St. John River near the mouth of the Nashwaak River, and again, opposite Fredericton. The population seems to have remained relatively stable over the years it has been observed. At the peak calling period it is estimated over 40 frogs are trilling.

Although the gray treefrog is apparently very local in its distribution in New Brunswick it is widely distributed and common over much of North America; in Canada occurring in Southern Ontario, Quebec and Manitoba as well as in this province. Why would this treefrog be isolated in New Brunswick? Following the retreat of the vast ice sheets that covered this region over 12,000 years ago, temperatures began to rise. By 7,000 B.P. (before present) temperatures in New Brunswick were at least 2.5° C. warmer on the average than they are now. This warm period is known as the climatic optimum and during this time it is theorized that the gray treefrog had a much wider distribution in New Brunswick than it now has. But temperatures began to cool and the gray treefrog, not fond of cool summer nights or the spreading forests of conifers, apparently disappeared from most of the province. Average summer temperatures are higher in the Fredericton area than anywhere else in New Brunswick and here the gray treefrog has survived, isolated from the continuous distribution of the species over much of North America.

But because it may be isolated the New Brunswick population of Hyla versicolor is of particular interest to scientists. Any population isolated from the main distribution of that species is an incipient species. Meaning that because its genetic material is separated from the larger pool of genes circulating in the

rest of the population, any changes that might occur through mutation and be selected for in response to local environmental pressures are much more likely to accumulate in the isolate. If given sufficient time in isolation a new species may develop. Changes may accumulate slowly or in some cases fairly rapidly (hundreds of years). There is a great deal to be learned about speciation and because we suspect we know how long the gray treefrog has been isolated the population is of particular interest. The problem is further complicated however. In some parts of the range of the gray treefrog, Hyla versicolor, a second species Hyla chrysoscelis, for all purposes identical in coloration and size, also occurs, sometimes in the same marsh. Only by counting chromosone numbers or be determining the pulse rates of trilling males can these two frogs be separated (each trill is made up of a series of closely spaced rhythmical beats or pulses). That pulse rates are temperature dependent creates added challenges for the field biologist. Calls are tape recorded and temperatures noted in the field. Later, visual preparations called audiospectrograms can be used to determine pulse rates.

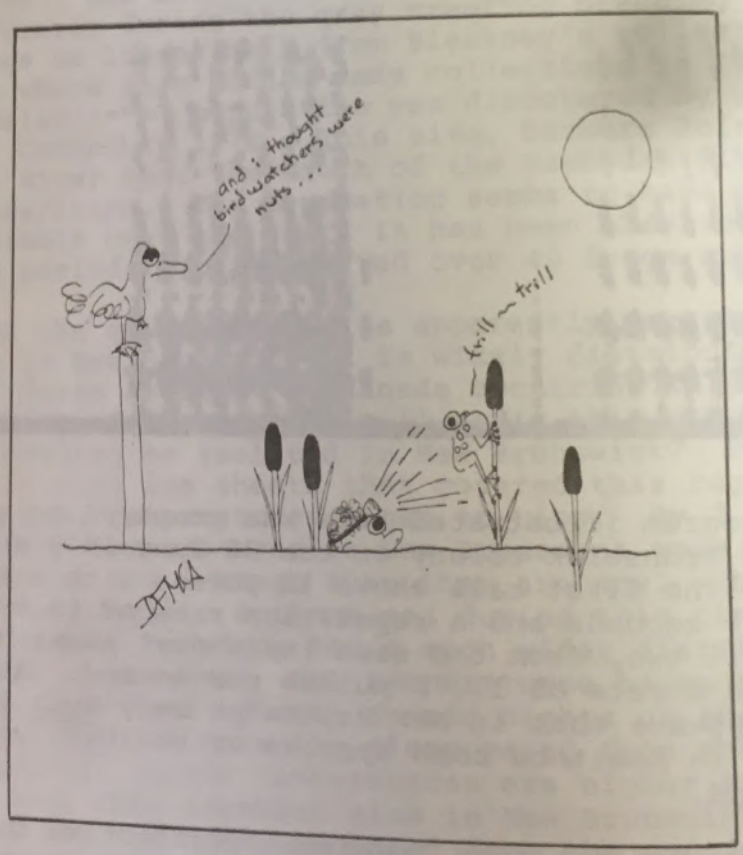


The audiospectrogram illustrated here was prepared from a recording made at the New Brunswick colony on the 30 June 1979 at a temperature of 15° C. The first call shows 12 pulses with a total call duration of .600 seconds and a repetition rate of 19.98 pulses per second while call two, from the same individual shows 9 pulses over .506 seconds and a rate of 17.78 pulses per second. As in Ontario and Quebec it appears that in New Brunswick only Hyla versicolor occurs, however in Manitoba both species of the Hyla versicolor complex are found.

In New Brunswick the gray treefrogs distinctive trill can first be heard in early June and although it may continue until the end of July, we suspect breeding is over by mid-July. Only three female gray treefrogs have ever been observed in New Brunswick and eggs, larvae or newly metamorphased frogs have never been found. One female that was dissected contained 1,984 well developed eggs though. During the breeding season males calls from islands of vegetation from water level to about 2 m. above

the water. Later in the season they will move higher up into the trees, continuing to call as they retreat into the forest for the summer. Many interesting questions about the gray treefrog remain to be answered. How far do these frogs travel from the marsh following the breeding period? Is the New Brunswick population really isolated from the rest of the range?

Is the gray treefrog endangered in this province? We don't know. Its status is without doubt uncertain. We know next to nothing of its life history in this province. More fieldwork will have to be carried out before we can say we have sorted out the distributional problems. Perhaps the gray treefrog is more widely distributed in New Brunswick than it would now appear. But as it now stands in New Brunswick this treefrog is limited to a single marsh in a semi-urban area. The marsh is prime commercial property.



field trips

Birding at Grand Manan

Daryl Linton

Grand Manan Island is one of the few natural areas which is still relatively unspoiled by man.

The Via Rail Canada Inc. organized a tour of Grand Manan from September 24-27 and I was fortunate to accompany this tour.

The party arrived on the island at noon hour on September 24. The tour was accommodated at the Marathon Inn, where yellow-rumped warblers frequented the walkways and flickers were abundant on the grounds.

After dinner, the bus motored to the Southwest Head Light. The view there was breath-taking, with its 200 foot cliffs. Guillemots, eiders, cormorants, black-backed gulls and herring gulls were numerous along the shores. The guillemots were then in their winter plumage. After departing, the tour stopped to observe dulse drying in the sun.

The Gerrish House Museum at Grand Harbour proved to be interesting with more than three hundred mounted birds.

After arriving at North Head, the group was surprised to learn that a twenty-five foot mud shark had been removed from a weir nearby and was lying in the bank near the main wharf.

The following day, September 25, the tour went on an excursion with Preston Wilcox, a local fisherman. The excursion left Seal Cove, sailed past White Head Island and Kent Island out to Gannet Rock and back to Wood Island. The most interesting marine birds seen were the razorbill and Leach's petrel. Unfortunately, no shearwaters were seen. The tour spent a few hours exploring Wood Island where a variety of song birds and shorebirds were seen. Some water pipits were seen along the shore. In the evening, Elmer Wilcox showed some very interesting slides of the Grand Manan Island archipelago as well as the birds and plants of these islands.

The next day, September 26, the bus travelled to the Castalia Marsh, a dulse processing plant and to a bog near Deep Cove Sand Beach. However, I spent the day at Castalia as the number and variety of birds there were impressive. There were approximately 100 green-winged and blue-winged teal. The most abundant shorebird was the black bellied plover. One Hudsonion Godwit was seen, several dunlin and some short-billed dowitcher. Small numbers of semipalmated sandpipers and semipalmated plovers were present, some ruddy turnstones and some greater yellowlegs. The group travelled to "The Whistle" in the evening to observe and photograph the sunset.

On the last day, September 27, the tour travelled to Dark Harbour. The views there were impressive, with the cliffs of columnar basalt, the natural harbour and the hills which slope down to the harbour. An unusual bird, the yellow-billed cuckoo, was seen along the road down to Dark Harbour. This was the best bird sighting of the week. The party then travelled to the Anchorage Bird Sanctuary. There was actually a smaller diversity of species and number of individuals there than at the Castalia Marsh. Sanderlings, semipalmated sandpipers and semipalmated plovers were seen in small numbers along the beach. A red-necked grebe was observed in the water nearby. A bittern was flushed at Long Pond, and I flushed a rail in grass and shallow water along Long Pond. This rail resembled a Virginia Rail but was not a confirmed sighting. The scenery was superb, many species of birds were present in larger numbers than on the mainland. This concluded a very enjoyable and interesting stay on the island.

The following is a list of all bird species seen on the island:

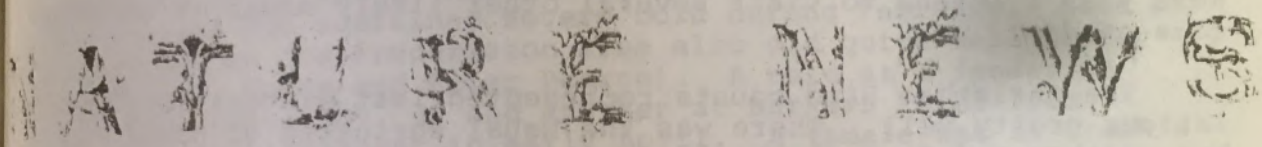
1. Common Loon
2. Red-necked Grebe
3. Leach's Storm Petrel
4. Double-crested Cormorant
5. Great Blue Heron
6. American Bittern
7. Black Duck
8. Green-winged Teal
9. Blue-winged Teal
10. Common Eider
11. Red-breasted Merganser
12. Sharp Shinned Hawk
13. Marsh Hawk
14. American Kestrel
15. Semipalmated Plover
16. Black-bellied Plover
17. Ruddy Turnstone
18. American Woodcock
19. Greater Yellowlegs
20. Dunlin
21. Semipalmated Sandpiper
22. Sanderling
23. Short-billed Dowitcher
24. Hudsonian Godwit
25. Great Black-backed Gull
26. Herring Gull
27. Bonaparte's Gull
28. Common Tern
29. Razor Billed Auk
30. Black Guillimot
31. Mourning Dove
32. Yellow-billed Cuckoo
33. Ruby-throated Hummingbird
34. Belted Kingfisher
35. Common Flicker
36. Yellow-bellied Sapsucker
37. Hairy Woodpecker
38. Downy Woodpecker
39. Blue Jay
40. Common Raven
41. Common Crow
42. Black-capped Chickadee
43. Boreal Chickadee
44. Brown Creeper
45. Mockingbird
46. Gray Catbird
47. American Robin
48. Veery
49. Golden-crowned Kinglet
50. Water Pipit
51. Cedar Waxwing
52. Starling
53. Red Eyed Vireao
54. Black-and-White Warbler
55. Yellow Warbler
56. Magnolia Warbler
57. Yellow Rumped Warbler
58. Chestnut-sided Warbler
59. Palm Warbler
60. House Sparrow
61. Northern Oriole
62. Rusty Blackbird
63. Common Grackle
64. Brown Headed Cowbird
65. Rose-breasted Grosbeak
66. Purple Finch
67. American Goldfinch
68. White-winged Crossbill
69. Savannah Sparrow
70. Dark-eyed Junco
71. Tree Sparrow
72. Chipping Sparrow
73. Field Sparrow
74. White-throated Sparrow
75. Song Sparrow

nature news.

David Christie

Because I have not been preparing a regular Nature News section for the last year, the amount of information coming in has dried up to some extent. The current write-up includes selected reports from over a long period - from late November 1978 through September 1979 plus a few November observations added by the editor. I would like to invite people to resume regular correspondence so that there will be lots of interesting reports avilable for future news.

Members in the upper Saint John Valley should watch regularly for Grand Falls' Cataract Weekly. In April Dr. George Stirrett, one of Fredericton's honorary members began an interesting column, "Notes on Natural History". The column contains reports on observations of nature and lucid explanations of many topical natural phenomena.



Editors Note: Nature News is perhaps one of the most important parts of this natural history publication. The News plays several roles - it involves members directly and enhances communication within the Federation. It keeps members posted on rare or unusual sightings as well as providing a rundown on trends in the natural history of this province. Its most valuable contribution however is that it preserves records that would otherwise go undocumented or be forever lost in some naturalists field notes. We need your contributions. Perhaps one member of each club would like to serve as recording naturalist for his or her region. And remember, we are interested in all natural history observations, not just those concerning birds. Contributions should be addressed to:

Nature News,
David Christie,
Dept. of Natural Science
New Brunswick Museum
277 Douglas Avenue
Saint John, N.B. E2K 1E5

During the past year the New Brunswick Museum has been conducting a bird survey of Fundy National Park for Parks Canada. Intensive observations by Brian Dalzell and myself produced a number of interesting records. Among them were an adult male King Eider April 6, a Turkey Vulture, April 22, two Caspian Terns May 1, a Blue-gray Gnatcatcher May 8th and two Black Guillemots August 10, (when there were many small herring off the mouth of the Alma River). In addition Mary Majka saw a Grasshopper Sparrow in the park May 23.

The most interesting discovery however, was that there is a previously unsuspected small breeding population of Gray-cheeked Thrushes in the park. The main concentration noted was near the coast along the Coppermine Trail where at least four birds were singing during the last week of June. However probable summer residents were also heard at inland locations such as near Marven Lake, Keyhole Brook and The Big Dam Trail. On July 5 a nest with 4 eggs was discovered along Laverty Brook; on the 18th it contained 3 well-feathered young. It was the second nest found in New Brunswick. Also this summer during a trip to Grand Manan on June 29, Hal Hinds heard a Gray-cheeked Thrush singing at Dark Harbour. Apparently this species may occur along much of the Bay of Fundy shore but is seldom detected because of its brief period of song rendered mostly before dawn and for a short period after sunset. Next year I intend to visit several other likely areas at the right time of day.

The Christmas Bird counts represented last winters bird populations pretty well. There was the usual shrinking of numbers as bad weather and food shortages took their toll but no special movements, although Am. Goldfinches and Pine Siskins were common at many bird feeders during January and February.

The winter of 1978-79 has become well known for the invasion of owls, especially the Great Gray in many parts of eastern North America. New Brunswick, however, was just a bit too far east to experience much of it. The only Great Gray Owl reported was at Point Wolfe Warden Station in Fundy National Park on February 18 when it was observed closely by John and Lynn Gorman. To the west many Great Grays were seen in the State of Maine. Two Hawk Owls reached us - the bird at Little Shemogue (Cape Tormentine Christmas Count) being seen at least until Jan. 14 (Stu Tingley) and another at McGowan Corner Jan. 17-22 (Melvin Moore, Bill Varty, Gerry Clayden). The Snowy Owl flight in New Brunswick was also relatively minor. Three were at Miscou Island Nov. 24 (Peter de Marsh and Jean Burgess), more than one in the Campbellton area (Alan Madden) and one at Gagetown Dec. 16 and Jan 4 (Enid Inch). Most of the Snowies on the Tantramar Marshes disappeared in late winter (Tingley), perhaps providing some of those on the Shepody Marshes in Albert County, where the first two were seen Feb. 4 (D.C.) and the maximum of four on March 10 (Henrik Deichman). Only one was reported in Saint John during the winter. The only unusual hawk reported was a dark Gyrfalcon chasing a flock of 500 Snow Buntings

at Miscou Nov. 24 (deMarsh).

The two Purple Gallinules that landed in N.B. Dec. 27 must have been part of a whole flock carried north from the Caribbean since two were found in Maine the same day and apparently are also at St. Johns, Nfld. (fide Deichmann). How many more must have perished at sea or in the forest? Our two were found shivering in snowbanks at Nauwigewauk (Leslie Lamb) and Alma (Theresa Kelly) and via various persons (Russell Jamieson, Norman Wentzell, Doris Hatt) found their way to Cecil Johnston and Mary Majka who nursed the birds back to health. After an ill-fated trip for one of them to the Bahamas and back (Canadian Veterinary certificate not recognized) both birds now have a permanent home in the aviary at Stanley Park Zoo in Vancouver. They are two very well-travelled birds!

Three Canvasbacks spent a few days, Dec. 16-20 (Nettie Moore et al) in the Saint John River at Curries Mountain, York Co., and Canada Geese were seen at various times between Douglas and Mactaquac including a flock of 100 in mid-January (fide Bev and Marc Schneider).

The Howard Mann family at Gondola Point had good luck with wintering Mourning Doves. The dozen at their feeder Nov. 28 had increased to 19 by Jan 24 and all but two of them survived the winter despite the sustained severe cold during February. Some of the Cardinals in the Fredericton area also did quite well (information from N. Moore and Peter Pearce). A male at a feeder in Douglas from about Nov. 30 and another at Barkers Point from Dec. 8 were still present in early April. A female was at Crock's Point from Dec. 16 till late January, a male at Forest Hill Jan. 2-4, a probable female at Oromocto Dec. 26, a male at Lincoln just before Christmas and one in the Rosewood Drive area about mid-December. A male Cardinal at Rothesay in late November re-appeared March 31 and was joined by a female the next day (Margaret Jones). Nesting must be suspected there. Mrs. Don Lockhart of Bath, Carleton Co., reported a male Cardinal remained about her feeder all this past winter.

The highlight of the winter is the first New Brunswick report of a Tufted Titmouse. Mr. and Mrs. Albert Morais of New Maryland identified one in their yard on January 13th. It was not seen again and all the pertinent details have not reached me. Interestingly, the second Quebec record of this southern species was reported during the winter. However none were reported in eastern Maine.

Spring arrivals came mostly a bit earlier than usual. On Grand Manan, at Bancrofts Point, 300 Brant were seen Feb. 25, a Great Blue Heron March 1, and a Double-crested Cormorant March 15 (Dalzell). Some blackbirds reached Saint John by March 18 but March 22-24 marked the first big push with Red-Wings and Crackles reaching Fredericton March 22, Alma March 23 and Moncton and Grand Falls March 24. Brown-headed Cowbirds, Am. Robin and Song Sparrows appeared in some areas at the same time and an Am. Woodcock was

seen at Oxbow, Victoria Co. March 24 (Erwin Landaver) and a Belted Kingfisher at Fundy Park March 23 (George Sinclair).

As spring progressed there were other conspicuous influxes in association with spells of warm weather. One of the most pronounced was that of May 17 following four days of cool, wet weather. In Fundy Park 76 species were seen, 30 more than on any of the previous three days (D.C. and Dalzell). That included first arrivals or large increases for most species of warblers, over 1,000 Bobolinks and a particularly early Olive-sided Flycatcher.

Spring highlight was the male Garganey at Red Head Marsh. The Garganey is an old world teal, resembling our Blue-winged, although the males are strikingly different in head and body plumage. Because so many exotic ducks are kept in captivity there is always some suspicion that such a bird has escaped rather than being a transatlantic vagrant. In this case there was no definite evidence to suggest it was a former captive but one can not be entirely certain. There have been a few other reports along the North American Atlantic coast, including Prince Edward Island. This one was discovered by Mike Bamford May 3 and seen and photographed by many observers until May 19 (Cecil Johnston).

A puzzling dove seen by Bill and Odna McCarlie at Saint John April 19 was reported to Jim Wilson who got a full description that suggests it was a White-winged Dove, a southwestern species prone to appearing in unexpected places. The two other New Brunswick records were at opposite of the Bay of Fundy on July 31 a few years ago. Stu Tingley sends word that this summer they were seen on both Sable and Seal Islands, N.S.

Other less exotic but scarce spring birds were: Snowy Egrets in late April and May at Castalia (Dalzell), Saint John West (3; Johnston), Waterside (3; Deichmann, Christie et al) and more unusually at Heath Steel Mines in northern N.B. (Harry Walker); Snow Geese at Baie Verte March 31 (3, Canadian Wildlife Service Staff), Waterside in late April (Sedgwick Sinclair) and Perth May 3 (Murray Watters); a pair of Gadwall at Saint John West April 27 (Bamford); Common Gallinule at Davidson's Point, Deer Island in mid-May (Andy Forsythe); two Caspian Terns at Gondola Point May 5 (DSC and Mike Majka); an adult Red-headed Woodpecker at Alma March 30 (G. Sinclair); a Mockingbird at Salmon Beach, Gloucester Co. May 19 (DeMarsh) (Note: a few others reported in southern N.B.); An Eastern Bluebird at Upper Sackville May 26 (CWS Staff); an Indigo Bunting at Alma May 9 (Joanne Deichmann, Sue Feltham).

The only Peregrine Falcon reported was at Mal Bay South, Miscou Island May 17 (deMarsh). Two late Northern Shrikes were at Mechanics Settlement, Kings Co. May 4 (Mary Majka, Dalzell and D.C.) An unusually large flock of Double-crested Cormorants, 150, spent almost three weeks from May 2 at Plaster Rock (Landauer).

Each season has its obvious highlight and this summer I guess

It would be the albatross seen by Allison Naves, halfway between Grand Manan and Yarmouth N.S. on Aug. 16. He was completely unfamiliar with this large sea bird, twice as large as a "farmer gull" (Great Black-backed) with long straight wings. His description relayed by Peter Pearce leaves no doubt it was an albatross. Most likely it would have been either a Yellow-nosed or Black-browed.

Surface water temperatures in the Gulf of Maine were very warm this summer and a good number of Cory's Shearwaters, a warm water species, came in as far as the "Bluenose" ferry route between Bar Harbour and Yarmouth early in August but none were reported from New Brunswick waters. Fulmars were seen again in the Machias Seal Island area this summer (Peter Vickery et al) and 6 to 8 Black-legged Kittiwakes were there June 19 (Vickery).

Willets may now be nesting on the New Brunswick shore of the Bay of Fundy. Three were on the Ram Pasture Marsh, near Sackville May 13 (C.W.S. staff) and a pair is suspected to have been there all summer (fide Tony Erskine).

Northern Three-toed Woodpeckers were reported twice in Fundy Park this summer, a male at Laverty Brook July 18 (DC) and a female and immature north of Bruin Lake August 17 (Mr. & Mrs. Bill Grummitt). Jeff Thomas of the Living Rivers Program saw Northerns once or twice along the Tabusintac River.

Purple Martins suffered, as they often do during periods of heavy rain. On August 13 and 14 Charlie Wilson picked up 21 dead young around his colony at Hammond River. Apparently the adults were unable to bring enough food, for the young were very thin. Jack Garnett reported birds dying at his Maquapit Lake colony at this same time. No doubt such problems were widespread.

A male Wheatear in breeding plumage at Caron Point, near Bathurst, was very early on August 14 (deMarsh). The few reports we have had are generally in September. Interestingly one was in Scarborough, Maine August 16-17 where it was also considered unusually early (fide Vickery).

Don McAlpine reports he flushed a Green Heron from a marsh at Barkers Point on August 15.

A very unusual bird was a male Prothonotary Warbler feeding in the rockweed at Liberty Point, Campobello Island Aug. 26 (Vickery et al). We have but four previous records of this southern warbler.

Other early fall strays or rare migrants reported were a "fairly certain" immature Yellow-crowned Night Heron at Machias Seal Aug. 6 (Pearce); a Piping Plover, rare on Grand Manan at Long Pond Aug. 17 (Pearce) and at Bancroft Point Sept. 8 (Dalzell); a Bairds Sandpiper at Saint John West July 25 (Ron Weir) and possibly one at Castalia Sept. 8 (Dalzell); two Wilson's Phalaropes at Saint John West July 25 (Weir); an immature Little Gull at Eel River Bar Sept. 9 (Tingley); a Yellow-billed Cuckoo at Grand Manan Aug. 31 (Dalzell), 2 possibly 3 Western Kingbirds at Maces Bay August 28 (Erskine) and one at Fundy Park.

H. Q. Sept. 10 (Deichmann and Barry Spencer); a Blue-gray Gnatcatcher at Campobello Island Aug. 26 (C. Vickery); an adult male Pine Warbler at Bancroft Pt. Sept. 8 (Dalzell); and a Prairie Warbler on Deer Island Aug. 25 (Vickery).

Mrs. Don Lockhart reports a single adult Bald Eagle was seen flying along the St. John River at Bath on occasion this past winter and that as well one pair of Ospreys and a pair of Bald Eagles spent the summer at Tuadook Lake. On Sept. 15 Betty McAlpine spotted two adult Bald Eagles at Grand Bay and notes that as many as four Ospreys were seen at one time circling over the St. John River there during the summer months.

Highlight of a Saint John naturalist's outing to the Maces Bay-Point Lepreau area on Oct. 27 was our sighting of a Mockingbird. Other birds of interest recorded were Red throated Loon, Blue-winged Teal, Oldsquaw, Mourning Dove and Catbird (Tom Page et al).

Other Animals and Plants. Few reports other than of birds have been received. Coyotes continue to spread and increase in the province. Hilaire Chiasson writes that one shot last winter on the ice near Ile Lameque was the first reported there.

A Minke Whale was seen off Machias Seal Island June 19 (Vickery) and a dead one measured by museum staff at 7.9 meters in total length, washed ashore near New River Beach on the 15 Sept.

When Don McAlpine visited a rift cave in Albert County on the 23 Sept. he noted that about 200 Little Brown Bats were roosting on the walls, no doubt prepared for the winter ahead. On the 24 Sept. he spotted a single Myotis Sp. (bat) feeding over the Nerepis River and that same evening bats were heard squeaking in Barry Kings attic. Don also reports that on the 23 Sept. he saw a Long-tailed Weasel, the least common of two weasel species in this province, bound across the road at dusk in the Brookville area of Saint John. Its much larger size when compared to the short-tailed weasel and its long tail were clearly silhouetted in the headlights of his car.

Grand Manan surely has a hold on the title of "banana belt of New Brunswick". Wood Frogs began calling at Bancroft Point March 27 and the first Am. Toad was heard April 17 (Dalzell). In most parts of the province the toads don't get out much before the middle of May. In Saint John a Yellow-spotted Salamander was noted crossing the road during a downpour on the 3 Nov. (McAlpine). Mild temperatures that week even induced Wood Frogs to call from their hibernation sites beneath the leaves at Browns Flats (Stan Gorham) and Spring Peepers were calling at Salmon Rock along the Nerepis River during the same period (B. King).

A large fish washed up on the beach at Pigeon Hill, Ile Lameque June 8 and caused quite a controversy over whether or not it was a whale, a shark, or a prehistoric reptile. Information provided by Hilaire Chiasson indicates it was undoubtedly a Basking Shark, a gigantic fish reaching lengths of up to 50 feet but having very small teeth that are easily lost or overlooked. There are over 100 records of it in eastern Canadian waters.

The Guillemot reports that the major marine invertebrate of the summer was the Boreal Squid Illex illecebrosus. "In mid-August there were literally tons of them stranded on Herring Cove Beach at Campobello Island". In early September one washed up at Marys Point Beach where they have been seldom seen (DC).

Warm weather in late March brought two Mourning Cloak butterflies out of hibernation at Odell Park March 21 and a smaller brown butterfly - a comma?-was flying there April 4 (N. Moore). Tony Thomas reports having caught 13 species of moths by April 24 and only the second Milberts Tortoise Shell he had seen in 5 years in the Fredericton area. On May 8 one of those tortoise shells repeatedly buzzed my red cap while I was in the woods of Fundy Park.

The first spring flower, Coltsfoot was reported this year at Andover March 26 (Fred Tuly) beating the ones on Fort Howe, Saint John, by a day (Harvey McLeod).

SUNROOM, LATEST ADDITION TO NEW BRUNSWICK MUSEUM

A new sun is rising at the New Brunswick Museum, the SUNPOOM. Walk into this intimate room and awaken your five senses. In the SUNROOM you will discover such things as the feel of fur, the smell of pineapple weed, the taste of dulse, hear a music box, meet Flash the turtle and carry on a two way converation on the old crank wall phones. The SUNROOM is a new experience for young and old and one you wont't want to miss.

Each Saturday different activities will be waiting for your participation. Learn to spin, make tallow candles, print on a printing press, weave, make natural dyes, learn birch bark and quill work. These are only some of the unsual and interesting things for you to do at the SUNROOM, New Brunswick Museum EVERY Saturday 10 a.m. to 1 p.m.

announcements.

NEW BRUNSWICK FEDERATION OF NATURALISTS - 7th Annual General Meeting - August 4, 1979

The meeting held in the N.B. Fisheries School at Caraquet was called to order at 10.15 a.m. with the president Harry Walker in the chair.

Those in attendance introduced themselves.

The Secretary, David Christie, read the minutes of the 6th annual general meeting and moved, seconded by Henrik Deichmann, that they be accepted as read. Carried.

The treasurer, Janice Dexter, presented three reports on the federation's finances, during the periods January 1 to December 31, 1977, January 1 to December 31, 1978 and January 1 to July 31, 1979. Recent records showed current cash balance is $800.02. She notes that these statements should be audited soon. David Smith moved, seconded by Vernon Goodfellow, acceptance of the treasurer's report. Carried.

Henrik Deichmann reported the nominating committee's nominees for the board:-

President	- Harry Walker
Vice-President	- Vernon Goodfellow
Secretary	- David Christie
Treasurer	- Janice Dexter
Director-at-Large	- Daryl Linton

There having been no other nominations he moved, seconded by Owen Washburn, that these nominees be accepted as officers and director. Carried.

Henrik Deichmann moved that the meeting send wishes to honorary member Nettie Moore for a speedy recovery from her operation. Carried.

Owen Washburn reported on the Canadian Nature Federation meeting held in May at Montreal. The federation is now financially sound and the environmental program is going very well. Much of the recovery of the federation, he felt, could be credited to out-going president Martin Edwards who had taken a very active role in federation affairs. The new president is Diane Griffin, a P.E.I. native, now residing in Edmonton. The 1980 annual meeting will be held in Winnipeg and Owen suggested that the New Brunswick federation consider hosting the 1983 or 1984 Canadian conference.

Janice Dexter moved, seconded by Michael Burzynski, that we extend an invitation to the Canadian Nature Federation to hold its 1983 annual meeting in New Brunswick. Carried.

The possibility of a donation to the Canadian Nature Federation was suggested but Owen Washburn suggested that our small amount of money would be more useful locally. It was pointed out that $500 of our finances is earmarked for a scholarship and/or land program.

Henrik Deichmann suggested that the federation should have a forestry-related program at its 1980 annual meeting, possibly to be held in the Fredericton area. He requested comments from members.

Barry King requested articles for the N.B. Naturalist. He had extra copies of recent issues for anyone who wanted them.

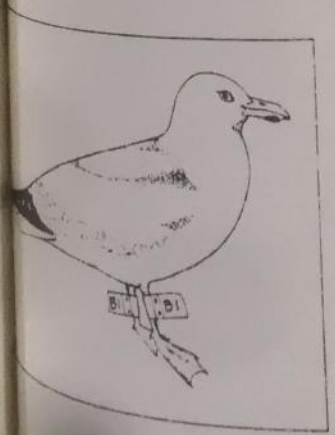
David Christie moved, seconded by Janice Dexter, that the federation's $3 membership fee be considered to apply to individuals and to families. Carried.

The secretary reported that a "Certiciate of Commendation" had been received from St. Francis Xavier University recognizing the federation's "contribution to the field of adult non-formal education."

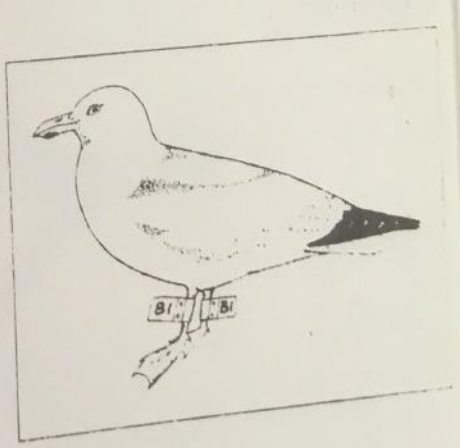
Michael Burzynski reported on the W.A. Squires Memorial Natural History slide programs that are being planned for distribution to schools and organizations.

Following announcements concerning the afternoon and Sunday field trips, the meeting adjourned to hear Larry Morris, director of the Atlantic Center for the Environment speak about its programmes.

D. S. Christie
SECRETARY



Great Lakes Herring Gulls have been marked with numbered and lettered green, orange, blue or pink leg ribbon - one on each leg. If you see any Herring Gulls so marked, please note number, letter and colour of each ribbon and date and place of sighting. Contact Dr. D. V. Chip Weseloh or Mr. Pierre Mineau, Canadian Wildlife Service, Box 5050, Burlington, Ontario, Canada, L7R 4A6. Tel. (416) 637-4264.

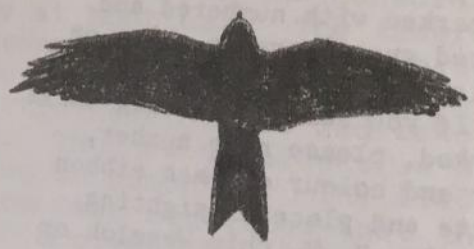


Information Wanted on Hawk Migration

David Christie reports he was recently contacted by Neil Currie, a representative of the Hawk Migration Association of North America, seeking co-operators in the Maritimes who would be interested in observing hawk migration. In the United States observers are out each fall watching for several hours at numerous locations. Most watches are conducted along a range of hills or at coastal locations (for example such well known points as Hawk Mountain, Pennsylvania and Cape May, New Jersey). Certain weekends are picked for concentrated efforts in several areas. For instance, during 1979 April 21-22, September 15-16, 22-23 and 29-30 and October 27-28 were hawk watch weekends. On a good day - usually one with northwest to north winds hundreds or thousands of hawks may be seen, such as 10,212 at Mount Wachusett, Mass., on Sept. 13, the best day there in 1978.

In New Brunswick we don't know whether there are areas as good for hawk watching as those farther south and no one has ever sat for hours counting all the hawks that pass at one place. South west Head, Grand Manan in fall and coastal Albert County in spring appear to be moderately good places to observe and David suggests the line of hills north of Route 1 between St. George and St. Stephen might be good in fall as he has observed Broad-winged Hawks there frequently while driving in late August. Interesting-ly Howard Mann saw a flock of about 150 hawks circling overhead south along the Kennebecasis at Gondola Point on October 16 this fall.

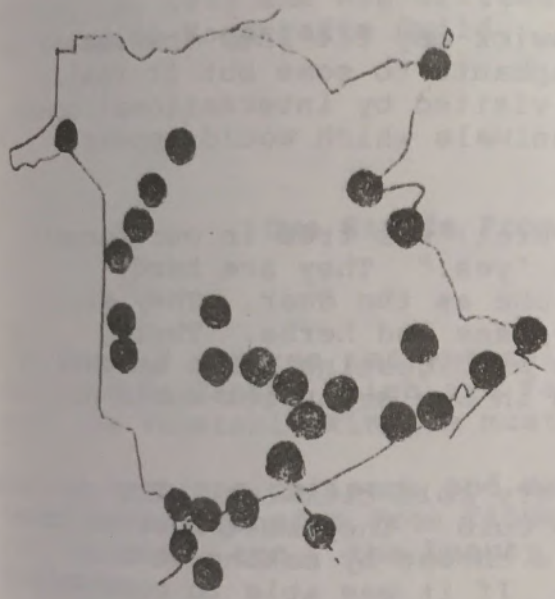
If you know of places where hawks are seen migrating please write to David Christie at the New Brunswick Museum and when you see hawks on the move stop for a couple of hours if possible and make some thorough counts. Only thus can we learn more about hawk migration in this province. If you are prepared to go out in the 1980 hawk watch weekends write for forms and a hawk migration report to Mr. Currie at the Taft School, Watertown, Connecticut, 06795.



CHRISTMAS BIRD COUNT, 1979-80

This year Christmas Bird Counts should be conducted on one day during the period Dec. 15 to January 1. The census area should fit within a 15-mile diameter circle. Join your local count (1977 and 1978 areas marked on the map) or if there isn't an established one in your area get together with friends and start a new one. Counts of 6 hours or more duration will be published in the N.B. Naturalist.

For further instructions or to learn the name of your local compiler contact David Christie, N.B. Museum, 277 Douglas Avenue, Saint John, N.B.



A Kangaroo on the Miramichi

B. King

The "Weekend Miramichi" and other media have noted a strange visitor on the Miramichi this summer. It has been sighted near Acadia Forest Products in Nelson as well as in Douglasfield and in Millbank. Like the cougar, it is very elusive. Unlike the cougar, this fellow comes from Australia and from the description sounds like a red-necked wallaby, a type of kangaroo standing from 3 to 4 feet and weighing up to 100 lbs.

Kangaroo sightings in New Brunswick may fit into the same category as little folk and pink elephants to some but it really isn't impossible. The Miramichi is visited by international ocean liners and often these ships carry animals which would appear strange in our forest.

Now assuming a kangaroo (or several) was free in our forest could it survive? The answer may be "yes." They are hardy animals. Kangaroos fill the same niche as the deer. They are browsers, feeding on twigs, buds, grasses and herbs. Their multi-chambered stomachs are capable of digesting large amounts of plant fibre (cellulose). Starvation in New Brunswick would not be likely for a kangaroo.

Kangaroos are able to survive very cold climates. The red-necked wallaby has a dense fur to cope with cold. They must however have shelter from the wind. Snow may be a threat by making it more difficult to move in search of food. If it was able to cope with our snow, a kangaroo would have a fair chance of survival through our winters.

Keep your eyes and ears open for things that go hop in the night. Kangaroos are most active at night and are timid animals.

natural dyes

Nature provides many things for man to utilize. Over the centuries, we have learned to use nature as a source of food, medicine, energy and resources for our technology. Natural dyes have been used for thousands of years and not that long ago were the only source of colour for textiles.

The following article was published in the Family Herald of July 12, 1933 and was written by Mrs. James Peck, President of the Canadian Handcrafts Guild.

Dye Stuffs From the Wild Woods

The old art has not entirely died out for there are still many districts in Canada which are far from the sources of supply and where the vegetable kingdom must be tapped to obtain lovely colours.

It requires patience and experience with combinations of materials to transfer from flowers, roots, barks of various trees, lichens, moss, etc., the beauty of nature to the products of the craftsman.

It is a simple, healthful and interesting process for it may be carried on entirely out of doors and every member of the family may be employed in gathering material.

Here are some of the many plants that will yield very pretty colours, and they may be set (or mordanted) with the following easily obtained fixers:

Blueberries, with salt, or salt and alum
Onion skins with alum
Sorrel roots, with alum
Bracken fern, with alum or lye
Golden rod, with alum
Alder bark, with alum, lye or copperas
Bitter vetch, with alum
Rhubarb flowers with alum and cream of tartar

And here are a few recipes that will give some idea of how to proceed:

With blueberries, to produce purple or blue colour take 2 gallons water, 8 lbs fruit, 4 lbs salt; boil 3/4 of an hour, strain, add wool and boil for one hour. By using 5 oz. vitriol instead of

salt, a green colour may be obtained; by using 8 oz. alum instead of salt a pale blue shade results.

With yellow tansy or goldenrod: 2 gallons water, 1/4 lb alum, boil flowers, strain, add goods. Boil a half hour, dry, then wash in suds. For deep yellow use 2 oz. of copperas instead of alum.

For yellow: One lb outer skins of onions, 2 gallons of water, 2 oz. alum, boil gently, one hour, strain, immerse wool, boil 3/4 of an hour, dry, and rinse. For a green colour: use weak lye instead of alum, as above.

For black: one gallon water, 2 oz. copperas, 2 lbs alder bark, boil one hour, strain, immerse wool, boil 1/2 hour, dry then wash. With less copperas a good brown may be obtained; by using lye instead of copperas a light brown.

By using judgment as to the mordants used, the following plants will yield many colours: Black currants, cranberry, black-eyed susan, beet root, wild cherry, apple bark, mountain ash, stag horn moss, firewood, butternut bark. Needles of fir trees or larch, birch bark and many others. The lichens that grown on fences and trees give many shades of brown. These need no mordant.

In attempting these dyes there are a few things that should be remembered: Wool or any material must be wrung out in warm water before immersing in dye. By using different mordants a great variety of shades may be obtained from the dye on the same kind of plant. Lye may be made by pouring boiling water on lumps of wood ashes and straining carefully. It thus becomes a very good mordant.

If you purpose to weave a piece of material, it is wise to dye at one time enough wool to complete the match for a shade at a second boil piece. It is very difficult to get an exact match for a shade at a second boiling. Many people are disappointed when a new shade emerges after they have tried for an exact match, but to the artistic experimenter the fact that each attempt results in a surprising new shade, or perhaps even a new colour, adds to the charm of dyeing from plants. It is unlikely that two dyers will get exactly the same results when they use the same plants and mordants. The slightest variation in quantity, possibly even the water from the new roof or the spring may make a change.

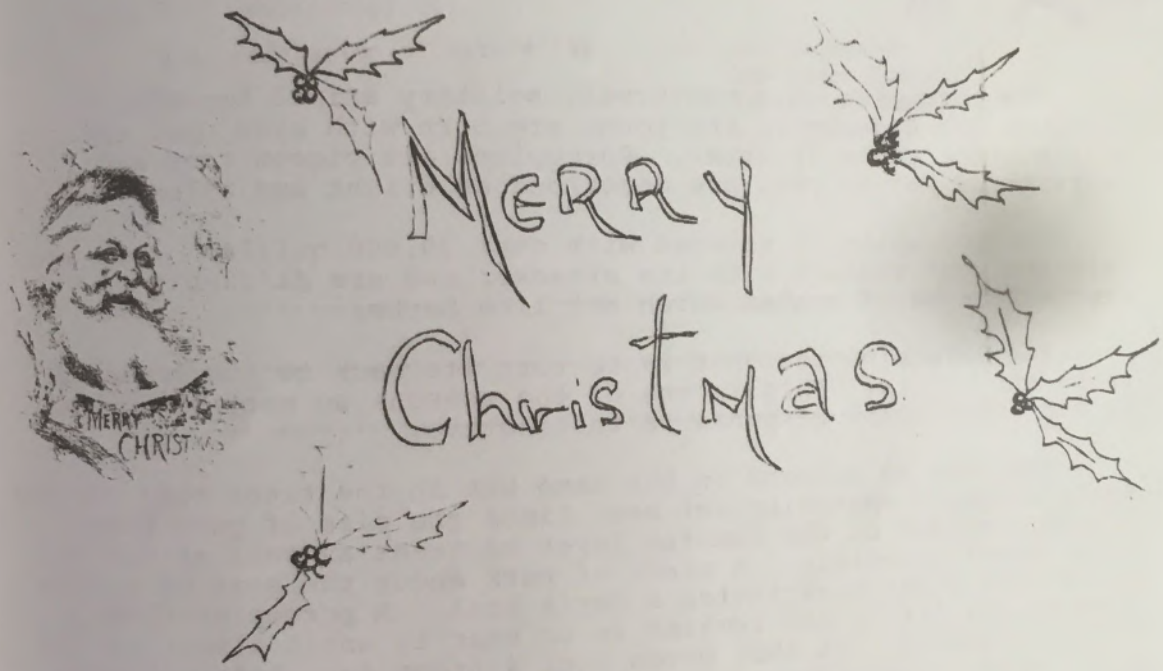
Colours may be deepened by longer boiling. By boiling for a shorter period, lighter shades will be obtained.

The equipment required is simple and inexpensive. A tripod made of three branches off the nearest fallen tree. Tie these together and fasten them firmly in the ground, fill your pot with the water and light a fire, hanging the pot of the tripod. Then put the plants in and boil not too fiercely; or a fire may be built between stones and the pot set there to boil, or the kitchen stove may be used.

After a time you will attain confidence and knowledge as to the proportions needed for your colours. You will also realize that as there is no limit to the plants, toadstools, treebarks and leaves, so there is no limit to the lovely colours to be transferred from the fields and the woods to your wool.

Try many flowers, roots, barks, both inner and outer barks as they yield different shades. You may discover a new one!

The "pot" referred to here would be an iron one and I should imagine an aluminum, or other, pot would produce a different shade. Also certain mixtures would eat through, or corrode aluminum.



Special Thanks to Don McAlpine and Marilyn Pash for their help in putting this issue together and to David Christie for his help in proofreading.

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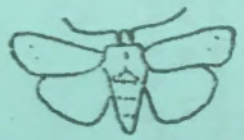

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